ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 770

[EPA–HQ–OPPT–2016–0461; FRL–9949–90]

RIN 2070–AJ44

Formaldehyde Emission Standards for Composite Wood Products

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: EPA is issuing a final rule to implement the Formaldehyde Standards for Composite Wood Products Act, which added Title VI to the Toxic Substances Control Act (TSCA). The purpose of TSCA Title VI is to reduce formaldehyde emissions from composite wood products, which will reduce exposures to formaldehyde and result in benefits from avoided adverse health effects. This final rule includes formaldehyde emission standards applicable to hardwood plywood, medium-density fiberboard, and particleboard, and finished goods containing these products, that are sold, supplied, offered for sale, or manufactured (including imported) in the United States. This final rule includes provisions relating to, among other things, laminated products, products made with no-added formaldehyde resins or ultra low-emitting formaldehyde resins, testing requirements, product labeling, chain of custody documentation and other recordkeeping requirements, enforcement, import certification, and product inventory sell-through provisions, including a product stockpiling prohibition. This final rule also establishes a third-party certification program for hardwood plywood, medium-density fiberboard, and particleboard and includes procedures for the accreditation of third-party certifiers and general requirements for accreditation bodies and third-party certifiers.

DATES: This final rule is effective February 10, 2017. The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of February 10, 2017.

ADDRESSES: The dockets for this action, identified by docket identification (ID) numbers EPA–HQ–OPPT–2011–0380, EPA–HQ–OPPT–2012–0018, and EPA–HQ–OPPT–2016–0461 are available at *http://www.regulations.gov* or at the Office of Pollution Prevention and Toxics Docket (OPPT Docket), Environmental Protection Agency Docket Center (EPA/DC), West William Jefferson Clinton Bldg., Rm. 3334, 1301 Constitution Ave. NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the OPPT Docket is (202) 566–0280. Please review the visitor instructions and additional information about the docket available at *http://www.epa.gov/dockets.*

FOR FURTHER INFORMATION CONTACT:

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SUPPLEMENTARY INFORMATION:

I. Executive Summary

A. Does this action apply to me?

You may be potentially affected by this action if you manufacture (including import), sell, supply, or offer for sale hardwood plywood, medium-density fiberboard, particleboard, and/or products containing these composite wood materials in the United States. The following list of North American Industrial Classification System (NAICS) codes is not intended to be exhaustive, but rather provides a guide to help readers determine whether this document applies to them. Potentially affected entities may include:

- Veneer, plywood, and engineered wood product manufacturing (NAICS code 3212).
- Manufactured home (mobile home) manufacturing (NAICS code 321991).
- Prefabricated wood building manufacturing (NAICS code 321992).
- Furniture and related product manufacturing (NAICS code 337).
- Furniture merchant wholesalers (NAICS code 42321).
- Lumber, plywood, millwork, and wood panel merchant wholesalers (NAICS code 42331).
- Other construction material merchant wholesalers (NAICS code 423390), *e.g.,* merchant wholesale distributors of manufactured homes (*i.e.,* mobile homes) and/or prefabricated buildings.
- Furniture stores (NAICS code 4421).
- Building material and supplies dealers (NAICS code 4441).
- Manufactured (mobile) home dealers (NAICS code 45393).
- Motor home manufacturing (NAICS code 336213).
- Travel trailer and camper manufacturing (NAICS code 336214).
- Recreational vehicle (RV) dealers (NAICS code 441210).
- Recreational vehicle merchant wholesalers (NAICS code 423110).
- Engineering services (NAICS code 541330).
- Testing laboratories (NAICS code 541380).
- Administrative management and general management consulting services (NAICS code 541611).
- All other professional, scientific, and technical services (NAICS code 541990).
- All other support services (NAICS code 561990).
- Business associations (NAICS code 813910).
- Professional organizations (NAICS code 813920).

If you have any questions regarding the applicability of this action, please consult the technical person listed under **FOR FURTHER INFORMATION CONTACT**.

B. What is the Agency's authority for taking this action?

This final rule is being issued under the authority of section 601 of TSCA, 15 U.S.C. 2697. EPA has also been mindful of environmental, economic, and social impacts consistent with section 2(c) of TSCA, 15 U.S.C. 2601.

C. What action is the agency taking?

EPA is issuing a final rule that implements TSCA Title VI. The final rule includes provisions on labeling; chain of custody requirements; sell-through provisions; ultra low-emitting formaldehyde resins (ULEF); no-added formaldehyde-based resins (NAF); finished goods; third-party testing and certification; auditing and reporting of third-party certifiers (TPCs); recordkeeping; enforcement; laminated products; and exceptions from regulatory requirements for products and components containing *de minimis* amounts of composite wood products. The final rule incorporates the emission standards established by TSCA Title VI for hardwood plywood, medium-density fiberboard (MDF) and particleboard, and products containing these composite wood materials, that are sold, supplied, offered for sale, or manufactured (defined by statute to include import) in the United States.

The emission standards established by TSCA Title VI are not altered in this

final rule. The requirements in this final rule are consistent, to the extent EPA deemed appropriate and practical considering TSCA Title VI, with the requirements currently in effect in California under the California Air Resources Board's (CARB) Air Toxics Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products (ATCM) (Ref. 1).

Under this final rule, the definition of hardwood plywood exempts laminated products made by attaching a wood or woody grass veneer to a compliant core or platform with a phenol-formaldehyde resin or a resin formulated with no added formaldehyde as part of the resin cross-linking structure. To be eligible for the exemption, laminated product producers must maintain records demonstrating eligibility for the exemption.

This final rule establishes the manufactured-by date for composite wood products at December 12, 2017. After this date, hardwood plywood made with either a combination core or a veneer core, particleboard, and MDF must be manufactured (including imported) in compliance with the provisions of this final rule. This final rule establishes the manufactured-by date for laminated products at December 12, 2023. Before that date, laminated product producers must use compliant composite wood product platforms and comply with the recordkeeping and labeling requirements for fabricators. After that date, laminated products that are exempt from the definition of hardwood plywood must also keep, as a condition of the exemption, records demonstrating eligibility for the exemption. Other laminated products will have to be made in compliance with the testing and TPC certification requirements for hardwood plywood.

Table 1 is a summary of the regulatory requirements by regulated entity. This is not meant to be an exhaustive list of requirements, nor is it intended to replace the provisions of the regulatory text. For specific information on any of these requirements, interested persons should consult the referenced regulatory provisions. Entities who fit into more than one category must comply with the requirements for all applicable categories. For example, an importer of composite wood product panels who also fabricates finished goods must comply with the requirements for importers and the requirements for fabricators.

TABLE 1—SUMMARY OF PROVISIONS

Requirement	Compliance date
Composite Wood Product Producers	
Products must comply with emission standards: Hardwood plywood (made with a veneer core or a composite core) = 0.05 ppm Particleboard = 0.09 ppm MDF = 0.11 ppm Thin MDF = 0.13 ppm (40 CFR 770.10)	December 12, 2017.
Products must be certified by an EPA TSCA Title VI TPC unless they are eligible for a limited exemption for products made with NAF-based or ULEF resins. (40 CFR 770.15, 770. 17, 770.18)	December 12, 2017.
Products must undergo quarterly testing and routine quality control testing using specified methods (40 CFR 770.20)	December 12, 2017.
Panels must be labeled with the producer's name (or other identification), lot number, TPC number, and a statement of compliance with TSCA Title VI. (40 CFR 770.45)	December 12, 2017.
Records, including testing, production, purchaser, transporter, and non-complying lot information, must be kept for 3 years.	December 12, 2017.
Records demonstrating initial eligibility for reduced testing or a limited third-party certification exemption for products made with NAF-based or ULEF resins must be kept for as long as exemption eligibility is claimed. (40 CFR 770.40)	
Producers of Laminated Products That Are Not Exempt From the Definition of Hardwood Plywood	
Bills of lading, invoices, or comparable documents must be obtained and maintained for 3 years (40 CFR 770.30, 770.40)	December 12, 2017.
Finished goods must be labeled with the producer's name, the date the good was produced, and a statement of TSCA Title VI compliance. (40 CFR 770.45)	December 12, 2017.
Laminated products must comply with the hardwood plywood emission standard of 0.05 ppm, and the testing, certification, and recordkeeping requirements for composite wood products. (40 CFR 770.10, 770.15, 770.20, 770.40)	December 12, 2023.
Producers of Laminated Products That Are Exempt From the Definition of Hardwood Plywood	
Records demonstrating purchase/use of compliant platforms and NAF or PF resins and bills of lading, invoices, or comparable documents must be obtained and maintained for 3 years. (40 CFR 770.40)	December 12, 2023.
Bills of lading, invoices, or comparable documents must be obtained and maintained for 3 years (40 CFR 770.30, 770.40)	December 12, 2017.
Finished goods must be labeled with the producer's name, the date the good was produced, and a statement of TSCA Title VI compliance. (40 CFR 770.45)	December 12, 2017.
Fabricators (Other Than Laminated Product Producers)	
Bills of lading, invoices, or comparable documents must be obtained and maintained for 3 years.	December 12, 2017

TABLE 1—SUMMARY OF PROVISIONS—Continued

Requirement	Compliance date
(40 CFR 770.30, 770.40)	
Finished goods must be labeled with the producer's name, the date the good was produced, and a statement of TSCA Title VI compliance. (40 CFR 770.45)	December 12, 2017.
Importers	
Bills of lading, invoices, or comparable documents bearing a statement of TSCA Title VI compliance must be obtained and maintained for 3 years. In addition, must have the ability to make records identifying the panel producer, the date the products were produced, the supplier (if different) and the date the products were purchased available to EPA within 30 calendar days of request. (40 CFR 770.30, 770.40)	December 12, 2017.
Import certification under TSCA section 13 is required ..... (40 CFR 770.30, 770.40)	December 12, 2018.
Distributors and Retailers	
Bills of lading, invoices, or comparable documents must be obtained and maintained for 3 years. ..... (40 CFR 770.30, 770.40)	December 12, 2017

This final rule also establishes an EPA TSCA Title VI Third-Party Certification Program to ensure that composite wood panel producers comply with the statutory formaldehyde emission limits. Under the EPA TSCA Title VI Third-Party Certification Program, TPCs will regularly inspect composite wood panel producers, and conduct, oversee, and verify formaldehyde emissions tests. TPCs who wish to participate in the EPA TSCA Title VI Third-Party Certification Program must apply to EPA for approval and receive recognition from EPA before certifying products under this rule. The requirements for TPCs to receive EPA recognition include being accredited by EPA-recognized accreditation bodies (ABs) to specific voluntary consensus standards and to the regulatory requirements in this rule. In addition, TPCs approved by CARB are eligible for EPA TSCA Title VI recognition through reciprocity, provided that they meet all applicable requirements. Existing CARB TPCs and TPCs approved by CARB during the two-year transition period that are recognized by EPA may certify composite wood products under TSCA Title VI until December 12, 2018. After that time, EPA will only recognize TPCs, including CARB-approved TPCs, who are accredited by EPA-recognized ABs.

