560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA-HQ-OAR-2016-0243; FRL-5185.1-02-OAR]

RIN 2060-AV56

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

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The U.S. Environmental Protection Agency (EPA) is finalizing amendments to the national emissions standards for hazardous air pollutants (NESHAP) for the Plywood and Composite Wood Products (PCWP) source category. Specifically, the EPA is finalizing maximum achievable control technology (MACT) standards in the form of emission limitations and work practices as appropriate for total hazardous air pollutants (HAP) (including acetaldehyde, acrolein, formaldehyde, methanol, phenol, propionaldehyde), non-mercury (non-Hg) HAP metals, mercury (Hg), hydrogen chloride (HCl), polycyclic aromatic hydrocarbons (PAH), dioxin/furan (D/F), and methylene diphenyl diisocyanate (MDI). Sources affected by the amendments include PCWP process units and lumber kilns located at facilities that are major sources of HAP emissions. These final amendments address the 2007 partial remand and vacatur of the 2004 final rule that promulgated the PCWP NESHAP ("2004 rule"). The final amendments also respond to issues raised in a petition for reconsideration regarding the 2020 residual risk and technology review (RTR) and other amendments to the 2020 PCWP NESHAP.

DATES: This final rule is effective on **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. The incorporation by reference of certain publications listed

in the rule is approved by the Director of the Federal Register as of **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: The EPA has established a docket for this action under Docket ID No. EPA-HQ-OAR-2016-0243. All documents in the docket are listed on the *https://www.regulations.gov/* website. Although listed, some information is not publicly available, *e.g.*, Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only as portable document format (PDF) versions that can only be accessed on the EPA computers in the docket office reading room. Certain databases and physical items cannot be downloaded from the docket but may be requested by contacting the docket office at (202) 566-1744. The docket office has up to 10 business days to respond to these requests. Except for these items, publicly available docket materials are available electronically at *https://www.regulations.gov/* or on EPA computers in the docket office reading room at the EPA Docket Center, WJC West Building, Room Number 3334, 1301 Constitution Ave., NW, Washington, DC. The Public Reading Room hours of operation are 8:30 a.m. to 4:30 p.m. Eastern Time (ET), Monday through Friday. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the EPA Docket Center is (202) 566-1742.

FOR FURTHER INFORMATION CONTACT: For information about this final rule, contact U.S. EPA, Attn: Matthew Kollman, Mail Drop: E143-03, 109 T.W. Alexander Drive, P.O. Box 12055, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-1920; and email address: *Kollman.Matthew@epa.gov*. Individuals who are deaf or hard of hearing, as well as individuals who have speech or communication disabilities, may use a telecommunications relay service. To learn more about how to make an accessible telephone call to any of the telephone numbers shown in

this preamble, please visit https://www.fcc.gov/trs for the relay service of the Federal Communications Commission, and a list of relay services is available on their directory page at https://www.fcc.gov/general/trs-state-and-territories.

SUPPLEMENTARY INFORMATION:

Preamble acronyms and abbreviations. Throughout this document the use of "we," "us," or "our" is intended to refer to the EPA. We use multiple acronyms and terms in this preamble. While this list may not be exhaustive, to ease the reading of this preamble and for reference purposes, the EPA defines the following terms and acronyms here:

APCD	air pollution control device
CAA	Clean Air Act
CBI	Confidential Business Information
CEDRI	Compliance and Emissions Data Reporting Interface
CEMS	continuous emission monitoring system
CFR	Code of Federal Regulations
CPMS	continuous parameter monitoring system
CO_2e	carbon dioxide equivalent
D/F	dioxin/furan (*i.e.*, polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans)
dscm	dry standard cubic meter
EDL	estimated detection limit
EFB	electrified filter bed
EPA	Environmental Protection Agency
ESP	electrostatic precipitator
°F	degrees Fahrenheit
FR	*Federal Register*
gr/dscf	grains per dry standard cubic foot
HAP	hazardous air pollutant(s)
HCl	hydrogen chloride
Hg	mercury
IBR	incorporation by reference
ICR	information collection request
kPa	kilopascals
lb/MSF 3/4"	pounds of pollutant per thousand square feet of 3/4-inch thick board
lb/MSF 3/8"	pounds of pollutant per thousand square feet of 3/8-inch thick board
lb/ODT	pounds of pollutant per oven-dried ton of wood
LVL	laminated veneer lumber

MACT	maximum achievable control technology
MDF	medium density fiberboard
MDI	methylene diphenyl diisocyanate
MDL	method detection limit
mg/dscm	milligrams of pollutant per dry standard cubic meter of air
NAICS	North American Industry Classification System
NESHAP	national emission standards for hazardous air pollutants
ng/dscm	nanograms of pollutant per dry standard cubic meter of air
Non-Hg	non-mercury
NRDC	Natural Resources Defense Council
NTTAA	National Technology Transfer and Advancement Act
O&M	operation and maintenance
OCAP	Office of Clean Air Programs
OMB	Office of Management and Budget
OSB	oriented strandboard
PAH	polycyclic aromatic hydrocarbons
PBCO	production-based compliance option
PCWP	plywood and composite wood products
PDF	portable document format
PM	particulate matter
PRA	Paperwork Reduction Act
ppmvd	parts per million by volume, dry
psia	pounds per square inch absolute
RATA	relative accuracy test audit
RCO	regenerative catalytic oxidizer
RDL	representative detection limit
RFA	Regulatory Flexibility Act
RMH	resinated material handling
RTC	Response to Comments
RTO	regenerative thermal oxidizer
RTR	residual risk and technology review
SBA	Small Business Administration
SSM	startup, shutdown, and malfunction
TEQ	toxic equivalency (relative the toxicity of 2,3,7,8-tetrachlordibenzo dioxin)
THC	total hydrocarbon
tpy	tons per year
UMRA	Unfunded Mandates Reform Act
VCS	voluntary consensus standards
WESP	wet electrostatic precipitator
3xRDL	three times the representative detection limit

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I. General Information

A. Executive summary

In this final rule, the EPA is amending the PCWP NESHAP in response to multiple actions: the partial remand and vacatur of the 2004 final rule that promulgated the "2004 rule", the petition for reconsideration of the 2020 RTR, and to address previously unregulated HAP in the PCWP source category.[1,2] This final rule establishes new emission limitations and work practices as appropriate that reflect MACT for HAP emitted by process units that are part of the PCWP source category. This action is an amendment to the previous technology review, not a new technology review as required under CAA section 112(d)(6).

The EPA promulgated the PCWP NESHAP on July 30, 2004. In the 2004 rule, for several process units, the EPA concluded that the MACT floors were represented by no emission reduction (or "no-control" emission floors). In 2007, the U.S. Court of Appeals for the D.C. Circuit vacated and remanded those portions of the 2004 rule.[3] On August 13, 2020, the EPA took final action on the RTR of the PCWP NESHAP as required by Clean Air Act (CAA) sections 112(d)(6) and (f)(2). The EPA acknowledged in the preamble to the proposed RTR that there were unregulated sources with "no-control" MACT determinations in the PCWP source category, and we stated our plans to address those units in a separate action subsequent to the RTR.[4] The EPA also received a petition for reconsideration following promulgation of the 2020 RTR, which argued that the EPA failed to set limits for unregulated HAP, among other issues.

On May 18, 2023, the EPA proposed revisions to the PCWP NESHAP ("May 2023 proposal") to set MACT standards for total HAP (including acetaldehyde, acrolein,

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[1] 69 FR 45944 (July 30, 2004).
[2] 85 FR 49434 (Aug. 13, 2020).
[3] *NRDC v. EPA*, 489 F.3d 1364 (D.C. Cir. 2007).
[4] 84 FR 47077-78 (Sept. 6, 2019).

formaldehyde, methanol, phenol, propionaldehyde), MDI, and combustion-related HAP. The proposed standards for combustion related HAP include non-Hg HAP metals, mercury, HCl, PAH, and D/F).[5] We proposed setting total HAP and MDI standards for sources with previously vacated no-control floor determinations, MDI standards for processes that use MDI resins and coatings, and standards to limit combustion-related HAP from direct wood- and other fuel-fired dryers. *See* section II.C of this preamble for additional details and other proposed changes that were included in the May 2023 proposal.

The public comment period for the May 2023 proposal closed on July 18, 2023. We summarize some of the more significant comments we timely received regarding the proposed rule and provide our responses in section III of this preamble. A summary of all other public comments on the proposal and the EPA's responses to those comments is available in the docket for this rulemaking along with a redline strikeout version of the regulatory language that incorporates the changes.[6,7] The EPA is finalizing MACT standards largely as proposed to address sources with previously vacated no-control floor determinations and unregulated HAP in the PCWP source category. Changes from the proposed rule are listed in Table 1 and include setting D/F emission limitations for direct wood-fired green rotary dryers, adding a definition for PAH, technical corrections to emissions data analyses, refinement to work practice standards for sources including lumber kilns, fiber washers, log vats, and wastewater operations to address comments on technical feasibility or clarity, and other changes to improve clarity such as revising the definition for non-HAP resin. Section III.G.4 of this preamble contains our responses to

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[5] 88 FR 31856 (May 18, 2023).
[6] *National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products (40 CFR Part 63, Subpart DDDD), Response to Public Comments on May 18, 2023 Proposed Amendments*, available in the docket for this rulemaking.
[7] *Final Regulation Edits for 40 CFR Part 63 Subpart DDDD National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products*, available in the docket for this rulemaking.

the issues raised by the petition for reconsideration that the EPA received on the 2020 RTR final rule.

The EPA estimates that this final rule will result in the reduction of approximately 720 tons per year (tpy) HAP and 8,500 tpy volatile organic compounds (VOC) at a total annualized cost of $53 million (2024 dollars) to 219 affected major source facilities. Section IV of this preamble describes in more detail the final costs, emissions reductions, and economic impacts of this final rule.

Table 1 Summary of Final Amendments

Action	Summary
Finalize standards for lumber kilns	Establishes work practice standards to limit emissions of organic HAP, combustion-related HAP, and VOCs from lumber kilns.
Finalize standards for organic HAP emitted by process units with previous "no-control" MACT determinations	Establishes numeric standards for organic HAP for new and existing atmospheric refiners and heated zones of existing fiberboard mat dryers and press predryers; establishes work practice standards for new and existing resinated material handling process units, stand-alone digesters, fiber washers, and log vats; and defines mixed PCWP process emissions streams subject to the NESHAP.
Finalize standards for previously unregulated resin-related HAP	Establishes numeric standards for MDI emissions for reconstituted wood products presses, tube dryers that blow-line blend MDI resin, and miscellaneous coating operations.
Finalize standards for previously unregulated combustion-related HAP	Establishes numeric standards for emissions of combustion-related HAP for new and existing direct wood-fired dryers; establishes work practice standards to limit emissions of combustion-related HAP, including D/F, by requiring burner tune-ups for burners associated with direct wood-fired and direct natural gas-fired dryers and by requiring continuous monitoring of an indicator of combustion unit bypass stack usage associated with PCWP dryers and lumber kilns.
Other updates and revisions	Establishes performance testing requirements for new and existing source emission limits; establishes monitoring, recordkeeping, and reporting requirements; removes obsolete rule language including the emissions averaging compliance option for existing affected sources, dates, and startup/shutdown provisions that are no longer in effect; and updates and clarifies electronic reporting requirements.

B. Does this action apply to me?

Regulated entities. Table 2 of this preamble presents categories and entities that this action potentially regulates.

Table 2—NESHAP and Industrial Source Categories Affected by This Final Action

NESHAP and Source Category	NAICS[1] Code
Plywood and Composite Wood Products (40 CFR part 63, subpart DDDD)	321113, 321211, 321212, 321215, 321219, and 321999

[1] North American Industry Classification System.

The EPA does not intend table 2 of this preamble to be exhaustive but rather to provide a guide for readers regarding the entities that this final action is likely to affect. To determine if this action affects your facility, you should examine the applicability criteria in title 40 of the Code of Federal Regulations (CFR), part 63, subpart DDDD. If you have any questions regarding the applicability of any aspect of this NESHAP, please contact the appropriate person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section of this preamble.

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

In addition to being available in the docket, an electronic copy of this action is available on the Internet. In accordance with 5 U.S.C. 553(b)(4), a brief summary of this rulemaking may be found at *www.regulations.gov*, Docket ID No. EPA-HQ-OAR-2016-0243. Following signature by the EPA Administrator, the EPA will post a copy of this final action at *https://www.epa.gov/stationary-sources-air-pollution/plywood-and-composite-wood-products-manufacture-national-emission*. Following publication in the *Federal Register*, the EPA will post the *Federal Register* version of the final rule and key technical documents at this same website.

D. Judicial review and administrative reconsideration

Under CAA section 307(b)(1), judicial review of this final action is available only by filing a petition for review in the United States Court of Appeals for the District of Columbia Circuit (D.C. Circuit) by **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].** CAA section 307(b)(2) prohibits a party from challenging this final rule separately in any civil or criminal proceedings brought by the EPA for enforcement.

CAA section 307(d)(7)(B) further provides that only an objection to a rule or procedure that was raised with reasonable specificity during the period for public

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

E. Severability

This final rule contains several discrete components, which the EPA views as severable as a practical matter (*i.e.*, they are functionally independent and will operate in practice independently of the other components). These discrete components are detailed in sections III.A through III.G of this preamble and the technical memoranda available in the docket. For example, the final requirements for direct-fired PCWP dryers, lumber kilns, process units that use MDI resins or coatings, monitoring of process unit bypass stacks, and performance testing generally function independently of one another and would not be impacted if a reviewing court were to vacate one or more of the other final provisions. In addition, as this final rule revises an existing NESHAP, the EPA notes that if a reviewing court were to vacate one or more of the standards finalized here, the affected standards will revert to those present in the 2020 RTR final rule.

II. Background

A. What is the statutory authority for this action?

CAA section 112, as amended (42 U.S.C. 7412) provides the statutory authority for this action. CAA section 112 establishes a two-stage regulatory process to develop standards for emissions of HAP from stationary sources. Generally, the first stage involves establishing technology-based standards that reflect MACT or an appropriate alternative.[8] The second stage involves evaluating those standards within eight years to determine whether additional standards are needed to address any remaining risk associated with HAP emissions.[9] The EPA commonly refers to this second stage as the "residual risk review." In addition to the residual risk review, CAA section 112 also requires the EPA to review the standards at least every eight years and "revise as necessary" taking into account "developments in practices, processes, or control technologies."[10] This review, commonly referred to as the "technology review," is the subject of this final rule. The discussion that follows identifies the most relevant CAA section 112 statutory sections and briefly explains the contours of the methodology used to implement these statutory requirements.

In the first stage, the EPA promulgates technology-based standards under CAA section 112(d) for categories of sources identified as emitting one or more of the HAP listed in CAA section 112(b). "Major sources" are those that emit, or have the potential to emit, any single HAP at a rate of 10 tpy or more, or 25 tpy or more of any combination of HAP.[11] For major sources, these standards are commonly referred to as MACT standards; CAA section 112(d)(2) provides that these must reflect the maximum degree of emission reductions of HAP achievable (after considering cost, energy requirements, and non-air

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[8] 42 U.S.C. 7412(d)(1)-(4).
[9] *Id.* 7412(f)(2).
[10] *Id.* 7412(d)(6).
[11] *Id.* 7412(a)(1).

quality health and environmental impacts). In developing MACT standards, CAA section 112(d)(2) directs the EPA to consider the application of measures, processes, methods, systems, or techniques, including, but not limited to, those that reduce the volume of or eliminate HAP emissions through process changes, substitution of materials, or other modifications; enclose systems or processes to eliminate emissions; collect, capture, or treat HAP when released from a process, stack, storage, or fugitive emissions point; are design, equipment, work practice, or operational standards; or any combination of the above.

CAA section 112(d)(3) establishes a minimum control level for MACT standards, known as the MACT "floor," based on emission controls achieved in practice by the best performing sources. For new sources, the MACT floor cannot be less stringent than the emission control achieved in practice by the best-controlled similar source. The MACT standards for existing sources can be less stringent than floors for new sources, but they cannot be less stringent than the average emission limitation achieved by the best-performing 12 percent of existing sources in the category or subcategory (or the best-performing five sources for categories or subcategories with fewer than 30 sources).

In certain instances, as provided in CAA section 112(h), the EPA may set work practice standards in lieu of numerical emission standards. Under CAA section 112(h), the EPA may adopt a work practice standard in lieu of a numerical emission standard if it is "not feasible in the judgment of the Administrator to prescribe or enforce an emission standard for control of a hazardous air pollutant or pollutants."[12] CAA section 112(h)(2) defines the phrase "not feasible to prescribe or enforce an emission standard" to mean any situation where the Administrator either determines that a HAP or HAPs "cannot be emitted through a conveyance designed and constructed to emit or capture such pollutant,

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[12] *Id.* 7412(h)(1).

or that any requirement for, or use of such a conveyance would be inconsistent with any Federal, State or local law"[13] or determines that "the application of measurement methodology to a particular class of sources is not practicable due to technological and economic limitations."[14] The EPA considers a measurement to be not technologically practicable within the meaning of CAA section 112(h)(2)(B) if the majority of the measurements are below the detection limit. Such measurements raise issues of questionable reliability, feasibility, and enforceability.

The EPA also considers control options that are more stringent than the floor and may establish standards more stringent than the floor, based on the consideration of the cost of achieving the emissions reductions, any non-air quality health and environmental impacts, and energy requirements.[15] Standards more stringent than the floor are commonly referred to as "beyond-the-floor" standards. In the second stage of the regulatory process, the CAA section 112(d)(6) requires the EPA to undertake a technology review no less frequently than every eight years. Under the technology review, the EPA must review the technology-based standards and revise them "as necessary (taking into account developments in practices, processes, and control technologies)."[16] In conducting this review, the EPA is not required to recalculate the MACT floors that were established in earlier rulemakings.[17] The EPA may consider cost in deciding whether to revise the standards pursuant to CAA section 112(d)(6).[18] Following the D.C. Circuit's decision in *Louisiana Environmental Action Network (LEAN)* v. *EPA*,[19] the EPA also reviews available data to determine if there are

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[13] *Id.* 7412(h)(2)(A).
[14] *Id.* 7412(h)(2)(B).
[15] *Id.* 7412(d)(2).
[16] CAA section 112(d)(6). CAA section 112 is codified at 42 U.S.C. 7412.
[17] *Ass'n of Battery Recyclers, Inc. v. EPA*, 716 F.3d 667 (D.C. Cir. 2013); *NRDC v. EPA*, 529 F.3d 1077, 1084 (D.C. Cir. 2008).
[18] 42 U.S.C. 7412(d)(2), (6); *Ass'n of Battery Recyclers*, 716 F.3d at 673-74.
[19] 955 F.3d 1088 (D.C. Cir. 2020).

unregulated HAP within the source category and evaluate these data for use in developing new emission standards. The D.C. Circuit held in *LEAN* that the EPA is required to address unregulated HAP from a major source category when the Agency conducts a technology review of a NESHAP that previously left such HAP unregulated.[20]

In the 2004 rule, the EPA concluded that the MACT floors for several process units were represented by no emission reduction (or "no control" emission floors) and declined to set standards for those units. In 2007, the D.C. Circuit held that the EPA's use of "no-control" emission floors to avoid setting emissions standards in another source category was unlawful.[21] In response, the EPA requested a voluntary remand and vacatur of the portions of the 2004 rule that included these "no-control" emission floor determinations.[22] The D.C. Circuit remanded and vacated those portions of the 2004 rule to the EPA to set emission standards for those units to replace the unlawful "no-control" floor determinations.[23] On August 13, 2020, the EPA took final action on the RTR of the PCWP NESHAP as required by CAA sections 112(d)(6) and (f)(2). The EPA acknowledged in the preamble to the proposed RTR that there are unregulated sources with "no-control" MACT determinations in the PCWP source category, and we stated our plans to address those units in a separate action subsequent to the RTR.[24]

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[20] The Agency is proposing elsewhere, *see e.g.*, 91 FR 21672 (Apr. 22, 2026), that the D.C. Circuit's decision in *LEAN* did not address the separate question whether the statute is best read as mandating that the EPA address any unregulated emission points during the next available technology review. Rather, as proposed, the EPA retains discretion to evaluate whether and at what time to expand the regulatory scope of the NESHAP to include additional emission points, including whether it is appropriate to regulate such additional emission points in the NESHAP for the particular source category at issue or instead as part of a different or new source category. In this final rule, the EPA is regulating emission points excluded from the 2004 rule in response to the D.C. Circuit's 2007 remand in *NRDC*, which held that the Agency had wrongfully excluded these emission points in the first instance from the 2004 rule that established standards for the PCWP source category. Doing so at this time is consistent with the EPA's obligations on remand from NRDC and with the EPA's discretion to address unregulated emission points when appropriate and in an appropriate manner.

[21] *Sierra Club v. EPA*, 479 F.3d 875, 883 (D.C. Cir. 2007).

[22] *NRDC*, 489 F.3d at 1371.

[23] *See id.* at 1375. .

[24] 84 FR 47077-78 (Sept. 6, 2019).

This final rule responds to the partial remand and vacatur of the 2004 rule, the petition for reconsideration of the 2020 RTR, and addresses previously unregulated HAP in the PCWP source category. This final rule establishes new standards that reflect MACT for HAP emitted by process units that are part of the PCWP source category, pursuant to CAA sections 112(d)(2) and (3) and, where appropriate, CAA section 112(h). The EPA is setting "total HAP" standards (defined in the PCWP NESHAP as acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde) for sources with previously vacated "no-control" MACT determinations. In addition to total HAP, the EPA is setting standards for previously unregulated HAP present in the PCWP source category, including non-Hg HAP metals, Hg, HCl, PAH, and D/F as a result of combustion in direct-fired dryers and MDI from processes that use MDI resins and coatings.

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

The EPA originally promulgated the PCWP NESHAP on July 30, 2004.[25] The standards are codified at 40 CFR part 63, subpart DDDD. The PCWP industry consists of facilities engaged in the production of PCWP or kiln-dried lumber. PCWP 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. PCWP manufacturing facilities also include facilities that manufacture dry veneer and lumber kilns located at any facility. PCWP includes (but are not limited to) plywood, veneer, particleboard, oriented strand board (OSB), hardboard, fiberboard, medium density fiberboard (MDF), laminated strand lumber, laminated veneer lumber (LVL), wood I-joists, kiln-dried lumber, and glue-laminated beams. There

[25] 69 FR 45944 (July 30, 2004).

are currently 219 major source facilities that are subject to the PCWP NESHAP, including 93 facilities manufacturing PCWP and 126 facilities producing kiln-dried lumber. A major source of HAP is a plant site that emits or has the potential to emit any single HAP at a rate of 9.07 megagrams (10 tons) or more, or any combination of HAP at a rate of 22.68 megagrams (25 tons) or more per year from all emission sources at the plant site.

The affected source under the PCWP NESHAP is the collection of dryers, refiners, blenders, formers, presses, board coolers, and other process units associated with the manufacturing of PCWP. The affected source includes, but is not limited to, green end operations, refining, drying operations (including any combustion unit exhaust stream routinely used to direct fire process unit(s)), resin preparation, 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 and preparation of raw materials used in the manufacturing 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 kind of facility.

The PCWP NESHAP contains several compliance options for process units subject to the standards: (1) installation and use of emissions control systems with an efficiency of at least 90 percent; (2) production-based limits that restrict HAP emissions per unit of product produced; and (3) emissions averaging that allows control of emissions from a group of sources collectively (only at existing affected sources). These compliance options apply for the following process units: fiberboard mat dryer heated zones (at new affected sources); green rotary dryers; hardboard ovens; press predryers (at new affected sources); pressurized refiners; primary tube dryers; secondary tube dryers;

reconstituted wood product board coolers (at new affected sources); reconstituted wood product presses; softwood veneer dryer heated zones; rotary strand dryers; and conveyor strand dryers (zone one at existing affected sources, and zones one and two at new affected sources). In addition, the PCWP NESHAP includes work practice standards for dry rotary dryers, hardwood veneer dryers, softwood veneer dryers, veneer redryers, and group 1 miscellaneous coating operations (defined in 40 CFR 63.2292).

The 2020 RTR found that the risk associated with air emissions from the PCWP manufacturing industry (including those from lumber kilns and other process units and HAP for which we had not yet responded to the 2007 partial remand and vacatur) are acceptable and that the current PCWP NESHAP provides an ample margin of safety to protect public health. In the 2020 RTR, the EPA concluded that there were no developments in practices, processes, or control technologies that would warrant revisions to the specific standards already promulgated in 2004. In addition to conclusions with respect to the RTR, the 2020 action contained amendments to remove exemptions from the standards during periods of startup, shutdown, and malfunction (SSM). The 2020 RTR amendments added work practices so there would be standards in place of the former startup and shutdown exemptions for three specific events that occur during PCWP production: safety-related shutdowns, pressurized refiner startup/shutdown, and softwood veneer dryer gas-burner relights. Lastly, the 2020 RTR amendments included provisions requiring electronic reporting and repeat emissions testing. In the 2020 RTR, the EPA did not address and reached no conclusions regarding unregulated HAP. The 2020 RTR did not address establishing MACT emissions limits or work practices for the process units or HAP that were the subject of the 2007 D.C. Circuit's partial remand and vacatur of the 2004 rule's "no-control" MACT determinations. Consequently, this is the first rulemaking in which the EPA has

addressed emission limits and work practices for these process units and HAP, since the 2007 ruling.

C. What changes did we propose for the PCWP source category in our May 18, 2023, proposal?

On May 18, 2023, the EPA published a proposal in the *Federal Register* for the PCWP NESHAP, 40 CFR part 63, subpart DDDD to set MACT standards for total HAP, MDI, and combustion-related HAP including non-Hg HAP metals, Hg, HCl, PAH, D/F. Total HAP limits were proposed for fiberboard mat dryers at existing sources, hardboard press predryers at existing sources, and atmospheric refiners at existing and new sources. Limits for non-Hg HAP metals in the form of particulate matter (PM), Hg, HCl, and PAH were proposed for direct wood- and other fuel-fired dryers at existing and new sources. MDI limits were proposed for reconstituted wood product presses using MDI, tube dryers blow-line blending MDI, and miscellaneous coating operations. The proposed rule also included the addition of burner tune-up requirements for all direct-fired PCWP dryers, direct-fired lumber kilns, and associated combustion unit bypass stacks. Work practice standards were also proposed for lumber kilns, stand-alone digesters, fiber washers, log vats, wastewater operations, and resinated material handling (RMH) units, including resin tanks, blenders, formers, reconstituted wood products board coolers at existing sources, plywood presses, engineered wood product presses and curing chambers, finishing sanders, finishing saws, panel trim chippers, humidifiers, and wastewater operations.

The proposed rule included the removal of the emissions averaging compliance option for existing affected sources (not available for new affected sources). The proposed rule also included a requirement for mixed PCWP process streams at existing sources currently meeting the compliance options present in Table 1B of this subpart to continue doing so. Additionally, the proposed rule included a requirement to monitor process unit bypass stack usage at all times; plus, the proposal added emissions testing;

monitoring, reporting, and recordkeeping requirements relevant to the standards being added. The proposal incorporated a revised definition of "pressurized refiner" to clearly distinguish between stand-alone digesters and pressurized refiners. Lastly, the proposed rule included the removal of obsolete date language associated with amendments finalized on August 13, 2020, that are now implemented.

III. What is the rationale for our final decisions and amendments to the PCWP NESHAP?

This action finalizes the EPA's determinations pursuant to the technology review provisions of CAA section 112 for the PCWP source category and amends the PCWP NESHAP based on those determinations. This action also reflects several changes to the May 2023 proposal in consideration of comments received during the public comment period described in section III of this preamble.

Section III.A describes the analytical procedures used to develop the MACT standards we are finalizing. Section III.B discusses the MACT standards we are finalizing for combustion-related HAP from direct-fired PCWP dryers, including rotary strand dryers, green rotary dryers, dry rotary dryers, tube dryers, and softwood veneer dryers. Section III.C discusses the MACT standards we are finalizing for all HAP emitted from lumber kilns. Section III.D discusses the MACT standards we are finalizing for total HAP from various process units other than lumber kilns that also had ''no-control'' MACT determinations in the 2004 rule that were vacated and remanded. Section III.E discusses the MACT standards we are finalizing for process units with MDI emissions, including reconstituted wood product presses, blow-line blend tube dryers, and miscellaneous coating operations. Section III.F discusses the final requirements for performance testing, monitoring, and recordkeeping and reporting. Section III.G discusses other actions we are finalizing. Section III.H discusses the effective and compliance dates of the amendments we are finalizing. Each of these discussions include

a summary of what we proposed, a summary of key comments we received on what we proposed and our responses, and a summary of our final decisions and rationale. Comment summaries for all other comments and the EPA's specific responses can be found in the response to comments (RTC) document.[26]

A. Analytical procedures

The MACT standards finalized in this action were developed pursuant to CAA sections 112(d)(2) and (3) or, when appropriate, CAA section 112(h). When developing MACT standards, the "MACT floor" for existing sources is calculated based on the average performance of the best performing units in each category or subcategory and on a consideration of the variability of HAP emissions from these units. The MACT floor for new sources is based on the emissions levels that are achieved by the best performing similar source, with a similar consideration of variability. For existing sources, the MACT floor is based on the average emission limitation achieved by the best performing 12 percent of sources (for which the EPA has emissions information) for source categories or subcategories with 30 or more sources, or the average emission limitation achieved by the best performing five sources (for which the EPA has or could reasonably obtain emissions information) for categories or subcategories with fewer than 30 sources. The EPA does not consider costs when determining the MACT floor. To account for variability in PCWP manufacturing operations and resulting emissions, we calculated the MACT floors using the 99 percent Upper Prediction Limit (UPL) using performance data collected from two CAA section 114 surveys of PCWP facilities in 2017 and 2022.[27] We

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[26] *National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products (40 CFR Part 63, Subpart DDDD), Response to Public Comments on May 18, 2023 Proposed Amendments*, available in the docket for this rulemaking.

[27] For more information regarding the general use of the UPL and why it is appropriate for calculating MACT floors, see *Use of Upper Prediction Limit for Calculating MACT Floors* (UPL Memo), available in the docket for this rulemaking.

note that the MACT floors for certain existing and new units are based on limited data sets.[28]

Once the UPL is calculated for a pollutant, the representative detection limit (RDL) for the pollutant measurement method is considered, if necessary. The RDL is representative of the laboratory instrument sensitivity and lowest industry-standard method detection limits (MDL) achieved when analyzing air pollutant samples. Consideration of the RDL is necessary when pollutants are measured near or below the detection limit of the analysis method, which was the case for some HAP measured in the 2022 survey. The EPA compares a value of three times the RDL (3xRDL) of the pollutant to UPL values to ensure that the calculated MACT floors account for measurement variability. [29] If the 3xRDL value exceeds the MACT floor UPL, the 3xRDL value is substituted as the MACT floor emission limit to ensure that the standard is set no lower than the minimum level at which emissions can reliably be measured. We applied an established procedure for cases where we had low detection data to handle below detection level (BDL) data and develop RDL data when setting MACT emission limits.[30]

In addition, under CAA section 112(d)(2), the EPA must examine more stringent "beyond-the-floor" regulatory options to determine MACT. Unlike the floor minimum stringency requirements, the EPA must consider various impacts of the more stringent

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[28] *See* the memorandum entitled *Revised Approach for Applying the Upper Prediction Limit to Limited Datasets*, available in the docket for this rulemaking.

[29] The factor of three used in the 3xRDL calculation is based on a scientifically accepted definition of level of quantitation—simply stated, the level where a test method performs with acceptable precision. The level of quantitation has been defined as 10 times the standard deviation of seven replicate analyses of a sample at a concentration level close to the MDL units of the emission standard. That level is then compared to the MACT floor value to ensure that the resulting emission limit is in a range that can be measured with reasonable precision. In other words, if the 3xRDL value were less than the calculated floor (*e.g.*, calculated from the UPL), we would conclude that measurement variability has been adequately addressed by the calculated floor; if it were greater than the calculated floor, we would adjust the emissions limit to comport with the 3xRDL value to address measurement variability.

[30] Westlin, P. & Merrill, R. (2012). *Data and procedure for handling below detection level data in analyzing various pollutant emissions databases for MACT and RTR emissions limits*, available in the docket for this rulemaking.

regulatory options in determining whether MACT standards are to reflect beyond-the-floor requirements. These impacts include the cost of achieving additional emissions reduction beyond that achieved by the MACT floor, any non-air quality health and environmental impacts that would result from imposing controls beyond the floor, and energy requirements of such beyond floor measures. If the EPA concludes that the more stringent regulatory options have unreasonable impacts, the EPA selects the MACT floor as MACT. However, if the EPA concludes that impacts associated with beyond-the-floor levels of control are reasonable considering additional HAP emissions reductions achieved, the EPA selects those beyond-the-floor levels as MACT.