Under this final rule, composite wood products must be certified by an EPA TSCA Title VI TPC. To obtain and maintain certification, panel producers must establish quality assurance/quality control programs, conduct regular quality control testing of product emissions, and have an EPA-recognized TPC conduct or oversee quarterly formaldehyde emissions testing. Composite wood products made with NAF-based or ULEF resins may be eligible for reduced testing and/or a limited exemption from TPC oversight after an initial testing period of three months, for NAF, or six months, for ULEF.

This action includes labeling requirements for composite wood products and finished goods as well as ''chain of custody'' and recordkeeping requirements with a three year record retention period. Products that contain *de minimis* amounts of composite wood products, defined as products containing 144 square inches or less of regulated composite wood products, are exempt from the labeling requirements, but not the recordkeeping requirements or other provisions. TSCA section 13 import certification for composite wood products that are articles is also required.

Notable changes from EPA's proposed regulations include the clarification of certain terms under TSCA Title VI to exclude renovation and construction activities, applicability of the hardwood plywood emission standard limited to hardwood plywood made with either a composite or a veneer core, an expanded exemption for laminated products to products laminated with phenol-formaldehyde resins in addition to those laminated with resins formulated with no added formaldehyde as part of the resin cross-linking structure, a manufactured-by date for non-exempt laminated products that is seven years after publication of this final rule, the addition of a petition process through which any person can petition the Agency to expand the exemption for laminated products from the definition of the term ''hardwood plywood'', elimination of the requirement to hold lots selected for testing until test results are received, specific notification requirements for non-complying lots, reduced recordkeeping for non-laminating fabricators, and allowing two years after date of final publication of the rule, instead of one year, for importers to certify that imports are in compliance with TSCA Title VI pursuant to TSCA section 13.

D. Why is the Agency taking this action?

EPA is promulgating this final rule to reduce formaldehyde emissions from composite wood products, and thereby reduce exposures to formaldehyde and avoid adverse health effects. TSCA Title VI directs EPA to promulgate regulations that include provisions on labeling; chain of custody requirements; sell-through provisions; ULEF and NAF resins; finished goods; third-party testing and certification; auditing and reporting of TPCs; recordkeeping; enforcement; laminated products; and exceptions from regulatory requirements for products and components containing *de minimis* amounts of composite wood products.

E. What are the estimated impacts of this action?

EPA's analysis of the potential costs, benefits, and impacts associated with this rulemaking is summarized in Table 2, and additional detail is provided in Unit VI.A. The quantified costs of the rule may exceed the quantified benefits under certain conditions. There are additional unquantified benefits due to other avoided health effects. There is not sufficient information at this time on the relationship between

formaldehyde exposure and myeloid leukemia, respiratory related effects, or reduced fertility to include a valuation estimate in the overall benefits analysis. Although uncertainty remains regarding how best to quantify the effect of formaldehyde exposure on these health endpoints, reducing these effects is an important non-monetized impact that contributes to the overall benefits of the rule.

After assessing both the costs and the benefits of the rule, including the unquantified benefits, EPA has made a reasoned determination that the benefits of the rule justify its costs.

TABLE 2—SUMMARY OF COSTS AND BENEFITS OF RULE

Category	Description
Benefits	This rule will reduce exposures to formaldehyde, resulting in benefits from avoided adverse health effects. For the subset of health effects where the results were quantified, the estimated annualized benefits (due to avoided incidence of eye irritation and nasopharyngeal cancer) are $64 million to $186 million per year using a 3% discount rate, and $26 million to $79 million per year using a 7% discount rate. There are additional unquantified benefits due to other avoided health effects.
Costs	The annualized costs of this rule are estimated at $38 million to $83 million per year using a 3% discount rate, and $43 million to $78 million per year using a 7% discount rate.
Effects on State, Local, and Tribal Governments.	Government entities are not expected to be subject to the rule's requirements, which apply to entities that accredit TPCs, certify panel producers, or manufacture, fabricate, distribute, or sell composite wood products. The rule does not have a significant intergovernmental mandate, significant or unique effect on small governments, or have Federalism implications.
Small Entity Impacts	This rule would impact approximately 922,000 small businesses: almost 910,000 have costs impacts less than 1% of revenues, over 6,000 have impacts between 1% and 3%, and over 5,000 have impacts greater than 3% of revenues. Approximately 99% of firms with impacts over 1% have annualized costs of less than $250 per year.
Environmental Justice and Protection of Children.	This rule increases the level of environmental protection for all affected populations without having any disproportionately high and adverse human health or environmental effects on any population, including any minority or low-income population or children.

F. Children's Environmental Health

Consistent with the Agency's Policy on Evaluating Health Risks to Children (Ref. 2), EPA has evaluated the environmental health effects of formaldehyde emissions from composite wood products on children. The results of this evaluation are described in Chapter 7.7 of the economic analysis (Ref. 3). The economic analysis only monetizes the potential benefits associated with avoided cases of nasopharyngeal cancer and eye irritation, some of which clearly would accrue to children. However, some studies have reported associations between elevated levels of formaldehyde and other health endpoints, such as respiratory symptoms. The World Health Organization (WHO) (Ref. 4) and the Agency for Toxic Substances and Disease Registry (ATSDR) (Ref. 5) have raised questions about the potential role of formaldehyde in increasing risk of asthma or allergic conditions, particularly among children. In addition to a study observing an association with increased chronic respiratory symptoms and decreased pulmonary function among children (Ref. 6), 96% of whom lived in households with formaldehyde levels below 0.075 milligrams per cubic meter (mg/m^3), more recent studies since the WHO and ATSDR reviews observed increased risks of allergic conditions among adults and children, and increased severity of asthma symptoms among children with ''wheeze'' in the previous year (Refs. 7–10). To the extent that the reductions reported in this rule would lead to reduced respiratory symptoms in children, the monetized estimate for cancer and eye irritation alone is likely an underestimate. The analysis shows that children aged zero through one represent three percent of the individuals affected by the rule and are estimated to accrue 2% to 10% of the rule's total quantified benefits. Children aged two through fifteen represent twenty percent of the individuals affected by the rule and are estimated to accrue 15% to 21% of the rule's total quantified benefits. Exposure to formaldehyde may cause disproportionate effects on children compared to adults. The emission standards and other requirements of this rule will reduce emissions of formaldehyde from composite wood products for individuals of all ages that are exposed and children may accrue higher benefits from the exposure reductions compared to adults.

II. Background

A. Formaldehyde Sources and Health Effects

Formaldehyde is a colorless, flammable gas at room temperature and has a strong odor. It is found in certain resins used in the manufacture of composite wood products (*i.e.,* hardwood plywood, particleboard and MDF). It is also found in certain household products such as glues, permanent press fabrics, carpets, antiseptics, medicines, cosmetics, dishwashing liquids, fabric softeners, shoe care agents, lacquers, plastics and paper product coatings. It is a by-product of combustion and certain other natural processes. Examples of sources of formaldehyde gas inside homes include cigarette smoke, unvented, fuel-burning appliances (*e.g.,* gas stoves, kerosene space heaters), and composite wood products made using formaldehyde-based resins (Ref. 5). In addition, formaldehyde is a by-product of human metabolism, and thus endogenous levels are present in the body.

Formaldehyde is an irritant and the National Toxicology Program (NTP) and the International Agency for Research on Cancer (IARC) have classified it as a known human carcinogen based on sufficient evidence in humans that formaldehyde causes nasopharyngeal cancer and leukemia (Refs. 11–12), a classification supported by the National Research Council of the National Academy of Sciences (NRC) in their 2014 review of the NTP assessment (Ref. 13). Depending on concentration, formaldehyde can cause eye, nose, and throat irritation, even when exposure is of relatively short duration. In the indoor environment, sensory reactions and various symptoms as a result of mucous membrane irritation are

potential effects, including respiratory symptoms as previously discussed. Formaldehyde is also listed under section 112(b)(1) of the Clean Air Act as a hazardous air pollutant (Ref. 14).

In 1991, EPA classified formaldehyde as a probable human carcinogen, ''based on limited evidence in humans, and sufficient evidence in animals,'' and derived an inhalation unit risk factor for assessing formaldehyde cancer risk. The risk factor and supporting documentation is included in EPA's Integrated Risk Information System (IRIS) database (*http://www.epa.gov/iris/*) (Ref. 15). The IRIS program in EPA's Office of Research and Development (ORD) completed a draft assessment of the potential cancer and non-cancer health effects that may result from chronic exposure to formaldehyde by inhalation (Ref. 16). This draft IRIS assessment was peer reviewed by the NRC in 2011. The draft formaldehyde IRIS assessment is being revised in response to the NRC peer review and public comments, and the final assessment will be posted on the IRIS database. In the interim, this final rule estimates benefits using the 1991 IRIS inhalation unit risk value of 1.3×10^{-5} per $\mu g/m^3$ (Ref. 15).

In addition, EPA used concentration-response functions to estimate the impact of exposure to formaldehyde on eye irritation for use in the non-cancer benefits assessment to support this rule, as discussed in the proposal. The derivation of these concentration-response functions, uncertainties, and EPA's proposed approach for using the concentration-response functions in the benefits assessment were externally peer reviewed (Ref. 17). While the economic analysis of cancer benefits is based on the unit risk, which is a reasonable upper bound on the central estimate of risk, the non-cancer benefits were evaluated using the estimated concentration-response functions which reflect the central effect estimates rather than upper bounds.

B. History of This Rulemaking

1. *The CARB ATCM.* In 2007, CARB issued an ATCM to reduce formaldehyde emissions from hardwood plywood with a composite or veneer core, MDF, and particleboard, products referred to collectively as composite wood products. The CARB ATCM was approved on April 18, 2008, by the California Office of Administrative Law and the first emission standards took effect on January 1, 2009 (Ref. 1). Additional emission standards followed through 2012. The CARB ATCM requires manufacturers to meet formaldehyde emission standards for the regulated composite wood products that are sold, offered for sale, supplied, imported or manufactured for use in California. The CARB ATCM also requires that compliant composite wood products be used in finished goods sold, offered for sale, supplied, imported or manufactured for sale in California. The CARB ATCM does not apply to hardwood plywood and particleboard materials when installed in manufactured homes subject to regulations promulgated by the United States Department of Housing and Urban Development (HUD).

On March 24, 2008, 25 organizations and approximately 5,000 individuals petitioned EPA under section 21 of TSCA to use its authority under section 6 of TSCA to adopt the CARB ATCM nationally. On June 27, 2008, EPA denied the petitioners' request to immediately pursue a TSCA section 6 rulemaking, stating that the available information at the time was insufficient to support an evaluation of whether formaldehyde emitted from hardwood plywood, particleboard, and medium-density fiberboard presents or will present an unreasonable risk to human health (including cancer and non-cancer endpoints) under TSCA section 6 (Ref. 18). On December 3, 2008, EPA issued an Advance Notice of Proposed Rulemaking (ANPR) that announced EPA's intention to investigate whether and what regulatory or other action might be appropriate to protect against risks posed by formaldehyde emitted from the products covered by the CARB ATCM as well as other pressed wood products. (Ref. 19)

2. *The Formaldehyde Standards for Composite Wood Products Act.* The Formaldehyde Standards for Composite Wood Products Act, or Title VI of TSCA, 15 U.S.C. 2697, was enacted on July 7, 2010 (Ref. 20). The statute establishes formaldehyde emission standards that are identical to the CARB ATCM Phase 2 standards for hardwood plywood with a composite or veneer core, MDF, and particleboard sold, supplied, offered for sale, or manufactured in the United States. Pursuant to TSCA section 3(7), the definition of the term ''manufacture'' includes import. The statute directs EPA to issue final implementing regulations by January 1, 2013. The Act specifically covers composite wood products used in manufactured housing and directs HUD to update its regulation to ensure that it reflects the emission standards in the Act. TSCA Title VI does not give EPA the authority to raise or lower the established emission standards, and EPA must generally promulgate the implementing regulations in a manner that ensures compliance with the standards. Congress directed EPA to consider a number of elements for inclusion in the implementing regulations, many of which are aspects of the CARB program.

3. *EPA's proposed rules.* On June 10, 2013, EPA issued two Notices of Proposed Rulemaking (NPRMs) containing proposed requirements to implement TSCA Title VI. The first NPRM (the TPC proposal) included a proposed framework for a TSCA Title VI TPC Program (Ref. 21), while the second NPRM included the remainder of the proposed implementing regulations for TSCA Title VI (Ref. 22).

The initial comment period on the TPC proposal was scheduled to end on August 9, 2013, but was extended twice, ultimately closing on September 25, 2013. Information pertaining specifically to the TPC proposal, including the comments received, can be found at *http://www.regulations.gov* under docket number EPA–HQ–OPPT–2011–0380.

The initial comment period on the implementation proposal was scheduled to end on August 9, 2013, but was also extended twice, ultimately closing on October 9, 2013. The comment period was specifically reopened for additional comments on the laminated products issue from April 8, 2014 to May 26, 2014, including one extension. EPA also held a public meeting on laminated products on April 28, 2014. Information pertaining specifically to the implementation proposal, including the comments received during both comment periods, can be found at *http://www.regulations.gov* under docket number EPA–HQ–OPPT–2012–0018.

EPA is finalizing both proposed rules in a single final rule under RIN 2070–AJ44. Although this final rule document and supporting information will appear in docket EPA–HQ–OPPT–2016–0461, both dockets for the proposed rules (EPA–HQ–OPPT–2011–0380 and EPA–HQ–OPPT–2012–0018) contain supporting information with respect to this rule and should be considered merged for the purpose of this final rule.

III. Provisions of This Final Rule

A. Scope and Applicability

1. *Composite wood product.* The final rule defines the term ''composite wood product'' as including only those products subject to a formaldehyde emission standard, *i.e.,* hardwood plywood with a composite or veneer core, MDF, and particleboard. EPA has also clarified throughout the regulatory text whether particular provisions apply

to panels, component parts, or finished goods, or all three.

2. *Finished good.* EPA's proposed rule included a definition of the term ''finished good'' that was virtually identical to the definition in TSCA Title VI. Although EPA did not receive any comments directly addressing the proposed definition, other comments on the scope and applicability of the regulation have caused EPA to clarify what is meant by the term ''finished good.'' Specifically, EPA has determined that Congressional intent with respect to the regulation of finished goods under TSCA Title VI was to regulate *goods* that move freely through commerce and that are produced through a manufacturing process at a manufacturing facility, not objects like buildings or other structures that are constructed on site and become a permanent addition to real property Thus, the production of manufactured housing or prefabricated buildings at a factory is covered by this final rule, while the construction of housing or other real property on site, or the assembly and placement of prefabricated buildings or manufactured housing at a site, is not. The NAICS, used by Federal statistical agencies to classify business establishments for data analysis purposes, recognizes the significant differences between these activities by including the production of manufactured housing or prefabricated buildings in the Manufacturing economic sector rather than the Construction economic sector. More specifically, the production of both manufactured housing and prefabricated buildings is included in the Wood Product Manufacturing subsector, along with the production of composite wood product panels. Therefore, to ensure that this distinction is clear, the definition of ''finished good'' incorporated into this final rule specifically excludes buildings and similar structures that are constructed on-site.

3. *Hardwood plywood. a. General definition.* As proposed, EPA is incorporating the basic statutory definition of hardwood plywood and the statutory exclusions into the regulation with the addition of veneer core to the list of cores in the statutory definition. As TSCA section 601(b)(2)(A) establishes a formaldehyde emission standard for hardwood plywood with a veneer core, EPA is including the phrase ''veneer core'' in the regulatory definition of hardwood plywood to avoid any potential confusion over whether hardwood plywood made with a veneer core is covered by the regulations. In addition, as discussed in the next section, the regulatory definition specifically includes laminated products, except for those laminated products made by attaching a wood or woody grass veneer with a phenol-formaldehyde resin or a resin formulated with no added formaldehyde as part of the resin cross-linking structure to a compliant core or platform. The Agency has also included a petition process through which any person can petition the Agency to expand the exemption for laminated products from the definition of the term ''hardwood plywood.''

The statutory definition of hardwood plywood only includes products that are panels and that are intended for interior use. As part of this rulemaking, EPA convened a Small Business Advocacy Review (SBAR) Panel (Ref. 23). More information on the Panel process can be found in the preamble to the proposed rule (Ref. 22). Among the recommendations made by the SBAR Panel was a recommendation that EPA, to reduce uncertainty in the regulated community as to which products are covered, include definitions of the term ''panel'' and the phrase ''intended for interior use'' (Ref. 23). Accordingly, EPA is defining the term ''panel'' as a thin (usually less than two inches thick), flat, usually rectangular piece of particleboard, medium density fiberboard or hardwood plywood. Embossing or imparting of an irregular surface on the composite wood products by the original panel producer during pressing does not remove the product from this definition. EPA has determined, based on the comments received, this definition is consistent with both the CARB ATCM and common industry usage. EPA has added the parenthetical indicating that panels are usually less than two inches thick to provide some additional guidance on panel thinness (Ref. 24). The definition of panel also includes a sentence added because EPA agrees with those commenters who stated that the purpose of the CARB ATCM and of TSCA Title VI is to regulate composite wood products as they come out of the press. Finally, EPA also added a sentence to clarify the term ''panel'' does not include items made for the purpose of research and development.

EPA is also promulgating a definition of the phrase ''intended for interior use.'' Recognizing that the primary purpose of TSCA Title VI is to reduce formaldehyde emissions from composite wood products inside buildings and similar living areas in recreational vehicles, EPA's definition includes products intended for use or storage inside a building or recreational vehicle, or constructed in such a way that they are not suitable for long term use in a location exposed to the elements. EPA received very few comments on this definition, and is finalizing the definition as proposed. The purpose of this definition is to help explain coverage of miscellaneous finished goods, such as sporting goods, that are made of at least some hardwood plywood and that may be used indoors or outdoors. This definition does not exclude windows and exterior doors, including garage doors, which are clearly intended to be covered by TSCA Title VI. The statute contains specific exemptions for windows that contain less than five percent by volume of composite wood products, exterior doors and garage doors that contain less than three percent by volume of composite wood products, and exterior and garage doors that are made with NAF-based or ULEF resins.

TSCA Title VI also directs EPA to determine whether the definition of hardwood plywood should exempt engineered veneer. Engineered veneer is a type of veneer that is created by dyeing and gluing together veneer leaves in a mold to produce a block. The block is then sliced into leaves of veneer with a designed appearance that is highly repeatable. EPA did not propose to exempt any engineered veneer because EPA did not have any information to support such an exemption. One commenter, the Hardwood Plywood and Veneer Association (HPVA), clarified that it did not consider the production of engineered veneer, or the resulting engineered veneer product, to be hardwood plywood (Ref. 25). HPVA noted that engineered veneer, once manufactured, could be used as a component in the production of hardwood plywood. EPA agrees that engineered veneer, by itself, is not hardwood plywood because it is not an assembly of veneer plies joined by adhesive to a core. EPA interprets TSCA Title VI and its implementing regulations to apply to hardwood plywood that incorporates engineered veneer, but not to the production of engineered veneer itself.

b. Laminated products. As discussed in more detail in this Unit, the definition of ''hardwood plywood'' exempts laminated products made by attaching a wood or woody grass veneer to a compliant core or platform with either a phenol-formaldehyde resin or a resin formulated with no added formaldehyde as part of the resin cross-linking structure. Additionally, the Agency has included a petition process through which any person can petition

the Agency to expand the exemption for laminated products from the definition of the term ''hardwood plywood''. Further, this final rule establishes the manufactured-by date for laminated products as December 12, 2023. After that date, producers of laminated products that are exempt from the definition of ''hardwood plywood'' must maintain records that demonstrate eligibility for the exemption in order to claim the exemption. Also after that date, other laminated products will have to be produced in compliance with the testing and certification requirements applicable to hardwood plywood. EPA is also promulgating a definition of laminated product that limits applicability of the term to products made with composite wood product platforms. As is the case with any component part, composite wood products used to make laminated products must be either certified pursuant to this regulation or compliant with the provisions for composite wood products made with NAF-based or ULEF resins. Also, as discussed in this Unit, the term ''laminated product'' is further limited to those products that are produced by fabricators of the component parts or finished goods in which the laminated products are incorporated. Regardless of whether laminated product producers are producing exempt or non-exempt laminated products, they are fabricators and must also comply with the fabricator recordkeeping requirements as of the manufactured-by date for composite wood products, which is December 12, 2017.

i. Background. TSCA Title VI defines laminated product as a product made by affixing a wood veneer to a particleboard, MDF, or veneer-core platform. The statutory definition further provides that laminated products are component parts used in the construction or assembly of a finished good, and that a laminated product is produced by the manufacturer or fabricator of the finished good in which the product is incorporated. Congress granted EPA the authority to promulgate a modified definition of laminated product through rulemaking. The statute also directs EPA to conduct a rulemaking process pursuant to TSCA section 601(d) that uses all available and relevant information from State authorities, industry, and other available sources of such information, and analyzes that information to determine, at the discretion of the Administrator, whether the definition of the term ''hardwood plywood'' should exempt any laminated product. Section 601(d) of TSCA states, among other things, that EPA must promulgate implementing regulations in a manner that ensures compliance with the statutory emission standards.