For some process types, it is not feasible to prescribe or enforce a numerical emission standard using the MACT floor and MACT determination approach described in CAA sections 112(d)(2) and (3). According to CAA section 112(h)(1), MACT standards may take the form of design, equipment, work practice, or operational standards if it is not feasible in the judgment of the Administrator to prescribe or enforce an emission standard for control of HAP. To support a determination that it is not feasible to prescribe or enforce an emission standard for control of HAP, CAA sections 112(h)(2)(A) and (B) require the EPA to determine that either: (A) a HAP or pollutants cannot be emitted through a conveyance designed and constructed to emit or capture such pollutant, or that any requirement for, or use of, such a conveyance would be inconsistent with any Federal, State or local law, or (B) the application of measurement methodology to a particular class of sources is not practicable due to technological and economic limitations.

B. MACT standards for direct-fired PCWP dryers

As proposed, the EPA is finalizing standards for two subcategories of PCWP direct-fired dryers: (1) wood and other fuel-fired dryers; and (2) natural gas fuel-fired dryers. We subcategorized PCWP direct-fired dryers by fuel type because wood and

other fuel-fired dryers have different design and combustion-related HAP emissions profiles from those firing natural gas (or propane). We are finalizing the addition of the following definitions to the PCWP NESHAP to delineate the different types of direct-fired PCWP dryers: *PCWP dryer, Direct wood-fired PCWP dryer, and Direct natural gas-fired PCWP dryer.* In addition, we are finalizing the same definition of natural gas used in the NESHAP codified at 40 CFR part 63, subpart DDDDD ("Boiler MACT"). As proposed, the EPA is finalizing a work practice standard requiring annual burner tune-ups for the combustion unit(s) that fire new and existing direct-fired PCWP dryers. The purpose of the annual burner tune-ups is to control all combustion-related HAP that may be emitted from direct natural gas-fired PCWP dryers and control D/F emissions from direct wood-fired dryers. In addition to requiring annual burner tune-ups for all direct-fired dryers, we are also finalizing the proposed requirement for new and existing direct-fired PCWP dryers to continuously monitor an indicator of their combustion unit bypass stack usage such as flow damper position or temperature to address any HAP emitted from combustion bypass stacks associated with direct-fired PCWP dryers. As explained in the preamble, work practice standards for direct-fired dryer bypass stacks are justified because emissions are not technically and feasibly measurable.

1. What combustion HAP standards did we propose for direct wood-fired dryers?

For direct wood-fired PCWP dryers, emission limits for combustion HAP were developed following the approach described in section III.A. The MACT emission limits were developed in mass per production and concentration units to provide compliance options for the various dryer configurations subject to the standards. Mass per production units are pounds of pollutant per thousand square feet (lb/MSF) for softwood veneer dryers and pounds per oven dried ton (lb/ODT) for all other dryer types. Concentration units include grains per dry standard cubic foot (gr/dscf) for PM and milligrams per dry standard cubic meter (mg/dscm) for non-PM pollutants.

The EPA proposed MACT standards for combustion-related HAP (non-Hg metals, Hg, HCl, PAH, and D/F) from direct wood-fired PCWP dryers, which include rotary strand dryers, green rotary dryers, dry rotary dryers, tube dryers, softwood veneer dryers (heated zones), fiberboard mat dryers (heated zones), and hardboard ovens. The EPA proposed PM numerical limits to serve as a surrogate to control non-Hg metals and proposed numerical limits for both mercury and HCl. Additionally, the EPA proposed PAH numerical limits for all direct wood-fired dryers based on an aggregate of 19 PAH compounds which serve as a surrogate for all PAHs in the PCWP source category. Lastly, the EPA proposed a D/F work practice to address D/F emissions from direct wood-fired dryers in the PCWP source category. Some, but not all, changes to the direct-fired standards from the May 2023 proposal are discussed in the remainder of this section.[31] A complete discussion of changes is provided in the RTC document and a docketed memorandum.[32]

2. What comments did we receive on combustion HAP standards for direct wood-fired dryers?

Comment: The EPA received comments on specific data and production values used in our calculations of the proposed PM emission limit for green rotary dryers.

EPA Response: After reevaluating the production values used in the PM UPL calculations for green rotary dryers, and reviewing the technical errors raised by commenters, the EPA agreed with commenters and found that the new and existing source limits for PM required correction due to technical errors. *See* section 3 of the RTC document located in the docket for this rulemaking for these specific comments and our responses regarding revisions.

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[31] 88 FR 31861-67 (May 18, 2023).

[32] *Revised Regulatory Options for Combustion-related HAP from Plywood and Composite Wood Products Direct-Fired Dryers*, available in the docket for this rulemaking.

Comment: With regards to the proposed PAH limits for wood-fired dryers, commenters argued that data quality issues with the PAH data collected in the 2022 survey render the data unsuitable for setting these limits. The commenters requested that the EPA remove the PAH limits based on the collected data and instead rely on the annual burner tune-up work practice to control PAH emissions. The commenters noted the annual burner tune-up work practice to reduce D/F formation would also reduce the formation of PAH.

EPA Response: The EPA agrees, in part, with the commenter's concern over data quality. The EPA has reevaluated the PAH data and concluded the data were acceptable for setting MACT limits after two adjustments. First, we removed one 3-run test with excessive contamination from the final MACT analysis (in addition to a single test run with lab analysis problems we had already removed from the proposed MACT analysis). Second, we removed naphthalene from the MACT floor analysis and from the rule specific definition of PAH at 40 CFR 63.2292 to preemptively address naphthalene contamination issues in future compliance demonstrations.[33] The EPA received sufficient data in the 2022 survey to demonstrate that the remaining 18 PAH congeners serve as an appropriate surrogate for polycyclic organic matter and naphthalene, the listed HAP that PAH standards are intended to regulate.

Comment: Some commenters argued that our proposal to use the 3xRDL value of 3.3E-05 mg/dscm as the PAH limit for wood-fired softwood veneer dryers in the absence of PAH test data was arbitrary and capricious.

EPA Response: The EPA agrees that we lacked adequate data to establish a numerical MACT limit for softwood veneer dryers. Performance data were not collected

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[33] *See* the RTC document and memorandum entitled *Revised Regulatory Options for Combustion-related HAP from Plywood and Composite Wood Products Direct-Fired Dryers*, available in the docket for this rulemaking.

from direct-wood fired softwood veneer dryers in the CAA section 114 survey because softwood veneer dryers were not expected to have the same potential for formation of detectable PAH emissions as direct wood-fired rotary and tube dryers, which operate at higher temperatures under more turbulent conditions. Upon further consideration in response to these comments, we are not finalizing the proposed 3xRDL limit for wood-fired softwood veneer dryers and instead are relying on the burner tune-up standards included in the rule to limit the potential for PAH emissions from wood-fired softwood veneer dryers. However, we require that wood-fired softwood veneer dryers conduct performance testing for PAH emissions along with the compliance tests required for other combustion-related HAPs. Although we do not expect to find detectable PAH emissions, if PAH are detected, these test results could be used during the next eight-year technology review to determine if revision to a numerical standard is warranted.

Comment: One commenter questioned our analysis of D/F toxic equivalency (TEQ) emissions data and proposed that a work practice is justified for D/F from wood-fired dryers because emissions cannot reliably be measured due to the prevalence of non-detects in more than 55 percent of TEQ runs.[34] The commenter suggested that the EPA reevaluate the RDL as a result of D/F test method improvements in recent years and questioned if the EPA should have compared detected TEQ to the 3xRDL value as was done for the proposal.

EPA Response: We maintain that use of the current RDL is appropriate for this rulemaking. The EPA may consider updating the RDL as additional lab experience and data sets become available for a broader set of emission sources using the revised EPA Method 23, which was not finalized at the time of the PCWP CAA section 114 data collection. However, the EPA agrees with commenters that the RDL is not the

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[34] TEQ of dioxin and furan congeners is relative to the toxicity of 2,3,7,8-tetrachlordibenzo-p-dioxin.

appropriate detection value when determining the number of non-detect TEQ runs. We updated our analysis of the detected TEQ to compare to the estimated detection limit (EDL) of 1.8E-02 nanograms per dry standard cubic meter (ng/dscm) instead of 3xRDL to adhere to guidance for evaluating when to establish numerical MACT limits versus establishing work practices.[35] Upon reanalysis, the percentage of non-detect TEQ runs remained the same as proposed for wood-fired rotary strand dryers (100 percent non-detect), dry rotary dryers (100 percent non-detect), and tube dryers (80 percent non-detect). We no longer found that a substantial majority of green rotary dryer TEQ runs were non-detect upon comparison with the EDL. As a result, we are revising the rule to add a numerical limit for D/F from direct wood-fired green rotary dryers based on the emissions data sets available at proposal.

Emissions data for D/F (in terms of TEQ) are available for three out of six direct wood-fired green rotary dryer systems. The UPL MACT floor calculations for existing sources were based on all three systems because fewer than 30 direct wood-fired green rotary dryer systems exist. The UPL MACT floor calculation for new sources was based on the best performing system. The TEQ MACT floor for existing direct wood-fired green rotary dryer systems is 1.3E-09 lb/ODT or 1.7E-01 ng/dscm based on the UPL. The TEQ MACT floor for new direct wood-fired green rotary dryers is 4.4E-10 lb/ODT or 3.7E-02 ng/dscm based on 3xRDL. The 3xRDL value was substituted for the UPL in the new source MACT floor to ensure that the standards are established at the minimum level at which emissions can be measured reliably. The TEQ MACT floors are based on dryers that already have PM and organic HAP controls in series. The burner tune-up requirements required for all direct-fired PCWP dryers are expected to help with meeting

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[35] *See* the June 5, 2014 memorandum entitled *Determination of "non-detect" from EPA Method 29 (multi-metals) and EPA Method 23 (dioxin/furan) test data when evaluating the setting of MACT floors versus establishing work practice standards*, available in the docket for this rulemaking.

the TEQ MACT floors. No options more stringent than the MACT floors were identified for existing or new sources. No reductions in TEQ emissions were estimated for existing or new wood-fired green rotary dryer systems because they are expected to meet the MACT floor with baseline controls and proper tuning.

3. What combustion HAP standards are we finalizing for direct wood-fired dryers

Table 3 of this preamble summarizes the MACT emission limits being finalized for direct wood-fired PCWP dryers.

Table 3—Final Emission Limits for Combustion-Related HAP for Direct Wood-Fired PCWP Dryers[e]

PCWP Dryer	PM (non-Hg HAP metal) limit[a]	Hg limit[a]	HCl limit[a]	PAH limit[a,b]
Rotary strand dryer - existing	9.9E-02 lb/ODT or 3.6E-03 gr/dscf	1.7E-05 lb/ODT or 8.4E-04 mg/dscm	5.8E-03 lb/ODT or 1.5E-01 mg/dscm	1.1E-04 lb/ODT or 9.9E-03 mg/dscm
Rotary strand dryer - new	5.6E-02 lb/ODT or 1.3E-03 gr/dscf	1.7E-05 lb/ODT or 8.4E-04 mg/dscm	1.7E-03 lb/ODT or 9.0E-02 mg/dscm	1.8E-05 lb/ODT or 1.5E-03 mg/dscm
Green rotary dryer - existing	2.9E-01 lb/ODT or 5.2E-03 gr/dscf	1.5E-05 lb/ODT or 1.3E-03 mg/dscm	1.1E-02 lb/ODT or 1.7 mg/dscm	3.2E-04 lb/ODT or 4.2E-02 mg/dscm
Green rotary dryer - new	3.7E-02 lb/ODT or 1.3E-03 gr/dscf	1.1E-05 lb/ODT or 8.4E-04 mg/dscm	2.9E-03 lb/ODT or 9.0E-02 mg/dscm	6.2E-05 lb/ODT or 2.9E-03 mg/dscm
Dry rotary dryer - existing	6.5E-01 lb/ODT or 9.8E-02 gr/dscf	1.0E-05 lb/ODT or 8.4E-04 mg/dscm	1.1E-03 lb/ODT or 9.0E-02 mg/dscm	4.6E-05 lb/ODT or 4.1E-03 mg/dscm
Dry rotary dryer - new	6.0E-01 lb/ODT or 4.6E-02 gr/dscf	1.0E-05 lb/ODT or 8.4E-04 mg/dscm	1.1E-03 lb/ODT or 9.0E-02 mg/dscm	2.2E-05 lb/ODT or 2.1E-03 mg/dscm
Primary tube dryer or secondary tube dryer - existing	3.1E-01 lb/ODT or 3.1E-03 gr/dscf	3.9E-05 lb/ODT or 1.6E-03 mg/dscm	6.4E-03 lb/ODT or 7.4E-01 mg/dscm	3.0E-04 lb/ODT or 1.6E-03 mg/dscm
Primary tube dryer or secondary tube dryer - new	9.1E-02 lb/ODT or 1.3E-03 gr/dscf	3.9E-05 lb/ODT or 8.4E-04 mg/dscm	4.3E-03 lb/ODT or 9.0E-02 mg/dscm	3.4E-06 lb/ODT or 1.8E-06 mg/dscm
Softwood veneer dryer heated zones - existing	7.2E-02 lb/MSF 3/8" or 1.5E-02 gr/dscf	5.8E-05 lb/MSF 3/8" or 4.1E-02 mg/dscm	c	d
Softwood veneer dryer heated zones - new	7.2E-02 lb/MSF 3/8" or 1.5E-02 gr/dscf	5.8E-05 lb/MSF 3/8" or 4.1E-02 mg/dscm	c	d

[a] lb/ODT = pounds per oven dried ton, gr/dscf = grains per dry standard cubic foot, mg/dscm = milligrams per dry standard cubic meter

[b] Naphthalene was not included in the final PAH limits.

[c] HCl was not detected.

[d] A burner-tune up standard applies. See section III.B of this preamble for details.

[e] A burner-tune up standard applies for D/F emissions for all wood-fired PCWP dryers except green rotary dryers which have a numerical D/F limit discussed in section III.B of this preamble.

We are modifying the proposed PAH limits to not include naphthalene. We are not finalizing the proposed PAH limits from softwood veneer dryers and instead are requiring PAH testing to be included in the performance tests of these dryers in addition to the burner tune-up standard. In addition to the limits presented in Table 3 of this preamble, we are revising the rule to add D/F limits for direct wood-fired green rotary dryers based on reanalysis of the D/F data. In addition to adjustments stemming from public comments, we removed data from MACT floor calculations if they were collected from systems that ceased operations since the pre-proposal analysis was completed. This adjustment affected some limits and some mass per production based 3xRDL values. We also updated PM 3xRDL values to reflect the most recent revision to these values.

C. MACT standards for lumber kilns

As explained in the May 2023 proposal, the EPA did not identify any lumber kilns with add-on air pollution controls.[36] We explained that the EPA, as well as State permitting authorities, have evaluated the possibility of capturing and controlling emissions from lumber kilns and in each case concluded that capture and control of lumber kiln emissions is not technically feasible or cost effective for VOC emissions from batch or continuous kilns, and that these previous conclusions are equally relevant for capture and control of HAP. The EPA proposed a work practice standard for lumber kilns based on the criteria in CAA section 112(h), which states that if it is not feasible in the judgment of the Administrator to prescribe or enforce an emission standard for control of a HAP, the Administrator may, in lieu thereof, promulgate a design, equipment, work practice, or operational standard, or combination thereof, which in the Administrator's judgment is consistent with the provisions of CAA section 112(d).

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[36] 88 FR 31867-71 (May 18, 2023).

1. What lumber kilns standards did we propose

To reduce HAP from lumber kilns, we proposed a work practice consisting of four elements: (1) operation and maintenance (O&M) plan for all kilns to maintain the integrity of lumber kiln internal air flow and heat distribution components (*e.g.*, baffles, fans, vents, heating coils, temperature sensors) to provide as uniform a temperature and air flow as reasonably possible; (2) annual burner tune-up for direct-fired kilns to reduce the potential for combustion-related HAP emissions beyond the reduction in these emissions that results from minimizing lumber over-drying; (3) a work practice option in which all kilns limit over-drying by operating below a temperature set point, conducting in-kiln moisture monitoring, or following a site-specific plan (for temperature and lumber moisture monitoring); and (4) minimum kiln-dried lumber moisture content limits below which lumber is considered to be over-dried lumber for all kilns for purposes of the PCWP NESHAP. The May 2023 proposal described each of these elements in detail.[37]

2. What comments did we receive on the proposed lumber kiln standards?

Comment: One commenter argued that the EPA has not shown infeasibility to justify work practice standards over numeric standards for limiting over-drying of lumber at lumber kilns. Other commenters agreed with the EPA's determination that it is not feasible to prescribe or enforce emissions standards for lumber kilns.

EPA response: The EPA determined work practice standards are appropriate because the total volume of emissions cannot be emitted through a conveyance that is designed and constructed to emit or capture HAP emissions. Furthermore, direct measurement of flow rate from batch kilns is not technically feasible because of the numerous vents and changing flow direction. Similarly, continuous dry kilns (CDKs)

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[37] *See* the June 1, 2026 memorandum entitled *Revised Development of National Emission Standards for Hazardous Air Pollutant Emission Standards for Lumber Drying Kilns*, available in the docket for this rulemaking.

have fugitive emissions from their openings that cannot be eliminated while allowing for lumber to enter and exit the kiln. Therefore, the EPA maintains work practice standards for kilns are justified and establishing numerical limits for kilns is not feasible. The work practices included in the final rule are justified under CAA section 112(h) and reflect the maximum degree of emission reduction achieved by existing lumber kilns and the degree of reduction that is achievable based on the EPA's review and analysis of available information.

Comment: Commenters supported the inclusion of O&M plans for kilns but suggested edits to plan requirements. Commenters noted components covered by the O&M plan should not be limited to those listed in the May 2023 proposal; objected to the proposed charge optimization practices to promote uniformity in lumber charged into the kiln (*e.g.*, sizing, sorting, stickering, conditioning); requested to be allowed additional time to complete corrective actions; and requested that the annual kiln inspection be conducted within 13 months of the previous inspection.

Similarly, a commenter requested that the EPA allow burner tune-ups to be performed every 13 months instead of every 12 months to help with process operation or personnel scheduling issues. The commenter also requested that additional language be added to 40 CFR 63.2271(c)(2) to specify that any cleaning, repairs, or replacements must be initiated within 30 days, to remove any interpretation that corrective action must be initiated immediately. This timeframe is consistent with 40 CFR 63.2253(a)(3)(ii) for initiation of the corrective actions identified during the annual lumber kiln integrity inspection in the O&M plan. The commenter did not propose a specific completion timeframe.

EPA response: The EPA agrees that facilities may need an additional month to perform corrective action and in the burner tune-up compliance schedule to accommodate process operations and personnel scheduling issues. In response to these comments, the

EPA revised the O&M plan language. We also revised the rule to allow inspections to occur no later than 13 months after the previous inspection and added language for allowing submittal of a written request to the delegated authority for completing corrective actions after 180 days In response to the commenter's requests, the EPA revised the final rule to allow annual tune-ups and burner/grate inspections to be performed no more than 13 months after the previous tune-up, instead of every 12 months. To address the commenter's concerns regarding the current rule language being silent on the required timeframe of corrective actions and potential delays due to availability of parts, the EPA revised 40 CFR 63.2271(c)(2) to clarify that any corrective action taken as part of the tune-up/inspection must be initiated within 30 days and completed within 180 days following the annual tune-up/inspection identifying the need for the corrective action. The EPA also added language specifying if additional time is necessary to complete corrective actions, an extension request may be submitted through the delegated authority consistent with the O&M requirements.

Comment: Commenters stated that the "temperature set point" option under the proposed work practices should be referred to as the "temperature limit" option. According to the commenter, the EPA has proposed these temperature limits as "temperature set points" but compliance with the proposed temperature set point option would be based on the actual kiln dry bulb temperature readings according to 40 CFR 63.2269(m) and 40 CFR 63.2270(h)(1).

Commenters also requested that compliance with the maximum dry bulb temperatures under this work practice option be demonstrated with a longer averaging period of at least 24 hours, daily or batch to accommodate temperature variation instead of with a three-hour block average as proposed. The commenters noted that shorter averaging periods are impacted by routine temperature fluctuations in the kiln, such as temperature increases during fan reversals, which are a normal part of kiln operation and

not indicative of over-drying. They also noted that facilities hold title V operating permits with 24-hour averaging periods for temperature monitoring.

Commenters requested that the EPA replace the "in-kiln moisture measurement" option with a hybrid option involving both temperature and moisture measurement. The commenters stated that most facilities monitor lumber moisture content after the lumber exits the kiln and cools, per industry guidance. The commenters suggested a hybrid option could apply to most lumber kilns conducting higher temperature drying such as those in the U.S. Southeast. The commenters recommended maximum dry bulb temperature limits of 240 degrees Fahrenheit (°F) for batch indirect-fired kilns, 250 °F for batch direct-fired kilns, and 260 °F for indirect- and direct-fired continuous kilns. Because the hybrid work practice option would include higher temperature limits, commenters suggested that facilities could also monitor moisture content to meet the minimum moisture content limits in the rule. However, under the hybrid option, the moisture content could be measured either in the kiln or after the lumber has exited the kiln (*e.g.*, at the planer).

EPA response: As a result of these comments, to avoid confusion and clarify intent of the proposed standard, the EPA modified the name of this option in the final rule to refer to a "temperature limit" rather than a "temperature set point". The EPA is revising the final rule to require a batch cycle average for batch kilns and a daily (24-hour) block average for continuous kilns for the maximum dry bulb temperature to demonstrate compliance with the work practice standard.

The EPA also agrees with the commentator's request for a hybrid compliance option involving both temperature and moisture measurement. Using the large amount of monitoring data generated at the planer, along with kiln dry bulb temperature is a robust approach to reduce over-drying and is consistent with practices in place at lumber mills.

Therefore, we revised the final rule to replace the in-kiln moisture measurement option with the requested hybrid option.

Comment: Relative to the "site-specific plan" work practice option, commenters requested that the EPA extend the deadline to submit site-specific plans from the 180 days (as proposed) to 18 months to allow time for facilities to properly develop an effective site-specific plan and gather data to support the elements of the plan. One commenter noted that developing a site-specific plan for lumber kilns could reasonably take more than 12 months.

EPA response: The EPA agrees with the commenter that 18 months will allow facilities to properly develop a site-specific plan, therefore, the deadline is being extended to 18 months versus the proposed 180 days (6 months) in the final rule. The EPA acknowledges this extension will shorten the period for delegated authorities to review and approve the plans for over 140 lumber kilns in operation.

Comment: One commenter supported the EPA's general methodology of defining over-dried lumber through the proposed lumber minimum moisture content limits of the proposed Table 11 to Subpart DDDD of Part 63 ("Table 11"). The commenter also agreed with the EPA's description of maximum lumber moisture grade in principle but requested that the term "moisture specification" be used throughout the rule rather than "moisture grade."

EPA response: The EPA agreed and changed the term "moisture grade" to "moisture specification" to eliminate potential confusion.

3. What lumber kiln standards are we finalizing?

After considering comments[38], we are finalizing work practice standards for lumber kilns in 40 CFR 63.2241(e) to reduce HAP emissions by minimizing lumber over-drying. The final work practice consists of four elements: (1) O&M plan for all kilns; (2) annual burner tune-up for direct-fired kilns; (3) a choice of three work practice options including a temperature limit option, hybrid option involving higher temperature limit and lumber moisture monitoring, or site-specific plan for temperature and lumber moisture monitoring; and (4) minimum kiln-dried lumber moisture content limits below which lumber is considered to be over-dried lumber for all kilns for purposes of the PCWP NESHAP.

D. MACT standards for process units with organic HAP emissions

The EPA is finalizing MACT standards for organic HAP emissions from process units that had "no-control" MACT determinations in the 2004 rule that were vacated in 2007. In addition to lumber kilns, these process units include various RMH process units, atmospheric refiners, stand-alone digesters, fiber washers, fiberboard mat dryers at existing sources, hardboard press predryers at existing sources, and log vats. Some of these process units are already subject to new source HAP standards in the PCWP NESHAP, including fiberboard mat dryers, hardboard press predryers, and reconstituted wood product board coolers (which are a type of RMH unit) at new and reconstructed sources. Therefore, limits for these new and reconstructed sources do not need to be established in response to the partial remand and vacatur. Mixed PCWP process streams routed to HAP control devices subject to the current HAP emission limits in Table 1B are also already subject to the PCWP NESHAP. Sections III.D.1 through 6 summarize the

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[38] *See National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products (40 CFR Part 63, Subpart DDDD), Response to Public Comments on May 18, 2023 Proposed Amendments*, available in the docket for this rulemaking for a complete list of comments and responses.

final standards for process units with unregulated organic HAP emissions that were subject to the partial remand and vacatur, the key comments received and our responses, and our final decisions and rationale on the standards for this final action.[39]

1. RMH process units

RMH process units within the PCWP affected source include resin tanks, softwood and hardwood plywood presses, engineered wood product presses and curing chambers, blenders, formers, finishing saws, finishing sanders, panel trim chippers, reconstituted wood product board coolers (at existing affected sources), hardboard humidifiers, and onsite wastewater treatment operations specifically associated with PCWP manufacturing. These process units handle resin or resinated wood material downstream of the point in the PCWP process where resin is applied. The potential for HAP emissions from RMH process units relates to the material being processed (*i.e.*, resin and wood).

a. What RMH standards did we propose?

As explained in the proposal, RMH process units are not designed and constructed in a way that allows for HAP emissions capture or measurement. Therefore, the EPA proposed work practice standards for RMH process units under CAA section 112(h) to address their resin-related emissions and wood-related emissions.

We proposed work practice standards to require new and existing facilities with RMH process units to (i) use only a non-HAP resin,[40] or (ii) use a resin with a maximum true vapor pressure of less than or equal to 5.2 kilopascals (kPa), which is equal to 0.75 pounds per square inch absolute (psia),[41] or (iii) use a combination of resins meeting either (i) or (ii). Facilities with RMH process units would also be required to process

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[39] *See* the RTC document and the June 1, 2026 memorandum entitled *Revised Development of Emission Standards for Remanded Process Units Under the Plywood and Composite Wood Products NESHAP*, available in the docket for this rulemaking.
[40] Defined in 40 CFR 63.2292.
[41] Defined in 40 CFR 63.2292.

wood material that was purchased pre-dried to a moisture content of no more than 30 percent (weight percent, dry basis) or that has been dried in a dryer located at the PCWP facility. The proposed requirement to process dried wood did not apply for wet formers and wastewater operations.

No options more stringent than the RMH process unit work practices were identified for resin tanks, softwood and hardwood plywood presses, engineered wood product presses and curing chambers, blenders, formers, finishing saws, finishing sanders, panel trim chippers, or hardboard humidifiers at new or existing affected sources, or for reconstituted wood product board coolers at existing affected sources. Reconstituted wood product board coolers at new affected sources are already subject to standards under the PCWP NESHAP, so were not addressed by our proposal.

For RMH wastewater operations, the EPA proposed a work practice in addition to the process unit work practice standards that would require facilities with wastewater operations to implement one of the following measures:

- Follow the plan required in 40 CFR 63.2268 for wet control devices used as the sole means of reducing HAP emissions from PCWP process units; or
- Reduce the volume of wastewater to be processed by reusing or recirculating wastewater in the PCWP process or air pollution control system; or
- Store wastewater in a closed system; or
- Treat the wastewater by using an onsite biological treatment system, or by routing the wastewater to an offsite POTW or industrial wastewater treatment facility.

b. What comments on our proposed RMH standards did we receive?

Comment: One commenter questioned the justification of work practice standards for RMH process units.

EPA response: We maintain that work practices developed under CAA section 112(h) are legally justified and are the appropriate format of standard for RMH process

units, because it is not feasible to prescribe or enforce an emission standard for RMH process units.[42, 43]

Comment: Other commenters agreed that work practices are justified under CAA section 112(h) but expressed significant concern about the proposed definition of "non-HAP resin." To reduce implementation uncertainty, the commenters stated that the EPA should focus application of the weight percent limits (0.1 percent for carcinogens and 1 percent for non-carcinogens) on known resin-related HAP and clarify that the limits, which are based on OSHA hazard communication thresholds for reporting, are not cumulative. One commenter also requested that the EPA apply the tiered approach from the amino/phenolic resin NESHAP (based on storage tank capacity) for purposes of setting the vapor pressure limits in the PCWP NESHAP. The commenters asserted that these changes are needed to properly scope the standards to avoid unintended consequences and unaccounted for market impacts to upstream suppliers of resins. Commenters also requested whether the process under 40 CFR 63.6(g) for approval of an alternative non-opacity emission standard could be used in specific situations where it is not feasible to use a non-HAP resin or a resin that meets the vapor pressure standards.[44]

EPA response: The EPA agrees that the definitions around non-HAP resin and the resin requirements require further clarification. The EPA also agrees that the vapor pressure requirements should account for different tank sizes, as suggested by commenters. In this final action we are clarifying the definition of "non-HAP resin" and

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[42] *See* the June 1, 2026 memorandum entitled *Revised Development of Emission Standards for Remanded Process Units Under the Plywood and Composite Wood Products NESHAP*, available in the docket for this rulemaking.

[43] 88 FR 31871-76 (May 18, 2023).

[44] For a complete list of comments and responses on this subject *see National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products (40 CFR Part 63, Subpart DDDD), Response to Public Comments on May 18, 2023 Proposed Amendments*, available in the docket for this rulemaking.

"maximum true vapor pressure" and incorporating a tiered limits for vapor pressure based on resin tank size.

Comment: We received numerous comments opposing the proposed wastewater work practice options. Among other issues, commenters asserted that the definition of "wastewater operations" as proposed goes beyond the PCWP affected source, the EPA did not account for the costs associated with this overly broad definition, and the EPA lacked emissions information to justify the wastewater work practice.

EPA response: The EPA also agrees that, given the broad set of operations included under the proposed wastewater work practice, most of which are not part of the affected source as defined in the current rule, we lacked the authority to impose requirements beyond the defined affected source.

c. What RMH standards are we finalizing?

As a result of the comments, we are updating the proposed definition of "non-HAP resin" in the final rule to focus on the known resin-related HAP and to clarify how the weight percent limits are to be applied. In the final rule, non-HAP resin is defined as "a resin that contains less than 0.1 percent by mass of formaldehyde and less than 1.0 percent by mass each of phenol, methanol, and MDI." Using this definition and following the intent of the May 2023 proposal for the weight percentages to be applied for each HAP, an example resin with 0.5 weight percent phenol and 0.7 weight percent methanol would be considered a non-HAP resin because the 1.0 weight percent threshold is applied to each HAP. Under the vapor pressure option, the final standard contains tiered limits for vapor pressure based on resin tank size consistent with the amino/phenolic resin NESHAP and updating the definition of "maximum true vapor pressure" for the final rule.[45] The final vapor pressure limits for resins received at the PCWP facility are 5.2 kPa

[45] 40 CFR part 63, subpart OOO.

(0.75 psia) for resins stored in resin tanks with capacity greater than or equal to 40,000 gallons and 13.1 kPa (1.9 psia) for resins stored in one or more resin tanks with capacity less than 40,000 gallons. Finally, we note that under the PCWP NESHAP facilities can already request approval of an alternative standard following the process set forth under 40 CFR 63.6(g).[46]

Considering the EPA's proposed overly broad definition of wastewater operations that extends beyond the affected source and that no HAP emission reductions are estimated to be achieved with the wastewater work practices, the EPA is not finalizing the four work practice options for "wastewater operations" that were proposed in addition to the work practice standards for RMH process units. For the final rule, the term "wastewater operations" is being replaced with the wording from the definition of affected source "onsite wastewater treatment operations specifically associated with PCWP manufacturing," in the definition of RMH process units. The resin-related RMH process unit standards apply for "onsite wastewater treatment operations specifically associated with PCWP manufacturing."

2. Atmospheric refiners

Atmospheric refiners operate with continuous infeed and outfeed of wood material and under atmospheric pressure for refining (rubbing, grinding, or milling) wood material into fibers or particles used in particleboard or dry formed hardboard production. Atmospheric refiners are further characterized based on their placement before or after dryers in the PCWP production process. In addition to a definition of "atmospheric refiner," we proposed definitions of "dried wood atmospheric refiner" and "green wood atmospheric refiner" to distinguish atmospheric refiners following dryers in the PCWP

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[46] *See* 40 CFR part 63, subpart DDDD, table 10.

process (*e.g.*, dried wood atmospheric refiners) from other atmospheric refiners (*e.g.*, green wood atmospheric refiners).

a. What atmospheric refiner standards did we propose?

We proposed numerical emission limits for existing and new atmospheric refiners of each type developed pursuant to CAA sections 112(d)(2) and (3) using performance data collected from the CAA section 114 survey of PCWP facilities in 2022. The proposed standards were based on the MACT floor. More-stringent beyond-the-floor options were analyzed and rejected due to the high costs relative to the emission reductions that would be achieved, energy usage, and other non-air quality environmental impacts. Although the more stringent beyond-the-floor options were not proposed, we proposed to include a provision in 40 CFR 63.2240(d)(6) to give facilities the option of complying with the more stringent limits in Table 1B in place of the proposed limits in the proposed Table 1C to Subpart DDDD of Part 63 ("Table 1C") if they choose to meet the more stringent option.

b. What comments on the proposed atmospheric refiner standards did we receive?