The CARB ATCM defines laminated product as a finished good or component part of a finished good made by a fabricator in which a laminate or laminates are affixed to a platform. Under this definition, if the platform consists of a composite wood product, the platform must comply with the applicable emission standards. The CARB ATCM defines fabricator as any person who uses composite wood products to make finished goods, including producers of laminated products. Laminate is defined under the CARB ATCM as a veneer or other material affixed as a decorative surface to a platform. Under the CARB ATCM, fabricators or laminated product manufacturers have different requirements compared with requirements for manufacturers of composite wood products. In particular, fabricators do not need to conduct formaldehyde emissions testing or comply with third-party certification requirements; instead, fabricators need to ensure that they are using compliant composite wood products and they have recordkeeping and labeling obligations.

CARB is currently considering changes to its ATCM. At a workshop in March 2014, CARB presented a discussion draft of a proposal to set a formaldehyde emission standard of 0.13 parts per million (ppm) for unfinished laminated products made with wood veneers, but not require testing or certification. If the platform is a composite wood product, the platform would have to be certified (Ref. 26).

Given the importance of the laminated products issue to so many commenters, the potential impacts on the large number of laminated product producers, and the fact that CARB was presenting new ideas regarding laminated products, EPA decided to reopen the comment period on this issue and specifically solicit public comment on the approach in the March 2014 CARB proposal, as well as suggestions in the comments received during EPA's 2013 public comment period on the TSCA Title VI formaldehyde regulations.

ii. *Final rule provisions.* As directed by Congress, EPA has evaluated available and relevant information from State authorities, industry, and other sources to determine whether the definition of the term ''hardwood plywood'' should exempt engineered veneer or any laminated product. For the reasons described in this Unit, EPA has decided to exempt those laminated products made by attaching a wood or woody grass veneer to a core or platform consisting of compliant MDF, compliant particleboard, or compliant veneer, with either a phenol-formaldehyde resin or a resin formulated with no added formaldehyde as part of the resin cross-linking structure. EPA considers these provisions for laminated products made with phenol-formaldehyde resins and laminated products made with resins formulated with no added formaldehyde as part of the resin cross-linking structure to be mutually complementary but independent provisions, such that either one could be implemented even in the absence of the other. Additionally, the Agency has included a petition process through which any person can petition the Agency to expand the exemption for laminated products from the definition of the term ''hardwood plywood''.

1. Information reviewed by EPA. EPA reviewed a wide variety of available information on resins, the chemistry of formaldehyde-based resins, and formaldehyde emissions from composite wood products. Urea-formaldehyde resins have been around since the 1920s and they have been the most common resins used in the manufacture of hardwood plywood, particleboard, and MDF. Urea-formaldehyde resins have several advantages, including low cost, a rapid cure rate, and a light color. These resins are generally used for interior applications because they are not water-resistant. As described by CARB, ''[t]he reactions that occur during UF resin synthesis are reversible. During the forward reaction, water is eliminated. However, if moisture interacts with the UF resin, depolymerization may occur, leading to hydrolysis or the release of formaldehyde'' (Ref. 27). This characteristic of reversibility, in addition to the presence of small amounts of free formaldehyde in the resins, leads to continuing formaldehyde emissions from composite wood products made with urea-formaldehyde resins, sometimes for years, although the emission potential decreases with increasing age (Ref. 28).

The available emissions data from composite wood products made with urea-formaldehyde resins bears this out—composite wood products made with urea-formaldehyde resins can have high formaldehyde emissions. For example, in a study of the formaldehyde emission rates of products likely to be found or used in California homes, the results of 19 samples of unfinished wood products made with urea-formaldehyde resins ranged from 8.6 to

1580 μg/m²/h (Ref. 29). Using the conversion used by CARB (Ref. 30), the highest emissions translate to 1.09 ppm. Although the median was 164 μg/m²/h, which translates to 0.11 ppm, the study results demonstrate that wood products made with urea-formaldehyde resins are as likely to have high formaldehyde emissions as not (Refs. 28–29). Further, the results of a 2003 survey of wood product manufacturers conducted by CARB in support of their rulemaking indicated that the highest formaldehyde-emitting composite wood products were hardwood plywood, particleboard, and medium-density fiberboard for interior applications (Ref. 27). CARB further determined that the majority of these products are made with urea-formaldehyde resins, which emit more formaldehyde than products made with other resins (Ref. 27). Finally, the results of CARB's testing of particleboard and MDF laminated using urea-formaldehyde resins confirms that products laminated with urea-formaldehyde resins can have high formaldehyde emissions (Ref. 31). Although the median of the samples tested in either a finished or an unfinished state was 0.09 ppm (Ref. 30), many samples were well above that, two of them were over 1.25 ppm.

As mentioned by commenters, advancements in resin technology, which have accelerated due to the CARB ATCM, have made it possible to make composite wood products that have very low formaldehyde emissions, even if urea-formaldehyde resins are used (Refs. 32–33). CARB described strategies for reducing formaldehyde emissions from composite wood products made with urea formaldehyde resins (Ref. 27). These include modifications to the resins themselves, such as reductions in the mole ratio of formaldehyde to urea or the addition of scavengers such as hexamine or melamine, and changes in the production process, such as reduced press times or temperatures. Some commenters noted the difficulty in meeting the CARB ATCM emission standard for hardwood plywood, even with advanced urea formaldehyde resin technology (Refs. 34–35).

EPA determined that there are several other formaldehyde-based resins that are used in the production of composite wood products. Phenol-formaldehyde resins, also developed in the early 20th century, have ''outstanding durability and high polymer strength due to good adhesion to wood surfaces.'' (Ref. 27). Composite wood products made with phenol formaldehyde resins are typically used for exterior applications because of their high water resistance (Ref. 27). However, phenol formaldehyde resins are dark in color, making them unsuitable for some decorative applications, and they require longer press times and higher press temperatures (Ref. 27). In contrast to the synthesis of urea-formaldehyde resins, the reactions involved in phenol formaldehyde resin synthesis are more stable, resulting in composite wood products with comparatively low formaldehyde emission potentials (Ref. 28). The data reviewed by EPA support this conclusion. In particular, the California homes study (Ref. 29), the Riedlinger study (Ref. 36), discussed in Unit III.F. of the preamble to the proposed Implementation Rule (Ref. 22), and test data from a hardboard manufacturer (Ref. 37) provide evidence that products made with phenol-formaldehyde resins have lower formaldehyde emissions than products made with urea-formaldehyde resins. In the California homes study, the results from four samples of unfinished wood products made with phenol-formaldehyde resins ranged from 4.1 to 9.2 μg/m²/h or, using CARB's conversion, 0.0028 ppm to 0.0063 ppm. These results are markedly lower than the results from the urea-formaldehyde products in the same study (Ref. 29). As discussed in the proposed rule, the Riedlinger study was designed to evaluate the effects of higher temperatures and humidities on formaldehyde emissions from wood products made with different resin systems (Ref. 36). The study involved testing particleboard panels constructed in the laboratory using resin recipes that, according to the study designers, are a close approximation to recipes used in the particleboard industry. The particleboard panels constructed from urea-formaldehyde resins were the highest-emitting panels, at 0.063 ppm after 7 days of conditioning when tested at standard temperature and humidity for the ASTM D–6007 method. The formaldehyde emission rate for the melamine-urea-formaldehyde panels with the same conditions was a close second at 0.057 ppm. The formaldehyde emission rate for the panels made with phenol-formaldehyde resins was much lower, at 0.011 ppm. Finally, a hardboard manufacturer submitted test data on hardboard produced with a phenol-formaldehyde resin (Ref. 37). As described by the submitter, the test data show results well below ''any emission threshold defined in the legislation.''

Melamine-formaldehyde resins are also available. Being resistant to moist conditions, they are most commonly used for exterior and semi-exterior applications, but they are also used for decorative laminates, paper treating, and paper coating (Ref. 27). The synthesis of melamine-formaldehyde resins is similar to that of urea-formaldehyde resins, except that melamine is a stronger nucleophile than urea, resulting in a faster and more complete reaction between melamine and formaldehyde than between urea and formaldehyde (Ref. 27). Melamine-formaldehyde resins are lighter in color than phenol-formaldehyde resins, but the cost of melamine makes these resins relatively expensive. The cost of melamine contributed to the development of melamine-urea-formaldehyde resins, which are also water resistant at a lower cost. However, these resins may not provide the low formaldehyde emission potential that would be expected from a melamine-formaldehyde resin without urea (Ref. 38), a concern that is supported by the limited results of the Riedlinger study (Ref. 36).

There are limited formaldehyde emissions data available on melamine-formaldehyde resins without added urea. CARB described a study of formaldehyde emissions from MDF made with melamine-formaldehyde resins and a study of particleboard made with two different melamine-formaldehyde resin formulations (Ref. 27). Formaldehyde emissions from these two studies were measured by test methods that are not directly comparable to the TSCA Title VI emission standards, which are presented in terms of the ASTM E–1333–96 (2002) method (Ref. 39). Using comparisons developed by CARB (Ref. 40), it appears that the results from both studies are within the range of the formaldehyde emission standards established by TSCA Title VI. However, in light of the limited amount of data, and the uncertainties involved in comparing results from different test methods, EPA is unable to determine that this is the case.

EPA also reviewed the documents available from CARB's rulemaking process for the ATCM. In developing the CARB ATCM, CARB did a significant amount of research into available resins and their relative formaldehyde emissions potentials. CARB commissioned a study on formaldehyde and toluene diisocyanate emissions from interior residential sources (Ref. 29). In 2003, CARB also surveyed composite wood product manufacturers across the U.S., asking them for a variety of information including formaldehyde emissions data from products. This research led CARB to conclude that formaldehyde emission control

measures for hardwood plywood, medium-density fiberboard, and particleboard were warranted, because these three products were primarily being made with urea-formaldehyde resins that ''have the highest formaldehyde emission rates.'' (Ref. 27). According to CARB, formaldehyde emission rates from other composite wood products, products used primarily in exterior applications, such as oriented strand board, hardboard, and peg board, were about 90% lower and contributed far less to formaldehyde concentrations in California. CARB went on to note that the primary composite wood products using phenol-formaldehyde resins were oriented strand board and softwood, or structural plywood, which were mainly used for exterior sidings. Thus, many of the products excluded from the CARB ATCM, and later from TSCA title VI, such as hardboard, oriented strand board, structural plywood, structural panels, and structural composite lumber, were so excluded because CARB determined that they were already being made with resins with limited formaldehyde emissions potential. Based on the available information that EPA has reviewed as part of this rulemaking, EPA agrees with CARB's determination that composite wood products made with phenol-formaldehyde resins are much less likely to emit formaldehyde than products made with urea-formaldehyde resins.

EPA also observes that, as noted by a commenter (Ref. 25), the Leadership in Energy and Environmental Design (LEED) 2009 green building certification program allowed a low-emitting materials credit for the use of composite wood products made with no added urea-formaldehyde resins. This credit was available without formaldehyde emissions testing. A 2013 interpretation of the requirements allowed composite wood products that met the CARB ATCM standard for a ULEF exemption to obtain the credit, but only with the CARB-required testing to confirm low formaldehyde emissions. This credit has been expanded in LEED v4, the most recent LEED standard, to encompass materials that, with testing, meet the CARB ATCM standard for either a NAF or ULEF exemption.

EPA carefully considered all of the public comments, as well as information that EPA compiled on the wood products industry in order to develop this rule and analyze its economic impacts. Based on the information provided by commenters on the differences between hardwood plywood production and laminated product production, EPA agrees with the numerous commenters who asserted that laminated product producers are truly different from composite wood product mills. It is EPA's understanding that laminated product producers are generally smaller businesses that make fewer individual items per product type than mills do, although EPA recognizes that this is not universally true. There are also many more laminated product producers (an estimated 7,000 to 14,000) than composite wood product mills (an estimated 90, operated by 54 firms) (Ref. 3). Laminated product producers are often small custom shops who laminate on a per order basis. While each laminated product would not have to be tested, as some commenters asserted, the product grouping conventions used by TPCs and mills to reduce the number and frequency of required tests could still result in significantly more tests for a given production volume for a custom shop as compared to a hardwood plywood mill. In addition, because composite wood product mills typically make many more individual items of each product type than most laminated product producers, mills can amortize the fixed costs of testing over a larger volume of production, resulting in only a small cost increase per unit.

EPA considered the costs that laminated product producers would bear under a variety of options to address formaldehyde emissions from laminated products, including options involving an emission standard but no testing and reduced testing without certification, as well as the option chosen for this final rule. As more fully described in Chapter 2 of the economic analysis (Ref. 3), EPA estimated the size of the laminated product producer universe, how many of them used urea-formaldehyde resins, and how much it would cost for testing, certification, and switching from a urea-formaldehyde resin to a phenol-formaldehyde resin or a resin formulated with no added formaldehyde as part of the resin cross-linking structure. EPA assumed that laminated product producers would switch from a urea-formaldehyde resin to a qualified resin, or purchase already-veneered panels from a hardwood plywood panel producer or another laminated product producer, if it made economic sense for them to do so. Taking all of this into account, EPA estimated that the aggregate annualized costs for laminated product producers would be $26 million to $72 million using a three percent discount rate, and $26 million to $62 million using a seven percent discount rate.

Also as described in the economic analysis (Ref. 3), EPA estimated the human health benefits that would result from reductions in formaldehyde exposure attributable to this final rule. Because most domestic composite wood product panel producers are producing only CARB compliant products, exposure reductions due to this rule are expected to come primarily from two sources: Laminated products and imported composite wood products. EPA was able to quantify the benefits attributable to avoided eye irritation and nasopharyngeal cancer, but there are additional unquantified benefits due to other avoided health effects. There is not sufficient information at this time on the relationship between formaldehyde exposure and myeloid leukemia, respiratory related effects, or reduced fertility to include a valuation estimate in the overall benefits analysis. The quantified benefits attributable to reductions in laminated product emissions are $35 million to $104 million using a three percent discount rate, and $13 million to $42 million using a seven percent discount rate. These benefits represent approximately half of all quantified benefits attributable to the final rule.

2. Rationale for exemption. EPA based its proposed exemption for laminated products made with NAF-based resins on a reading of the statute that requires any exemption for laminated products to be promulgated in accordance with TSCA section 601(d)(1), in a manner that ensures compliance with the statutory emission standards. EPA's rationale was that, if the platform complied with the applicable emission standards for the platform, the addition of a veneer with a NAF-based resin was unlikely to cause the resulting laminated product to exceed the applicable emission standard for the platform. Although some commenters supported the proposed exemption, others thought it wasn't broad enough, and still others noted that laminated products were covered by TSCA Title VI as hardwood plywood, and should, therefore, be required to meet the hardwood plywood emission standard. Although EPA referred to the laminated products exemption in the proposed rule as a NAF exemption, this terminology likely causes confusion between the exemption for laminated products and the limited testing and certification exemptions discussed in Unit III.G. that are available to panel producers who use NAF-based or ULEF resins. EPA is therefore avoiding the use of the term ''NAF-based'' in connection with the laminated products exemption in this final rule.

Upon further reflection, and consideration of public comments, EPA

has concluded that the better reading of the statute is that EPA need not make a finding that exempt laminated products will meet the statutory emission standards, whether for hardwood plywood or for the underlying platform. Rather, EPA must make a reasoned determination, based upon a review of all of the available and relevant information, that some or all laminated products should be exempt. This provides EPA with the discretion to consider a wide variety of factors, including formaldehyde emission potential, business demographics, and resin chemistry, as well as costs and benefits. EPA views the formaldehyde emission potential and the benefits of reductions in emissions as the most important considerations. The purpose of TSCA Title VI is to reduce formaldehyde emissions from composite wood products in order to protect human health. The central feature of Title VI is the range of formaldehyde emissions that Congress established considering all of the factors then known. And Congress chose to include laminated products within the definition of hardwood plywood unless EPA exempts them. Consequently, although EPA has concluded that Title VI does not require strict compliance with the standards as the test for EPA's exemption decision, EPA continues to believe that consideration of the formaldehyde emission potential of laminated products and the estimated health benefits from reductions in such emissions are the most important considerations, and the statutory emission standards provide the best baseline for evaluating these considerations.

That having been said, Congress most likely treated laminated products differently from other covered products because of the real differences between laminated product producers and composite wood product mills (see earlier discussion). Notably, laminated product producers are generally of a smaller size and more numerous as compared to mills. Thus, EPA has carefully considered the costs and benefits in deciding whether to exempt laminated products, including the costs and benefits of testing and certification and of allowing time for the demonstration and development of lower-emitting resin substitutions. In this regard, an integral part of this determination is the decision to establish the manufactured-by date for laminated products at December 12, 2023, as discussed later in this Unit. EPA's decision to retain coverage of laminated products other than products made by using, during the lamination step, either a phenol-formaldehyde resin or a resin formulated with no added formaldehyde as part of the resin cross-linking structure hinges in part upon laminated product producers having the ability to fully evaluate options for compliance.

Congress also clearly modeled portions of TSCA Title VI on the CARB ATCM. For laminated products, Congress expressly included information from State authorities among the things that EPA must consider in deciding whether to exempt any laminated products. At that time, CARB's regulations did not regulate laminated products as hardwood plywood. However, Congress clearly did not direct EPA to mimic CARB exactly. EPA therefore has considered not only what CARB's regulations were at that time but also the current concerns and direction of their program.

Some commenters supported an exemption for laminated products that are made without urea-formaldehyde resins. In fact, one observed that CARB, in a presentation at an August 2013 stakeholder meeting on the differences between the ATCM and the EPA proposal, suggested an alternative approach to laminated products that would not require testing or certification unless the producer uses urea-formaldehyde resins (Ref. 41). As previously discussed, EPA knows of two other formaldehyde-based resins that would fit within the suggested category of no-added urea-formaldehyde resins, *i.e.,* phenol-formaldehyde resin and melamine-formaldehyde resin. At the present time, EPA has determined that the available data supports an exemption for laminated products made with phenol-formaldehyde resins, but not an exemption for products made with melamine-formaldehyde resins.

Many more commenters supported other options, such as an exemption for all laminated products or the CARB discussion proposal of March 2014. EPA is not promulgating an exemption for all laminated products because the available information indicates that laminated products made with urea-formaldehyde resins can have high formaldehyde emissions and laminated product producers have several alternatives to choose from in determining how best to comply with this final rule. Many laminated product producers are already using resins formulated with no-added formaldehyde as part of the resin cross-linking structure (Ref. 3) and more are likely to switch to that type of resin or a phenol-formaldehyde resin in order to avoid having to comply with the testing and certification requirements. Laminated product producers can choose to purchase already-veneered panels if that is more cost-effective. Laminated product producers can also choose to consult with an EPA TSC Title VI TPC to design a workable testing and certification program.

With respect to the CARB discussion proposal, it is a significant improvement over a complete exemption. However, EPA is concerned that, without either a requirement to use phenol-formaldehyde resins or resins formulated with no-added formaldehyde as part of the resin cross-linking structure or a requirement for some testing, there is no assurance that the products will meet CARB's suggested emission standard of 0.13 ppm. The record, especially the CARB/AHFA data set, demonstrates that some laminated products have high formaldehyde emissions, so a requirement that the platform be compliant does not ensure that the laminated product will also be compliant, particularly if urea-formaldehyde resins are used.