Comment: We received several comments noting that the numerical standards were not necessary and suggested using a work practice. Commenters also requested a concentration-based compliance option as well as revisions to the proposed definitions and classifications for atmospheric refiners.

EPA response: The EPA maintains that work practice standards cannot be established for atmospheric refiners under CAA section 112(h) because emissions can be captured, conveyed, and measured. However, the EPA agrees that an additional concentration-based compliance option and clarifying language is needed to reduce uncertainty and confusion with the proposed atmospheric refiner standards.

c. What atmospheric refiner standards are we finalizing?

Due to the requirement for EPA to establish emission standards for atmospheric refiners under CAA sections 112(d)(2) and (3), we are finalizing the numerical standards for atmospheric refiners as proposed. In response to comments received, we are adding concentration-based standards, in addition to the lb/ODT standards. We are modifying the proposed definition for atmospheric refiners to remove reference to wet-formed hardboard and fiberboard. We are also redefining the proposed "green wood atmospheric" and "dried wood atmospheric refiner," terms as "multipurpose atmospheric refiner" and "post-dryer atmospheric refiner," respectively, to eliminate confusion surrounding references to "green" and "dried" wood when the distinction to be made hinges on placement of a subset of refiners after dryers in the PCWP process. In the revised rule, all atmospheric refiners that are not "post-dryer atmospheric refiners" are defined as "multipurpose atmospheric refiners." These definitional changes do not alter the proposed MACT floors for green and dried wood atmospheric refiners because they are consistent with how the MACT floors and MACT were determined.

The final total HAP standards for multipurpose atmospheric refiners are 1.2E-01 lb/ODT or 15 parts per million volume, dry (ppmvd) for existing units and 2.4E-03 lb/ODT or 3.3 ppmvd for new units. The final standards for existing post-dryer atmospheric refiners are 4.1E-03 lb/ODT or 8.5E-01 ppmvd, and 3.3E-03 lb/ODT or 6.5E-01 ppmvd for new units.[47]

3. Stand-alone digesters and fiber washers

Stand-alone digesters are used to steam or water soak wood chips so that they may be easily rubbed apart or ground into fibers in atmospheric separate refiners that

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[47] More information on development of these standards can be found in the memorandum entitled *Revised Development of Emission Standards for Remanded Process Units Under the Plywood and Composite Wood Products NESHAP*, available in the docket for this rulemaking, and in our responses to comments in the RTC document, also available in the docket for this rulemaking.

operate downstream from the digesters. Stand-alone digesters have batch operating cycles that differ from pressurized refiner steaming vessels (sometimes called "digesters") used to preheat wood chips prior to pressurized refining. Pressurized refiner steaming vessels have continuous infeed and outfeed without pressure release between the steaming vessel and refiner part of the pressurized refiner.

Fiber washers are units in which water-soluble components of wood (hemicellulose and sugars) that have been produced during digesting and refining are removed from the wood fiber before the fiber is used in fiberboard or hardboard production. In a fiber washer, wet fiber leaving a refiner is further diluted with water and then passed over a filter, leaving the cleaned fiber on the surface.

One wet/dry process hardboard facility operated a batch stand-alone digester and a fiber washer at the time of the May 2023 proposal. This facility has since ceased operations. No PCWP affected sources are expected to operate stand-alone digesters or fiber washers, but the possibility cannot be entirely ruled out. Thus, standards for these process units are being finalized in this action. Both process units meet the criteria under CAA section 112(h)(2)(B) for establishing a work practice standard because there are technological and economic limitations to measuring emissions.

a. What standards for stand-alone digesters and fiber washers were proposed?

The potential for HAP emissions from stand-alone digesters is reduced when: (1) clean steam from the boiler is used for the digestion process (as opposed to steam potentially contaminated with HAP being reused from another process); and (2) HAP-containing or wood pulping chemicals[48] are not added to the digestion process. Thus, we proposed a work practice requiring clean steam to be used in the digesters and prohibiting

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[48] Wood pulping chemicals added to dissolve lignin in wood include sodium sulfide (Na_2S) in combination with sodium hydroxide (NaOH), sulfurous acid (H_2SO_3) compounds, or sodium sulfite (Na_2SO_3) in combination with sodium carbonate (Na_2CO_3). Lignin removal is not necessary in the hardboard industry where natural lignin helps bind wood fibers in processes where synthetic resins are not used.

addition of HAP-containing or wood pulping chemicals to the digestion process. No regulatory options more stringent than the work practice were identified for further consideration for existing or new stand-alone digesters.

We proposed a work practice for PCWP fiber washers to use fresh water for washing and processing fiber without addition of wood pulping or HAP-containing chemicals.

b. What comments on the proposed stand-alone digester and fiber washer standards did we receive?

Comment: One commenter explained their wet end process uses a large amount of water, which is recycled to optimize the volume of water discharged from the process and balance pH. The commenter requested the EPA eliminate the requirement to use only fresh water for washing because it is technically infeasible.

EPA response: The EPA agrees with the commentator's argument that using fresh water is infeasible due to process design and the increase in volume of wastewater that would result. Therefore, we are not finalizing the requirement to use only fresh water for washing in the work practice standards for fiber washers.

c. What standards for stand-alone digesters and fiber washers are we finalizing?

We are finalizing the proposed definition of "stand-alone digester" and an amendment to the definition of "pressurized refiner" in 40 CFR 63.2292 to distinguish between these two process units. Pressurized refiners are already subject to emission standards in the PCWP NESHAP. We are amending the current definition of pressurized refiner to state that: "Pressurized refiners include steaming vessels that operate under pressure to continuously feed and vent through the pressurized refiner." We are finalizing the stand-alone digester work practice requiring clean steam to be used in the digesters and prohibiting addition of HAP-containing or wood pulping chemicals to the digestion

process. Initial and continuous compliance with the stand-alone digester work practice must be demonstrated through recordkeeping.

We are finalizing the work practice requirement to process fiber without addition of HAP-containing or wood pulping chemicals. Initial and continuous compliance with the fiber washer work practice must be demonstrated through recordkeeping. No regulatory options more stringent than the work practice were identified for further consideration for existing or new fiber washers. No new fiberboard or hardboard mills are projected. Therefore, no new PCWP affected sources are expected to use fiber washers.

4. Fiberboard mat dryers and press predryers at existing sources

Fiberboard mat dryers are conveyor-type dryers used to dry wet-formed fiber mats. Press predryers are used in the wet/dry hardboard process to remove additional moisture from the hardboard mat after it exits the fiberboard mat dryer before the mat enters the hardboard press. The PCWP NESHAP already contains standards for fiberboard mat dryers (heated zones) and hardboard press predryers at new sources.

a. What Fiberboard mat dryers and press predryers did we propose for existing sources?

The EPA proposed standards for the heated zones of existing fiberboard mat dryers and hardboard press predryers. For the fiberboard mat dryer (heated zones), the proposed MACT floor is 4.9E-02 lb total HAP per MSF on a 1/8-inch thickness basis. The MACT floor for the press predryer is 8.0E-02 lb total HAP per MSF on a 1/8-inch thickness basis. The emission limit for each dryer was calculated using HAP test data collected in 2022 through a CAA section 114 survey. These MACT floor calculations were based on limited data sets.[49] The units that were tested in the 2022 survey were at the same wet/dry

[49] *See* the memorandum entitled *Approach for Applying the Upper Prediction Limit to Limited Datasets*, available in the docket for this rulemaking, for details on the EPA's review of the data sets and conclusions regarding appropriateness of the proposed MACT floors.

hardboard facility discussed in section III.D.3, which has ceased operations since the May 2023 proposal was published. The EPA considered beyond-the-floor regulatory options for both dryers, but these options were rejected because of the high costs relative to the HAP emission reduction that could be achieved, energy usage, and other non-air quality environmental impacts.

b. What comments did the EPA receive on the proposed standards for Fiberboard mat dryers and press predryers?

Comment: The EPA received comments supporting and opposing the proposed emission limits for fiberboard mat dryers and press predryers. One commenter recommended that the EPA rely on data from sources with controls that have ceased operation to set MACT standards instead of data from the only remaining units in operation at the time of proposal, which were uncontrolled. The commenter argued that the EPA contravenes the CAA by setting weaker standards using data from this single source when previously existing sources were better performing. A different commenter supported the proposed MACT analysis and emission limits and requested a change to the definition of fiberboard mat dryer to clarify applicability for units producing wet/dry hardboard. Another commenter asked the EPA to specify the emission standards for existing fiberboard mat dryers and press predryers in Table 1C on both a 1/8-inch and 1/2-inch basis for consistency with Table 1A to Subpart DDDD of Part 63 ("Table 1A") and asked the Agency to clarify the dates in Table 1C.

EPA Response: We disagree with the commenter's statement that development of these limits contravenes the CAA. According to CAA section 112(d)(3)(B), the MACT floor for existing sources is the average emission limitation achieved by the best performing five sources (for which the Administrator has or could reasonably obtain emissions information) in a category or subcategory with fewer than 30 sources. The D.C. Circuit has affirmed that CAA section 112 "says nothing about what data the

Agency should use to calculate emission standards."[50] The EPA followed the law when developing the MACT floors for fiberboard mat dryers and hardboard press predryers based on the emission data from the source remaining in operation at the time of the 2022 section 114 survey.[51] The most complete and relevant data on fiberboard mat dryer and press predryer emissions were collected during this survey. As noted in this section, the EPA did consider beyond-the-floor measures for both the fiberboard mat dryer and press predryer based on control technology and rejected these options for both dryers because of the high costs relative to the HAP emission reduction that could be achieved, energy usage, and other non-air quality environmental impacts.

c. What standards for Fiberboard mat dryers and press predryers are we finalizing?

After considering comments, we are finalizing the proposed standards for existing source fiberboard mat dryers and press predryers as proposed. We modified the proposed Table 1C to include the 1/8-inch limits converted to equivalent values in terms of 1/2-inch. We added a footnote to the table to clarify that the existing source limits are not applicable to new sources, which have their own limits from the 2004 rule in Tables 1A or 1B to Subpart DDDD of Part 63. Regarding the other changes requested by commenters, we clarified the definition fiberboard mat dryer applies to dryers in the wet/dry hardboard process.

5. Log vats

Log vats are used to condition logs before they are cut into veneer or wood strands. Hot water vats in which logs are immersed are often open to the atmosphere. In log steaming or "chest" vats, logs are placed in the vat in batches, the door is closed, and

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[50] *Nat'l Lime Ass'n v. EPA*, 233 F.3d 625, 632-33 (D.C. Cir. 2000).

[51] The Agency is proposing elsewhere to rely on information from the time of the original NESHAP rulemaking to avoid unfairly subjecting previously unregulated emission points to more stringent standards than would have been adopted if the EPA had set MACT floors in the 2004 rule. *See* 91 FR 21672 (Apr. 22, 2026). This rulemaking does not raise the same equity concerns because sources are not subject to more stringent standards than would have been adopted in 2004.

steam (which condenses in the vat) along with hot water sprays are used to condition the logs for a specified time before the logs are removed for veneer production. The EPA is finalizing the proposed definition for "log vat" in 40 CFR 63.2292 that applies to both hot water and log steaming vats.

a. What log vat standards did the EPA propose?

We proposed a work practice standard based on CAA section 112(h)(2)(A) and (B) for log vats at existing or new sources because log vats have neither the proper emissions capture and conveyance ductwork nor stacks where emissions testing could be conducted. The proposed work practice standard would require facilities to: (a) operate each vat using a site-specific target log temperature that does not exceed 212 °F, measured in the water used to soak the logs or in the wood cut at the lathe or stranders; and (b) operate each vat to reduce the potential for fugitive emissions by either: (1) covering at least 80 percent of the vat hot water surface area for soaking vats in which logs are submerged; or (2) keeping doors closed while steam or hot water showers are being applied inside log steaming vats.

b. What comments on the proposed log vat standards did we receive?

Comment: One commenter opposed distinguishing between hot water vats and log steaming vats and questioned the EPA's justification for using work practice standards over numeric standards for log vats. Other commenters agreed log vats are eligible for work practice standards but recommended changes in the proposed work practice standards pertaining to the potential for fugitive emissions. The commenters stated that covering logs in log vats can create health and safety concerns and hinder operations. They noted operators with steam vats already close the doors during steaming/spraying as standard procedures, making this requirement redundant.

EPA Response: As discussed in a docketed memorandum, the EPA has concluded that work practice standards for log vats are justified given the technical

limitations and measurement infeasibilities.[52] The EPA has also noted the safety concerns raised by commenters, and agrees that requiring an 80 percent log vat cover would interfere with operations and potentially lead to health and safety concerns.

c. What log vat standards are we finalizing?

As a result of the concerns raised by commenters on the proposed work practice standards, we are finalizing the temperature limitation work practice but not the requirement to cover at least 80 percent of the hot water surface or keep doors of log steaming vats closed. This change also eliminates the distinction in hot water and steaming vats.

6. Mixed PCWP process streams regulated at existing sources

Some PCWP facilities route emission streams from multiple process units of the same or different types into one shared HAP control system such as a regenerative thermal oxidizer (RTO), regenerative catalytic oxidizer (RCO), biofilter, or process incineration system to meet the compliance options in Table 1B. In a few mixed process arrangements, an emissions stream from a remanded unit was mixed at the inlet to a HAP control device and co-controlled with other process units listed in Table 1B such that the combined emission stream became subject to the Table 1B limits when the control system was initially installed to meet the PCWP NESHAP or as part of the PCWP plant design. Due to the mixing of emissions from each individual type of process unit, the PCWP process stream cannot be distinguished at the inlet or outlet of the control device.

a. What standards did we propose for mixed process streams?

We proposed a requirement that mixed PCWP process streams from remanded units meeting the compliance options in Table 1B be treated as a separate type of

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[52] *See* the June 1, 2026 memorandum entitled *Revised Development of Emission Standards for Remanded Process Units Under the Plywood and Composite Wood Products NESHAP*, available in the docket for this rulemaking.

emission stream that remains subject to the Table 1B limits. Mixed PCWP process streams are defined in 40 CFR 63.2292 as an emission stream from a process unit subject to the final amendments that was commingled with emissions stream(s) from process unit(s) subject to the compliance options in Table 1B before **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]** at an affected source that commenced construction (or reconstruction) on or before May 18, 2023. The definition of "mixed PCWP process stream" refers specifically to a "stream" as opposed to a whole process unit because there can be uncaptured or uncontrolled emissions from a remanded process unit in addition to the captured emission stream from the remanded unit that is routed to the HAP control device as part of a mixed PCWP process stream.

b. What comments on the proposed mixed PCWP process stream limits did we receive?

Comment: Two commenters agreed with the EPA's proposal that mixed PCWP process streams continue to meet compliance options in Table 1B. One commenter requested the Notice of Compliance Status (NOCS) for mixed PCWP process streams be due within a short timeframe after publication in the *Federal Register* (*e.g.*, 30 or 60 days) rather than on the date of publication.

EPA Response: We acknowledge commenters support for the proposed requirement that mixed PCWP process streams comply with options in Table 1B. We agree that 30 days would allow facilities the necessary time to create and submit their NOCS.

c. What mixed PCWP process stream limits are we finalizing?

In response to these comments, we are finalizing requirements for the mixed PCWP process streams as proposed with the exception that the NOCS shall be due no later than 30 days after the date of publication.

E. MACT standards for process units with MDI emissions

The EPA is finalizing standards to regulate MDI emissions from reconstituted wood product presses using MDI, tube dryers that blow-line blend MDI resin, and miscellaneous coating operations. Sections III.E.1 through 3 summarize the final standards, the key comments received and our responses, and our final decisions and rationale on the standards for this final action. A complete discussion of changes from the May 2023 proposal can be found in the RTC document and a docketed memorandum.[53]

1. Reconstituted wood product presses

a. What reconstituted wood product press MDI standards did we propose?

The EPA proposed MDI emission standards for reconstituted wood product presses that produce OSB and for reconstituted wood product presses that produce particleboard or MDF (PB/MDF). We developed separate standards because product differences affect MDI emissions.

For OSB presses, the proposed MACT standards for both new and existing sources are based on 3xRDL for MDI, which exceeded the calculated MACT floor. The 3xRDL values were substituted for the calculated MACT floor to ensure that the standards are established at the minimum level at which emissions can be measured reliably. The proposed MACT standards for new and existing OSB presses are 2.5E-04 lb MDI/MSF 3/4" (1.3E-04 lb/MSF 3/8") or 2.7E-02 mg MDI/dscm.

The proposed MACT floor for existing PB/MDF presses using MDI is 8.4E-04 lb/MSF 3/4" or 2.0E-01 mg MDI/dscm. For new sources, the 3xRDL values exceeded the calculated MACT floor concentration and emission rate. Therefore, the 3xRDL values were used in place of the calculated MACT floor for new source PB/MDF presses using

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[53] *See* the June 1, 2026 memorandum entitled *Revised Regulatory Options for MDI Emissions from Plywood and Composite Wood Products Reconstituted Wood Products Presses, Tube Dryers, and Miscellaneous Coating Operations*, available in the docket for this rulemaking.

MDI to ensure that the standards are established at the minimum level at which emissions can be measured reliably. For new PB/MDF presses the MDI proposed MACT limit based on the 3xRDL values is 2.3E-04 lb MDI/MSF 3/4" or 2.7E-02 mg MDI/dscm.

Considering the low levels of MDI emitted and that reconstituted wood product presses already meet HAP limits in the PCWP NESHAP using robust HAP controls, no regulatory options more stringent than the existing or new source MACT floors for MDI were identified for OSB or PB/MDF reconstituted wood product presses.

b. What comments on the proposed MDI reconstituted wood product press standards did we receive?

Comment: The EPA received comments supporting and opposing subcategorization of reconstituted wood product presses for purposes of limiting MDI.

EPA response: The EPA maintains subcategorizing reconstituted wood product presses using MDI by product is within the EPA's authority in CAA section 112(d)(1), which states, "The Administrator may distinguish among classes, types, and sizes of sources within a category or subcategory in establishing standards." The manner and type of press operation are distinct between products. Depending on the product type (*i.e.*, OSB, or PB/MDF), presses require different operating temperatures (*e.g.*, OSB is pressed at higher temperature) and feed stocks (*e.g.*, OSB are created with larger wood strands), which affect emission rates. Therefore, subcategorizing by product is appropriate.

Comment: The EPA also received a comment stating that it is unnecessary for the EPA to set numerical standards for MDI, and that MDI emissions would be more appropriately regulated under the work practice for RMH process units.

EPA response: We maintain that the EPA is required to set standards for HAP such as MDI that are known to be emitted from reconstituted wood products presses. Reconstituted wood products presses do not meet the criteria under CAA section 112(h) for establishing work practices.

c. What MDI reconstituted wood product press standards are we finalizing?

The EPA is finalizing the proposed MDI MACT limits for reconstituted wood product presses. The EPA is maintaining the designated subcategorization based on the product type, as described above. Reconstituted wood product presses operating HAP controls are expected to meet the MACT floor for existing and new sources. However, it is currently unknown whether presses at two particleboard facilities that meet the PCWP production-based compliance option (PBCO) using pollution prevention measures would meet the MDI MACT floor.[54,55]

2. Tube dryers

Primary tube dryers often incorporate blow-line blending in which resin is added to wood fibers as they enter the primary tube dryer. The resin and wood fibers mix with the turbulent conditions in the primary tube dryer as the wood fiber is dried. Primary and secondary tube dryers are often co-controlled. Primary tube dryers may also be co-controlled with a reconstituted wood product press.

a. What MDI standards did the EPA propose for tube dryers?

The proposed MACT standard for MDI from new and existing tube dryers is 1.7E-02 lb/ODT or 0.68 mg MDI/dscm. This standard is based on the MACT floor. No regulatory options more stringent than the MACT floor were identified for tube dryers that blow-line blend MDI.

b. What comments on the proposed MDI standard for tube dryers did we receive?

Comment: One commenter indicated MDI standards for tube dryers are not necessary because all tube dryers with blow-line blending MDI resin are equipped with

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[54] Table 1A to subpart DDDD of 40 CFR part 63 contains the PBCO total HAP limits.

[55] *See* the June 1, 2026 memorandum entitled *Revised Cost, Environmental, and Energy Impacts of Subpart DDDD Regulatory Options*, available in the docket for this rulemaking, for additional discussion the on impact of this action.

HAP emissions controls and the standard will only serve to incur an additional cost of emissions testing every five years with no environmental benefit.

EPA response: The EPA disagrees with the commenters claim that MDI standards for tube dryers are not necessary. Tube dryers blow-line blending MDI were identified as one of the primary sources of MDI emissions in the PCWP source category in the 2020 RTR.[56] Further, source testing in 2022 identified MDI emissions from an RTO-controlled tube dryer to be above the detection limit. For these reasons, establishing standards for tube dryers is appropriate.

c. What MDI standards are we finalizing for tube dryers?

The EPA is finalizing the proposed MACT standard for MDI from new and existing tube dryers. The MACT standard for tube dryers is 1.7E-02 lb/ODT or 0.68 mg MDI/dscm.

3. Miscellaneous coatings operations

a. What MDI standards did we propose for miscellaneous coatings operations?

The EPA proposed MDI emission standards for miscellaneous coating operations in which MDI moisture sealants are applied to engineered wood products such as parallel strand lumber or LVL.

b. What comments did the EPA receive on the proposed MDI standards for miscellaneous coatings operations?

Comment: Commenters questioned the necessity of the MDI numerical limit and requested reduced testing frequency for the MDI coating operation.

EPA response: The EPA maintains the standard is required to ensure MDI is properly regulated across miscellaneous coatings operations. Emissions from this source are measurable and capturable; therefore, they do not meet the criteria under CAA section

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[56] 85 FR 49434 (Aug. 13, 2020).

112(h) for establishing a work practice. See section III.F for an explanation of EPA's performance testing, monitoring, and recordkeeping and reporting requirements

c. What MDI standards did we finalize for miscellaneous coatings operations?

The final MACT limit for existing and new sources is 1.9E-03 lb MDI emitted/lb sealant applied, or 1.4E-05 lb MDI/ft^2 surface area coated based on coating HAP content. The limit is based on the MACT floor. No options more stringent than the MACT floor emission level were identified for further analysis. The EPA is finalizing the five-year testing frequency, as proposed.

F. Requirements for performance testing, monitoring, and recordkeeping and reporting

1. Performance testing

No comments were received on the proposed emission test methods included in Table 4 to Subpart DDDD of Part 63 ("Table 4"). We are finalizing the proposed methods without change. The final emissions test methods for total HAP include EPA Method 320,[57] NCASI Method IM/CAN/WP-99.02,[58] NCASI Method ISS/FP-A105.0,[59] or ASTM D6348-12e1[60] with the conditions discussed in section V.J of this preamble. EPA Method 326[61] is required for MDI emissions measurement, in which a minimum sample of 1 dscm must be collected. For PM as a surrogate to HAP metals, either EPA Method 5[62] or EPA Method 29[63] is required with a minimum sample volume of 2 dscm. For Hg, EPA Method 29 or EPA Method 30B[64] are required, with a minimum sample volume of 2 dscm for EPA Method 29. EPA Method 26A[65] was proposed for HCl emissions measurement with a minimum sample volume of 2 dscm. The recently updated

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[57] Appendix A to 40 CFR part 63.
[58] IBR in 40 CFR 63.14.
[59] IBR in 40 CFR 63.14.
[60] IBR in 40 CFR 63.14.
[61] Appendix A to 40 CFR part 63.
[62] Appendix A-3 to 40 CFR part 60.
[63] Appendix A-8 to 40 CFR part 60.
[64] Appendix A-8 to 40 CFR part 60.
[65] Appendix A-8 to 40 CFR part 60.

EPA Method 23[66] is required for PAH and D/F emission measurement with a minimum sample volume of 3 dscm. Consistent with the treatment of non-detect data used to establish the emission standards, we are finalizing a requirement that non-detect data be treated as the MDL in test averages used to demonstrate compliance with the standards in Table 1C, Table 1D to Subpart DDDD of Part 63 ("Table 1D"), or Table 1E to Subpart DDDD of Part 63 ("Table 1E"). We are revising the rule to add Table 12 to Subpart DDDD of Part 63 ("Table 12") to provide the toxic equivalence factors (TEFs) to multiply by the individual D/F congener test results to determine TEQ.[67] In addition, we are adding EPA Method 9[68] to the rule for use in conjunction with pressure drop monitoring across mechanical collectors and other dry control devices.

a. What performance testing frequency did we propose?

For the new and existing source emission limits being added to the PCWP NESHAP, we proposed that performance testing would be required every 5 years (60 months).

b. What comments did we receive on the proposed performance testing frequency?

Comment: Multiple commenters expressed concern about the proposed five-year frequency of emissions testing. One commenter argued that testing every five years is too infrequent to ensure compliance and recommended semiannual testing or a continuous emission monitoring system (CEMS). Other commenters requested the EPA allow performance testing of PAH, HCl, and Hg be one time sampling events rather than repeated every five years considering the high costs of testing, complexity of test methods, and lack of laboratory availability for these trace compounds.

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[66] Appendix A-8 to 40 CFR part 60.
[67] U.S. Environmental Protection Agency. (2010). *Recommended Toxicity Equivalence Factors (TEFs) for Human Health Risk Assessments of 2,3,7,8-Tetrachlorodibenzo-p-dioxin and Dioxin-Like Compounds*: https://www.epa.gov/sites/default/files/2013-09/documents/tefs-for-dioxin-epa-00-r-10-005-final.pdf.
[68] Appendix A-4 to 40 CFR part 60.

EPA response: Regarding the assertion that stack testing every five years cannot ensure compliance, we note that demonstration of compliance is not accomplished by performance testing alone but is paired with ongoing parametric monitoring established during performance testing to show compliance with the emission limits. Routine performance testing is necessary to provide periodic verification of the operation of control devices and to ensure the parametric monitoring remains relatable to actual emissions. We maintain that the proposed testing frequency, in combination with required parametric monitoring, is sufficient to ensure compliance and that CEMS are unnecessary for PCWP standards being finalized.

c. What performance testing requirements are we finalizing?

The final rule requires initial performance tests to be completed within 180 days after the compliance date for the new standards and subsequent performance testing every five years (60 months), thereafter.

2. Parameter monitoring

The preamble for the May 2023 proposal described the proposed parametric monitoring requirements in detail.[69] After reviewing public comments, we are finalizing the parametric monitoring requirements substantially as proposed with the following key changes:

- We are allowing the owner or operator to monitor pressure drop weekly opacity observations in lieu of continuous opacity monitoring system (COMS) for mechanical collectors (or other dry control devices not otherwise mentioned in Table 2 to Subpart DDDD of Part 63 ["Table 2"]) to demonstrate continuous compliance with PM limits.

[69] 88 FR 31878-79 (May 18, 2023).

- We are clarifying language in Table 10 to Subpart DDDD of Part 63 "Table 10" to require the notification and reporting requirements for performance evaluations for only COMs and CEMS, although we are retaining the requirement to perform performance evaluations on other continuous parameter monitoring systems (CPMS).
- We have corrected typographical errors related to electrified filter bed (EFB) monitoring by clarifying that only voltage monitoring is required for EFB.
- We changed the semiannual flow sensor calibration to an annual calibration, which is consistent with other calibration requirements throughout the rule.
- We are amending the rule to include language specifying when pressure drop is to be monitored.

For more details and our rationale surrounding these changes and other minor changes to the monitoring requirements, please see the RTC document in the docket for this action. The final monitoring requirements are summarized in this section.

Continuous compliance with the standards proposed in Tables 1C, 1D, or 1E must be demonstrated through control device parameter monitoring coupled with the proposed periodic emissions testing described in section III.F.1. The parametric monitoring already required in Table 2 for thermal oxidizers, catalytic oxidizers, or biofilters to demonstrate continuous compliance with the compliance options in Table 1B is also required to demonstrate ongoing compliance with the standards in Tables 1C, 1D, or 1E. In addition to the parametric monitoring currently specified for thermal oxidizers, catalytic oxidizers, or biofilters, the amendments to Table 2 as revised by this final action include the following parameter monitoring requirements for the types of air pollution control devices (APCDs) that we expect to be used to comply with the standards in Tables 1D or 1E:

- For wet electrostatic precipitator (WESP), secondary electric power input and liquid flow rate;
- For dry electrostatic precipitator (ESP), secondary electric power input or opacity;
- For wet PM scrubbers, liquid flow rate and pressure drop;
- For wet acid gas scrubbers, liquid flow rate and effluent pH;
- For EFBs, ionizer voltage or current and pressure drop; and
- For mechanical collectors (*e.g.*, cyclone or multiclone) or other dry control devices, a choice of opacity monitored using a COMS or pressure drop with weekly opacity observations.

The operating limits for these parameters must be established consistently with the existing provisions of 40 CFR 63.2262, as the average of the three test run averages during the performance test. Continuous compliance with the parameters for WESP, dry ESP, wet scrubbers, and EFB must be determined by comparing the three-hour block average parameter average to the limit established during the performance test.

Consistent with existing provisions in Table 2, the rule is amended to require that a source owner choosing to rely on a control device other than a thermal oxidizer, catalytic oxidizer, or biofilter used to meet a compliance option in Table 1C petition the Administrator for site-specific operating parameters to be monitored or to maintain the three-hour block average total hydrocarbon (THC) concentration within the limits established during the performance test. The source owner of process units that meet a compliance option in Tables 1C, 1D, or 1E without using a control device must maintain on a daily basis the process unit controlling operating parameter(s) within the ranges established during the performance test or maintain the three-hour block average THC concentration within the limits established during the performance test.

For control devices where opacity is used as an operating parameter, a COMS is required, and the 24-hour block average opacity must not exceed 10 percent (or the

highest hourly average measured during the performance test). Table 10 indicates that the requirements for opacity standards in 40 CFR 63.6(h)(2) through (9) do not apply because opacity is an operating limit and not an emission standard.

Continuous monitoring requirements associated with the work practices in Table 3 to Subpart DDDD of Part 63 ("Table 3") include combustion unit bypass stack usage monitoring (*e.g.*, temperature or bypass damper position), lumber kiln dry bulb temperature monitoring for comparison with the batch average or daily block average dry bulb temperature limit, monitoring of lumber moisture (with semiannual averaging) for comparison to lumber minimum moisture content limits in Table 11, or monitoring of lumber kiln temperature (with 3-hour block averaging) and lumber moisture (with semiannual averaging) for comparison to limits in an approved site-specific plan.

We are finalizing as proposed a requirement to continuously monitor process unit bypass stack usage at all times while the process units are operating, including times when the process unit is undergoing startup or shutdown, and during the operating conditions as specified in 40 CFR 63.2250(f)(2) through (4). This requirement is included to ensure that reliable data are available to evaluate continuous compliance with the PCWP NESHAP requirements.

Consistent with NESHAP general provisions at 40 CFR part 63, subpart A, a source owner is required to operate and maintain the source, its air pollution control equipment, and its monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, to include operating and maintaining equipment in accordance with the manufacturer's recommendations. Owners are required to prepare and keep records of calibration and accuracy checks of the continuous monitoring system (CMS) to document proper operation and maintenance of the monitoring system.

3. Recordkeeping and reporting

The EPA received no significant comments on the recordkeeping requirements, so they are being finalized as proposed. A source owner is required to submit semi-annual compliance summary reports that document both compliance with the requirements of the PCWP NESHAP and any deviations from compliance with any of those requirements, consistent with existing requirements in the PCWP NESHAP. Owners and operators are required to maintain the records specified by 40 CFR 63.10 and, in addition, are required to maintain records of all monitoring data, in accordance with the PCWP NESHAP.[70]

G. Other actions

We are finalizing revisions to the PCWP NESHAP to remove obsolete rule language including the emissions averaging compliance option for existing affected sources, dates, and startup/shutdown provisions that are no longer in effect. Removing the outdated language from the PCWP NESHAP streamlines the rule and makes it easier to read. We are also finalizing updates and clarifications of the electronic reporting requirements. In addition, we reviewed issues raised by reconsideration petitioners following the 2020 RTR. The final revisions and rationale are presented in this section.

1. Emissions averaging

Emissions averaging was included in the 2004 rule as a compliance option for use at existing affected sources. We proposed to remove the emissions averaging compliance option in the May 2023 proposal because no existing facilities are using it, and emissions averaging is not an option for new affected facilities. The only facility to use the option has now ceased PCWP production. Also, the new emission standards being added for process units and HAP subject to the 2007 partial remand and vacatur with this action further diminish opportunities for emissions averaging, and removing the emission

[70] 40 CFR 63.2282.

averaging language simplifies the rule. Two commenters agreed with removing the emissions averaging option and no commenters objected. Therefore, we are removing the emissions averaging option from the PCWP NESHAP in this final action.

2. Obsolete dates and provisions

On August 13, 2020, the EPA published several amendments to the PCWP NESHAP with corresponding compliance dates for transitioning from obsolete provisions that have since passed.[71] This final rule contains additional amendments with multiple associated dates discussed in section III.H of this preamble. We proposed in the May 2023 proposal to remove the obsolete dates and provisions that are no longer in effect to improve clarity of the PCWP NESHAP, including:

- In 40 CFR 63.2233(1) through (3), cross-references to specific paragraphs needed to implement the 2020 RTR amendments were proposed to be removed and replaced with a reference to the proposed 40 CFR 63.2233(e), which provides compliance dates for the rule requirements proposed in this action.
- Paragraphs 40 CFR 63.2250(a) through (c) were proposed to be removed and reserved because their requirements no longer apply.
- Date language was proposed to be removed in paragraphs 40 CFR 63.2250(f) and (g), which are paragraphs that replaced the obsolete paragraphs 40 CFR 63.2250(a) through (c) in the 2020 RTR amendments.
- Paragraphs 40 CFR 63.2280(b) and (d) contained dates for when electronic submittal of initial notifications and performance test results became effective. 40 CFR 63.2281(b)(6) contained dates for when electronic submittal of semiannual reports became effective. These dates have passed, and the electronic reporting

[71] 85 FR 49434 (Aug. 13, 2020).

requirements are in full effect, so we proposed to remove dates to make the rule easier to read.

- The first part of paragraph 40 CFR 63.2281(c)(4) contains dates for language that was phased out as well as dates for when electronic reporting requirements were phased in. Similarly, 40 CFR 63.2282(a)(2) contains obsolete dates and language intended to phase out some records and phase in other records. We proposed to remove the obsolete language to simplify the rule because the dates have now passed.
- Row 2 in Table 9 to Subpart DDDD of Part 63 was proposed to be removed and reserved because the requirement for an SSM report is no longer in effect.
- The 2020 RTR amendments added a column to Table 10 to clarify which general provisions in 40 CFR part 63, subpart A applied before and after August 13, 2021, for existing sources. The now obsolete column pertaining to requirements before August 13, 2021, was proposed to be removed. Those amendments pertain to SSM provisions that were removed and to reporting provisions that were added on August 13, 2020.

For clarity, we are retaining date language from the 2020 RTR that specified compliance dates for standards and electronic reporting provisions added with that rulemaking. We have also taken care to insert compliance date language for the new standards finalized in this action as discussed further in section III.H of this preamble.[72]

We received no substantial comments on removal of the obsolete dates and provisions. Therefore, we are finalizing the changes as proposed.

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[72] 40 CFR 63.2240(d) and (e), tables 1C, 1D, 1E to subpart DDDD of 40 CFR part 63, 40 CFR 63.2241(d) through (g), and table 3 to subpart DDDD of 40 CFR part 63.

3. Electronic reporting updates and clarifications

On November 19, 2020, the EPA published a final rule incorporating standard electronic reporting language into the general provisions at 40 CFR 63.9(k). We proposed to update the electronic reporting language in 40 CFR part 63, subpart DDDD, to refer to the provisions in 40 CFR 63.9(k) in addition to other revisions. The proposed revisions are as follows:

- We proposed to require that initial notifications and notifications of compliance status be submitted in a user-specified format such as PDF in 40 CFR 63.2280(b) and (d) instead of 40 CFR 63.2281(h).
- General provisions pertaining to submittal of CBI were proposed to be removed from 40 CFR 63.2281(h), (i)(3), and (j)(3).
- In 40 CFR 63.2281(k), we proposed to replace language pertaining to Compliance and Emissions Data Reporting Interface (CEDRI) outageswith additional detailed procedures for submitting CBI in electronic format.[73] The update provides an email address that source owners and operators can use to electronically mail CBI to the Office of Clean Air Programs (OCAP) CBI Office when submitting compliance reports.
- In 40 CFR 63.2281(l), we proposed to remove the provisions related to force majeure claims which are now in 40 CFR 63.9(k).
- We proposed to remove the provision in 40 CFR 63.2283(d) that states that records submitted to CEDRI may be maintained in electronic format, because 40 CFR 63.10(b)(1) already allows the retention of all records electronically.
- In Table 10, we proposed to indicate that all of the provisions in 40 CFR 63.9(k) apply to 40 CFR part 63, subpart DDDD.

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[73] Now in 40 CFR 63.9(k).

In addition, we proposed to amend 40 CFR 63.2281(c)(4) to clarify the compliance reporting requirements for the work practices in Table 3 (rows 6, 7, or 8). The EPA proposed to clarify that the requirement to report the date, time, and duration of every instance in which one of the work practices is used applies only if that individual work practice is used for more than 100 hours during the reporting period. The EPA's original intent was for the 100-hour reporting threshold to be compared to the semiannual usage of each of the three work practices individually, not for the total usage of all three work practices combined. As stated in 40 CFR 63.2281(c)(4), when one of the work practices is used for less than 100 hours per semiannual reporting period, a summary of the number of instances and total amount of time that work practice was used is required to be reported. As noted in section III.F.2 of this preamble, we also proposed to require continuous monitoring and recording of process unit bypass stack usage at all times including during the operating conditions specified in 40 CFR 63.2250(f)(2) through (4) and Table 3 (rows 6, 7, or 8) to ensure that reliable data are available to evaluate continuous compliance with the PCWP NESHAP requirements.

One commenter offered comments on the updated CEDRI reporting template provided with the May 2023 proposal and requested an additional opportunity to review the template before it is finalized.[74] The commenter's recommendations and the EPA's responses are provided in the RTC located in the docket. The EPA's revised CEDRI reporting template for this final rule is available in the docket but will not be required until implemented in CEDRI.[75]

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[74] 40 CFR Part 63, Subpart DDDD -- Plywood and Composite Wood Products Semiannual Compliance Reporting Spreadsheet Template. Document ID No. EPA-HQ-OAR-2016-0243-0417.
[75] 40 CFR Part 63, Subpart DDDD -- Plywood and Composite Wood Products Semiannual Compliance Reporting Spreadsheet Template (Final ICR Draft, 2026), available in the docket for this rulemaking.

4. Issues raised by petitioners following the RTR

Following publication of the 2020 RTR,[76] the EPA received a petition for reconsideration (Petition) from Earthjustice on behalf of Greater Birmingham Alliance to Stop Pollution, Louisiana Environmental Action Network, and Sierra Club ("Petitioners"). The Petitioners asked the EPA to reconsider certain aspects of the 2020 RTR and other amendments under the authority of CAA section 307(d)(7)(B), arguing that the EPA's rationale for four decisions all appeared for the first time in the 2020 RTR and RTC document accompanying the final rule.[77] This section summarizes the four issues raised by the Petitioners, the EPA's proposed revisions to the PCWP NESHAP to address some of these issues, comments received on the proposed revisions and our responses, and our final decisions and rationale on the issues for this rulemaking.

a. What were the issues raised by the Petitioners and what were our proposed revisions?

In the first issue raised, the Petitioners alleged that the EPA failed to set limits for unregulated HAP. Although we do not agree that the Petitioners met their burden under CAA section 307(d)(7)(B) to show that it was impracticable to raise this objection during the public comment period for the proposed 2020 RTR, and thereby compel reconsideration of this issue, the May 2023 proposal contained new standards for unregulated HAP that are being finalized in response to the 2007 partial remand and vacatur of the 2004 rule and to address unregulated HAP, such that the Petitioners' concern regarding this issue is resolved with this final action.

In the second and third issues raised by the Petitioners, they disagreed with two work practices the EPA finalized on August 13, 2020, for safety-related shutdowns and pressurized refiner startup and shutdowns, and objected to what they perceived to be the

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[76] 85 FR 49434 (Aug. 13, 2020).

[77] *National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products (40 CFR Part 63, Subpart DDDD) Residual Risk and Technology Review, Final Amendments, Responses to Public Comments on September 6, 2019, Proposal*. Document ID No. EPA-HQ-OAR-2016-0243-0244, available in the docket for this rulemaking.

EPA's changed or new rationale for these work practices between proposal and finalization of the 2020 RTR, claiming that they did not have an opportunity to raise their objections during the public comment period. The Petitioners disagreed with the EPA's use of CAA section 112(h) to develop work practice standards for safety-related shutdowns and pressurized refiner startup and shutdown events. For safety-related shutdowns, the Petitioners took issue with the EPA's rationale that facilities cannot capture and convey HAP emissions *to a control device* during these periods for safety reasons, saying that whether emissions can be conveyed *to a control device* is irrelevant under CAA section 112(h)(2)(A).[78] In response to this critique, and to ensure that there is a full opportunity for all stakeholders to comment on the EPA's rationale for these work practices, the EPA requested comment in the May 2023 proposal on the relevance of the ability of facilities to capture and convey emissions to a control device to CAA section 112(h)(2)(A), given that CAA section 112(h)(2)(A) explicates CAA section 112(h)(1), which explicitly refers to the EPA's judgment as to when it is not feasible to prescribe or enforce an emission standard *for control of* a HAP.

Regarding the EPA's rationale under CAA section 112(h)(2)(B) for the safety-related shutdown and pressurized refiner startup and shutdown work practices, the Petitioners expressed discontent with the EPA's conclusion that stack tests (which typically take one to three hours) cannot be conducted for events lasting only minutes. The Petitioners asserted that the EPA should have considered the practicability of other measurement methodologies including CEMS or continuous parameter monitoring. In response to the Petitioners' concerns, in the May 2023 proposal we maintained that stack testing is not feasible for safety-related shutdown events lasting only minutes or for

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[78] *National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products (40 CFR Part 63, Subpart DDDD) Residual Risk and Technology Review, Final Amendments: Response to Public Comments on September 6, 2019 Proposal*. Docket ID No. EPA-HQ-OAR-2016-0243-0244 Available in the docket for this rulemaking.

pressurized refiner startup/shutdown events lasting less than 15 minutes. We requested comment in the May 2023 proposal on how the EPA could feasibly prescribe or enforce a numeric emission limit for such short-term events without the ability to conduct stack testing. Further, continuous operation of CEMS on bypass stacks that are unused for the majority of process operating time is not technically (*e.g.*, because of the calibration drift likely to occur while the CEMS goes unused) or economically practicable. The source testing required for conducting a relative accuracy test audit (RATA) of CEMS would not be possible without requiring the use of the bypass during the RATA. Obtaining emissions data to correlate with parameters to establish continuously monitored parameter limits also necessitates stack testing. Although CEMS or specific continuously monitored parameter limits are not an appropriate measurement methodology for safety-related shutdowns and pressurized refiner startups and shutdowns themselves because of technical and economic limitations, in 2023 we proposed additional continuous parameter monitoring of bypass stack usage in addition to the work practices for safety-related shutdowns and pressurized refiner startup/shutdown events to address the Petitioners' concern. As discussed in section III.B of this preamble, we proposed to require continuous monitoring of combustion unit bypass stacks and to require annual tune-ups of combustion units used to direct-fire dryers. As discussed in section III.F of this preamble, we also proposed to require continuous monitoring of process unit bypass stack usage at all times while the process units are operating, including times when the process unit is undergoing startup or shutdown, and during safety-related shutdowns and pressurized refiner startup/shutdown events to ensure that reliable data are available to evaluate continuous compliance with the PCWP NESHAP requirements.

The Petitioners also took issue with inclusion of measures that facilities have developed to protect workers and equipment in the safety-related shutdown work practice. The Petitioners argued that the steps an operator takes to protect workers and

equipment are not necessarily the steps needed to prevent excess emissions or to remove raw materials and the heat source from the process as expeditiously as possible. We disagree with the Petitioners that the phrase "to protect workers and equipment" detracts from the safety-related shutdown work practice requirements to ensure that the flow of raw materials (such as furnish or resin) and fuel or process heat (as applicable) ceases, and that material is removed from the process unit(s) as expeditiously as possible given the system design to reduce air emissions. However, we requested comment in the May 2023 proposal on inclusion of measures facilities developed to protect workers and equipment from the safety-related shutdown provision. We also requested comment on all aspects of the work practice provisions (which appear in Table 3, rows 6 and 7) based on operational experience now that these narrowly defined provisions have been implemented in place of the broader SSM exemptions that were removed from the PCWP NESHAP.

In their fourth issue raised, the Petitioners disagreed with the EPA's statement in the September 6, 2019, proposed technology review and 2020 RTR that use of low-HAP resins is a development under CAA section 112(d)(6), claiming the EPA must revise standards for any development identified to require the maximum degree of reduction that is achievable through its application. In the 2019 proposed and 2020 final technology reviews, when noting that low-HAP resins may be a development, the EPA also explained that the EPA did not identify information to suggest that the resin system changes have significantly altered the type of process units or HAP pollution control technologies used in the PCWP industry to date or have led to processes or practices that have not been accounted for in the promulgated PCWP NESHAP compliance options. The Petitioners dismissed as irrelevant the EPA's explanation that there are many types of resin systems used in the manufacture of the various PCWP and that the resin-system solution for one facility's product may not be applicable for another product produced at

a different facility. The Petitioners also argued that it is irrelevant the EPA noted in 2020 plans for additional action for the PCWP NESHAP source category with respect to remanded PCWP process units in which the EPA would further consider the effects of resin system changes.

Given the Petitioners' objections, we rearticulated in the May 2023 proposal our conclusion from the 2020 RTR. Specifically, we retracted our characterization of low-HAP resins as a "development" under CAA section 112(d)(6) with respect to the standards established for the PCWP source category in 2004. As noted in 2020, the EPA did not identify information suggesting that the resin system changes have significantly altered the type of process units or HAP pollution control technologies used in the PCWP industry or have led to processes or practices that were not accounted for in the 2004 rule compliance options. Therefore, we agree with the Petitioners that it may have been inappropriate to describe resin changes as a "development" under CAA section 112(d)(6) that occurred after the PCWP NESHAP was promulgated in 2004. Moreover, we disagree with the Petitioners' claim that if resin changes were in fact such a "development," the EPA would be required to establish MACT standards under CAA sections 112(d)(2) and (3) as a consequence of that development. CAA section 112(d)(6) does not require the EPA to reconduct MACT determinations, as the D.C. Circuit made clear in *Natural Resources Defense Council (NRDC)* v. *EPA*, 529 F.3d 1077 (D.C. Cir. 2008). Instead, CAA section 112(d)(6) provides the EPA with the ability to exercise its judgment to determine what revisions to preexisting standards are necessary, after considering such developments. The mere presence of a development does not alone compel the EPA to determine that revising a promulgated MACT standard is necessary. Rather, the EPA is required to review the standard and determine whether to revise the standard after taking into account the development. This preserves the EPA's ability to exercise judgment regarding whether a change to a promulgated standard is necessary. In any event, as

discussed in section III.D of this preamble, we proposed work practice standards under CAA section 112(h) for RMH process units for which no emission standards were in place to respond to the 2007 partial remand and vacatur of the 2004 rule. These work practices were based on the use of non-HAP resins or resins with low vapor pressure, which have a low potential for HAP emissions, including resin types that were available at the time of the 2004 rule.

b. What comments did we receive on our proposed revisions to address the issues and what were our responses and final decisions?

We received comments on the safety-related shutdown and pressurized refiner work practices. One commenter opposed these work practices while another commenter supported them. Upon review of the comments provided, the EPA has reconsidered the work practices for safety-related shutdown and pressurized refiner startup and shutdown events, and the Agency is retaining these work practice standards as promulgated in the 2020 RTR.[79] The specific comments related to the work practices and our detailed response are in the RTC located in the docket.[80]

We also received a comment concerning the EPA's proposed retraction of a finding published in the 2019 proposed technology review.[81] The EPA stated in the 2019 review that the increased availability of low-HAP resins constituted a "development" that must be considered pursuant to CAA section 112(d)(6).[82] Commenters asserted that the EPA's proposed retraction of this finding in the May 2023 proposal is arbitrary. The commenter noted that pursuant to CAA section 112(d)(6), the EPA must evaluate whether this development warrants strengthening the MACT standard. A different

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[79] 85 FR 49434 (Aug. 13, 2020).

[80] *see National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products (40 CFR Part 63, Subpart DDDD), Response to Public Comments on May 18, 2023 Proposed Amendments*, Docket ID No. EPA-HQ-OAR-2016-0243, available in the docket for this rulemaking

[81] 84 FR 47074 (Sept. 6, 2019).

[82] *Id*. at 47092.

commenter indicated the EPA correctly determined that the option for facilities to reformulate resins was already contemplated during the development of the 2004 rule. The commenter stated that as an alternative to installing controls to reduce emissions, facilities can utilize the PBCO and meet HAP emission limits for each process unit. Upon review of the comments provided, we are reaffirming our conclusion from the 2020 RTR that no change to the preexisting PCWP NESHAP standards is warranted as a result of resin system changes. The specific comments and our detailed response are in the RTC located in the docket.

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

As proposed, the final rule requires affected sources that commence construction or reconstruction on or before May 18, 2023, to comply with the new emission standards within three years after the effective date (*i.e.*, by July 6, 2029). For affected sources that commenced construction or reconstruction after May 18, 2023, owners and operators must comply with the new provisions by **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]** or upon startup, whichever is later. An affected source is the collection of process units at a PCWP facility. Examples of new affected sources are new greenfield PCWP or lumber facilities, existing facilities constructing new PCWP manufacturing process lines in addition to (or as a replacement for) existing process lines, and existing lumber facilities adding (or replacing) lumber kilns in projects that meet the definition of reconstruction.

Commenters offered differing opinions on our proposal to provide three years after the effective date of the new provisions for existing affected sources to comply. One commenter argued that three years was too long, while another commenter argued that the three-year compliance period was too short to implement all new requirements.

Amendments to the PCWP NESHAP finalized in this rulemaking for adoption under CAA section 112(d)(2) and (3) are subject to the compliance deadlines outlined in

the CAA under CAA section 112(i). For existing sources, CAA section 112(i)(3) provides that there shall be compliance "as expeditiously as practicable, but in no event later than 3 years after the effective date of such standard" subject to certain exemptions further detailed in the statute. In determining what compliance period is as "expeditious as practicable," we consider the amount of time needed to plan and construct projects and change operating procedures. As provided in CAA section 112(i), all new affected sources would comply with these provisions by the effective date of the final amendments to the PCWP NESHAP or upon startup, whichever is later.

The EPA projects that many existing sources will need to make changes (*e.g.*, review operations, assemble documentation, install add-on controls and monitoring equipment) to comply with the finalized limits for various process units in their facility. These sources will require time to develop plans, construct, conduct performance testing, and implement monitoring to comply with the revised provisions. Therefore, the final rule allows three years for existing sources to become compliant with the applicable emission standards finalized in this action.

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

A. What are the affected sources?

There are currently 219 major source facilities subject to the PCWP NESHAP. We estimated that six new PCWP facilities will be constructed and become subject to the NESHAP in the five years following the May 2023 proposal. A memorandum documenting the revised changes to the facility list since the 2023 proposed rule can be found in the docket for this rulemaking.[83]

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[83] *See* the June 1, 2026 memorandum entitled "Revised Updates to List of Plywood and Composite Wood Products Facilities", available in the docket for this rulemaking.

B. What are the air quality impacts?

This final action is expected to reduce 721 tpy of directly-regulated HAPs compared to baseline emissions of 7,250 tpy.

Additionally, the final rule will result in a decrease of other air emissions that are not regulated by this rule. In comparison to baseline emissions of 58,036 tpy VOC, the EPA estimates VOC emission reductions of approximately 8,504 tpy.[84] We also estimate that the final action would result in additional reductions of 202 tpy of PM, 144 tpy of PM <2.5 μm in diameter ($PM_{2.5}$), 132 tpy of NOx, 719 tpy of CO, 12 tpy of SO_2.[85]

C. What are the cost impacts?

The EPA estimates that this final action would cost approximately $121 million in total capital costs (distributed across multiple years) and $53 million per year (in 2024 dollars) in total annualized costs.[86]

D. What are the economic impacts?

For the final rule, the EPA estimated the cost of compliance with the final emission limits. This includes the capital costs of installation, subsequent maintenance and operation of the controls, and other one-time and annual costs. To assess the potential economic impacts, the EPA prepared a partial equilibrium analysis modeling impacts to prices, production, and imports and exports. The EPA additionally performed a screening analysis that compared the expected annualized cost of compliance to the total sales revenue for the ultimate owners of affected facilities.

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[84] Baseline emissions estimates include only those process units for which new standards are being finalized in this action.

[85] More information about the estimated emission reductions and secondary impacts of this final action can be found in the document entitled *Revised Cost, Environmental, and Energy Impacts of Subpart DDDD Regulatory Options*, available in the docket for this rulemaking.

[86] More information about the estimated cost of this final action can be found in the document entitled *Revised Cost, Environmental, and Energy Impacts of Subpart DDDD Regulatory Options*, available in the docket for this rulemaking.

For this final rule, the partial equilibrium analysis estimated an expected economic cost to both producers and consumers and accounting for changes to prices and quantities caused by the final amendments equal to $53 million. The expected annualized compliance cost from the screening analysis is $237,680 (on average) for each facility, including 219 existing and six projected new facilities, with an estimated nationwide annualized cost of $53,500,000. The 219 existing affected facilities are owned by 64 parent companies, and the compliance costs associated with the final amendments are expected to be on average about 0.27 percent of annual sales revenue per ultimate owner.

Information on our cost and economic impact estimates for the PCWP manufacturing source category is contained in *Economic Impact Analysis for the Final National Emissions Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products Amendments*, available in the docket for this rulemaking.[87]

E. What are the benefits?

The EPA is obligated to present the Agency's best scientific understanding and the implications of that science when developing policies and regulations. However, the EPA's analytical practices often provided the public with false precision and confidence regarding the monetized impacts of fine $PM_{2.5}$ and ozone due to changes in emissions of $PM_{2.5}$ as well as $PM_{2.5}$ and ozone precursors. In addition, the science regarding the exposure, health effects from exposure, and valuation of reduction in health effect are evolving with better data and methods, especially at low concentrations of PM and ozone. Some of the sources of uncertainties include the set of assumptions used in projecting the health impact of reducing PM. These projections are based on a series of models that take into account emissions changes, resulting distributions of changes in ambient air quality, the estimated reductions in health effects from changes in exposure, and the composition

[87] Docket ID No. EPA-HQ-OAR-2016-0243.

of the population that will benefit from the reduced exposure. Each component includes assumptions, each with varying degrees of uncertainty.

In addition, the EPA historically provided point estimates rather than just ranges or only quantifying emissions, which leads the public to believe the Agency has a better understanding of the monetized impacts of exposure to $PM_{2.5}$ and ozone than it does in reality. Therefore, to address these concerns, the EPA is no longer monetizing benefits from $PM_{2.5}$ and ozone but will continue to quantify the emissions until the Agency is confident enough in the modeling to properly monetize those impacts. Implementing the final amendments is expected to reduce emissions of HAP and non-HAP pollutants, such as VOC. We estimate that the final amendments would reduce HAP emissions from the source category by approximately 721 tpy. The amendments would regulate emissions of acetaldehyde, acrolein, formaldehyde, methanol, phenol, propionaldehyde, non-Hg HAP metals, Hg, HCl, PAH, D/F and MDI. Information regarding the health effects of these compounds can be found in *Health Effects Notebook for Hazardous Air Pollutants*[88] and in the EPA Integrated Risk Information System database.[89]

The final amendments would reduce emissions of VOC which, in conjunction with NOx and in the presence of sunlight, form ground-level ozone. There are health benefits of reducing VOC emissions in terms of the number and value of avoided ozone-attributable deaths and illnesses. The *Integrated Science Assessment for Ozone* [90] found short-term (less than one month) exposures to ozone to be causally related to respiratory effects, a "likely to be causal" relationship with metabolic effects, and a "suggestive of, but not sufficient to infer, a causal relationship" for central nervous system effects,

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[88] U.S. Environmental Protection Agency. (Last updated Nov. 24, 2025). *Health Effects Notebook for Hazardous Air Pollutants*: https://www.epa.gov/haps/health-effects-notebook-hazardous-air-pollutants.
[89] U.S. Environmental Protection Agency. (2026). *List of Substances on IRIS*: https://iris.epa.gov/AtoZ/?list_type=alpha.
[90] U.S. Environmental Protection Agency. (2020). *Integrated Science Assessment for Ozone and Related Photochemical Oxidants*. EPA/600/R-20/012: https://www.epa.gov/isa/integrated-science-assessment-isa-ozone-and-related-photochemical-oxidants.

cardiovascular effects, and total mortality. The ISA reported that long-term exposures (one month or longer) to ozone are "likely to be causal" for respiratory effects including respiratory mortality, and a "suggestive of, but not sufficient to infer, a causal relationship" for cardiovascular effects, reproductive effects, central nervous system effects, metabolic effects, and total mortality.

The human health risk estimated for this source category for the 2020 RTR was determined to be acceptable, and the standards were determined to provide an ample margin of safety to protect public health. Specifically, the maximum individual cancer risk was 30-in-1 million for actual and allowable emissions and the noncancer hazard indices for chronic exposure were below 1 (*i.e.*, 0.8 for actual and allowable emissions). The maximum noncancer hazard quotient for acute exposure was 4. These health risk estimates were based on HAP emissions from the source category after addition of air pollution controls used to meet the MACT standards promulgated in 2004, as well as the baseline HAP emissions from process units for which standards are being promulgated in this action. While the 2020 RTR final amendments reduced emissions by an unquantified amount by removing the SSM exemption and adding repeat testing requirements, the changes to the PCWP NESHAP in this final action will reduce emissions by an additional 721 tons of HAP per year and will further improve human health exposures for populations in all demographic groups.

V. Statutory and Executive Order Reviews

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

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

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

B. Executive Order 14192: Unleashing Prosperity Through Deregulation

This action is not an Executive Order 14192 regulatory action because this action is not significant under Executive Order 12866.

C. Paperwork Reduction Act (PRA)

The information collection activities in this final rule have been submitted for approval to OMB under the PRA. The information collection request (ICR) document that the EPA prepared has been assigned EPA ICR number 1984.12. You can find a copy of the ICR in the docket for this rule, and it is briefly summarized here.

The final changes to the reporting and recordkeeping requirements for the PCWP NESHAP incorporate the reporting and recordkeeping requirements associated with the MACT standards being added to the rule for multiple HAP from new and existing process units.

Respondents/affected entities: Owners or operators of PCWP or kiln-dried lumber manufacturing plants that are major sources, or that are located at, or are part of, major sources of HAP emissions.

Respondent's obligation to respond: Mandatory.[91]

Estimated number of respondents: On average over the next three years, approximately 219 existing major sources would be subject to these standards. It is also estimated that six additional respondents would become subject to the emission standards over the three-year period.

Frequency of response: The frequency of responses varies depending on the burden item (*e.g.*, one-time, semiannual, annual, every five years).

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[91] 40 CFR part 63, subpart DDDD.

Total estimated burden: The average annual burden to industry over the next three years from the final recordkeeping and reporting requirements is estimated to be 44,400 hours per year. Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: The total annual recordkeeping and reporting cost for all facilities to comply with all the requirements in the NESHAP, including the requirements in this final rule, is estimated to be $10,290,000 per year including $3,870,000 in annualized capital and O&M costs.

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

D. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. The small entities subject to the requirements of this action are small businesses as defined by the U.S. Small Business Administration (SBA). The EPA prepared a small business screening analysis to determine if any of the identified affected entities are small entities, as defined by the SBA. This analysis is available in the docket for this rulemaking (Docket ID No. EPA-HQ-OAR-2016-0243). The Agency has determined that 18 out of 64 small ultimate PCWP manufacturing parent companies may experience an impact ranging from approximately 0.03 percent to approximately 1.09 percent of annual sales, with three of the 18 ultimate parent companies experiencing an impact of more than one percent of annual sales. The 18 parent companies own 22 affected PCWP facilities. The EPA does not expect a substantial economic impact from these final amendments because only

three out of 18 small business ultimate parent owners in the PCWP manufacturing source category face incremental total annualized compliance costs more than one percent but less than three percent of annual sales revenue.

Details of this analysis are presented in *Economic Impact Analysis for the Final National Emissions Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products Amendments,* located in the docket for this action.[92]

E. Unfunded Mandates Reform Act (UMRA)

This action does not contain an unfunded mandate of $100 million or more as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. While this action creates an enforceable duty on the private sector and one facility owned by a Tribal government, the cost does not exceed $100 million or more.

F. Executive Order 13132: Federalism

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

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

This action does not have Tribal implications as specified in Executive Order 13175. It will not have substantial direct effects on Tribal governments, on the relationship between the Federal Government and Indian Tribes, or on the distribution of power and responsibilities between the Federal Government and Indian Tribes, as specified in Executive Order 13175. There are facilities subject to this rule located on the

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[92] Docket ID No. EPA-HQ-OAR-2016-0243.

lands of the Coeur D'Alene Tribe, the Confederated Tribes and Bands of the Yakima Nation, and the Choctaw Nation. Consistent with the EPA Policy on Consultation and Coordination with Indian Tribes, the EPA offered consultation opportunities for Tribal officials early in the process of developing this rule to permit them to have meaningful and timely input into its development. The Choctaw Nation requested and received a pre-proposal meeting, a summary of which is available in the docket for this rulemaking. The EPA also offered consultation opportunities to all federally recognized Tribes during the comment period from May 18, 2023, to July 18, 2023, but received no request for consultation.

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

This action is not subject to Executive Order 13045 because the EPA does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children.

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

This action 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. In this final action, the EPA is setting emission standards for the PCWP source category. This does not impact energy supply, distribution, or use.

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

This action involves technical standards. Therefore, the EPA conducted searches for the PCWP NESHAP through the Enhanced National Standards Systems Network (NSSN) Database managed by the American National Standards Institute (ANSI). We also conducted a review of voluntary consensus standards (VCS) organizations and accessed and searched their databases. We conducted searches for EPA Methods 1, 1A,

2, 2A, 2C, 2D, 2F of appendix A-1 to part 60 of this chapter; EPA Test Methods 2G, 3, 3A, 3B of appendix A-2 to part 60 of this chapter; EPA Test Methods 4, 5 of appendix A-3 to part 60 of this chapter; EPA Test Method 10 of appendix A-4 to part 60 of this chapter; EPA Test Method 18 of appendix A-6 to part 60 of this chapter; EPA Test Methods 23, 25A of appendix A-7 to part 60 of this chapter; EPA Test Methods 26A, 29 of appendix A-8 to part 60 of this chapter; EPA Test Methods 204, 204A, 204B, 204C, 204D, 204E, 204F, 205 of appendix M to part 51 of this chapter; EPA Test Methods 308, 316, 320, 326 of appendix A to part 63 of this chapter; and EPA Test Method 0011 (incorporated by reference at 40 CFR 260.11(c)(4)). During the EPA's VCS search, if the title or abstract (if provided) of the VCS described technical sampling and analytical procedures that are similar to the EPA's referenced method, the EPA ordered a copy of the standard and reviewed it as a potential equivalent method. We reviewed all potential standards to determine the practicality of the VCS for this rule. This review requires significant method validation data that meet the requirements of EPA Method 301 for accepting alternative methods or scientific, engineering, and policy equivalence to procedures in the EPA referenced methods. The EPA may reconsider determinations of impracticality when additional information is available for any particular VCS.

Detailed information on the VCS search and determination can be found in the memorandum, *Voluntary Consensus Standard Results for NEHSAP: Plywood and Composite Wood Products*, which is available in the docket for this action.[93] Two VCS were identified as acceptable alternatives to the EPA test methods for this final rule.

The VCS ANSI/ASME PTC 19.10-1981 Part 10, "Flue and Exhaust Gas Analyses," is an acceptable alternative to EPA Method 3B manual portions only and not the instrumental portion. This method determines quantitatively the gaseous constituents

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[93] Document ID No. EPA-HQ-OAR-2016-0243-0415.

of exhausts resulting from stationary combustion sources. The manual procedures (but not instrumental procedures) of ASME/ANSI PTC 19.10-1981 Part 10 may be used as an alternative to EPA Method 3B for measuring the oxygen or carbon dioxide content of the exhaust gas. The gases covered in ASME/ANSI PTC 19.10-1981 are oxygen, carbon dioxide, carbon monoxide, nitrogen, sulfur dioxide, sulfur trioxide, nitric oxide, nitrogen dioxide, hydrogen sulfide, and hydrocarbons. However, the use in this rule is only applicable to oxygen and carbon dioxide. This VCS may be obtained from American Society of Mechanical Engineers (ASME), Three Park Avenue, New York, NY 10016-5990, telephone (800) 843-2763, *https://www.asme.org*. The EPA is finalizing our proposal to incorporate by reference (IBR) the VCS ANSI/ASME PTC 19.10-1981 Part 10, "Flue and Exhaust Gas Analyses," as an acceptable alternative to EPA Method 3B manual portions only and not the instrumental portion.