This final rule also does not include an exemption for laminated products made with compliant platforms and ULEF resins that contain urea-formaldehyde. The resins eligible for this exemption can be defined by their composition. For the purpose of this exemption, because specific resin formulation information was not available for the formaldehyde emissions data that EPA reviewed on phenol-formaldehyde resins, EPA has defined phenol-formaldehyde resin to be a resin that is primarily composed of phenol and formaldehyde, with no added urea. Similarly, the other resins eligible for the laminated products exemption do not contain added formaldehyde as part of the resin cross-linking structure by definition. However, the available information reviewed by EPA in this rulemaking indicates that the only way to determine whether urea-formaldehyde resins are also ULEF resins is through emissions testing. Indeed, in responding to another commenter's suggestion that EPA approve resin systems that demonstrate consistent compliance with emission limits when properly used, one commenter stated that ULEF is not a resin type (Ref. 42). According to this commenter, the term describes an emission result when measured in a variety of different tests over different time frames and a resin that meets the ULEF limits in one product setting and application may not in another. This commenter noted that application rates, laminate and substrate porosity and

other factors affect emissions from products made with ULEF resins. EPA agrees that there are a number of factors that affect the formaldehyde emission rates of products made with ULEF resins and that, in order to exempt laminated products made with ULEF resins, EPA would have to require upfront testing to demonstrate that product emissions are in the range of the statutory emission limits. There would be no meaningful difference between the testing EPA would require of laminated product producers to demonstrate low emissions and the testing that will be required of mills who are applying for the limited exemption from testing and TPC oversight for products made with ULEF resins. Laminated product producers are free to take advantage of the third-party certification exemption or reduced testing provisions under § 770.18.

In deciding on the scope and structure of the laminated products exemption, EPA was mindful of the scope of the CARB regulations and the consideration being given by CARB to amendment of those regulations, and EPA consulted extensively with CARB. It would not be appropriate for EPA to mirror the current CARB regulations and simply exempt laminated products, for the reasons stated above, and also because CARB is considering amendment to its regulations to cover laminated products. EPA cannot speculate whether or how CARB will amend its regulations, but the approach taken in today's rule is consistent overall with the concept of CARB's March 2014 discussion proposal, in that it uses the upper bound of the Title VI emission standards as the most important guide in determining whether laminated products should be exempted. While CARB's proposal would not have required testing and certification, for the reasons stated above, EPA is concerned that a program without testing or certification would not be effective in achieving the objective to keep emissions below the target level. Thus, EPA has determined today's rule properly accounts both for CARB's regulatory direction and for the numerous additional considerations appropriate under Title VI, as discussed herein.

3. Manufactured-by date for laminated products. EPA has determined that testing and certification is necessary for laminated products unless they are made by attaching a wood or woody grass veneer to a compliant platform with either a phenol-formaldehyde resin or a resin formulated with no-added formaldehyde as part of the resin cross-linking structure. However, EPA agrees with the numerous commenters who argued that EPA could not realistically expect those laminated product producers that are currently regulated under CARB only as fabricators to attain compliance with this rule's testing and certification requirements within a year. As a result of EPA's consideration of the public comments and EPA's review of the available and relevant information on laminated products as directed by the statute, EPA is establishing the manufactured-by date for laminated products at December 12, 2023. After the manufactured-by date for composite wood products, which is December 12, 2017, all laminated product producers must comply with the general requirements for fabricators, *i.e.,* they must use compliant cores or platforms, they must keep fabricator records, and they must follow the labeling requirements for fabricators. After the manufactured-by date for laminated products, laminated product producers making exempt laminated products also must, as a condition of the exemption, maintain records demonstrating that exempt products made after the manufactured-by date for laminated products are eligible for the exemption. Also after the manufactured-by date for laminated products, producers of non-exempt laminated products must comply with the testing, certification, and recordkeeping requirements for hardwood plywood in addition to the requirements for fabricators.

EPA recognizes the significant challenges described by many commenters in switching from urea-formaldehyde resins to other resin technologies and EPA realizes that it will take considerable time in some instances to successfully do so. Not only must fabricators find a way to make their products with new resin technology, they must also have time to observe how these products perform in use. Several commenters mentioned the difficulty of evaluating new resin technologies for products that have 25-year warranties. In addition, because the formaldehyde emission standard for hardwood plywood is lower than the standards for particleboard and MDF, even those laminated product producers that choose not to switch to an exemption-eligible resin technology may have to change resin formulations or purchase lower-emitting platforms in order to meet the hardwood plywood emission standard. These laminated product producers will also need time to evaluate strategies for compliance that may involve different production processes and different supply chains.

Another consideration is TPC capacity. EPA shares the concerns of those commenters who thought that the addition of large numbers of laminated product producers to the pool of businesses needing testing and TPC certification services might overwhelm available TPC capacity, at least at first. Although there is some uncertainty as to exactly how many laminated product producers will be able to switch to either phenol-formaldehyde resins or resins formulated with no-added formaldehyde as part of the resin cross-linking structure and thereby avoid testing and certification requirements, EPA anticipates that a significant number of them will do so. Currently, there are about 40 CARB-approved TPCs, with 11 of them located in the United States and EPA expects them to participate in the TSCA Title VI program. It would not take many of the estimated 7,000 to 14,000 laminated product producers, currently not regulated by CARB as hardwood plywood producers, to overwhelm this capacity.

Some commenters asked for additional time to conduct studies in order to demonstrate that other laminated products should be exempt from the testing and certification requirements. These commenters cited products with thicker veneers as an example of laminated products that would likely be able to demonstrate consistently low emissions. EPA agrees that this approach has merit, in that it could potentially enable EPA to make a finding that exemptions for other laminated products are also warranted. For example, although the limited data available meant that EPA was unable to determine that an exemption for laminated products made with melamine-formaldehyde resins was warranted, it is entirely possible that additional data would confirm that products made with melamine-formaldehyde resins have consistently low formaldehyde emissions. It is also possible that studies could demonstrate that certain combinations of resin formulation and manufacturing processes consistently result in products with low formaldehyde emissions, as suggested by another commenter. In order for EPA to base findings for additional exemptions on product studies, such studies should be performed in accordance with accepted scientific principles. Studies offered in support of a potential exemption that include, for example, a representative sampling of products belonging to the product category suggested for exemption, especially with

formaldehyde emission results from testing performed in accordance with ASTM E1333–10 or ASTM D6007–02 (Refs. 43–44), are likely to facilitate a preliminary EPA determination on the merits of the suggested exemption. However, other types of studies could also be used to support an exemption. In general, EPA intends to evaluate any data submitted in support of an exemption using the factors outlined in the July 2003 document entitled ''A Summary of General Assessment Factors for Evaluating the Quality of Scientific and Technical Information'' (Ref. 45). Persons interested in demonstrating that additional exemptions are warranted are encouraged to contact the technical person listed under **FOR FURTHER INFORMATON CONTACT.** The process from study initiation to final EPA rulemaking, if warranted, would be a multi-year effort. It is likely that designing and conducting a robust study in support of an exemption for other laminated products would take a couple of years. Upon study completion, it would take EPA some time to review the study and determine whether to undertake rulemaking to exempt additional laminated products. Once a decision to undertake rulemaking had been made, EPA's rulemaking process would take several more years.

There may also be other opportunities to reduce the burdens associated with the testing and certification requirements for laminated product producers. For example, there may be other test methods or testing protocols that, when applied to laminated product production, may ensure that laminated product emissions are consistently within the range of emissions permitted for laminated product platforms. EPA encourages laminated product producers to think creatively about how to approach the problem of demonstrating consistently low formaldehyde emissions, whether by the type of resin used or the manufacturing process, or by using alternatives to existing test methods and testing protocols. Some commenters suggested alternative testing protocols for laminated products, such as testing a worst-case scenario for that producer once a quarter. There may also be alternative methods for testing laminated products that would be less burdensome than either using ASTM E1333–10 or ASTM D6007–02 or a correlated quality control method. In order for EPA to incorporate any such alternatives, EPA would have to have data upon which to determine that the alternative does in fact provide accurate and repeatable results that demonstrate consistently low formaldehyde emissions.

To this end and consistent with 5 U.S.C. 553(e), EPA has established a process at § 770.4 through which any person may petition the Agency to initiate a rulemaking to expand the exemption for laminated products from the definition of the term ''hardwood plywood''. EPA considers establishment of the petition process at § 770.4 to be a rule of Agency procedure, and it is therefore not subject to prior notice and comment. Petitioners should include with their petitions all available and relevant data to support the requested exemption(s) and enable EPA to make a reasoned determination that the petition should be granted. This provides EPA with the discretion to consider a wide variety of factors, including formaldehyde emission potential, business demographics, and resin chemistry, as well as costs and benefits. EPA views the formaldehyde emission potential and the benefits of reductions in emissions as the most important considerations.

EPA's goal will be to promptly review the petition and supporting data. The Agency's review will be hastened to the extent that the petition fully addresses the factors EPA would take into account. EPA will acknowledge receipt of the petition within 15 calendar days by sending a letter to the petitioner and subsequently communicate in another letter to the petitioner the Agency's decision to initiate rulemaking or deny the petition. The petition and any accompanying data, together with the letters acknowledging EPA's receipt of the petition and communicating EPA's subsequent decision in response to the petition will be placed in a public docket.

Following a decision to initiate rulemaking based on a petition, EPA will publish in the **Federal Register** a proposed rule that would expand the laminated products exemption based on the petition, and provide a 30-day public comment period. Based on the petition and any public comments, EPA would take final action on the proposal. If EPA expands the exemption for laminated products to include additional resin formulations, laminated product producers using those additional resin formulations will be subject to the same recordkeeping requirements as those laminated product producers who use NAF and phenol-formaldehyde resins; that is, they must maintain records demonstrating eligibility for the exemption.

EPA agrees with the commenters who suggested that additional time should be given to laminated product producers before they are required to comply with the testing and certification provisions of this final rule. In fact, considering in part all of the comments advocating for a permanent exemption, EPA has determined that the three years suggested by several commenters is not likely to be sufficient for some laminated product producers to fully evaluate different resin technologies to determine whether they can qualify for the exemption and to either successfully implement an alternative resin in their production process or turn to evaluating strategies for achieving compliance with the hardwood plywood emission standard and the testing and certification provisions. Neither would it be sufficient to design and conduct studies and allow EPA to conduct rulemaking to provide additional exemptions if warranted.