The VCS ASTM D6348-12e1, "Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform (FTIR) Spectroscopy," is an acceptable alternative to EPA Method 320 with certain conditions. The VCS ASTM D6348-12e1 employs an extractive sampling system to direct stationary source effluent to an FTIR spectrometer for the identification and quantification of gaseous compounds. Concentration results are provided. This test method is potentially applicable for the determination of compounds that (1) have sufficient vapor pressure to be transported to the FTIR spectrometer; and (2) absorb a sufficient amount of infrared radiation to be detected. The VCS ASTM D6348-12e1 may be obtained from *https://www.astm.org* or from the ASTM Headquarters at 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, Pennsylvania, 19428-2959. The EPA is finalizing our proposal to IBR the VCS ASTM D6348-12e1, "Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform (FTIR) Spectroscopy," as an acceptable alternative to EPA Method 320 in place of ASTM D6348-03. ASTM D6348-03(2010) was determined to be

equivalent to EPA Method 320 with caveats. ASTM D6348-12e1 is a revised version of ASTM D6348-03(2010) and includes a new section on accepting the results from the direct measurement of a certified spike gas cylinder but lacks the caveats placed on the ASTM D6348-03(2010) version. ASTM D6348-12e1 is an extractive FTIR field test method used to quantify gas phase concentrations of multiple analytes from stationary source effluent and is an acceptable alternative to EPA Method 320 at this time with caveats requiring inclusion of selected annexes to the standard as mandatory. When using ASTM D6348-12e1, the following conditions must be met:

- The test plan preparation and implementation in the Annexes to ASTM D6348-03, sections A1 through A8 are mandatory; and
- In ASTM D6348-03, Annex A5 (Analyte Spiking Technique), the percent (%) R must be determined for each target analyte.[94]

In order for the test data to be acceptable for a compound, percent R must be 70 percent ≤ R ≤ 130 percent. If the percent R value does not meet this criterion for a target compound, the test data is not acceptable for that compound and the test must be repeated for that analyte (*i.e.*, the sampling and/or analytical procedure should be adjusted before a retest). The percent R value for each compound must be reported in the test report, and all field measurements must be corrected with the calculated percent R value for that compound by using the following equation: Reported Results = (Measured Concentration in Stack) / (percent R) x 100.

In addition to the VCS mentioned earlier in this section, we are finalizing our proposal to IBR ASTM D1835-05, "Standard Specification for Liquefied Petroleum (LP) Gases," for use in the definition of natural gas in 40 CFR 63.2292. The VCS ASTM D-1835-05 covers those products commonly referred to as liquefied petroleum gases,

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[94] Equation A5.5.

consisting of propane, propene (propylene), butane, and mixtures of these materials. This specification is designed to properly define acceptable LP products for domestic, commercial, or industrial uses. This VCS may be obtained from *https://www.astm.org* or from the ASTM Headquarters at 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, Pennsylvania, 19428-2959.

K. Congressional Review Act (CRA)

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

List of Subjects in 40 CFR Part 63

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

Lee Zeldin,

Administrator.

For the reasons stated in the preamble, the Environmental Protection Agency amends part 63 of title 40, chapter I, of the Code of Federal Regulations as follows:

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

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

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

Subpart A—General Provisions

2. Amend § 63.14 by revising paragraphs (f)(1) and (i)(13), (86), and (88) to read as follows:

§ 63.14 Incorporations by reference.

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(f) * * *

(1) ANSI/ASME PTC 19.10-1981, Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus], issued August 31, 1981; §§ 63.116(c) and (h); 63.128(a); 63.145(i); 63.309(k); 63.365(b); 63.457(k); 63.490(g); 63.772(e) and (h); 63.865(b); 63.997(e); 63.1282(d) and (g); 63.1426(c); 63.1450(a), (b), (d), (e), (f), and (g); 63.1625(b); table 5 to subpart EEEE; §§ 63.3166(a); 63.3360(e); 63.3545(a); 63.3555(a); 63.4166(a); 63.4362(a); 63.4766(a); 63.4965(a); 63.5160(d); table 4 to subpart UUUU; table 3 to subpart YYYY; table 5 to subpart AAAAA; § 63.7322(b); table 5 to subpart DDDDD; §§ 63.7822(b); 63.7824(e); 63.7825(b); 63.8000(d); table 4 to subpart JJJJJ; table 4 to subpart KKKKK; §§ 63.9307(c); 63.9323(a); 63.9621(b) and (c); table 4 to subpart SSSSS; table 5 of subpart UUUUU; table 1 to subpart ZZZZZ; §§ 63.11148(e); 63.11155(e); 63.11162(f); 63.11163(g); table 4 to subpart JJJJJJ; §§ 63.11410(j); 63.11551(c); 63.11646(a); 63.11945(d).

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(i) * * *

(13) ASTM Method D1835–05, Standard Specification for Liquefied Petroleum (LP) Gases, approved April 1, 2005, IBR approved for §§ 63.2292, 63.7575, and 63.11237.

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(86) ASTM D6348-03, Standard Test Method for Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy, including Annexes A1 through A8, Approved October 1, 2003, IBR approved for §§ 63.457(b), 63.997(e), and 63.1349, table 5 to subpart EEEE, table 4 to subpart UUUU, table 4 subpart ZZZZ, and table 8 to subpart HHHHHHH.

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(88) ASTM D6348–12e1, Standard Test Method for Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy, Approved February 1, 2012, IBR approved for §§ 63.997(e), 63.1571(a), and 63.2354(b), table 4 to subpart DDDD, table 5 to subpart EEEE, table 4 to subpart UUUU, §§ 63.7142(a) and (b) and 63.8000(d), and table 4 to subpart SSSSS.

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SUBPART DDDD — NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS: PLYWOOD AND COMPOSITE WOOD PRODUCTS

3. Amend § 63.2233 by revising paragraphs (a)(1) and (2) and (b) and adding paragraph (e) to read as follows:

§ 63.2233 When do I have to comply with this subpart?

(a) * * *

(1) If the initial startup of your affected source is before September 28, 2004, 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 September

28, 2004, except as otherwise specified in paragraph (e) of this section or elsewhere in this subpart.

(2) If the initial startup of your affected source is after September 28, 2004, 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, except as otherwise specified in paragraph (e) of this section or elsewhere in this subpart.

(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 October 1, 2007, except as otherwise specified in paragraph (e) of this section or elsewhere in this subpart.

* * * * *

(e) The compliance dates in paragraphs (e)(1) and (2) of this section apply for the compliance options, operating requirements, and work practice requirements that became effective on **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. The compliance options, operating requirements, and work practice requirements that became effective on **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, are listed in paragraph (e)(3) of this section.

(1) If construction or reconstruction of your affected source is commenced after May 18, 2023, you must comply with the compliance options, operating requirements, and work practice requirements listed in paragraph (e)(3) of this section beginning on **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, or upon initial startup, whichever is later.

(2) If construction or reconstruction of your affected source is commenced on or before May 18, 2023, you must comply with the compliance options, operating requirements, and work practice requirements listed in paragraph (e)(3) of this section

beginning on July 6, 2029, except as otherwise specified for mixed PCWP process streams in § 63.2240(d)(5).

(3) The compliance options, operating requirements, and work practice requirements that became effective on **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, include the compliance options and operating requirements in § 63.2240(d) and (e) and tables 2 (rows 6 to 12), 1C, 1D, 1E, 4 (rows 12 to 19), 5 (rows 9 to 12), and 7 (rows 8 to 14) to this subpart; and the work practice requirements § 63.2241(d) through (g) and tables 3 (rows 9 to 14), 6 (rows 9 to 14), 8 (rows 9 to 17) and 11 to this subpart.

4. Amend § 63.2240 by:

a. Revising the introductory text;

b. Removing and reserving paragraph (c); and

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

The revision and additions read as follows:

§ 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 to this subpart by using one or more of the compliance options listed in paragraphs (a) and (b) of this section. You must meet the compliance options in tables 1C through 1E to this subpart according to paragraph (d) of this section. The process units subject to the compliance options are listed in tables 1A through 1E to this subpart and are defined in § 63.2292. You need only to meet one of the compliance options outlined in paragraph (a) or (b) of this section for each process unit. You cannot combine compliance options in paragraphs (a) and (b) of this section for a single process unit. (For example, you cannot use a production-based compliance option in paragraph (a) of this section for one vent of a veneer dryer and an add-on control system compliance option in

paragraph (b) of this section 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.)

* * * * *

(d) *Additional compliance requirements.* After **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**], you must comply with the compliance options in tables 1C through 1E to this subpart and associated operating limits in table 2 to this subpart as specified in paragraphs (d)(1) through (6) of this section.

(1) Process units at an affected source that commenced construction or reconstruction on or before May 18, 2023, must comply with the compliance options in table 1C to this subpart on and after July 6, 2029.

(2) Process units at an affected source that commenced construction or reconstruction after May 18, 2023, must comply with the compliance options in table 1C to this subpart beginning on **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, or upon initial startup, whichever is later.

(3) Direct-wood fired PCWP dryers at an affected source that commenced construction or reconstruction on or before May 18, 2023, must comply with the compliance options in table 1D to this subpart on and after July 6, 2029. In addition to the limits in table 1D to this subpart, direct wood-fired green rotary dryers that commenced construction or reconstruction on or before May 18, 2023, must limit emissions of dioxins and furans toxic equivalency (TEQ) to no more than 1.3E-09 pounds per oven dried ton (lb/ODT) or 1.7E-01 nanogram per dry standards cubic meter (ng/dscm) on and after July 6, 2029.

(4) Direct-wood fired PCWP dryers at an affected source that commenced construction or reconstruction after May 18, 2023, must comply with the compliance

options in table 1E to this subpart beginning on **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, or upon initial startup, whichever is later. In addition to the limits in table 1E to this subpart, direct wood-fired green rotary dryers that commenced construction or reconstruction after May 18, 2023, must limit emissions of dioxins and furans TEQ to no more than 4.4E-10 lb/ODT or 3.7E-02 ng/dscm on and after July 6, 2029.

(5) Mixed PCWP process streams (defined in § 63.2292) complying with the compliance options for add-on control systems in table 1B to this subpart according to paragraph (b) of this section before **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, must continue to comply with the compliance options in table 1B to this subpart after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

(6) Affected facilities may choose to comply with the add-on control system compliance options in table 1B to this subpart (and associated operating limits in table 2 to this subpart) instead of the compliance options in table 1C to this subpart for fiberboard mat dryer heated zones, press predryers, post-dryer atmospheric refiners, or multipurpose atmospheric refiners.

(e) *Process unit bypass stack operating requirement.* After **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, you must comply with the operating requirement in table 2 to this subpart for process unit bypass stacks (defined in § 63.2292) by the compliance dates specified in § 63.2233(e).

5. Amend § 63.2241 by adding paragraphs (d) through (g) to read as follows:

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

* * * * *

(d) The following combustion unit tune-up and bypass stack monitoring requirements must be conducted for all direct-fired dryers (including direct wood-fired

PCWP dryers, direct natural gas-fired PCWP dryers, and direct-fired lumber kilns) by the dates specified in § 63.2233(e) and table 3 to this subpart. You must conduct an annual tune-up of each combustion unit used to directly-fire the PCWP dryer or lumber kiln following the procedures in § 63.2271(c) as specified in paragraphs (d)(1) through (3) of this section. You must monitor usage of combustion unit bypass stacks (defined in § 63.2292) following the procedures specified in § 63.2269(k) by the compliance date specified in § 63.2233(e).

(1) The initial tune-up must be completed by the compliance date specified in § 63.2233(e). After the initial tune-up, each annual tune-up is required to be completed no more than 13 months after the previous tune-up.

(2) If a combustion unit that direct-fires a PCWP dryer or lumber kiln is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup of the combustion unit for the purpose of direct-firing a PCWP dryer or lumber kiln.

(3) For combustion units with tune-up requirements in this subpart, you may use documentation (required in § 63.7550(c)(1)) of the tune-up conducted according to §§ 63.7515(d) and 63.7540(a)(10), in place of the annual combustion unit tune-up requirements in this paragraph (d) and § 63.2271(c), provided the documentation required in § 63.7550(c)(1) is provided according to the schedule in paragraphs (d)(1) and (2) of this section.

(e) For each lumber kiln, you must minimize lumber over-drying to reduce HAP emissions by meeting the requirements in paragraphs (e)(1) through (4) of this section by the dates specified in § 63.2233(e) and table 3 to this subpart.

(1) *Lumber kiln operation and maintenance (O&M).* Develop and maintain onsite an O&M plan for the lumber kilns at the facility. The O&M plan must include the kiln

maintenance, charge optimization, inspection, and corrective action elements specified in § 63.2253(a).

(2) *Lumber kiln burner tune-up*. For direct-fired lumber kilns, conduct annual burner tune-ups according to paragraph (d) of this section and § 63.2271(c).

(3) *Lumber kiln work practice.* Minimize lumber over-drying by operating according to one of the work practice options in paragraph (e)(3)(i), (ii), or (iii) of this section.

(i) *Temperature limit option*. Operate the lumber kiln with a maximum dry bulb temperature limit of no more than 210 °F for batch indirect fired (IF) kilns, 235 °F for batch direct-fired (DF) kilns, 245 °F for continuous IF kilns, or 245 °F for continuous DF kilns. You must continuously monitor and record the dry bulb temperature during the kiln drying cycle according to § 63.2269(m) and maintain the batch cycle average dry bulb temperature (for batch kilns) or daily block average dry bulb temperature (for continuous kilns) below the maximum limit specified in this paragraph (e)(3)(i) according to § 63.2270(h)(1).

(ii) *Hybrid option.* Operate the lumber kiln according to paragraphs (e)(3)(ii)(A) and (B) of this section.

(A) Operate the lumber kiln with a maximum dry bulb temperature limit of no more than 240 °F for batch indirect fired (IF) kilns, 250 °F for batch direct-fired (DF) kilns, 260 °F for continuous IF kilns, or 260 °F for continuous DF kilns. You must continuously monitor and record the dry bulb temperature during the kiln drying cycle according to § 63.2269(m) and maintain the batch cycle average dry bulb temperature (for batch kilns) or daily block average dry bulb temperature (for continuous kilns) below the maximum limit specified in this paragraph (e)(3)(ii)(A) according to § 63.2270(h)(1).

(B) Operate the kiln to dry to a semiannual average lumber moisture content (weight percent, dry basis) at or above the minimum limit of moisture content considered

to be over-dried lumber as specified in paragraph (e)(4) of this section and table 11 of this subpart. Lumber moisture must be monitored and recorded according to § 63.2269(n). The semiannual average must be determined according to § 63.2270(i).

(iii) *Site-specific plan option.* Develop and operate according to a site-specific plan to minimize lumber over-drying through temperature and lumber moisture monitoring as required in paragraphs (e)(3)(iii)(A) and (B) of this section. The site-specific plan must be submitted to the delegated authority for approval and the site-specific limits from the plan must be incorporated into the facility's operating permit as specified in § 63.2253(b).

(A) The site-specific plan must identify one temperature parameter (such as wet or dry bulb temperature, wet bulb depression, or temperature drop across the load) to be continuously monitored during the kiln drying cycle; include a description of how the temperature parameter is measured and used to minimize over-drying of lumber; and include a site-specific limit for the temperature parameter that minimizes over-drying. You must continuously monitor and record the temperature parameter according to § 63.2269(m) and calculate the 3-hour block average for comparison to the site-specific temperature limit according to § 63.2270(h)(2).

(B) The site-specific plan must include a method for monitoring lumber moisture content (weight percent, dry basis); specify the location of such monitoring within the lumber manufacturing process (for example, at the kiln unloading track, in lumber storage, or at the planer); specify the minimum kiln-dried lumber moisture content limit based on the lumber moisture specifications produced at the facility based on paragraph (e)(4) of this section and table 11 of subpart DDDD; and adhere to the minimum data and lumber moisture content averaging requirements in §§ 63.2269(o) and 63.2270(j).

(4) *Over-dried lumber.* As used in this subpart, the "maximum lumber moisture specification" means the upper limit of lumber moisture content (weight percent on a dry

basis) that meets the relevant lumber grade standard for a lumber product. For each maximum lumber moisture specification, table 11 to this subpart provides the corresponding minimum kiln-dried lumber moisture content limits below which lumber is considered to be over-dried for purposes of this subpart.

(f) By the dates specified in § 63.2233(e) and table 3 to this subpart, you must operate each log vat using a site-specific target log temperature that does not exceed 212 °F measured in the water used to soak the logs or in the wood as it is cut from the log.

(g) By the dates specified in § 63.2233(e) and table 3 to this subpart, you must meet the work practice standards in paragraphs (g)(1) and (2) of this section for resinated material handling process units, including resin tanks, softwood and hardwood plywood presses, engineered wood product presses and curing chambers, blenders, formers, finishing saws, finishing sanders, panel trim chippers, and reconstituted wood products board coolers (at existing affected sources), hardboard humidifiers, and onsite wastewater treatment operations specifically associated with PCWP manufacturing.

(1) You must meet one of the resin-related requirements in paragraphs (g)(1)(i) through (iii) of this section.

(i) Use only a non-HAP resin as defined in § 63.2292; or

(ii) Use only a resin with maximum true vapor pressure (defined in § 63.2292) of less than or equal to 13.1 kPa (1.9 psia) if the resin is stored in resin tanks with capacity of less than 40,000 gallons, or use only a resin with maximum true vapor pressure (defined in § 63.2292) of less than 5.2 kPa (0.75 psia) if the resin is stored in one or more resin tanks with capacity of 40,000 gallons or more; or

(iii) Use a combination of resins meeting either paragraph (g)(1)(i) or (ii) of this section.

(2) Process wood material that was purchased pre-dried to a moisture content of no more than 30 percent (weight percent, dry basis), or has been dried in a dryer located

at the PCWP facility. This paragraph (g)(2) does not apply for wet formers and onsite wastewater treatment operations specifically associated with PCWP manufacturing.

6. Amend § 63.2250 by:

a. Removing and reserving paragraphs (a) through (c);

b. Revising paragraph (f) introductory text and paragraph (f)(6);

c. Adding paragraph (f)(7); and

d. Revising paragraph (g).

The revisions and addition read as follows:

§ 63.2250 What are the general requirements?

* * * * *

(f) You must be in compliance with the compliance options, operating requirements, and the work practice requirements in this subpart when the process unit(s) subject to the compliance options, operating requirements, and work practice requirements are operating, except as specified in paragraphs (f)(1) through (7) of this section.

* * * * *

(6) The applicable standard during each of the operating conditions specified in paragraphs (f)(2) through (4) of this section are the work practice requirements in table 3 to this subpart for safety-related shutdowns (row 6), pressurized refiner startup and shutdown (row 7), and direct-fired softwood veneer dryers undergoing startup or shutdown of gas-fired burners (row 8). The otherwise applicable compliance options, operating requirements, and work practice requirements (in rows 1 through 5 of table 3 to this subpart) do not apply during the operating conditions specified in paragraphs (f)(2) through (4) of this section, with the exception of the operating requirement in § 63.2240(e) which applies at all times.

(7) When using a wet scrubber, electrified filter bed, or mechanical collector (or other dry control device not mentioned elsewhere in table 2 to this subpart), you are not required to meet the minimum limit for pressure drop across the control device during startup or shutdown. Parameter limits other than pressure drop continue to apply during startup and shutdown.

(g) You must always operate and maintain your affected source, including air pollution control and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by this subpart. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

§ 63.2252 [Removed and Reserved]

7. Remove and reserve § 63.2252.

8. Under the undesignated center heading "General Compliance Requirements" add § 63.2253 to read as follows:

§ 63.2253 What are the general requirements for lumber kilns?

(a) *Lumber kiln O&M plan.* The lumber kiln O&M plan must include the elements specified in paragraphs (a)(1) through (3) of this section and be maintained according to paragraph (a)(4) of this section.

(1) Procedures for maintaining the integrity of lumber kiln internal air flow and heat distribution components (such as, baffles, fans, vents, heating coils, or temperature sensors) to provide as uniform a temperature and air flow as reasonably possible.

(2) Charge optimization practices to reduce over drying.

(3) At least annually, you must inspect lumber kiln integrity and review the charge optimization practices used. You must implement corrective actions as needed and maintain records of the inspections and corrective actions taken.

(i) The initial inspection of kiln integrity must be completed by the compliance date specified in § 63.2233(e). After the initial inspection, each annual inspection is required to be completed no more than 13 months after the previous inspection.

(ii) Corrective actions must be initiated within 30 days after the inspection and completed within 180 days following the inspection identifying the need for the corrective action. If the corrective action cannot be completed within 180 days, a written request for an extension may be submitted to the delegated authority, who may grant an extension if they determine additional time is necessary.

(4) After the compliance date in § 63.2233(e), any updates made to the O&M plan maintained onsite must be described in the semiannual compliance report. Delegated authorities may require modification of the O&M plan, as needed, upon review.

(b) *Lumber kiln site-specific plan approval.* If you choose to comply with the work practice option in § 63.2241(e)(3)(iii) using a site-specific plan for temperature and lumber moisture monitoring, the requirements in paragraphs (b)(1) through (5) of this section apply.

(1) The site-specific plan must be developed and submitted to the delegated authority by January 6, 2028.

(2) The written site-specific plan must be maintained onsite at the facility and is enforceable upon the compliance date specified in § 63.2233.

(3) After the compliance date, you must report deviations from the site-specific plan according to § 63.2281.

(4) Once the site-specific plan is approved by the delegated authority, the site-specific limits from the plan must be incorporated into the facility's title V permit when the title V permit is next reopened for cause or renewed, as applicable.

(5) After the compliance date in § 63.2233(e), any updates made to the site-specific plan must be approved by the delegated authority, and any updates to the site-specific limits from the plan must be incorporated into the facility's title V permit when the title V permit is next reopened for cause or renewed, as applicable.

9. Amend § 63.2260 by revising paragraph (a) to read as follows:

§ 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 to this subpart according to the requirements in § 63.2262 and table 4 to this subpart. Combustion units that accept process exhausts into the flame zone are exempt from the performance testing to show compliance with the compliance options in table 1B or 1C to this subpart and the operating requirements for thermal oxidizers.

* * * * *

10. Revise § 63.2262 to read as follows:

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

(a) *Testing procedures*. You must conduct each performance test according to the requirements in paragraphs (b) through (o) of this section and according to the methods specified in table 4 to this subpart.

(b) *Periods when performance tests must be conducted*. You must conduct each performance test based on representative performance (i.e., performance based on

representative operating conditions as defined in § 63.2292) of the affected source for the period being tested. Representative conditions exclude periods of startup and shutdown. You may not conduct performance tests during periods of malfunction. You must describe representative operating conditions in your performance test report for the process and control systems and explain why they are representative. You must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions are representative. Upon request, you shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(c) *Number and duration 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 as specified in paragraphs (c)(1) and (2) of this section.

(1) Testing of a temporary total enclosure (TTE) conducted using EPA Methods 204A through 204F of appendix M of part 51 of this chapter, 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.

(2) Test runs longer than 1 hour may be required to meet minimum sample volume requirements specified in table 4 to this subpart.

(d) *Location of sampling sites*. (1) 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 (defined in § 63.2292) and prior to any releases to the atmosphere. For control sequences with wet control devices (defined in § 63.2292) followed by control devices (defined in § 63.2292), sampling sites

may be located at the inlet and outlet of the control sequence and prior to any releases to the atmosphere.

(2) Sampling sites for process units meeting compliance options without a control device must be located prior to any releases to the atmosphere. Facilities demonstrating compliance with a production-based compliance option for a process unit equipped with a wet control device must locate sampling sites prior to the wet control device.

(3) Sampling sites must be located at the outlet of the control device (defined in § 63.2292), if a control device is used, and prior to any releases to the atmosphere to demonstrate compliance with the compliance options in table 1C, 1D, or 1E to this subpart and for compliance with the dioxin and furan limits in § 63.2240(d)(2) and (3).

(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 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 in table 1A to this subpart, or compliance options in terms of mass per unit production in table 1C, 1D, or 1E to this subpart, you must measure and record the process unit throughput during each performance test.

(g) *Nondetect data*. (1) Except as specified in paragraphs (g)(2) and (3) of this section, all nondetect data (defined in § 63.2292) must be treated as one-half of the method detection limit when determining total HAP, formaldehyde, methanol, or total hydrocarbon (THC) emission rates.

(2) When showing compliance with the production-based compliance options in table 1A to this subpart, you may treat emissions of an individual HAP as zero if all three of the performance test runs result in a nondetect measurement, and the method detection

limit is less than or equal to 1 parts per million by volume, dry basis (ppmvd). Otherwise, nondetect data for individual HAP must be treated as one-half of the method detection limit.

(3) Nondetect data must be treated as the method detection limit when showing compliance with § 63.2240(d)(3) or (4) and the compliance options in table 1C, 1D, or 1E to this subpart. When determining 2,3,7,8-Tetrachlorodibenzo-p-dioxin toxicity equivalency (TEQ), the value of zero may be used for nondetect results.

(h) *Calculation of percent reduction across a control system*. When determining the control system efficiency for any control system when complying with any of the compliance options based on percent reduction across a control system in table 1B to this subpart, as part of the performance test, you must calculate the percent reduction using the following equation:

Equation 1 to Paragraph (h)

$$PR = CE \times \frac{ER_{in} - ER_{out}}{ER_{in}}(100)$$

Where:

PR	=	Percent reduction, percent.
CE	=	Capture efficiency, percent (determined for reconstituted wood product presses and board coolers as required in table 4 to 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 to this subpart, or compliance options in terms of mass per unit production in table 1C, 1D, or 1E to this subpart, you must

calculate your mass per unit production emissions for each performance test run using the following equation:

Equation 2 to Paragraph (i)

$$MP = \frac{ER_{HAP}}{P \times CE}$$

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) or other pollutant in table 1C, 1D, or 1E to this subpart being measured 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 to this subpart).

(j) *Thickness basis conversion*. Use the following equation to convert from one thickness basis to another:

Equation 3 to Paragraph (j)

$$MSF_B = MSF_A \times \frac{A}{B}$$

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 (3) of this section.

(1) During the performance test to meet a compliance option in table 1B or 1C to this subpart (or a PAH limit in table 1D or 1E to this subpart), you must continuously

monitor the firebox temperature during each of the required 1-hour test runs. For regenerative thermal oxidizers, you may measure the temperature in multiple locations (e.g., one location per burner) in the combustion chamber and calculate the average of the temperature measurements prior to reducing the temperature data to 15-minute averages for purposes of establishing your minimum firebox temperature. 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 demonstrating compliance with the applicable standards. Multiple three-run performance tests may be conducted to establish a range of parameter values under different operating conditions.

(2) You may establish a different minimum firebox temperature for your thermal oxidizer by submitting the notification specified in § 63.2280(g) and conducting a repeat performance test as specified in paragraph (k)(1) of this section that demonstrates compliance with the applicable compliance options of this subpart.

(3) If your thermal oxidizer is a combustion unit that accepts process exhaust into the flame zone, then you are exempt from the performance testing and monitoring requirements specified in paragraphs (k)(1) and (2) of this section. To demonstrate initial compliance, you must submit documentation with your Notification of Compliance Status showing 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) and (2) of this section.

(1) During the performance test to meet a compliance option in table 1B or 1C to this subpart (or a PAH limit in table 1D or 1E to this subpart), you must continuously monitor during the required 1-hour test runs either the temperature at the inlet to each catalyst bed or the temperature in the combustion chamber. For regenerative catalytic

oxidizers, you must calculate the average of the temperature measurements from each catalyst bed inlet or within the combustion chamber prior to reducing the temperature data to 15-minute averages for purposes of establishing your minimum catalytic oxidizer temperature. The minimum catalytic oxidizer temperature must then be established as the average of the three minimum 15-minute temperatures monitored during the three test runs demonstrating compliance with the applicable standards. Multiple three-run performance tests may be conducted to establish a range of parameter values under different operating conditions.

(2) You may establish a different minimum catalytic oxidizer temperature by submitting the notification specified in § 63.2280(g) and conducting a repeat performance test as specified in this paragraph (l) that demonstrates compliance with the applicable compliance options of this subpart.

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

(1) During the performance test to meet a compliance option in tables 1B through 1E to this subpart, you must continuously monitor the biofilter bed temperature during each of the required 1-hour test runs. To monitor biofilter bed temperature, you may use multiple thermocouples in representative locations throughout the biofilter bed and calculate the average biofilter bed temperature across these thermocouples prior to reducing the temperature data to 15-minute averages for purposes of establishing biofilter bed temperature limits. The biofilter bed temperature range must be established as the temperature values 10 percent below the minimum and 10 percent (not to exceed 8 °F) above the maximum 15-minute biofilter bed temperatures monitored during the three test runs demonstrating compliance with the applicable standards. You may base your biofilter bed temperature range on values recorded during previous performance tests

provided that the data used to establish the temperature 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 of the performance tests. Replacement of the biofilter media with the same type of material is not considered a modification of the biofilter for purposes of this section.

(2) For a new biofilter installation, you will be allowed up to 180 days following the compliance date or 180 days following initial startup of the biofilter to complete the requirements in paragraph (m)(1) of this section.

(3) You may expand your biofilter bed temperature operating range 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 applicable compliance options of this subpart.

(n) *Establishing operating requirements for process units meeting compliance options without a control device*. If you operate a process unit that meets a compliance option in table 1A, 1C, 1D, or 1E to this subpart without the use of a control device, you must establish your process unit operating parameters according to paragraphs (n)(1) and (2) of this section.

(1) During the performance test, you must identify and document the process unit controlling parameter(s) that affect HAP emissions during the three-run performance test. The controlling parameters you identify must coincide with the representative operating conditions you describe according to paragraph (b) of this section. For each parameter, you must specify appropriate monitoring methods, monitoring frequencies, and for continuously monitored parameters, averaging times not to exceed 24 hours. The operating limit for each controlling parameter must then be established as the minimum, maximum, range, or average (as appropriate depending on the parameter) recorded

during the performance test. Multiple three-run performance tests may be conducted to establish a range of parameter values under different operating conditions.

(2) You may establish different controlling parameter limits 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, 1C, 1D, or 1E to this subpart for an uncontrolled process unit.

(o) *Establishing operating requirements using 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) and (2) of this section.

(1) During the 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 demonstrating compliance with the applicable standards. Multiple three-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 to this subpart.

(p) *Establishing wet electrostatic precipitator operating requirements.* If you use a wet electrostatic precipitator to meet a compliance option in table 1D or 1E to this subpart, you must establish your wet electrostatic precipitator operating requirements

according to paragraphs (p)(1) through (3) of this section except as specified in paragraph (p)(4) of this section if you are using a COMS.

(1) During the PM or Hg performance test, you must continuously monitor the total secondary electric power during each of the required test runs. The minimum total secondary electric power must then be established as the average of the three minimum 15-minute total secondary electric power values monitored during the three test runs demonstrating compliance with the applicable emission limits in this subpart.

(2) During the PM, Hg, or HCl performance test, you must continuously monitor the liquid flow rate to the wet electrostatic precipitator during each of the required test runs. The minimum liquid flow rate must then be established as the average of the three minimum 15-minute liquid flow rate values monitored during the three test runs demonstrating compliance with the applicable emission limits in this subpart.

(3) You may establish a different minimum total secondary power or liquid flow rate limits for your wet electrostatic precipitator by submitting the notification specified in § 63.2280(g) and conducting a repeat performance test as specified in paragraphs (p)(1) and (2) of this section that demonstrates compliance with the applicable emission limits in this subpart. Multiple three-run performance tests may be conducted to establish a range of parameter values under different operating conditions.

(4) For a WESP followed by a control device with a dry exhaust for which you choose to use a COMS instead of WESP parameter monitoring, you must follow the procedures in paragraph (t) of this section for establishing the opacity operating limit.

(q) *Establishing dry electrostatic precipitator operating requirements*. If you use a dry electrostatic precipitator to meet a compliance option in table 1D or 1E to this subpart, you must establish your dry electrostatic precipitator operating requirements according to paragraphs (q)(1) and (2) of this section.

(1) During the PM or Hg performance test, you must continuously monitor the total secondary electric power during each of the required test runs. The minimum total secondary electric power must then be established as the average of the three minimum 15-minute total secondary electric power values monitored during the three test runs demonstrating compliance with the emission limits in this subpart.

(2) You may establish a different minimum total secondary power limits for your dry electrostatic precipitator by submitting the notification specified in § 63.2280(g) and conducting a repeat performance test as specified in paragraph (q)(1) of this section that demonstrates compliance with the applicable emission limits in this subpart. Multiple three-run performance tests may be conducted to establish a range of parameter values under different operating conditions.

(r) *Establishing wet scrubber operating requirements*. If you use a wet scrubber to meet a compliance option in table 1D or 1E to this subpart, you must establish your wet scrubber operating requirements according to paragraphs (r)(1) through (4) of this section.

(1) During the performance test, you must continuously monitor the scrubber liquid flow rate during each of the required test runs. The minimum liquid flow rate must then be established as the average of the three minimum 15-minute liquid flow rate values monitored during the three test runs demonstrating compliance with the compliance options in table 1D or 1E to this subpart.

(2) For a wet PM scrubber, during the PM performance test, you must continuously monitor pressure drop across the scrubber during each of the required test runs. The minimum pressure drop must then be established as the average of the three minimum 15-minute pressure drop values monitored during the three test runs demonstrating compliance with the PM limit.

(3) For wet acid gas scrubber, during the HCl performance test, you must continuously monitor the scrubber effluent pH during each of the required test runs. The minimum effluent pH must then be established as the average of the three minimum 15-minute pH values monitored during the three test runs demonstrating compliance with the HCl limit.

(4) You may establish different minimum liquid flow rate, pressure drop, or pH values for your wet scrubber by submitting the notification specified in § 63.2280(g) and conducting a repeat performance test as specified in paragraphs (r)(1) through (3) of this section that demonstrates compliance with the applicable emission limits in this subpart. Multiple three-run performance tests may be conducted to establish a range of parameter values under different operating conditions.

(s) *Establishing electrified filter bed operating requirements.* If you use an electrified filter bed to meet a compliance option in table 1D or 1E to this subpart, you must establish your electrified filter bed operating requirements according to paragraphs (s)(1) through (3) of this section.

(1) During the PM or Hg performance test, you must continuously monitor the bed voltage and ionizer voltage during each of the required test runs. The minimum bed voltage limit and ionizer voltage limit must then be established as the average of the three minimum 15-minute bed voltage values and ionizer voltage values monitored during the three test runs demonstrating compliance.

(2) During the PM or Hg performance test, you must continuously monitor the pressure drop across the electrified filter bed during each of the required test runs. The pressure drop range limits must then be established as the average of the three minimum and three maximum 15-minute pressure drop values monitored during the three test runs demonstrating compliance with the applicable emission limits in this subpart.

(3) You may establish different bed voltage and ionizer voltage limits or pressure drop range limits for your electrified filter bed by submitting the notification specified in § 63.2280(g) and conducting a repeat performance test as specified in paragraph (s)(1) and (2) of this section that demonstrates compliance with the applicable emission limits in this subpart. Multiple three-run performance tests may be conducted to establish a range of parameter values under different operating conditions.

(t) *Establishing operating requirements using opacity measured with a COMS.* If you use a mechanical collector (or other dry control device not listed elsewhere in table 2 to the subpart) or WESP followed by a control device with a dry exhaust (for which you choose to use a COMS) to meet a compliance option in table 1D or 1E to this subpart, you must establish your operating requirements according to paragraphs (t)(1) and (2) of this section.

(1) During the PM performance test, you must continuously monitor opacity during each of the required test runs. The maximum opacity limit must then be established as either 10 percent opacity, or the highest hourly average computed from the 6-minute opacity values monitored during the three test runs demonstrating compliance with the PM limit.

(2) You may establish different opacity limits by submitting the notification specified in § 63.2280(g) and conducting a repeat performance test as specified in paragraph (t)(1) of this section that demonstrates compliance with the applicable emission limits in this subpart. Multiple three-run performance tests may be conducted to establish a range of opacity values under different operating conditions.

(u) *Establishing operating requirements based on pressure drop with opacity observations*. If you use a mechanical collector (or other dry control device not listed elsewhere in table 2 to this subpart) to meet a compliance option in table 1D or 1E to this subpart, and you choose to use a combination of pressure drop and opacity observations

instead of a COMS to demonstrate continuous compliance, you must establish your operating requirements according to paragraphs (u)(1) through (3) of this section.

(1) During the PM performance test, you must continuously monitor pressure drop across the mechanical collector (or other dry control device) during each of the required test runs. The minimum pressure drop limit must then be established as the average of the three minimum 15-minute pressure drop values monitored during the three test runs demonstrating compliance with the PM limit.

(2) During the PM performance test, you must conduct opacity observations of the control device outlet emissions to the atmosphere using EPA Method 9 of appendix A-4 to part 60 of this chapter. You must establish the maximum opacity operating limit as the average of the 6-minute opacity observations during the three test runs demonstrating compliance with the PM limit, or 10 percent opacity, whichever is greater.

(3) You may establish a different pressure drop limit or opacity observation limit by submitting the notification specified in § 63.2280(g) and conducting a repeat performance test as specified in paragraph (u)(1) or (2) of this section that demonstrates compliance with the applicable emission limits in this subpart. Multiple three-run performance tests may be conducted to establish a range of parameter values under different operating conditions.

11. Revise § 63.2268 to read as follows:

§ 63.2268 Initial compliance demonstration for a wet control device.

If you use a wet control device as the sole means of reducing HAP emissions (including total HAP, methanol, or formaldehyde), you must develop and implement a plan for review and approval to address how organic HAP captured in the wastewater from the wet control device is contained or destroyed to minimize re-release to the atmosphere such that the desired emissions reductions are obtained. You must submit the plan with your Notification of Compliance Status.

12. Amend § 63.2269 by revising paragraph (c) introductory text and adding paragraphs (e) through (o) to read as follows:

§ 63.2269 What are my monitoring installation, operation, and maintenance requirements?

* * * * *

(c) *Wood moisture monitoring*. For each furnish or veneer moisture meter, you must meet the requirements in paragraphs (a)(1) through (3) and (c)(1) through (5) of this section. This paragraph (c) does not apply for lumber moisture monitoring (covered in paragraphs (n) and (o) of this section) to show compliance with the lumber kilns standards in § 63.2241(e).

* * * * *

(e) *Continuous opacity monitoring systems (COMS).* You must install, operate, certify and maintain each COMS according to the procedures in paragraphs (e)(1) through (7) of this section by the compliance date specified in § 63.2233.

(1) Each COMS must be installed, operated, and maintained according to Performance Specification 1 at appendix B to part 60 of this chapter.

(2) You must conduct a performance evaluation of each COMS according to the requirements in § 63.8(e) and according to Performance Specification 1 at appendix B to part 60 of this chapter.

(3) As specified in § 63.8(c)(4)(i), each COMS must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(4) The COMS data must be reduced as specified in §§ 63.8(g)(2) and 63.2270(e).

(5) You must document procedures and acceptance criteria for operating and maintaining each COMS according to the requirements in § 63.8(d). At a minimum, the

documentation must include a daily calibration drift assessment, a quarterly performance audit, and an annual zero alignment audit of each COMS.

(6) You must operate and maintain each COMS according to the requirements of § 63.8(e). You must identify periods the COMS is out of control including any periods that the COMS fails to pass a daily calibration drift assessment, a quarterly performance audit, or an annual zero alignment audit. Any 6-minute period for which the monitoring system is out of control and data are not available for a required calculation constitutes a deviation from the monitoring requirements.

(7) You must determine and record all the 6-minute averages (and 24-hour block averages as applicable) collected for periods during which the COMS is not out of control.

(f) *Pressure monitoring*. If you have an operating requirement that requires the use of a pressure monitoring system, you must meet the requirements in paragraphs (a) and (f)(1) through (6) of this section.

(1) Install the pressure sensor(s) in a position that provides a representative measurement of the pressure (e.g., PM scrubber pressure drop).

(2) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion consistent with good engineering practices.

(3) Use a pressure sensor with a minimum tolerance of 1.27 centimeters of water or a minimum tolerance of 1 percent of the pressure monitoring system operating range, whichever is less.

(4) Perform checks at least once each process operating day to ensure pressure measurements are not obstructed (e.g., check for pressure tap pluggage daily).

(5) Conduct a performance evaluation of the pressure monitoring system at the time of each performance test but no less frequently than annually.

(6) If at any time the measured pressure exceeds the manufacturer's specified maximum operating pressure range, conduct a performance evaluation of the pressure monitoring system and confirm that the pressure monitoring system continues to meet the performance requirements. Alternatively, install and verify the operation of a new pressure sensor.

(g) *pH monitoring.* If you have an operating limit that requires a pH monitoring system, you must meet the requirements in paragraphs (a) and (g)(1) through (4) of this section.

(1) Install the pH sensor in a position that provides a representative measurement of scrubber effluent pH.

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

(3) Calibrate the pH monitoring system according to the manufacturer's instructions. Clean the pH probe at least once each process operating day. Maintain on-site documentation that your calibration frequency is sufficient to maintain the specified accuracy of your device.

(4) Conduct a performance evaluation (including a two-point calibration with one of the two buffer solutions having a pH within 1 of the pH of the operating limit) of the pH monitoring system at the time of each performance test but no less frequently than annually.

(h) *Liquid flow rate monitoring*. If you have an operating limit that requires the use of a flow measurement device, you must meet the requirements in paragraphs (h)(1) through (4) of this section.

(1) Locate the flow sensor and other necessary equipment in a position that provides a representative flow.

(2) Use a flow sensor with a measurement sensitivity 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 annually.

(i) *Secondary electric power input monitoring.* If you have an operating requirement that requires a secondary electric power monitoring system, you must meet the requirements in paragraphs (a) and (i)(1) and (2) of this section.

(1) Install sensors to measure (secondary) voltage and current to the precipitator collection plates.

(2) Conduct a performance evaluation of the electric power monitoring at the time of each performance test but no less frequently than annually.

(j) *Electrified filter bed voltage monitoring.* If you have an operating requirement that requires a voltage monitoring system, you must meet the requirements in paragraphs (a) and (j)(1) and (2) of this section.

(1) Install sensors to measure voltage to the electrified filter bed.

(2) Conduct a performance evaluation of the voltage monitoring at the time of each performance test but no less frequently than annually.

(k) *Combustion unit bypass stack monitoring*. If you have a bypass stack in which combustion unit exhaust streams routinely used to direct-fire a PCWP dryer or lumber kiln are temporarily vented to the atmosphere without passing through the direct-fired PCWP dryer or lumber kiln, you must meet the requirements in paragraphs (a) and (k)(1) and (2) of this section.

(1) Install a sensor to continuously monitor an indicator of bypass stack usage such as flow damper position or temperature.

(2) Conduct a performance evaluation of the bypass stack monitor at the time of each performance test but no less frequently than annually.

(l) *Process unit bypass stack monitoring.* If you have a bypass stack that allows a process unit exhaust stream to temporarily vent to the atmosphere while bypassing a control device routinely used to meet the compliance options in table 1B, 1C, 1D, or 1E to this subpart, you must meet the requirements in paragraphs (a) and (l)(1) and (2) of this section.

(1) Install a sensor to continuously monitor an indicator of bypass stack usage such as flow damper position or temperature.

(2) Conduct a performance evaluation of the bypass stack monitor at the time of each performance test but no less frequently than annually.

(m) *Lumber kiln temperature monitoring*. Temperature monitors used in lumber kilns must meet the requirements in paragraphs (a), (b), and (m)(1) and (2) of this section.

(1) For purposes of complying with dry bulb temperature limits in § 63.2241(e)(3)(i) or (ii), dry bulb temperature monitor(s) must be located in a position to determine the dry bulb temperature of the heated air that exits the lumber.

(2) Facilities complying with the site-specific plan in § 63.2241(e)(3)(iii) must describe the number and location of temperature monitors in the site-specific plan.

(n) *Lumber moisture monitoring under hybrid option*. The requirements in paragraphs (a), (b), and (n)(1) and (2) of this section apply for lumber kilns using the hybrid temperature and lumber moisture monitoring work practice option in § 63.2241(e)(3)(ii). The lumber moisture content (weight percent, dry basis) must be monitored either within the kiln or at a location after the lumber exits the kiln.

(1) For lumber moisture content measured after the lumber exits the kiln, you must obtain at least one lumber moisture content measurement per either twenty thousand board feet (20 MBF or 20,000 BF) of board lumber produced or per 2,000 cubic feet (2,000 CF) of round lumber produced.

(2) For lumber moisture content measured in the kiln, lumber moisture measurements must be obtained as follows for each kiln type:

(i) For batch kilns with in-kiln moisture monitoring, lumber moisture measurements must be distributed in different areas of the kiln. At least one lumber moisture reading per crib must be obtained.

(ii) For continuous kilns with in-kiln moisture monitoring, lumber moisture measurements must be obtained for each crib of lumber dried.

(o) *Lumber moisture monitoring under site-specific plan.* The requirements in paragraphs (a) and (o)(1) and (2) of this section apply for lumber facilities monitoring lumber moisture under the site-specific plan work practice option § 63.2241(e)(3)(iii).

(1) The site-specific plan must include a method for monitoring lumber moisture content (weight percent, dry basis) and specify the location of such monitoring within the lumber manufacturing process (for example, at the kiln unloading track, in lumber storage, or at the planer).

(2) You must obtain at least one lumber moisture content measurement per twenty thousand board feet (20 MBF or 20,000 BF) of board lumber produced or per 2,000 cubic feet (2,000 CF) of round lumber produced.

13. Amend § 63.2270 by revising paragraph (e) and adding paragraphs (g) through (k) to read as follows:

§ 63.2270 How do I monitor and collect data to demonstrate continuous compliance?

* * * * *

(e) For dry rotary dryer and veneer predryer wood moisture monitoring, dry rotary dryer temperature monitoring, biofilter bed temperature monitoring, biofilter outlet THC monitoring, and continuous opacity monitoring, determine the 24-hour block average of all recorded readings, calculated after every 24 hours of operation as the average of the

evenly spaced recorded readings in the previous 24 operating hours (excluding periods described in paragraphs (b) and (c) of this section).

* * * * *

(g) The requirements in paragraphs (c) through (f) of this section do not apply for monitoring the usage of process unit bypass stacks or combustion unit bypass stacks as such monitoring must be conducted continuously at all times that the process unit or combustion unit (that routinely direct-fires a PCWP dryer or lumber kiln) is operating. You must record the dates and times when each bypass stack is used and use the recording readings (excluding invalid data described in paragraph (b) of this section) to calculate and report the total duration of bypass stack usage during the semiannual reporting period.

(h) For lumber kilns, the following temperature data averaging requirements apply:

(1) *Temperature limit and hybrid options*. You must continuously monitor and record the dry bulb temperature during the kiln drying cycle and record the dry bulb temperature at least once every 15 minutes as specified in § 63.2269(m). The readings from multiple dry bulb temperature monitors positioned to determine the temperature of the heated air that exits the lumber may be averaged together to determine the kiln-wide, dry bulb temperature.

(i) For batch kilns, calculate the average from the recorded readings during each batch cycle, and maintain the batch cycle average dry bulb temperature at or below the maximum temperature limits specified in either § 63.2241(e)(3)(i) or (ii), whichever applies.

(ii) For continuous dry kilns, calculate the daily block average from the recorded readings and maintain the daily block average dry bulb temperature at or below the

maximum temperature limits specified in either § 63.2241(e)(3)(i) or (ii), whichever applies.

(2) *Site specific plan option.* You must continuously monitor the temperature parameter (such as wet or dry bulb temperature, wet bulb depression, or temperature drop across the load) specified in your site-specific plan. You must record the temperature parameter at least every 15 minutes and calculate the 3-hour block average for comparison to the site-specific temperature limit.

(i) For lumber kilns using the hybrid option, the following lumber moisture data averaging requirements must be followed:

(1) Using the lumber moisture content measurement data collected according to § 63.2269(n), calculate and record the semiannual average kiln-dried lumber moisture content for lumber with a given moisture specification produced at the facility.

(2) Compare the semiannual average lumber moisture content for each moisture specification produced at the facility to the applicable minimum kiln-dried moisture content limits included in table 11 to this subpart to determine compliance.

(j) For lumber kilns using the site-specific option, the following lumber moisture data averaging requirements must be followed:

(1) Using the lumber moisture content measurement data collected, calculate and record the monthly and semiannual average kiln-dried lumber moisture content.

(2) Compare the monthly average lumber moisture content to the minimum kiln-dried lumber moisture content limit included in the site-specific plan based on § 63.2241(e)(4) and table 11 to this subpart. You must take corrective action if the monthly average lumber moisture content determined in paragraph (j)(1) of this section is below the minimum lumber moisture content limit in the site-specific plan. You must maintain records of corrective actions taken and report corrective actions in the semiannual report.

(3) Compare the semiannual average kiln-dried lumber moisture content to the minimum lumber moisture content limit included in the site-specific plan based on § 63.2241(e)(4) of this section and table 11 to this subpart to determine compliance.

(k) If you observe opacity using EPA Method 9 of appendix A-4 to part 60 of this chapter (in conjunction with pressure drop monitoring) instead of using a COMS for mechanical collectors (or other dry control device not listed elsewhere in table 2 to this subpart) to meet a compliance option in table 1D or 1E to this subpart, you must follow the procedure for demonstrating continuous compliance with the opacity observation limit in paragraphs (k)(1) and (2) of this section.

(1) A qualified observer must conduct two weekly 6-minute opacity observations of the mechanical collector (or other dry control device) exhaust to the atmosphere according to EPA Method 9 of appendix A-4 in part 60 of this chapter and 40 CFR 60.11 to demonstrate the opacity remains below the maximum limit established according to § 63.2262(u).

(2) If the average of the two weekly 6-minute opacity observations exceeds the maximum opacity limit established in paragraph (k)(1) of this section, you must take appropriate corrective action to correct the above normal emissions as soon as practicable and within the monitoring period and record the action taken.

14. Amend § 63.2271 by revising paragraph (b)(4) and adding paragraph (c) to read as follows:

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

* * * * *

(b) * * *

(4) Instances of safety-related shutdown, pressurized refiner startup and shutdown, and startup and shutdown of direct-fired softwood veneer dryer gas-fired

burners subject to the work practice requirements in table 3 to this subpart (rows 6 through 8) must be reported as required in § 63.2281(c)(4). Instances when the work practice requirements in table 3 to this subpart (rows 6 through 8) are used are not considered to be deviations from (or violations of) the otherwise applicable compliance options, operating requirements and work practice requirements (in rows 1 through 5 of table 3 to this subpart) as long as you do not exceed the minimum amount of time necessary for these events and continuously monitor process unit bypass stack usage during the events as required in § 63.2240(e) and table 2 to this subpart.

(c) For direct-fired PCWP dryers (including direct wood-fired PCWP dryers and direct natural gas-fired PCWP dryers) and direct-fired lumber kilns, demonstrate compliance with the annual tune-up requirement in § 63.2241(d) and table 3 to this subpart as specified in paragraphs (c)(1) through (8) of this section.

(1) You must conduct the tune-up while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to PCWP dryer or lumber kiln over the 12 months prior to the tune-up.

(2) Inspect the burner and (if applicable) grates. Clean, repair, or replace any components of the burner and grates as necessary. This work must be initiated within 30 days after the inspection and completed within 180 days following the inspection identifying the need for the corrective action. If the corrective action cannot be completed within 180 days, a written request for an extension may be submitted to the delegated authority, who may grant an extension if they determine additional time is necessary.

(3) For direct-fired PCWP dryers with burners in the dryer or separate combustion unit(s), inspect the flame pattern (as applicable) and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available.

(4) For each direct-fired PCWP dryer with a burner in the dryer, cycle the burner through its firing range to ensure the burner functions satisfactorily throughout the operating range.

(5) Inspect the combustion air system and system that controls the air-to-fuel ratio to make sure it is functioning properly (according to the manufacturer's guidelines, if available).

(6) Inspect the fuel delivery system and, if applicable, the ash removal system to make sure each system is functioning properly (according to the manufacturer's guidelines, if available).

(7) Record the results of each inspection and corrective action taken, as required in § 63.2282.

(8) The required inspections and any necessary maintenance must be performed annually (no more than 13 months after previous inspection). If inspections are performed more frequently than annually, required equipment maintenance and replacement may be delayed until the next scheduled shutdown of the combustion unit firing a PCWP dryer or lumber kiln.

15. Amend § 63.2280 by:

a. Revising paragraphs (a) and (b) and paragraph (d) introductory text;

b. Removing and reserving paragraph (f);

c. Revising paragraph (g) introductory text; and

d. Removing and reserving paragraph (g)(2).

The revisions read as follows:

§ 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) and (f)(4) and (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 September 28, 2004, 120 calendar days after initial startup, or no later than 120 days after the source becomes subject to this subpart, or after initial startup, whichever is later, as specified in § 63.9(b)(2). Initial notifications required in § 63.9(b) must be submitted in a user-specified format such as portable document format (PDF) following the procedure specified in § 63.9(k) except the Confidential Business Information (CBI) should be submitted according to § 63.2281(k).

* * * * *

(d) If you are required to conduct a performance test, design evaluation, or other compliance demonstration as specified in tables 4 through 6 to this subpart, or a repeat performance test as specified in table 7 to this subpart, you must submit a Notification of Compliance Status as specified in § 63.9(h)(2)(ii). Notifications of Compliance Status must be submitted in a user-specified format such as portable document format (PDF) following the procedure specified in § 63.9(k) except the CBI should be submitted according to § 63.2281(k).

* * * * *

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

* * * * *

16. Revise § 63.2281 to read as follows:

§ 63.2281 What reports must I submit and when?

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

(b) Unless the EPA 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 to this subpart and as specified in paragraphs (b)(1) through (6) 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.

(6) Submit all reports following the procedure specified in § 63.9(k) except the CBI should be submitted according to paragraph (k) of this section.

(c) The compliance report must contain the information in paragraphs (c)(1) through (11) 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) The compliance report must include the number of instances and total amount of time during the reporting period in which each of the work practice requirements in table 3 to this subpart (row 6, 7, or 8) is used in place of the otherwise applicable compliance options, operating requirements, and work practice requirements (in table 3 to this subpart rows 1 through 5). If a work practice in table 3 to this subpart (row 6, 7, or 8) is used for more than a total of 100 hours during the semiannual reporting period, you must report the date, time and duration of each instance when that one work practice exceeding 100 hours was used.

(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 shut down 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 the following equation.

Equation 1 to Paragraph (c)(5)(iii)(C)

$$RM = \frac{DT_p + DT_c}{PU_p + PU_c}$$

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) [Reserved]

(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 to 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 (CMS), including CEMS, COMS, 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.

(9) For each combustion unit subject to tune-up requirements, include the date of the most recent burner tune-up and a summary of corrective actions taken.

(10) The total time (hours) during the semiannual reporting period that each combustion unit bypass stack or each process unit bypass stack was used.

(11) For each lumber kiln, the information specified in paragraphs (c)(11)(i) though (v) of this section.

(i) A description of updates to the O&M plan made during the reporting period, as required under § 63.2253(a)(4).

(ii) If complying with the dry bulb temperature limit option in § 63.2241(e)(3)(i), note the applicable maximum dry bulb temperature limit according to kiln type, and report deviations from the dry bulb temperature limit batch cycle average (for batch kilns) or daily block average (for continuous kilns) calculated according to § 63.2270(h)(1).

(iii) If complying with a site-specific temperature limit under a site-specific plan in § 63.2241(e)(3)(iii)(A), note the site-specific temperature parameter limit, and report deviations from the 3-hour block average temperature parameter limit included in the site-specific plan calculated according to § 63.2270(h)(2).

(iv) If complying with the hybrid option in § 63.2241(e)(3)(ii), note the applicable maximum dry bulb temperature limit according to kiln type, report deviations from the dry bulb temperature limit batch cycle average (for batch kilns) or daily block average (for continuous kilns) calculated according to § 63.2270(h)(1), and report the semiannual average lumber moisture content determined according to § 63.2270(i).

(v) If complying with a site-specific approach for monitoring kiln-dried lumber moisture content under a site-specific plan in § 63.2241(e)(3)(iii)(B), describe the lumber

moisture monitoring method and location and note the site-specific minimum kiln-dried lumber moisture content limit included in the site-specific plan. Report corrective actions taken as a result of monthly lumber moisture content averages (determined according to § 63.2270(g)) that are below the minimum lumber moisture content limit in the site-specific plan. Report the semiannual average kiln-dried lumber moisture content value determined according to § 63.2270(g).

(d) For each deviation from a compliance option or operating requirement and for each deviation from the work practice requirements in table 8 to 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 (5) of this section and 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 date, time, 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, operating requirement, or work practice requirement occurring at an affected source where you are using a CMS to comply with the compliance options, operating requirements, or work practice requirements in this subpart, you must include the information in paragraphs (c)(1) through (5) and (e)(2) through (13) of this section. This includes periods of startup, shutdown, and malfunction and routine control device maintenance.

(1) [Reserved]

(2) The date, time, and duration 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.

(12) For any failure to meet a compliance option in § 63.2240, including the compliance options in table 1A through 1E to this subpart, provide an estimate of the quantity of each regulated pollutant emitted over any emission limit, and a description of the method used to estimate the emissions.

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

(f) [Reserved]

(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 to 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.

(h) If you are required to submit reports following the procedure specified in this paragraph (h), you must submit reports to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through the EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/*). For semiannual compliance reports required in this section and table 9 (row 1) to this subpart, you must use the appropriate electronic report template on the CEDRI website (*https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri*) for this subpart. The date report templates become available will be listed on the CEDRI website. If the reporting form for the semiannual compliance report specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate addresses listed in § 63.13. You must begin submitting all subsequent reports via CEDRI in the first full reporting period after the report template for this subpart has been available in CEDRI for 1 year. The report must

be submitted by the deadline specified in this subpart, regardless of the method in which the report is submitted.

(i) Within 60 days after the date of completing each performance test required by this subpart, you must submit the results of the performance test following the procedures specified in paragraphs (i)(1) through (3) of this section.

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

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

(3) *Confidential Business Information (CBI).* If you claim some of the information submitted under this paragraph (i) is CBI, you must submit a complete file, including information claimed to be CBI, to the EPA. The file must be generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the file according to paragraph (k) of this section except it should be sent to the attention of the Branch Supervisor in the Measurement Strategy Branch.

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

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

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

(3) *Confidential Business Information (CBI).* If you claim some of the information submitted under this paragraph (j) is CBI, you must submit a complete file, including information claimed to be CBI, to the EPA. The file must be generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the file according to paragraph (k) of this section except it should be sent to the attention of the Branch Supervisor in the Measurement Strategy Branch.

(k) For Confidential Business Information (CBI):

(1) The preferred method to receive CBI is for it to be transmitted electronically using email attachments, File Transfer Protocol, or other online file sharing services. Electronic submissions must be transmitted directly to the OCAP CBI Office at the email address ocapcbi@epa.gov, and as described in the preceding sentence, should include clear CBI markings and be flagged to the attention of the Sector Lead, Plywood and Composite Wood Products. If assistance is needed with submitting large electronic files that exceed the file size limit for email attachments, and if you do not have your own file sharing service, please email ocapcbi@epa.gov to request a file transfer link.

(2) If you cannot transmit the file electronically, you may send CBI information through the postal service to the following address: OCAP Document Control Officer (C404-02), OCAP, U.S. Environmental Protection Agency, 109 T.W. Alexander Drive, P.O. Box 12055, Research Triangle Park, North Carolina 27711, Attention Sector Lead – Plywood and Composite Wood Products. The mailed CBI material should be double wrapped and clearly marked. Any CBI markings should not show through the outer envelope.

(3) All CBI claims must be asserted at the time of submission. Anything submitted using CEDRI cannot later be claimed CBI. Furthermore, under CAA section 114(c), emissions data is not entitled to confidential treatment, and the EPA is required to make emissions data available to the public. Thus, emissions data will not be protected as CBI and will be made publicly available.

(4) You must submit the same file submitted to the CBI office with the CBI omitted to the EPA via the EPA's CDX as described in § 63.9(k).

(l) [Reserved]

17. Amend § 63.2282 by:

a. Revising paragraphs (a)(2) introductory text, (a)(2)(iii)(A), and (c) introductory text; and

b. Removing and reserving paragraph (d).

The revisions read as follows:

§ 63.2282 What records must I keep?

(a) * * *

(2) Records related to startup and shutdown, failures to meet the standard, and actions taken to minimize emissions, specified in paragraphs (a)(2)(i) through (iv) of this section.

* * * * *

(iii) * * *

(A) For any failure to meet a compliance option in § 63.2240, including the compliance options in tables 1A through 1E to this subpart, record an estimate of the quantity of each regulated pollutant emitted over any emission limit and a description of the method used to estimate the emissions.

* * * * *

(c) For each CMS, you must keep the following records:

* * * * *

§ 63.2283 [Amended]

18. Amend § 63.2283 by removing and reserving paragraph (d).

19. Revise § 63.2292 to read as follows:

§ 63.2292 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act (CAA), in § 63.2, and in this section as follows:

1-hour period means a 60-minute period.

Affected source means the collection of dryers, refiners, blenders, formers, presses, board coolers, and other process units associated with the manufacturing of plywood and composite wood products. The affected source includes, but is not limited

to, green end operations, refining, drying operations (including any combustion unit exhaust stream routinely used to direct fire process unit(s)), resin preparation, 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.

Agricultural fiber means the fiber of an annual agricultural crop. Examples of agricultural fibers include, but are not limited to, wheat straw, rice straw, and bagasse.

Atmospheric refiner means a piece of equipment operated under atmospheric pressure for refining (rubbing, grinding, or milling) wood material into fibers or particles for use in particleboard, MDF or dry-process hardboard production. Atmospheric refiners are operated with continuous infeed and outfeed of wood material and atmospheric pressures throughout the refining process. An atmospheric refiner is a process unit.

Biofilter means an enclosed control system such as a tank or series of tanks with a fixed roof that contact emissions with a solid 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.

Blender means rotary drum or other vessel in which resin and other additives are mixed with wood or agricultural fiber furnish prior to forming into a composite wood

product. Blenders do not include mix chests in wet formed fiberboard or hardboard manufacturing. A blender is a process unit.

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.

Combustion unit means a dryer burner, process heater, or boiler. Combustion units may be used for combustion of organic HAP emissions.

Combustion unit bypass stack means a bypass or abort stack in which a combustion unit exhaust stream routinely used to direct-fire a PCWP dryer or lumber kiln is vented to the atmosphere without first passing through the PCWP dryer or lumber kiln.

Control device means any equipment that reduces the quantity of HAP emitted to the air. The device may destroy the HAP or secure the HAP 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 HAP emissions to the atmosphere.

Conveyor strand dryer means a conveyor dryer used to reduce the moisture of wood strands used in the manufacture of oriented strandboard, laminated strand lumber, or other wood strand-based products. A *conveyor strand dryer* is a process unit.

Conveyor strand dryer zone means each portion of a conveyor strand dryer with a separate heat exchange system and exhaust vent(s). Conveyor strand dryers contain multiple zones (e.g., three zones), which may be divided into multiple sections.

Curing chamber means an oven or room surrounded by a wall or heavy plastic flaps that uses heat, infrared, or radio-frequency techniques to cure the resin used to bond the web and flange components of I-joists. A curing chamber is a process unit.

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 of whether or not such failure is permitted by this subpart. A deviation is not always a violation. The determination of whether a deviation constitutes a violation of the standard is up to the discretion of the entity responsible for enforcement of the standards.

Direct-fired process unit means a process unit that is heated by the passing of combustion exhaust through the process unit such that the process material is contacted by the combustion exhaust.

Direct natural gas-fired PCWP dryer means a direct-fired PCWP dryer (including each dry rotary dryer, green rotary dryer, tube dryer, rotary strand dryer, hardboard oven, press predryer or heated zones from a softwood or hardwood veneer dryer, conveyor strand dryer, or fiberboard mat dryer) in which greater than 90 percent of the direct-fired annual heat input results from natural gas (or propane) combustion.

Direct wood-fired PCWP dryer means a direct-fired PCWP dryer in which 10 percent or more of the direct-fired annual heat input results from combustion of wood-

derived fuel such as bark, wood residuals, or wood-derived syngas or any other fuel except for natural gas (or propane).

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, medium density fiberboard, or hardboard.

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.

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.

Engineered wood product means a structural wood product made with lumber, veneers, strands of wood, or from other small wood elements that are bound together with resin. Engineered wood products include, but are not limited to, laminated strand lumber, laminated veneer lumber, parallel strand lumber, wood I-joists, and glue-laminated beams.

Engineered wood product press means a press that applies heat and/or pressure to resinated veneer, wood strands, or lumber to bond the resinated wood material into an engineered wood product. An engineered wood product press is a process unit.

Fiber means the discrete elements of wood or similar cellulosic material, which are separated by mechanical means, as in refining, that can be formed into boards.

Fiber washer means a unit in which water-soluble components of wood (hemicellulose and sugars) that have been produced during digesting are removed from the wood fiber. Typically, wet fiber leaving a refiner is further diluted with water and

then passed over a filter, leaving the cleaned fiber on the surface. A fiber washer is a process unit.

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 generally 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 used to produce fiberboard or hardboard by applying heat. A *fiberboard mat dryer* is a process unit.

Finishing sander means a piece of equipment that uses an abrasive drum, belt, or pad to impart smoothness to the surface of a plywood or composite wood product panel and to reduce the panel to the prescribed thickness. A finishing sander is a process unit.

Finishing saw means a piece of equipment used to trim or cut finished plywood and composite wood products panels to a certain size. A finishing saw is a process unit.

Flame zone means the portion of the combustion chamber in a combustion unit that is occupied by the flame envelope.

Former or forming system means a series of bins (or forming headers) that distribute resinated furnish into layers onto a conveyor to form a loose mat to be compressed into a reconstituted wood product such as particleboard, oriented strandboard, or medium density fiberboard. Each forming bin (or forming header) adds a layer to the mat beginning with a face furnish layer, then one or more core furnish layers, and ending with a face furnish layer. The forming system includes each of the forming bins (headers) in series, flying cutoff saw (in facilities with batch presses), and pneumatic furnish pick-up points up prior to the press loader or continuous press.