In EPA's view, seven years is a more realistic timeframe for acting on any additional warranted exemptions, and should also provide sufficient time for laminated product producers to either switch to a resin that renders them eligible for the exemption or figure out how to implement a testing and certification program for their laminated products. EPA based the seven year timeframe on the Agency's best professional judgment of the estimated time it likely takes to conduct product testing, especially to prove that a particular technology sufficiently reduces emissions in a broad array of applications and for EPA to evaluate and act upon a petition to expand the exemption for laminated products from the definition of the term ''hardwood plywood.'' EPA assumed that it would take at least a year to design a study that would result in the generation of data to support an exemption for a category of products, and another year to acquire the products and actually perform the product testing. The amount of time needed for EPA's review of the data could vary substantially, depending on the amount, robustness, and sufficiency of provided supporting information. Finally, EPA wanted to ensure that there would be enough time for laminated product producers to develop data to support any petitions and submit them to EPA for evaluation before the testing and certification requirements take effect for laminated products without feeling compelled to expend resources for the otherwise-required testing and certification to avoid potential noncompliance.

EPA considered establishing a shorter sell-through period, which would have

required producers of laminated products to incur the cost of complying with the testing and certification requirements while also making financial investments in determining whether they are able to switch to a qualified resin or conducting a robust study to justify a subsequent exemption. However, EPA does not think this approach is justified for several reasons, and as indicated above, EPA's decision not to exempt laminated products other than products made by using, during the lamination step, either a phenol-formaldehyde resin or a resin formulated with no added formaldehyde as part of the resin cross-linking structures is premised in part of the decision to establish the seven-year sell-through period. Even aside from efforts to develop alternatives to compliance with today's standards, laminated product producers could not realistically be expected to be in full compliance with this regulation in one year in view of the considerations discussed herein (such as TPC capacity and process changes the producers may need to make). In addition, because of the large number of laminated product producers that are subject to this rule, the fact that many of them are very small businesses that laminate on a per-order basis, and the significant upfront costs involved in designing and implementing a testing and certification program, it does not make sense, in EPA's view, to require producers to simultaneously incur compliance costs while investigating whether they are able to switch to a qualified resin or while conducting a robust study to justify a subsequent exemption or the effectiveness of alternative test methods or protocols. EPA wants to encourage these investigations, which may well reveal approaches that are as or more reliable in ensuring low emissions at a lower cost, and EPA is concerned that requiring the investment and process changes needed to comply with the rule certification and testing requirements on a shorter timeframe might reduce the incentive for the development of alternative approaches. EPA also does not think it makes sense to stimulate a large expansion of TPC capacity in the short term that may be unnecessary and/or may result in excess capacity over time.

Overall, EPA has exercised its discretion in making its determination so as to fulfill the primary purpose of TSCA Title VI without impeding unduly or creating unnecessary economic barriers to technological innovation. See 15 U.S.C. 2601(b)(3). In fact, EPA encourages laminated product producers and the wood products industry to explore all avenues for reducing formaldehyde emissions from composite wood products. In addition to established resins, such as soy-based resins or phenol formaldehyde resins, new resin technologies may be developed that provide adequate performance while contributing minimal formaldehyde emissions. Similarly, while there are established alternatives to regulated composite wood products, *e.g.,* lumber or solid wood, it is likely that new alternatives will be developed. For example, in 2014, EPA awarded a grant through EPA's Small Business Innovation Research program competition to Ecovative Design, LLC. Ecovative makes packaging, building materials (furniture and panels) and automotive products by growing them from agricultural byproducts and mycelium, a fungal network of threadlike cells that are like the roots of mushrooms. These materials are not hardwood plywood, particleboard, or MDF, and thus are not subject to this final regulation. EPA encourages laminated product producers to consider all aspects of their production processes when deciding how best to lower formaldehyde emissions from laminated products and achieve compliance with this regulation.

4. Definitions associated with laminated products. EPA is promulgating the definitions associated with laminated products essentially as proposed, except that the term ''laminated product'' is limited to those products that are produced either by the fabricator of the finished good in which the product is incorporated or by a fabricator who uses the laminated product in the further construction or assembly of a component part. EPA's proposed definition did not include any provisions restricting applicability of the term to certain entities because of concerns over potentially inequitable results. EPA did not intend for the term ''laminated product'' to be expanded to the extent that virtually all hardwood plywood panels could be considered laminated products. Rather, EPA's intention was to allow fabricators of component parts, *e.g.,* cabinet door fabricators, to be afforded similar treatment under the TSCA Title VI regulations as fabricators of finished goods, *e.g.,* entire cabinets. The laminated product definition in this final rule addresses EPA's concerns without being overly broad.

EPA's proposed definition of laminated product also expanded upon the statutory definition to include products made by attaching woody-grass veneers to particleboard, MDF, or veneer-core platforms. In addition, EPA proposed related definitions for the terms ''veneer'' and ''woody-grass.'' While some commenters objected to the expansion of the definition of laminated products to include woody-grass veneers, CARB and another commenter supported including woody-grass veneers, and the February 2014 draft amendments to the CARB ATCM include woody grass in the definition of veneer. Therefore, for the reasons stated in the proposal, that woody-grass veneers can be porous and therefore not effective barriers to formaldehyde emissions, that woody grass veneers can be affixed to cores and platforms using urea-formaldehyde resins, and that including woody grass veneers is consistent with the definition of hardwood plywood in the ANSI/HPVA HP–1 standard (Ref. 46), the definition of laminated product in the final rule includes woody grass as well as wood veneers. EPA notes that the term ''laminated product'' does not include those products made by attaching something other than a wood or woody grass veneer (*e.g.,* plastic, vinyl, or film) to a core or platform.

In addition, because the term ''core'' and the term ''platform'' can both be used to describe the wood product to which a wood or woody grass veneer is affixed, the final rule's laminated product definition includes both terms.

EPA is promulgating the definition of the term ''veneer'' as proposed, with the addition of a maximum thickness limit of 6.4 millimeters (¼ inch, the thickest veneer allowed under the ANSI/HPVA HP–1 standard) to distinguish it from lumber or sawn veneer, a specialty product typically used in the restoration of antique furniture.

EPA also proposed to define component part as a part that contains one or more composite wood products and is used in the assembly of finished goods. EPA is promulgating the definition of component part as proposed, except that EPA has added the unintentionally-omitted phrase ''construction or'' to the definition, as well as a clarification regarding parts sold individually to end users. Such items are not component parts but are more properly classified as finished goods because their commercial assembly process is complete. This clarification is consistent with CARB's proposal to modify their definition of the term ''finished good'' so that it means any good or product, other than a panel, containing hardwood plywood, particleboard, or MDF.

4. Particleboard and medium-density fiberboard. As proposed, EPA is

incorporating the statutory definitions of the terms ''particleboard'' and ''medium-density fiberboard'' into the regulations without change. In addition, EPA is finalizing the proposed definition for the term ''thin medium-density fiberboard'' that incorporates a maximum thickness of 8 millimeters or 0.315 inches and is consistent with both CARB and the voluntary consensus standard for medium-density fiberboard (Ref. 47). EPA is aware that some products are marketed as ''high-density fiberboard.'' If these products meet the definition of medium-density fiberboard, they are regulated as medium-density fiberboard. If they meet the definition of ''hardboard'' they are exempt as hardboard.

5. Exemptions. a. Statutory exemptions. TSCA section 601(c) exempts a number of products from the formaldehyde emission standards for composite wood products. These exemptions include, but are not limited to: Hardboard, structural plywood, structural panels, oriented strandboard, glued laminated lumber, prefabricated wood I-joists, finger-jointed lumber, wood packaging, composite wood products used inside new vehicles other than recreational vehicles, windows that contain less than five percent by volume of composite wood products, exterior doors and garage doors that contain less than three percent by volume of composite wood products, and exterior and garage doors that are made with NAF-based or ULEF resins. EPA is incorporating these exemptions into the implementing regulations. Composite wood products, component parts, and finished goods that qualify for these exemptions are exempt from all of the provisions of the implementing regulations. However, component parts and finished goods made of a mixture of exempt products and regulated products are not exempt. For example, a cabinet made up of structural plywood and hardwood plywood would be subject to the labeling and recordkeeping requirements of this final rule. The hardwood plywood in the cabinet would also be subject to the emission standard for hardwood plywood as well as the testing and certification provisions of this rule.

The statute exempts any finished good that has previously been sold or supplied to an individual or entity that purchased or acquired the finished good in good faith for purposes other than resale. The statute provides two examples: Antiques and secondhand furniture. Thus, dealers in secondhand furniture do not have any obligations under this regulation solely due to the fact that some of the furniture may contain composite wood products. Similarly, refurbishment of antique furniture and in-house repairs of previously sold finished goods, such as cabinetry and furniture, are not covered by this regulation. However, there is no exemption for panel producers, importers, and fabricators of composite wood products and component parts that are intended to be used in repairs. Unless another exemption is applicable, these entities may only make compliant products available in the market place, including to end users and other parties that intend to use these products in repairs.

With respect to exterior and garage doors made with NAF-based or ULEF resins, these resin types are defined elsewhere in the statute, with reference to both the composition of the resin and the formaldehyde emissions of composite wood products made with the resin. EPA is promulgating these exemptions as proposed and will interpret the statutory language to mean that, in order to be eligible for this exemption, the composite wood products used to make exterior and garage doors must comply with the emission standards contained in the statutory definitions of NAF-based resins and ULEF resins, as measured by the testing described in the statutory definitions of these resin types. However, manufacturers, fabricators, distributors, or retailers of these doors are not required to comply with the third-party certification, recordkeeping, or labeling provisions of this final rule.

b. Hardboard. TSCA Title VI exempts hardboard, but directs EPA to define it. EPA proposed to define hardboard with reference to, and consistent with, three relevant ANSI standards: ANSI A135.4 (Basic Hardboard), ANSI A135.5 (Prefinished Hardboard Paneling), or ANSI A135.6 (Hardboard Siding) (Refs. 48–50). EPA is concerned that, because hardboard and thin MDF share similar appearances and end uses, a broad definition of hardboard could lead to thin MDF being erroneously categorized as hardboard and exempted from the emission standards. Subsequent to EPA's proposal, CARB issued proposed amendments to its ATCM that would limit the hardboard exemption to hardboard that emits less than 0.06 ppm formaldehyde (Ref. 51).