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.

Glue-laminated beam press means an engineered wood product press that presses resinated stacks of lumber into a beam by application of heat and/or pressure.

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.

Group 1 miscellaneous coating operations means application of edge seals, nail lines, logo (or other information) paint, shelving edge fillers, trademark/grade stamp inks, and wood putty patches to plywood and composite wood products (except kiln-dried lumber) on the same site where the plywood and composite wood products are manufactured. Group 1 miscellaneous coating operations also include application of synthetic patches to plywood at new affected sources.

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

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, poplar, and oak.

Hardwood plywood press means a hot press which, through heat and pressure, bonds assembled hardwood veneers (including multiple plies of veneer and/or a substrate) and resin into a hardwood plywood panel. A hardwood plywood press is a process unit.

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.

Humidifier or humidification chamber means a process unit used to increase the moisture content of hardboard following pressing or baking in a hardboard oven. Typically, water vapor saturated air is blown over the hardboard surfaces in a cabinet. A humidifier 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* is also known as parallel strand lumber (PSL).

Log vat means a process unit that raises the temperature of the logs inside by applying a heated substance, usually hot water or steam, to the outside of the logs by spraying or soaking. A log vat is a process unit.

Lumber means boards or planks sawed or split from logs or timber, including logs or timber processed for use as utility poles or other wood components. Lumber can be either green (non-dried) or dried. Lumber is typically either air-dried or kiln-dried.

Lumber kiln means an enclosed dryer operated by applying heat to reduce the moisture content of lumber.

LVL or PSL press means an engineered wood product press that presses resinated stacks of veneers into a solid billet by application of heat and/or pressure. The billet is cut into laminated veneer lumber or parallel strand lumber after exiting the press. An LVL or PSL press is a process unit.

Maximum lumber moisture specification means (for purposes of this subpart) the upper limit of lumber moisture content (weight percent on a dry basis) that meets the relevant lumber grade standard for a lumber product.

Maximum true vapor pressure means the equilibrium partial pressure exerted by each HAP that is present in the stored resin in a concentration above the thresholds defining non-HAP resins at the temperature equal to the highest calendar-month average of the liquid storage temperature for liquids stored above or below the ambient temperature, or at the local maximum monthly average temperature as reported by the National Weather Service for liquids stored at the ambient temperature, as determined:

(1) From safety data sheets or other technical information provided by the PCWP resin supplier; or

(2) Standard reference texts; or

(3) Any other method approved by the Administrator.

Medium density fiberboard (MDF) means a composite panel composed of cellulosic fibers (usually wood or agricultural fiber) 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 oriented strandboard siding that occurs at the same site as oriented strandboard manufacture and application of asphalt, clay slurry, or titanium dioxide coatings to fiberboard at the same site of fiberboard manufacture.

Mixed PCWP process stream means an emission stream from a process unit subject to standards effective on **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, that was co-mingled with an emissions stream or streams from one or more process units subject to the compliance options in table 1B to this subpart before **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, at an affected source that commenced construction (or reconstruction) on or before May 18, 2023.

Molded particleboard means a shaped composite product (other than a composite panel) composed primarily of cellulosic materials (usually wood or agricultural fiber) generally in the form of discrete pieces or particles, as distinguished from fibers, which are pressed together with resin.

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

Multipurpose atmospheric refiner means an atmospheric refiner that processes wood for use in PCWP and is not a "post-dryer atmospheric refiner" as defined in this section. A *multipurpose atmospheric refiner* is a process unit.

Natural gas means:

(1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or

(2) Liquefied petroleum gas, as defined in ASTM D1835-05 (incorporated by reference, see § 63.14); or

(3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 35 and 41 megajoules (MJ) per dry standard cubic meter (950 and 1,100 Btu per dry standard cubic foot); or

(4) Propane or propane derived synthetic natural gas. Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure C_3H_8.

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

Non-HAP coating means a coating with HAP contents below 0.1 percent by mass for Occupational Safety and Health Administration-defined carcinogens as specified in section A.6.4 of appendix A to 29 CFR 1910.1200, and below 1.0 percent by mass for other HAP compounds.

Non-HAP resin means a resin that contains less than 0.1 percent by mass of formaldehyde and less than 1.0 percent by mass each of phenol, methanol, and MDI.

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.

Panel-trim chipper means a piece of equipment that accepts the discarded pieces of veneer or pressed plywood and composite wood products panels that are removed by

finishing saws and reduces these pieces to small elements. A panel-trim chipper is a process unit.

Parallel strand lumber (PSL) 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. *Parallel strand lumber* is also known as laminated veneer lumber (LVL).

Partial wood products enclosure means an enclosure that does not meet the design criteria for a wood products enclosure as defined in this subpart.

Particle means a discrete, small piece of cellulosic material (usually wood or agricultural fiber) produced mechanically and used as the aggregate for a particleboard.

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

PCWP dryer means each dry rotary dryer, green rotary dryer, tube dryer, rotary strand dryer, hardboard oven, or press predryer; or the heated zones from a softwood or hardwood veneer dryer, conveyor strand dryer, or fiberboard mat dryer.

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, medium density fiberboard, or lumber. Plywood products may be flat or curved.

Plywood and composite wood products (PCWP) manufacturing facility means a facility 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 panel, engineered wood product, or other product defined in this section. 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, molded particleboard, oriented strandboard, hardboard, fiberboard, medium density fiberboard, laminated strand lumber, laminated veneer lumber, wood I-joists, kiln-dried lumber, and glue-laminated beams.

Polycyclic aromatic hydrocarbons (PAH) means the sum of 2-methylnaphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene, fluoranthene, pyrene, benz(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(e)pyrene, benzo(a)pyrene, perylene, indeno(1,2,3-c,d)pyrene, benzo(g,h,i)perylene, dibenz(a,h)anthracene.

Post-dryer atmospheric refiner means an atmospheric refiner used to process wood for use in PCWP in which 90 percent or more (by weight) of the annual throughput has been previously dried onsite in a dryer at the PCWP affected facility. A *post-dryer atmospheric refiner* is a process unit.

Press predryer means a dryer used to reduce the moisture and elevate the temperature by applying heat to 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. Pressurized refiners include steaming vessels that operate under pressure to continuously feed and vent through the pressurized refiner. A *pressurized refiner* is a process unit.

Primary tube dryer means a single-stage tube dryer or the first stage of a multi-stage tube dryer. Tube dryer stages are separated by vents for removal of moist gases between stages (e.g., a product cyclone at the end of a single-stage dryer or between the

first and second stages of a multi-stage tube dryer). The first stage of a multi-stage tube dryer is used to remove the majority of the moisture from the wood furnish (compared to the moisture reduction in subsequent stages of the tube dryer). Blow-lines used to apply resin are considered part of the primary tube dryer. A *primary tube dryer* is a process unit.

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

Process unit bypass stack means a bypass or abort stack that allows a process unit exhaust stream to temporarily vent to the atmosphere while bypassing a control device routinely used to meet the compliance options in table 1B, 1C, 1D, or 1E to this subpart.

Process unit(s) subject to standards effective on ***[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]***, means a softwood plywood press, hardwood plywood press, engineered wood product press, humidifier, atmospheric refiner, stand-alone digester, fiber washer, blender, former, finishing sander, finishing saw, panel trim chipper, log vat, resin tank, onsite wastewater treatment operation specifically associated with PCWP manufacturing, lumber kiln, press predryer (at an existing affected source), fiberboard mat dryer heated zones (at an existing affected source), or reconstituted wood products board cooler (at an existing affected source).

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 medium density fiberboard 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. Representative operating conditions exclude periods of startup and shutdown.

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.

Resin tank means a storage tank, container, or vessel connected to plywood and composite wood product production that holds resin. A resin tank is a process unit.

Resinated material handling (RMH) process unit means each resin tank, softwood plywood press, hardwood plywood press, engineered wood product press or curing chamber, blender, former, finishing saw, finishing sander, panel trim chipper, hardboard humidifier, and onsite wastewater treatment operations specifically associated with PCWP manufacturing at a new or existing affected source; and each reconstituted wood products board cooler at an existing affected source.

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

Rotary strand dryer means a rotary dryer operated by applying heat and used to reduce the moisture of wood strands used in the manufacture of oriented strandboard, laminated strand lumber, or other wood strand-based products. A rotary strand dryer is a process unit.

Safety-related shutdown means an unscheduled shutdown of a process unit subject to a compliance option in table 1B to this subpart during which time emissions from the process unit cannot be safely routed to the control system in place to meet the compliance options or operating requirements in this subpart without imminent danger to the process, control system, or system operator.

Secondary tube dryer means the second stage and subsequent stages following the primary stage of a multi-stage tube dryer. Secondary tube dryers, also referred to as relay dryers, operate at lower temperatures than the primary tube dryer they follow. Secondary tube dryers are used to remove only a small amount of the furnish moisture compared to the furnish moisture reduction across the primary tube dryer. A *secondary tube dryer* is a process unit.

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 plywood press means a hot press which, through heat and pressure, bonds assembled softwood veneer plies and resin into a softwood plywood panel. A softwood plywood press is a process unit.

Softwood veneer dryer means a dryer that removes excess moisture from veneer by conveying the veneer through a heated medium, generally 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.

Stand-alone digester means a pressure vessel used to heat and soften wood chips (usually by steaming) before the chips are sent to a separate process unit for refining into fiber. Stand-alone digesters operate in batch cycles that include filling with wood chips, pressurization, cooking of wood chips under pressure, pressure release (purge) venting, and chip discharge (blow) from the pressure vessel. Venting of emissions from stand-alone digesters is separate from any downstream refining process. A stand-alone digester 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.

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.

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 EPA Method 204 of appendix M to part 51 of this chapter.

Thermal oxidizer means a control system that combusts or oxidizes exhaust gas from a process unit. Thermal oxidizers include regenerative thermal oxidizers and combustion units.

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

Tube dryer means a single-stage or multi-stage dryer operated by applying heat 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. Tube dryers do not include pneumatic fiber transport systems that use temperature and humidity conditioned pneumatic system supply air in order to prevent cooling of the wood fiber as it is moved through the process. 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 control device means any equipment that uses water as a means of collecting an air pollutant. Wet control devices include scrubbers, wet electrostatic precipitators, and electrified filter beds. Wet control devices do not include biofilters or other equipment that destroys or degrades HAP.

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.

Wood products enclosure means a permanently installed containment that was designed to meet the following physical design criteria:

(1) Any natural draft opening shall be at least four equivalent opening diameters from each HAP-emitting point, except for where board enters and exits the enclosure, unless otherwise specified by the EPA Administrator.

(2) The total area of all natural draft openings shall not exceed 5 percent of the surface area of the enclosure's four walls, floor, and ceiling.

(3) The average facial velocity of air through all natural draft openings shall be at least 3,600 meters per hour (200 feet per minute). The direction of airflow through all natural draft openings shall be into the enclosure.

(4) All access doors and windows whose areas are not included in item 2 of this definition and are not included in the calculation of facial velocity in item 3 of this definition shall be closed during routine operation of the process.

(5) The enclosure is designed and maintained to capture all emissions for discharge through a control device.

Work practice requirement means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to CAA section 112(h).

20. Add tables 1C through 1E to subpart DDDD of part 63 to read as follows:

Table 1C to Subpart DDDD of Part 63—Compliance Options Applicable On and After [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]

If you operate a(n) . . .	For process units at an affected source that commenced construction or reconstruction on or before May 18, 2023, you must comply with the following compliance options[1] on and after July 6, 2029 . . .	For process units at an affected source that commenced construction or reconstruction after May 18, 2023, you must comply with the following compliance options[1] beginning on [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER], or upon initial startup, whichever is later. . .
Fiberboard mat dryer heated zones at an affected source that commenced construction or reconstruction on or before January 9, 2003[2]	4.9E-02 lb total HAP/MSF 1/8" or 2.0E-01 lb total HAP/MSF 1/2"	See footnote "2"
Press predryer at an affected source that commenced construction or reconstruction on or before January 9, 2003[2]	8.0E-02 lb total HAP/MSF 1/8" or 3.2E-01 lb total HAP/MSF 1/2"	See footnote "2"
Post-dryer atmospheric refiner	4.1E-03 lb total HAP/ODT or 8.5E-01 ppmvd total HAP	3.3E-03 lb total HAP/ODT or 6.5E-01 ppmvd total HAP
Multipurpose atmospheric refiner	1.2E-01 lb total HAP/ODT or 15 ppmvd total HAP	2.4E-03 lb total HAP/ODT or 3.3 ppmvd total HAP
Reconstituted wood product press producing OSB using MDI resin	2.5E-04 lb MDI/MSF 3/4" (1.3E-04 lb/MSF 3/8") or 2.7E-02 mg MDI/dscm	2.5E-04 lb MDI/MSF 3/4" (1.3E-04 lb/MSF 3/8") or 2.7E-02 mg MDI/dscm
Reconstituted wood product press producing particleboard or MDF using MDI resin	8.4E-04 lb MDI/MSF 3/4" or 2.0E-01 mg MDI/dscm	2.3E-04 lb MDI/MSF 3/4" or 2.7E-02 mg MDI/dscm
Primary tube dryer blow-line blending MDI resin, or primary tube dryer blow-line blending MDI resin co-controlled with a reconstituted wood products press using MDI resin	1.7E-02 lb MDI/ODT or 6.8E-01 mg MDI/dscm	1.7E-02 lb MDI/ODT or 6.8E-01 mg MDI/dscm
Miscellaneous coating operation for applying MDI moisture sealant to the surface of an engineered wood product	1.9E-03 lb MDI emitted/lb sealant applied or 1.4E-05 lb MDI per square foot of surface area coated	1.9E-03 lb MDI emitted/lb sealant applied or 1.4E-05 lb MDI per square foot of surface area coated

[1] Total HAP, as defined in § 63.2292, includes acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde. MDI is 4,4'-Diphenylmethane Diisocyanate (CAS 101-68-8). ug = micrograms; mg = milligrams; dscm = micrograms per dry standard meter; kPa = kilopascals; psia = pounds per square inch absolute; 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.

[2] Fiberboard mat dryer (heated zones) or press predryers at an affected source that commenced construction or reconstruction after January 9, 2003, must be in compliance with the compliance options in table 1A or 1B to this subpart beginning on September 28, 2004, or upon initial startup, whichever is later.

Table 1D to Subpart DDDD of Part 63—Compliance Options Applicable On and After July 6, 2029, for Direct Wood-Fired PCWP Dryers at Affected Sources That Commenced Construction or Reconstruction On or Before May 18, 2023

For the following types of direct wood-fired PCWP dryers. . .	You must meet the PM (HAP metal) limit	You must meet the Hg limit	You must meet the HCl limit	You must meet the PAH limit

Rotary strand dryer	9.9E-02 lb/ODT or 3.6E-03 gr/dscf	1.7E-05 lb/ODT or 8.4E-04 mg/dscm	5.8E-03 lb/ODT or 1.5E-01 mg/dscm	1.1E-04 lb/ODT or 9.9E-03 mg/dscm
Green rotary dryer	2.9E-01 lb/ODT or 5.2E-03 gr/dscf	1.5E-05 lb/ODT or 1.3E-03 mg/dscm	1.1E-02 lb/ODT or 1.7 mg/dscm	3.2E-04 lb/ODT or 4.2E-02 mg/dscm
Dry rotary dryer	6.5E-01 lb/ODT or 9.8E-02 gr/dscf	1.0E-05 lb/ODT or 8.4E-04 mg/dscm	1.1E-03 lb/ODT or 9.0E-02 mg/dscm	4.6E-05 lb/ODT or 4.1E-03 mg/dscm
Primary tube dryer or secondary tube dryer	3.1E-01 lb/ODT or 3.1E-03 gr/dscf	3.9E-05 lb/ODT or 1.6E-03 mg/dscm	6.4E-03 lb/ODT or 7.4E-01 mg/dscm	3.0E-04 lb/ODT or 1.6E-03 mg/dscm
Softwood veneer dryer heated zones	7.2E-02 lb/MSF 3/8” or 1.5E-02 gr/dscf	5.8E-05 lb/MSF 3/8” or 4.1E-02 mg/dscm	NA	NA

Notes: lb/ODT = pounds per oven dried ton, gr/dscf = grains per dry standard cubic foot, mg/dscm = milligrams per dry standard cubic meter. See § 63.2240(d)(3) for dioxin and furan TEQ limit for direct wood-fired green rotary dryers.

Table 1E to Subpart DDDD of Part 63—Compliance Options Applicable On and After [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER], for Direct Wood-Fired PCWP Dryers at Affected Sources That Commenced Construction or Reconstruction After May 18, 2023

For the following types of direct wood-fired PCWP dryers . . .	You must meet the PM (HAP metal) limit	You must meet the Hg limit	You must meet the HCl limit	You must meet the PAH limit
Rotary strand dryer	5.6E-02lb/ODT or 1.3E-03 gr/dscf	1.7E-05 lb/ODT or 8.4E-04 mg/dscm	1.7E-03 lb/ODT or 9.0E-02 mg/dscm	1.8E-05 lb/ODT or 1.5E-03 mg/dscm
Green rotary dryer	3.7E-02 lb/ODT or 1.3E-03 gr/dscf	1.1E-05 lb/ODT or 8.4E-04 mg/dscm	2.9E-03 lb/ODT or 9.0E-02 mg/dscm	6.2E-05 lb/ODT or 2.9E-03 mg/dscm
Dry rotary dryer	6.0E-01 lb/ODT or 4.6E-02 gr/dscf	1.0E-05 lb/ODT or 8.4E-04 mg/dscm	1.1E-03 lb/ODT or 9.0E-02 mg/dscm	2.2E-05 lb/ODT or 2.1E-03 mg/dscm
Primary tube dryer or secondary tube dryer	9.1E-02 lb/ODT or 1.3E-03 gr/dscf	3.9E-05 lb/ODT or 8.4E-04 mg/dscm	4.3E-03 lb/ODT or 9.0E-02 mg/dscm	3.4E-06 lb/ODT or 1.8E-06 mg/dscm
Softwood veneer dryer heated zones	7.2E-02 lb/MSF 3/8” or 1.5E-02 gr/dscf	5.8E-05 lb/MSF 3/8” or 4.1E-02 mg/dscm	NA	NA

Notes: lb/ODT = pounds per oven dried ton, gr/dscf = grains per dry standard cubic foot, mg/dscm = milligrams per dry standard cubic meter. See § 63.2240(d)(4) for dioxin and furan TEQ limit for direct wood-fired green rotary dryers.

21. Revise tables 2 through 10 to subpart DDDD of part 63 to read as follows:

Table 2 to Subpart DDDD of Part 63—Operating Requirements

If you operate a(n) . . .	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	Maintain the 3-hour block average THC concentration[1] in the thermal oxidizer exhaust below the maximum concentration established during the performance test.

If you operate a(n) . . .	You must . . .	Or you must . . .
(2) Catalytic oxidizer	Maintain the 3-hour block average catalytic oxidizer temperature above the minimum temperature established during the performance test; and check the activity level of a representative sample of the catalyst annually except as specified in footnote "2" to this table	Maintain the 3-hour block average THC concentration[1] in the catalytic oxidizer exhaust below the maximum concentration established during the performance test.
(3) Biofilter	Maintain the 24-hour block biofilter bed temperature within the range established according to § 63.2262(m)	Maintain the 24-hour block average THC concentration[1] 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 used to meet the compliance options in table 1B or 1C to this subpart	Petition the EPA 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 [1] in the control device exhaust below the maximum concentration established during the performance test.
(5) Process unit that meets a compliance option in table 1A, 1C, 1D, or 1E to this subpart without the use of a control device	Maintain on a daily basis the process unit controlling operating parameter(s) within the ranges established during the performance test according to § 63.2262(n)	Maintain the 3-hour block average THC concentration[1] in the process unit exhaust below the maximum concentration established during the performance test.
(6) Wet electrostatic precipitator used to meet the compliance options in § 63.2240(d)(2) and (3) and table 1D or 1E to this subpart	Maintain the 3-hour block average total secondary electric power input and liquid flow rate above the minimum limits established during the performance test.	For a WESP followed by a control device with a dry exhaust, maintain the 24-hour block average opacity of no more than 10 percent (or the highest hourly average measured during the performance test).
(7) Dry electrostatic precipitator used to meet the compliance options in § 63.2240(d)(2) and (3) and table 1D or 1E to this subpart	Maintain the 3-hour block average total secondary electric power input above the minimum limit established during the performance test	Maintain the 24-hour block average opacity of no more than 10 percent (or the highest hourly average measured during the performance test).
(8) Wet PM scrubber used to meet the compliance options in § 63.2240(d)(2) and (3) and table 1D or 1E to this subpart	Maintain the 3-hour block average liquid flow rate and pressure drop above the minimum limits established during the performance test.	
(9) Wet acid gas scrubber used to meet the compliance options in table 1D or 1E to this subpart	Maintain the 3-hour block average liquid flow rate and effluent pH above the minimum limits established during the performance test.	
(10) Electrified filter bed used to meet the compliance options in § 63.2240(d)(2) and (3) and table 1D or 1E to this subpart	Maintain the 3-hour block average ionizer voltage and the bed voltage above the minimum limits established during the performance test; AND maintain the pressure drop within the range established during the performance test.	

If you operate a(n) . . .	You must . . .	Or you must . . .
(11) Mechanical collector or other dry control device (not listed elsewhere in this table) used to meet the compliance options in § 63.2240(d)(2) and (3) and table 1D or 1E to this subpart	Maintain the 24-hour block average opacity of no more than 10 percent (or the highest hourly average measured during the performance test).	Maintain the 3-hour block average pressure drop across the control device above the minimum limit established during the performance test AND maintain average weekly 6-minute opacity readings below the maximum limit established according to § 63.2262(u).
(12) Process unit bypass stack (defined in § 63.2292) on and after July 6, 2029, except as noted in footnote "3" to this table	Continuously monitor usage of the process unit bypass stack at all times while the process units are operating.	

[1] You may choose to subtract methane from THC measurements.
[2] You may forego the annual catalyst activity check during the calendar year when a performance test is conducted according to table 4 to this subpart.
[3] New or reconstructed affected sources that commenced construction or reconstruction after May 18, 2023, must comply with this requirement beginning on **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, or upon initial startup, whichever is later.

Table 3 to Subpart DDDD of Part 63—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 (through proper balancing of the heated zone exhausts).
(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).
(5) Group 1 miscellaneous coating operations	Use non-HAP coatings as defined in § 63.2292.
(6) Process units and control systems undergoing safety-related shutdown on and after August 13, 2021, except as noted in footnote "1" to this table	Follow documented site-specific procedures such as use of automated controls or other measures that you have developed to protect workers and equipment to ensure that the flow of raw materials (such as furnish or resin) and fuel or process heat (as applicable) ceases and that material is removed from the process unit(s) as expeditiously as possible given the system design to reduce air emissions.
(7) Pressurized refiners undergoing startup or shutdown on and after August 13, 2021, except as noted in footnote "1" to this table	Route exhaust gases from the pressurized refiner to its dryer control system no later than 15 minutes after wood is fed to the pressurized refiner during startup. Stop wood flow into the pressurized refiner no more than 15 minutes after wood fiber and exhaust gases from the pressurized refiner stop being routed to the dryer during shutdown.

For the following process units at existing or new affected sources . . .	You must . . .
(8) Direct-fired softwood veneer dryers undergoing startup or shutdown of gas-fired burners on and after August 13, 2021, except as noted in footnote "1" to this table	Cease feeding green veneer into the softwood veneer dryer and minimize the amount of time direct gas-fired softwood veneer dryers are vented to the atmosphere due to the conditions described in § 63.2250(d).
(9) Direct wood-fired PCWP dryers, direct natural gas-fired PCWP dryers, direct-fired lumber kilns, and associated combustion unit bypass stacks on and after July 6, 2029, except as noted in footnote "2" to this table	Conduct an annual tune-up of the combustion unit(s) used to directly fire each PCWP dryer or lumber kiln as specified in §§ 63.2241(d) and 63.2271(c); and continuously monitor an indicator of combustion unit bypass stack usage such as flow damper position or temperature according to § 63.2269(l)
(10) Lumber kilns on and after July 6, 2029, except as noted in footnote "2" to this table	Minimize lumber over-drying to reduce HAP emissions according to § 63.2241(e) by developing and operating according to the O&M plan in § 63.2241(e)(1) and complying with one of the work practice requirements in § 63.2241(e)(3).
(11) Stand-alone digesters on and after July 6, 2029, except as noted in footnote "2" to this table	Use clean steam for injection into digestion process; AND process fiber without addition of HAP-containing or wood pulping chemicals.
(12) Fiber washers on and after July 6, 2029, except as noted in footnote "2" to this table	Process fiber without addition of HAP-containing or wood pulping chemicals.
(13) Log vats on and after July 6, 2029, except as noted in footnote "2" to this table	Meet the work practice requirements specified in § 63.2241(f).
(14) Resinated material handling (RMH) process units on and after July 6, 2029, except as noted in footnote "2" to this table, as applicable	Meet the work practice requirements specified in § 63.2241(g).

[1] New or reconstructed affected sources that commenced construction or reconstruction after September 6, 2019, must comply with this requirement beginning on August 13, 2020, or upon initial startup, whichever is later.

[2] New or reconstructed affected sources that commenced construction or reconstruction after May 18, 2023, must comply with this requirement beginning on **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, or upon initial startup, whichever is later.

Table 4 to Subpart DDDD of Part 63—Requirements for Performance Tests

For . . .	You must . . .	Using . . .
(1) Each process unit subject to a compliance option in tables 1A through 1E to this subpart	select sampling port's location and the number of traverse ports	EPA Method 1 or 1A of appendix A-1 to part 60 of this chapter (as appropriate).
(2) Each process unit subject to a compliance option in tables 1A through 1E to this subpart	determine velocity and volumetric flow rate	EPA Method 2 in addition to Methods 2A, 2C, 2D, 2F, or 2G of appendices A-1 and A-2 to part 60 of this chapter (as appropriate).
(3) Each process unit subject to a compliance option in tables 1A through 1E to this subpart	conduct gas molecular weight analysis	EPA Method 3, 3A, or 3B of appendix A-2 to part 60 of this chapter (as appropriate). As an alternative to EPA Method 3B for the manual procedures only and not the instrumental procedures, you may use ANSI/ASME PTC 19-10-1981 Part 10 (IBR, see § 63.14).
(4) Each process unit subject to a compliance option in tables 1A through 1E to this subpart	measure moisture content of the stack gas	EPA Method 4 of appendix A-3 to part 60 of this chapter; OR EPA Method 320 of appendix A to this part; OR ASTM D6348-12e1 (IBR, see § 63.14).

For . . .	You must . . .	Using . . .
(5) Each process unit subject to a compliance option in table 1B to this subpart for which you choose to demonstrate compliance using a total HAP as THC compliance option	measure emissions of total HAP as THC	EPA Method 25A in appendix A-7 to part 60 of this chapter. You may measure emissions of methane using EPA Method 18 in appendix A-6 to part 60 of this chapter 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 to this subpart	measure emissions of total HAP (as defined in § 63.2292)	EPA Method 320 of appendix A to this part; OR the NCASI Method IM/CAN/WP-99.02 (IBR, see § 63.14); OR the NCASI Method ISS/FP-A105.01 (IBR, see § 63.14); OR ASTM D6348-12e1 (IBR, see § 63.14) provided that the conditions in footnote "1" are met.
(7) Each process unit subject to a compliance option in table 1B to this subpart for which you choose to demonstrate compliance using a methanol compliance option	measure emissions of methanol	EPA Method 308 of appendix A to this part; OR EPA Method 320 of appendix A to this part ; OR the NCASI Method CI/WP-98.01 (IBR, see § 63.14); OR the NCASI Method IM/CAN/WP-99.02 (IBR, see § 63.14); OR the NCASI Method ISS/FP-A105.01 (IBR, see § 63.14).
(8) Each process unit subject to a compliance option in table 1B to this subpart for which you choose to demonstrate compliance using a formaldehyde compliance option	measure emissions of formaldehyde	EPA Method 316 of appendix A to this part; OR EPA Method 320 of appendix A to this part ; OR EPA Method 0011 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (EPA Publication No. SW-846) for formaldehyde (IBR, see § 63.14); OR the NCASI Method CI/WP-98.01 (IBR, see § 63.14); OR the NCASI Method IM/CAN/WP-99.02 (IBR, see § 63.14); OR the NCASI Method ISS/FP-A105.01 (IBR, see § 63.14).
(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 to this subpart	meet the design specifications included in the definition of wood products enclosure in § 63.2292; or determine the percent capture efficiency of the enclosure directing emissions to an add-on control device	EPA Methods 204 and 204A through 204F of appendix M to part 51 of this chapter, to determine capture efficiency (except for wood products enclosures as defined in § 63.2292). Enclosures that meet the definition of wood products enclosure or that meet Method 204 requirements for a permanent total enclosure (PTE) are assumed to have a capture efficiency of 100 percent. Enclosures that do not meet either the PTE requirements or design criteria for a wood products enclosure must determine the capture efficiency by constructing a TTE according to the requirements of EPA Method 204 and applying EPA Methods 204A through 204F (as appropriate). As an alternative to EPA Methods 204 and 204A through 204F, you may use the tracer gas method contained in appendix A to this subpart.

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 to this subpart	determine the percent capture efficiency	A TTE and EPA Methods 204 and 204A through 204F (as appropriate) of appendix M to part 51 of this chapter. As an alternative to installing a TTE and using EPA Methods 204 and 204A through 204F, you may use the tracer gas method contained in appendix A to this subpart. Enclosures that meet the design criteria (1) through (4) in the definition of wood products enclosure, or that meet EPA Method 204 requirements for a PTE (except for the criteria specified in section 6.2 of EPA Method 204) are assumed to have a capture efficiency of 100 percent. Measured emissions divided by the capture efficiency provides the emission rate.
(11) Each process unit subject to a compliance option in tables 1A and 1B to this subpart	establish the site-specific operating requirements (including the parameter limits or THC concentration limits) in table 2 to this subpart	Data from the parameter monitoring system or THC CEMS and the applicable performance test method(s).
(12) Each process unit subject to total HAP limit in table 1C to this subpart	measure emissions of total HAP (as defined in § 63.2292)	EPA Method 320 of appendix A to this part; OR the NCASI Method IM/CAN/WP-99.02 (IBR, see § 63.14); OR the NCASI Method ISS/FP-A105.01 (IBR, see § 63.14); OR ASTM D6348-12e1 (IBR, see § 63.14) provided that the conditions in footnote "1" are met. Nondetect data must be treated according to § 63.2262(g)(3).
(13) Each process unit subject to an MDI limit in table 1C to this subpart	measure emissions of MDI	EPA Method 326 of appendix A to this part. Nondetect data must be treated according to § 63.2262(g)(3). A minimum sample volume of 1 dscm must be collected.
(14) Each process unit subject to a PM HAP metals limit in table 1D or 1E to this subpart	measure emissions of PM	EPA Method 5 in appendix A-3 to part 60 of this chapter; or EPA Method 29 in appendix A-8 to part 60 of this chapter. Nondetect data must be treated according to § 63.2262(g)(3). A minimum sample volume of 2 dscm must be collected.
(15) Each process unit subject to a mercury limit in table 1D or 1E to this subpart	measure emissions of mercury	EPA Method 29 or 30B in appendix A-8 to part 60 of this chapter. Nondetect data must be treated according to § 63.2262(g)(3). For EPA Method 29 a minimum sample volume of 2 dscm must be collected.
(16) Each process unit subject to an HCl limit in table 1D or 1E to this subpart	measure emissions of HCl	EPA Method 26A in appendix A-8 to part 60 of this chapter. Nondetect data must be treated according to § 63.2262(g)(3). A minimum sample volume of 2 dscm must be collected.
(17) Each process unit subject to a PAH limit in table 1D or 1E to this subpart and each direct wood-fired softwood veneer dryer subject to this subpart	measure emissions of PAH	EPA Method 23 of appendix A-8 to part 60 of this chapter. Nondetect data must be treated according to § 63.2262(g)(3). A minimum sample volume of 3 dscm must be collected.

For . . .	You must . . .	Using . . .
(18) Each process unit subject to a PM limit in table 1D or table 1E to this subpart controlled by mechanical collector or other dry control device for which pressure drop and opacity observations are used to demonstrate compliance	observe opacity	Method 9 of appendix A-4 to part 60 of this chapter. Opacity observations must be conducted during the duration of the PM performance test. For weekly observations, two 6-minute readings are required.
(19) Each direct wood-fired green rotary dryer subject to a dioxin/furan TEQ limit in § 63.2240(d)(3) or (4)	Measure emissions of dioxins and furans	EPA Method 23 of appendix A-8to part 60 of this chapter. Nondetect and estimated maximum possible concentration (EMPC) data must be treated according to § 63.2262(g)(3) and section 9.1.7.2 of EPA Method 23 procedures for standards promulgated after March 20, 2023. A minimum sample volume of 3 dscm must be collected. For each dioxin and furan congener, multiply the congener concentration by its corresponding toxic equivalency factor specified in table 12 to this subpart to determine the TEQ concentration for each congener. Sum the TEQ concentrations of each congener to obtain the total concentration of dioxins and furans emitted in terms of TEQ.

dscm = dry standard cubic meters

[1] As an alternative to EPA Method 320 of appendix A to this part, you may use ASTM Method D6348-12e1 (incorporated by reference, see § 63.14), with the caveats that the test plan preparation and implementation in the Annexes to ASTM Method D6348-12el, Sections Al through A8 are mandatory; and in ASTM Method D6348-12e1 Annex A5 (Analyte Spiking Technique), the percent (%) R must be determined for each target analyte (Equation A5.5). In order for the test data to be acceptable for a compound, %R must be 70% ≤ R ≤ 130%. If the %R value does not meet this criterion for a target compound, the test data is not acceptable for that compound and the test must be repeated for that analyte (i.e., the sampling and/or analytical procedure should be adjusted before a retest). The %R value for each compound must be reported in the test report, and all field measurements must be corrected with the calculated %R value for that compound by using the following equation:

Reported Results = (Measured Concentration in the Stack × 100)/% R

Table 5 to Subpart DDDD of Part 63—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 to this subpart	Meet the production-based compliance options listed in table 1A to this subpart	The average total HAP emissions measured using the methods in table 4 to this subpart over the 3-hour performance test are no greater than the compliance option in table 1A to this subpart; AND you have a record of the operating requirement(s) listed in table 2 to 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 to this subpart	Reduce emissions of total HAP, measured as THC, by 90 percent	Total HAP emissions, measured using the methods in table 4 to 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 to this subpart for the process unit over the performance test during which emissions were reduced by at least 90 percent.

For each . . .	For the following compliance options and operating requirements . . .	You have demonstrated initial compliance if . . .
(3) Process unit listed in table 1B to 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 to this subpart over the 3-hour performance test, do not exceed 20 ppmvd; and you have a record of the operating requirement(s) listed in table 2 to 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 to this subpart	Reduce methanol or formaldehyde emissions by 90 percent	The methanol or formaldehyde emissions measured using the methods in table 4 to 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 to 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 to 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 to this subpart over the 3-hour performance test, do not exceed 1 ppmvd; AND you have a record of the operating requirement(s) listed in table 2 to 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 to this subpart	You submit the results of capture efficiency verification using the methods in table 4 to this subpart with your Notification of Compliance Status.
(7) Process unit listed in table 1B to this subpart controlled by routing exhaust to a combustion unit	Compliance options in table 1B to this subpart	You submit with your Notification of Compliance Status documentation showing that the process exhausts controlled enter into the flame zone of your combustion unit.
(8) Process unit listed in table 1B to this subpart using a wet control device as the sole means of reducing HAP emissions	Compliance options in table 1B to this subpart	You submit with your Notification of Compliance Status your plan to address how organic HAP captured in the wastewater from the wet control device is contained or destroyed to minimize re-release to the atmosphere.
(9) Process unit listed in table 1C to this subpart	Total HAP compliance options in table 1C to this subpart	The average total HAP emissions measured using the methods in table 4 to this subpart over the 3-hour performance test are no greater than the compliance option in table 1C to this subpart; AND you have a record of the operating requirement(s) listed in table 2 to this subpart for the process unit over the performance test during which emissions did not exceed the compliance option value.

For each . . .	For the following compliance options and operating requirements . . .	You have demonstrated initial compliance if . . .
(10) Process unit listed in table 1C to this subpart	MDI compliance options in table 1C to this subpart	The average total HAP emissions measured using the methods in table 4 to this subpart over the 3-hour performance test are no greater than the compliance option in table 1C to this subpart; AND you have a record of the operating requirement(s) listed in table 2 to this subpart for the process unit over the performance test during which emissions did not exceed the compliance option value.
(11) Direct wood-fired PCWP dryer listed in table 1D or 1E to this subpart	PM (HAP metal), Hg, HCl, and PAH compliance options in table 1D or 1E to this subpart and dioxin/furan TEQ options in § 63.2240(d)(3) and (4)	The average emissions measured using the methods in table 4 to this subpart over the 3-hour performance test are no greater than the compliance option in tables 1D and 1E to this subpart; AND you have a record of the operating requirement(s) listed in table 2 to this subpart for the process unit over the performance test during which emissions did not exceed the compliance option value.
(12) Mixed PCWP process stream as defined in § 63.2292	Compliance options in table 1B to this subpart	You identify the mixed PCWP process stream in your Notification of Compliance Status and submit documentation showing that the mixed PCWP process stream met a compliance option in table 1B to this subpart on or before the close of business on the 30th calendar day after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

Table 6 to Subpart DDDD of Part 63—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).

For each . . .	For the following work practice requirements . . .	You have demonstrated initial compliance if . . .
(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).
(5) Group 1 miscellaneous coating operations	Use non-HAP coatings as defined in § 63.2292	You meet the work practice requirement and you submit a signed statement with the Notification of Compliance Status that you are using non-HAP coatings and you have a record showing that you are using non-HAP coatings.
(6) Process units and control systems undergoing safety-related shutdown on and after August 13, 2021, except as noted in footnote "1" to this table	Follow documented site-specific procedures to ensure the flow of raw materials and fuel or process heat ceases and that material is removed from the process unit(s) as expeditiously as possible given the system design to reduce air emissions	You meet the work practice requirement and you have a record of safety-related shutdown procedures available for inspection by the delegated authority upon request.
(7) Pressurized refiners undergoing startup or shutdown on and after August 13, 2021, except as noted in footnote "1" to this table	Route exhaust gases from the pressurized refiner to its dryer control system no later than 15 minutes after wood is fed to the pressurized refiner during startup. Stop wood flow into the pressurized refiner no more than 15 minutes after wood fiber and exhaust gases from the pressurized refiner stop being routed to the dryer during shutdown.	You meet the work practice requirement and you have a record of pressurized refiner startup and shutdown procedures available for inspection by the delegated authority upon request.
(8) Direct-fired softwood veneer dryers undergoing startup or shutdown of gas-fired burners on and after August 13, 2021, except as noted in footnote "1" to this table	Cease feeding green veneer into the softwood veneer dryer and minimize the amount of time direct gas-fired softwood veneer dryers are vented to the atmosphere due to the conditions described in §63.2250(d)	You meet the work practice requirement and you have a record of the procedures for startup and shutdown of softwood veneer dryer gas-fired burners available for inspection by the delegated authority upon request.
(9) Direct wood-fired PCWP dryers, direct natural gas-fired PCWP dryers, direct-fired lumber kilns, and associated bypass stacks for combustion unit exhaust streams routinely used to direct-fire a PCWP dryer or lumber kiln on and after July 6, 2029, except as noted in footnote "2" to this table	Conduct an annual tune-up of combustion unit(s) used to directly fire each PCWP dryer or lumber kiln as specified in § 63.2241(d) AND continuously monitor an indicator of bypass stack usage	You submit with your Notification of Compliance Status documentation of the initial burner tune up conducted according to § 63.2241(d); and you identify in your Notification of Compliance Status the method used to continuously monitor and record the duration of bypass stack usage.

For each . . .	For the following work practice requirements . . .	You have demonstrated initial compliance if . . .
(10) Lumber kilns on and after July 6, 2029, except as noted in footnote "2" to this table	Minimize lumber over-drying to reduce HAP emissions according to the work practice requirements in § 63.2241(e)	You submit with your Notification of Compliance Status the O&M plan developed according to §§ 63.2241(e)(1) and 63.2250(a) and a description of the work practice option you will comply with according to § 63.2241(e)(3); and if using the site-specific plan option under § 63.2241(e)(3)(iii) you must submit your site-specific plan to the delegated authority for approval according to § 63.2253(b) by the date specified in § 63.2253(b)(1).
(11) Stand-alone digesters on and after July 6, 2029, except as noted in footnote "2" to this table	Use clean steam for injection into digestion process; and process fiber without addition of HAP-containing or wood pulping chemicals	You meet the work practice requirement and you submit a signed statement with the Notification of Compliance Status that the stand-alone digester operates according to the work practice.
(12) Fiber washers on and after July 6, 2029, except as noted in footnote "2" to this table	Process fiber without addition of HAP-containing or wood pulping chemicals	You meet the work practice requirement and you submit a signed statement with the Notification of Compliance Status that the fiber washer operates according to the work practice.
(13) Log vats on and after July 6, 2029, except as noted in footnote "2" to this table	Operate the log vat with a target log temperature at or below 212 °F as specified in § 63.2241(f)	You meet the work practice requirements and you submit a signed statement with the Notification of Compliance Status with a record showing that the target log temperature is at or below 212 °F.
(14) Resinated material handling (RMH) process units on and after July 6, 2029, except as noted in footnote "2" to this table	Work practice requirements specified in § 63.2241(g).	You meet the work practice requirements and you submit a signed statement with the Notification of Compliance Status that resin(s) used are non-HAP resin(s) or have maximum true vapor pressure of less than or equal to the applicable limit in § 63.2241(g)(1)(ii) and that wood material processes meets the requirements in 63.2241(g)(2).

[1] New or reconstructed affected sources that commenced construction or reconstruction after September 6, 2019, must comply with this requirement beginning on August 13, 2020, or upon initial startup, whichever is later.

[2] New or reconstructed affected sources that commenced construction or reconstruction after May 18, 2023, must comply with this requirement beginning on **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, or upon initial startup, whichever is later.

Table 7 to Subpart DDDD of Part 63—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 table 1B to this subpart or mixed PCWP process unit (defined in § 63.2292)	Compliance options in table 1B to this subpart and the operating requirements in table 2 to this subpart based on monitoring of operating parameters	Collecting and recording the operating parameter monitoring system data listed in table 2 to this subpart for the process unit according to §§ 63.2269(a) and (b) and 63.2270; and reducing the operating parameter monitoring system data to the specified averages in units of the applicable requirement according to calculations in § 63.2270; and maintaining the average operating parameter at or above the minimum, at or below the maximum, or within the range (whichever applies) established according to § 63.2262.
(2) Each process unit listed in tables 1A and 1B to this subpart	Compliance options in tables 1A and 1B to this subpart and the operating requirements in table 2 to this subpart based on THC CEMS data	Collecting and recording the THC monitoring data listed in table 2 to this subpart for the process unit according to § 63.2269(d); and reducing the CEMS data to 3-hour block averages according to calculations in § 63.2269(d); 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.
(3) Each process unit using a biofilter	Compliance options in tables 1B to this subpart	Conducting a repeat performance test using the applicable method(s) specified in table 4 to this subpart[1] within 2 years following the previous performance test and within 180 days after each replacement of any portion of the biofilter bed media with a different type of media or each replacement of more than 50 percent (by volume) of the biofilter bed media with the same type of media.
(4) Each process unit using a catalytic oxidizer	Compliance options in table 1B to this subpart	Checking the activity level of a representative sample of the catalyst at least annually[2] and taking any necessary corrective action to ensure that the catalyst is performing within its design range.
(5) Each process unit listed in table 1A to this subpart	Compliance options in table 1A to this subpart and the operating requirements in table 2 to this subpart based on monitoring of process unit controlling operating parameters	Collecting and recording on a daily basis process unit controlling operating parameter data; and maintaining the operating parameter at or above the minimum, at or below the maximum, or within the range (whichever applies) established according to § 63.2262.
(6) Each Process unit listed in table 1B to this subpart using a wet control device as the sole means of reducing HAP emissions	Compliance options in table 1B to this subpart	Implementing your plan to address how organic HAP captured in the wastewater from the wet control device is contained or destroyed to minimize re-release to the atmosphere.

For . . .	For the following compliance options and operating requirements . . .	You must demonstrate continuous compliance by . . .
(7) Each process unit listed in table 1B to this subpart using a control device other than a biofilter	Compliance options in tables 1B to this subpart	Conducting a repeat performance test using the applicable method(s) specified in table 4 to this subpart[1] by August 13, 2023, or within 60 months following the previous performance test, whichever is later, and thereafter within 60 months following the previous performance test.
(8) Process unit listed in table 1C to this subpart	Total HAP compliance options in table 1C to this subpart and the operating requirements in table 2 to this subpart based on monitoring of operating parameters	The average total HAP emissions measured using the methods in table 4 to this subpart over the 3-hour performance test are no greater than the compliance option in table 1C to this subpart; and you have a record of the operating requirement(s) listed in table 2 to this subpart for the process unit over the performance test during which emissions did not exceed the compliance option value.
(9) Process unit listed in table 1C to this subpart	MDI compliance options in table 1C to this subpart and the operating requirements in table 2 to this subpart based on monitoring of operating parameters	The average MDI emissions measured using the methods in table 4 to this subpart over the 3-hour performance test are no greater than the compliance option in table 1C to this subpart; AND you have a record of the operating requirement(s) listed in table 2 to this subpart for the process unit over the performance test during which emissions did not exceed the compliance option value.
(10) Direct wood-fired PCWP dryer using a wet or dry electrostatic precipitator, wet scrubber, electrified filter bed, thermal oxidizer, catalytic oxidizer, or biofilter to meet the standards in table 1D or 1E to this subpart	Compliance options in § 63.2240(d)(2) and (3) and table 1D or 1E to this subpart and the operating requirements in table 2 to this subpart based on monitoring of operating parameters	Collecting and recording the operating parameter monitoring system data listed in table 2 to this subpart for the process unit according to §§ 63.2269(a) and (b) and 63.2270; and reducing the operating parameter monitoring system data to the specified averages in units of the applicable requirement according to calculations in § 63.2270; and maintaining the average operating parameter at or above the minimum, at or below the maximum, or within the range (whichever applies) established according to § 63.2262.
(11) Direct wood-fired PCWP dryer using a mechanical collector or other dry control device (not elsewhere listed in this table) or a WESP followed by a control device with a dry exhaust to meet the standards in table 1D or 1E to this subpart	Compliance options in § 63.2240(d)(2) and (3) and table 1D or 1E to this subpart and the operating requirements in table 2 to this subpart based on continuous opacity monitoring	Collecting and recording opacity data according to §§ 63.2269(e) and 63.2270; and reducing the opacity data to a 24-hour block average according to § 63.2270; and maintaining the average opacity at or below the maximum established according to § 63.2262.
(12) Process unit bypass stack (defined in § 63.2292)	Continuously monitor usage of the process unit bypass stack at all times while the process units are operating, undergoing startup or shutdown, and during the operating conditions specified in § 63.2250(f)(2) through (4)	Continuously monitoring and recording the duration of bypass stack usage according to §§ 63.2269(a) and (l) and 63.2270.

For . . .	For the following compliance options and operating requirements . . .	You must demonstrate continuous compliance by . . .
(13) Each process unit listed in table 1C, 1D, or 1E to this subpart	Total HAP and MDI limits in table 1C to this subpart (as applicable), and the PM, Hg, HCl, and PAH limits in table 1D or 1E to this subpart (as applicable), and the dioxin/furan TEQ limits in § 63.2240(d)(2) and (3)	Conducting a repeat performance test using the applicable method(s) specified in table 4 to this subpart[1] within 60 months following the previous performance test.
(14) Direct wood-fired PCWP dryer using a mechanical collector or other dry control device (not elsewhere listed in this table) to meet the standards in table 1D or 1E to this subpart	Compliance options in § 63.2240(d)(2) and (3) and table 1D or 1E to this subpart and the operating requirements in table 2 to this subpart based on pressure drop monitoring and opacity observations	Collecting and recording pressure drop and opacity observations listed in table 2 to this subpart according to §§ 63.2269(a) and (f) and 63.2270; and reducing the pressure drop monitoring system data to the specified averages in units of the applicable requirement according to calculations in § 63.2270; and maintaining the average pressure drop above the minimum established according to § 63.2262; and maintaining the weekly opacity observations at or below the maximum established according to § 63.2262.

[1] When conducting a repeat performance test, the capture efficiency demonstration required in table 4 to this subpart, row 9 is not required to be repeated with the repeat emissions test if the capture device is maintained and operated consistent with its design as well as its operation during the previous capture efficiency demonstration conducted according to table 4 to this subpart, row 9 as specified in § 63.2267.
[2] You may forego the annual catalyst activity check during the calendar year when a performance test is conducted according to table 4 to this subpart.

Table 8 to Subpart DDDD of Part 63—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 24-hour block average inlet furnish moisture content at less than or equal to 30 percent (by weight, dry basis) and maintaining the 24-hour block average inlet dryer temperature at less than or equal to 600 °F; and keeping records of the inlet temperature of 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 24-hour block average inlet moisture content of the veneer processed at or below of less than or 25 percent and keeping records of the inlet moisture content of the veneer processed.

For . . .	For the following work practice requirements . . .	You must demonstrate continuous compliance by . . .
(5) Group 1 miscellaneous coating operations	Use non-HAP coatings as defined in § 63.2292	Continuing to use non-HAP coatings and keeping records showing that you are using non-HAP coatings.
(6) Process units and control systems undergoing safety-related shutdown on and after August 13, 2021, except as noted in footnote "1" to this table	Follow documented site-specific procedures to ensure the flow of raw materials and fuel or process heat ceases and that material is removed from the process unit(s) as expeditiously as possible given the system design to reduce air emissions	Keeping records showing that you are following the work practice requirements during safety-related shutdowns.
(7) Pressurized refiners undergoing startup or shutdown on and after August 13, 2021, except as noted in footnote "1" to this table	Route exhaust gases from the pressurized refiner to its dryer control system no later than 15 minutes after wood is fed to the pressurized refiner during startup. Stop wood flow into the pressurized refiner no more than 15 minutes after wood fiber and exhaust gases from the pressurized refiner stop being routed to the dryer during shutdown.	Keeping records showing that you are following the work practice requirements during pressurized refiner startup and shutdown events.
(8) Direct-fired softwood veneer dryers undergoing startup or shutdown of gas-fired burners on and after August 13, 2021, except as noted in footnote "1" to this table	Cease feeding green veneer into the softwood veneer dryer and minimize the amount of time direct gas-fired softwood veneer dryers are vented to the atmosphere due to the conditions described in § 63.2250(d)	Keeping records showing that you are following the work practice requirements while undergoing startup or shutdown of softwood veneer dryer direct gas-fired burners.
(9) Direct wood-fired PCWP dryers, direct natural gas-fired PCWP dryers, direct-fired lumber kilns, and associated combustion unit bypass stacks on and after July 6, 2029, except as noted in footnote "2" to this table	Conduct an annual tune-up of combustion unit(s) used to directly fire each PCWP dryer or lumber kiln as specified in § 63.2271(c); AND continuously monitor an indicator of bypass stack usage	Conducting and maintaining records of annual burner inspections and corrective actions taken; and continuously monitoring and recording the duration of combustion unit bypass stack usage according to §§ 63.2269(a) and (k) and 63.2270.
(10) Lumber kilns on and after July 6, 2029, except as noted in footnote "2" to this table	O&M plan developed under § 63.2241(e)(1) involving annual inspection of lumber kiln integrity and review of charge optimization practices and corrective actions	Operating according to your O&M plan developed under § 63.2241(e)(1); and conducting annual inspection of the integrity of the lumber kiln internal air flow and heat distribution components, reviewing charge optimization practices, implementing corrective actions, and maintaining records of corrective actions according to § 63.2241(e)(1)(c).
(11) Lumber kilns on and after July 6, 2029, except as noted in footnote "2" to this table	Temperature limit option under § 63.2241(e)(3)(i)	Operating the kiln with a dry bulb temperature limit no higher than the maximum limit specified in § 63.2241(e)(3)(i); and continuously monitoring dry bulb temperature; and maintaining records of the batch average or daily block average dry bulb temperature.

For . . .	For the following work practice requirements . . .	You must demonstrate continuous compliance by . . .
(12) Lumber kilns on and after July 6, 2029, except as noted in footnote "2" to this table	Hybrid option under § 63.2241(e)(3)(ii)	Operating the kiln with a dry bulb temperature limit no higher than the maximum limit specified in § 63.2241(e)(3)(ii)(A); and continuously monitoring dry bulb temperature; and maintaining records of the batch average or daily block average dry bulb temperature and continuously monitoring lumber moisture while drying lumber; and keeping records of the kiln-dried lumber moisture content for determination of the semiannual average according to § 63.2241(e)(3)(ii)(B)
(13) Lumber kilns on and after July 6, 2029, except as noted in footnote "2" to this table	Site-specific plan option for temperature and lumber moisture monitoring under § 63.2241(e)(3)(iii)	Operating the kiln using the approved site specific temperature limit and site-specific method for lumber moisture monitoring under § 63.2241(e)(3)(iii); continuously monitoring, recording, and calculating the 3-hour block average temperature under § 63.2241(e)(3)(iii)(A); continuously monitoring, recording, and calculating the monthly and semiannual average kiln-dried lumber moisture content under § 63.2241(e)(3)(iii)(B); and maintaining records and reporting corrective action as required in § 63.2241(e)(3)(iii)(B).
(14) Stand-alone digesters on and after July 6, 2029, except as noted in footnote "2" to this table	Use clean steam for injection into digestion process; and process fiber without addition of HAP-containing or wood pulping chemicals.	Continuing to meet the work practice by using clean steam and processing fiber without addition of HAP-containing or wood pulping chemicals and keeping records showing that you continue to meet the work practice.
(15) Fiber washers on and after July 6, 2029, except as noted in footnote "2" to this table	Process fiber without addition of HAP-containing or wood pulping chemicals.	Continuing to meet the work practice by processing fiber without addition of HAP-containing or wood pulping chemicals AND keeping records showing that you continue to meet the work practice.
(16) Log vats on and after July 6, 2029, except as noted in footnote "2" to this table	Operate the log vat with a target log temperature at or below 212 °F as specified in § 63.2241(f)	Continuing to meet the work practice by operating the log vat as specified in § 63.2241(f) and keeping records showing that you continue to meet the work practice.
(17) Resinated material handling (RMH) process units on and after July 6, 2029, except as noted in footnote "2" to this table	Work practice requirements specified in § 63.2241(g).	Continuing to meet the work practice requirements in § 63.2241(g) and keeping records showing that you continue to meet the work practice.

[1] New or reconstructed affected sources that commenced construction or reconstruction after September 6, 2019, must comply with this requirement beginning on August 13, 2020, or upon initial startup, whichever is later.

[2] New or reconstructed affected sources that commenced construction or reconstruction after May 18, 2023, must comply with this requirement beginning on **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, or upon initial startup, whichever is later.

Table 9 to Subpart DDDD of Part 63—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).

You must submit a(n) . . .	The report must contain . . .	You must submit the report . . .
(2) [Reserved]		
(3) Performance test report	The information required in § 63.7(g)	According to the requirements of § 63.2281(i).
(4) CMS performance evaluation, as required for CEMS under § 63.2269(d)(2) and COMS under § 63.2269(e)(2)	The information required in § 63.7(g)	According to the requirements of § 63.2281(j).

Table 10 to Subpart DDDD of Part 63—Applicability of General Provisions to This Subpart

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

Citation	Subject	Brief description	Applies to this subpart
§ 63.6(e)(1)(i)	General Duty to Minimize Emissions	You must operate and maintain affected source in a manner consistent with safety and good air pollution control practices for minimizing emissions	No, see § 63.2250 for general duty requirement.
§ 63.6(e)(1)(ii)	Requirement to Correct Malfunctions ASAP	You must correct malfunctions as soon as practicable after their occurrence	No.
§ 63.6(e)(1)(iii)	Operation and Maintenance Requirements	Operation and maintenance requirements are enforceable independent of emissions limitations or other requirements in relevant standards	Yes.
§ 63.6(e)(2)	[Reserved]		
§ 63.6(e)(3)	Startup, Shutdown, and Malfunction Plan (SSMP)	Requirement for SSM and SSMP; content of SSMP	No.
§ 63.6(f)(1)	SSM Exemption	You must comply with emission standards at all times except during SSM	No.
§ 63.6(f)(2) and (3)	Methods for Determining Compliance/Finding of Compliance	Compliance based on performance test, operation and maintenance plans, records, inspection	Yes.
§ 63.6(g)(1) through (3)	Alternative Standard	Procedures for getting an alternative standard	Yes.
§ 63.6(h)(1)	SSM Exemption	You must comply with opacity and visible emission standards at all times except during SSM	No.
§ 63.6(h)(2) through (9)	Opacity/Visible Emission (VE) Standards	Requirements for opacity and visible emission standards	No. This subpart specifies opacity as an operating limit not an emission standard.
§ 63.6(i)(1)-(14)	Compliance Extension	Procedures and criteria for Administrator to grant compliance extension	Yes.
§ 63.6(i)(15)	[Reserved]		
§ 63.6(i)(16)	Compliance Extension	Compliance extension and Administrator’s authority	Yes.
§ 63.6(j)	Presidential Compliance Exemption	President may exempt source category from requirement to comply with rule	Yes.
§ 63.7(a)(1) and (2)	Performance Test Dates	Dates for conducting initial performance testing and other compliance demonstrations; must conduct within 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 as soon as practicable	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.

Citation	Subject	Brief description	Applies to this subpart
§ 63.7(e)(1)	Performance Testing	Performance tests must be conducted under representative conditions; cannot conduct performance tests during SSM; not a violation to exceed standard during SSM	No, see § 63.2262(a) and (b).
§ 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 for at least the time specified in the relevant standard; 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 of this chapter	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) and (3)	Multiple Effluents and Multiple Monitoring Systems	Specific requirements for installing monitoring systems; must install on each effluent before it is combined and before it is released to the atmosphere unless Administrator approves otherwise; if more than one monitoring system 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)	Operation and Maintenance of CMS	Must maintain and operate CMS in accordance with § 63.6(e)(1)	No.
§ 63.8(c)(1)(ii)	Spare Parts for CMS	Must maintain spare parts for routine CMS repairs	Yes.
§ 63.8(c)(1)(iii)	Requirements to Develop SSMP for CMS	Must develop and implement SSMP for CMS	No.

Citation	Subject	Brief description	Applies to this subpart
§ 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)	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.
§ 63.8(c)(5)	Continuous Opacity Monitoring System (COMS) Minimum Procedures	COMS minimum procedures	Yes.
§ 63.8(c)(6) through (8)	CMS Requirements	Zero and high-level calibration check requirements; out-of-control periods	Yes.
§ 63.8(d)(1) and (2)	CMS Quality Control	Requirements for CMS quality control, including calibration, etc.	Yes. Refer to § 63.2269(a) through (c) and (f) through (o) for CPMS quality control procedures to be included in the quality control program.
§ 63.8(d)(3)	Written Procedures for CMS	Must keep quality control plan on record for 5 years. Keep old versions for 5 years after revisions. May incorporate as part of SSMP to avoid duplication.	No, see § 63.2282(f).
§ 63.8(e)(1)	CMS Performance Evaluation	Performance evaluation	Yes, for CEMS, COMS, and for the CMS in § 63.2269(f) and (g) and (i) through (l)
§ 63.8(e)(2) through (5)	CMS Performance Evaluation	Notification, performance evaluation test plan, reports	Yes, for CEMS and COMS.
§ 63.8(f)(1) through (5)	Alternative Monitoring Method	Procedures for Administrator to approve alternative monitoring	Yes.
§ 63.8(f)(6)	Alternative to Relative Accuracy Test	Procedures for Administrator to approve alternative relative accuracy tests for CEMS	Yes, for CEMS.
§ 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; rounding of data	Yes.
§ 63.9(a)	Notification Requirements	Applicability and State delegation	Yes.
§ 63.9(b)(1) and (2)	Initial Notifications	Submit notification 120 days after effective date; contents of notification	Yes.
§ 63.9(b)(3)	[Reserved]		

Citation	Subject	Brief description	Applies to this subpart
§ 63.9(b)(4) and (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 best available control technology/lowest achievable emission rate	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 the EPA Administrator 60 days prior	Yes.
§ 63.9(f)	Notification of Visible Emissions/Opacity Test	Notify the EPA Administrator 30 days prior	Yes, except notifications are not required for opacity observations in § 63.2270(k).
§ 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) through (6)	Notification of Compliance Status	Contents; due 60 days after end of performance test or other compliance demonstration, except for opacity/VE, which are due 30 days after; when to submit to Federal vs. State authority	Yes, except notifications are not required for opacity observations in § 63.2270(k).
§ 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.
§ 63.9(k)	Electronic reporting procedures	Electronic reporting procedures	Yes.
§ 63.10(a)	Recordkeeping/Reporting	Applies to all, unless compliance extension; when to submit to Federal vs. State authority; procedures for owners of more than one source	Yes.
§ 63.10(b)(1)	Recordkeeping/Reporting	General Requirements; keep all records readily available; keep for 5 years	Yes.
§ 63.10(b)(2)(i)	Recordkeeping of Occurrence and Duration of Startups and Shutdowns	Records of occurrence and duration of each startup or shutdown that causes source to exceed emission limitation	No, see § 63.2282(a).

Citation	Subject	Brief description	Applies to this subpart
§ 63.10(b)(2)(ii)	Recordkeeping of Failures to Meet a Standard	Records of occurrence and duration of each malfunction of operation or air pollution control and monitoring equipment	No, see § 63.2282(a) for recordkeeping of (1) date, time and duration; (2) listing of affected source or equipment, and an estimate of the quantity of each regulated pollutant emitted over the standard; and (3) actions to minimize emissions and correct the failure.
§ 63.10(b)(2)(iii)	Maintenance Records	Records of maintenance performed on air pollution control and monitoring equipment	Yes.
§ 63.10(b)(2)(iv) and (v)	Actions Taken to Minimize Emissions During SSM	Records of actions taken during SSM to minimize emissions	No.
§ 63.10(b)(2)(vi), (x), and (xi)	CMS Records	Malfunctions, inoperative, out-of-control	Yes.
§ 63.10(b)(2)(vii) through (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) through (6) and (9) through (14)	Records	Additional records for CMS	Yes.
§ 63.10(c)(7) and (8)	Records	Records of excess emissions and parameter monitoring exceedances for CMS	No.
§ 63.10(c)(15)	Use of SSMP	Use SSMP to satisfy recordkeeping requirements for identification of malfunction, correction action taken, and nature of repairs to 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.

Citation	Subject	Brief description	Applies to this subpart
§ 63.10(d)(4)	Progress Reports	Must submit progress reports on schedule if under compliance extension	Yes.
§ 63.10(d)(5)(i)	Periodic SSM Reports	Contents and submission of periodic SSM reports	No, see § 63.2281(d) and (e) for malfunction reporting requirements.
§ 63.10(d)(5)(ii)	Immediate SSM Reports	Contents and submission of immediate SSM reports	No.
§ 63.10(e)(1) and (2)	Additional CMS Reports	Must report results for each CEM 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	Yes.
§ 63.10(f)	Waiver for Recordkeeping/Reporting	Procedures for the EPA Administrator to waive	Yes.
§ 63.11	Control Device and Work Practice Requirements	Requirements for flares and alternative work practice for equipment leaks	NA.
§ 63.12	State Authority and Delegations	State authority to enforce standards	Yes.
§ 63.13	Addresses	Addresses where reports, notifications, and requests are sent	Yes.
§ 63.14	Incorporations by Reference	Test methods incorporated by reference	Yes.
§ 63.15	Availability of Information and Confidentiality	Public and confidential information	Yes.
§ 63.16	Performance Track Provisions	Requirements for Performance Track member facilities	Yes.

22. Add tables 11 and 12 to subpart DDDD of part 63 to read as follows:

Table 11 to Subpart DDDD of Part 63—Lumber Minimum Moisture Content Limits

If the maximum lumber moisture specification (weight percent, dry basis) is . . .	The minimum kiln-dried lumber moisture content (weight percent, dry basis) is . . .
22 or more	15
19 - 21	12
18	11
17	10
16	9
15	8
14	7
13	6
10 - 12	5
9	4.5
8	4
7	3.5

If the maximum lumber moisture specification (weight percent, dry basis) is . . .	The minimum kiln-dried lumber moisture content (weight percent, dry basis) is . . .
6	3

Table 12 to Subpart DDDD of Part 63—Toxic Equivalency Factors

Dioxin/furan congener	Toxic equivalency factor
2,3,7,8-tetrachlorinated dibenzo-p-dioxin	1
1,2,3,7,8-pentachlorinated dibenzo-p-dioxin	1
1,2,3,4,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,7,8,9-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,6,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzo-p-dioxin	0.01
octachlorinated dibenzo-p-dioxin	0.0003
2,3,7,8-tetrachlorinated dibenzofuran	0.1
2,3,4,7,8-pentachlorinated dibenzofuran	0.3
1,2,3,7,8-pentachlorinated dibenzofuran	0.03
1,2,3,4,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,7,8,9-hexachlorinated dibenzofuran	0.1
2,3,4,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzofuran	0.01
1,2,3,4,7,8,9-heptachlorinated dibenzofuran	0.01
octachlorinated dibenzofuran	0.0003

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