The definition of hardboard in the final rule references the latest ANSI standards, as suggested in comments from the Composite Panel Association, the accredited developer for these standards. As noted in the standard itself, the name of the standard pertaining to siding was changed from ''Hardboard Siding'' to ''Engineered Wood Siding'' in order to more accurately describe the product (Ref. 52). The definition in the final rule also references the standard for engineered wood trim because the Composite Panel Association indicated that products conforming to this standard were also considered hardboard (Ref. 53). Although specific ANSI standards are referenced in the definition, minor unintentional deviations from the cited ANSI standards do not necessarily mean that a product is medium-density fiberboard and not hardboard. EPA has also added a rebuttable presumption that products emitting more than 0.06 ppm formaldehyde are not hardboard. Based on assertions from CARB and the Composite Panel Association, EPA has determined that products made according to the ANSI standards for hardboard are not likely to emit above 0.06 ppm formaldehyde (Ref. 54). This presumption is designed to ensure that MDF is not sold as hardboard. Some commenters suggested that EPA address this concern by excluding ''dry process'' hardboard from the definition of hardboard and treating it as MDF, while others thought this was unnecessary, because ''dry process'' hardboard is typically made with a small amount of phenol formaldehyde resins and has low formaldehyde emissions. The 0.06 ppm presumption is more enforceable than a process-based exclusion, and is in keeping with industry expectations of hardboard.

c. Other requested exemptions. Several commenters suggested that EPA adopt other, non-statutory, exemptions. As a general matter, EPA has determined that it can best ensure compliance with the emission standards by applying the regulatory requirements uniformly to all composite wood products sold, supplied, offered for sale, or manufactured in the United States. If EPA were to promulgate exemptions at the manufacturing level, exempt composite wood products could later be incorporated into finished goods, possibly with non-exempt composite wood products. This could make it difficult for downstream purchasers, EPA, and end consumers to assess whether finished goods are made from compliant composite wood products. It would also complicate the labeling and recordkeeping requirements, because without records passed down through the supply chain, it would be difficult to ascertain whether finished goods were made from compliant panels, exempt panels, regulated panels that were manufactured in violation of the regulations, or some combination thereof. Exemptions tied to the ultimate

end use of the product, if applied at the manufacturing level, would make it difficult to ensure that none of the composite wood products are diverted to other end uses, either intentionally or accidentally. Such exemptions would require labeling, recordkeeping, and chain-of-custody systems specific to the ultimate uses of the products. EPA notes, however, that military-specified plywood is excluded from the definition of the term ''hardwood plywood'' and thus military-specified plywood to be used in new vehicles, rail cars, boats, aerospace craft, and aircraft is not subject to these regulations.

Commenters suggested that EPA promulgate exemptions for products made by educational institutions, for products manufactured for export, and for products intended for exempt uses (*e.g.,* inside new vehicles). Because the statute provides that the emission standards apply to composite wood products sold, supplied, offered for sale, or manufactured in the United States, EPA does not believe it is appropriate to provide such exemptions, except to the extent an entity can demonstrate they meet the criteria for the exemption at TSCA section 12(a)(1). With respect to composite wood products and finished goods produced and labeled solely for export, an entity would bear the burden of demonstrating the applicability of TSCA section 12(a)(1). EPA further notes the regulations allow for the transportation and importation of panels for testing purposes, provided they are appropriately marked. In response to requests for a research and development exemption, EPA notes that the final definition of the term ''panel'' does not include items produced for the purpose of research and development, provided those items are not sold, supplied or offered for sale. Thus, those items are not subject to the panel certification requirements.

6. *Other definitions.* EPA is defining a number of other terms to ensure that the meaning and applicability of the regulatory requirements are clear. EPA is using the term ''panel producer'' to refer to those facilities that actually make composite wood products, including laminated products that are not exempt from the definition of hardwood plywood, but excluding importers that do not also make the products. As discussed in the preamble of the proposed rule, because TSCA section 3 defines the term ''manufacture'' to include import, EPA is using another term to clarify the regulation by referring to facilities that actually make the products regulated under TSCA Title VI for the purposes of the testing, certification, and recordkeeping requirements. The term ''panel producer'' applies separately to each specific facility because facilities under a common entity often operate under separate quality management systems and procedures and therefore have their own quality control program specific to their staff and operational capabilities. Other terms associated with the testing requirements are discussed in Unit III.E., while terms associated with the third-party certification program are discussed in Unit III.B.

Other terms for which EPA proposed definitions include ''importer,'' ''fabricator,'' ''retailer,'' ''distributor,'' and ''purchaser.'' EPA is finalizing the term ''importer'' as proposed because it is consistent with the definition of the term ''manufacturer'' in TSCA section 3 and the definition of the term ''importer'' in 40 CFR 710.3. An importer is an entity that imports composite wood products, component parts, or finished goods into the customs territory of the United States and the term includes the entity primarily liable for the payment of any duties on the products, or an authorized agent acting on the entity's behalf.

EPA proposed to define the term ''fabricator'' as an entity that incorporates composite wood products into component parts or into finished goods and ''retailer'' as an entity that generally sells smaller quantities of composite wood products directly to consumers. In considering comments received from the renovation industry on whether renovators should be considered fabricators or retailers, EPA reviewed the language of TSCA Title VI as well as the guidance available on CARB's Web site. EPA has determined that the activities of renovators are not the kinds of activities that Congress intended to regulate under TSCA Title VI. Renovators are neither fabricating finished goods to be sold in the marketplace nor are they actually retailing finished goods. Renovators perform their work on real property on behalf of, and at the direction of, the building owner or lessee and, as such, are neither selling nor supplying composite wood products to the building owner or lessee. EPA has added an express exception for renovators to both the definition of the term ''fabricator'' and the term ''retailer,'' to ensure that it is clear that they are not intended to be covered by the definitions.

The renovator exception from the term ''retailer'' does not encompass retailers who sell building materials and finished goods such as cabinets, and also offer installation services to consumers. For these retailers, the sale of composite wood products to consumers as part of a contract to perform renovation services would be covered by these regulations and the retailer would be required to maintain records of the transaction. The activities of the subcontractor who installs the composite wood products under contract to the retailer would not be covered.

EPA did not receive any other comments specifically on the language of the proposed definition of ''fabricator.'' EPA is adding the phrase ''or entity'' to the definitions of distributor, fabricator, importer, and retailer to ensure that it is clear that both natural persons and corporate entities have obligations under these regulations. EPA is also adding the term ''component part'' to the definition of retailer to make it clear that persons who sell parts that contain composite wood products directly to consumers are retailers because these parts have completed their commercial assembly and are more appropriately classified as finished goods. Finally, in response to those commenters who thought that the proposed definition was unclear, EPA is promulgating a definition of the term ''purchaser'' that clearly states that panel producers, importers, fabricators, distributors, and retailers are included, while excluding the end user.

EPA proposed to define the term ''panel'' as ''a flat or raised piece of composite wood product.'' In the final regulation EPA is defining the term panel as ''a thin (usually less than two inches thick), flat, usually rectangular piece of particleboard, medium-density fiberboard or hardwood plywood. Embossing or imparting of an irregular surface on the composite wood products by the original panel producer during pressing does not remove the product from this definition. Cutting a panel into smaller pieces, without additional fabrication, does not make the panel into a component part or finished good. This does not include items made for the purpose of research and development, provided such items are not sold, supplied, or offered for sale.'' In this definition, EPA is clarifying that items produced solely for the purpose of research and development are not ''panels'' within the intended meaning of TSCA Title VI and do not require certification unless they are sold, supplied, or offered for sale.

B. EPA TSCA Title VI Third-Party Certification Program

1. *Overview.* The basic framework of EPA's TPC proposal was that ABs interested in participating in the EPA TSCA Title VI Third-Party Certification

Program would apply to EPA, and if deemed qualified, would enter into a recognition agreement with EPA. After being recognized by EPA, ABs would accredit TPCs based on the TPC requirements established in § 770.7 of the proposed rule. The EPA-recognized ABs would then approve or deny TPC applications for acceptance into the EPA TSCA Title VI Third-Party Certification Program. Under the proposal, TSCA Title VI TPCs would certify panel producers' composite wood products as meeting all necessary requirements under TSCA Title VI.

EPA received several comments, discussed in more detail in Unit III.B.2.f., expressing concern over the proposed requirement that EPA-recognized ABs review and approve or deny TPC applications to participate in the EPA TSCA Title VI Third-Party Certification Program. Based on these comments, this final rule requires candidate TPCs to seek approval and recognition directly from EPA after being accredited by EPA-recognized ABs to the necessary standards developed by the International Organization for Standards (ISO) and the International Electrochemical Commission (IEC) and the TSCA Title VI regulatory requirements in 40 CFR part 770. In addition, TPCs approved by CARB under the formaldehyde ATCM will also be eligible for recognition under the EPA TSCA Title VI Third-Party Certification Program through reciprocity with CARB assuming they meet all applicable requirements of this final rule. The requirements for a TPC to obtain EPA recognition through reciprocity are discussed in Unit III.B.5.b.

In this final rule, EPA is retaining the proposed requirement that ABs interested in participating in the EPA TSCA Title VI Third-Party Certification Program must apply to EPA and enter into a recognition agreement with the Agency to become an EPA TSCA Title VI AB. Following the two-year transitional period for CARB TPCs discussed in Unit III.B.5.a., EPA will only recognize TPCs, including CARB-approved TPCs, who are accredited by EPA-recognized ABs. The Agency will, as proposed, require that TPCs under TSCA Title VI certify a composite wood panel producer's products by verifying the accuracy of formaldehyde emissions testing of composite wood products by the panel producer, monitoring panel producer quality assurance programs for composite wood products, and by conducting inspections of panel producers' activities and products, discussed in more detail in Unit III.B.3.c. Illustration 1 shown below provides an overview of the EPA TSCA Title VI Third-Party Certification Program.

EPA aligned, to the extent practicable, the EPA TSCA Title VI TPC requirements with those in the CARB ATCM to avoid placing differing or duplicative regulatory requirements on the regulated community.

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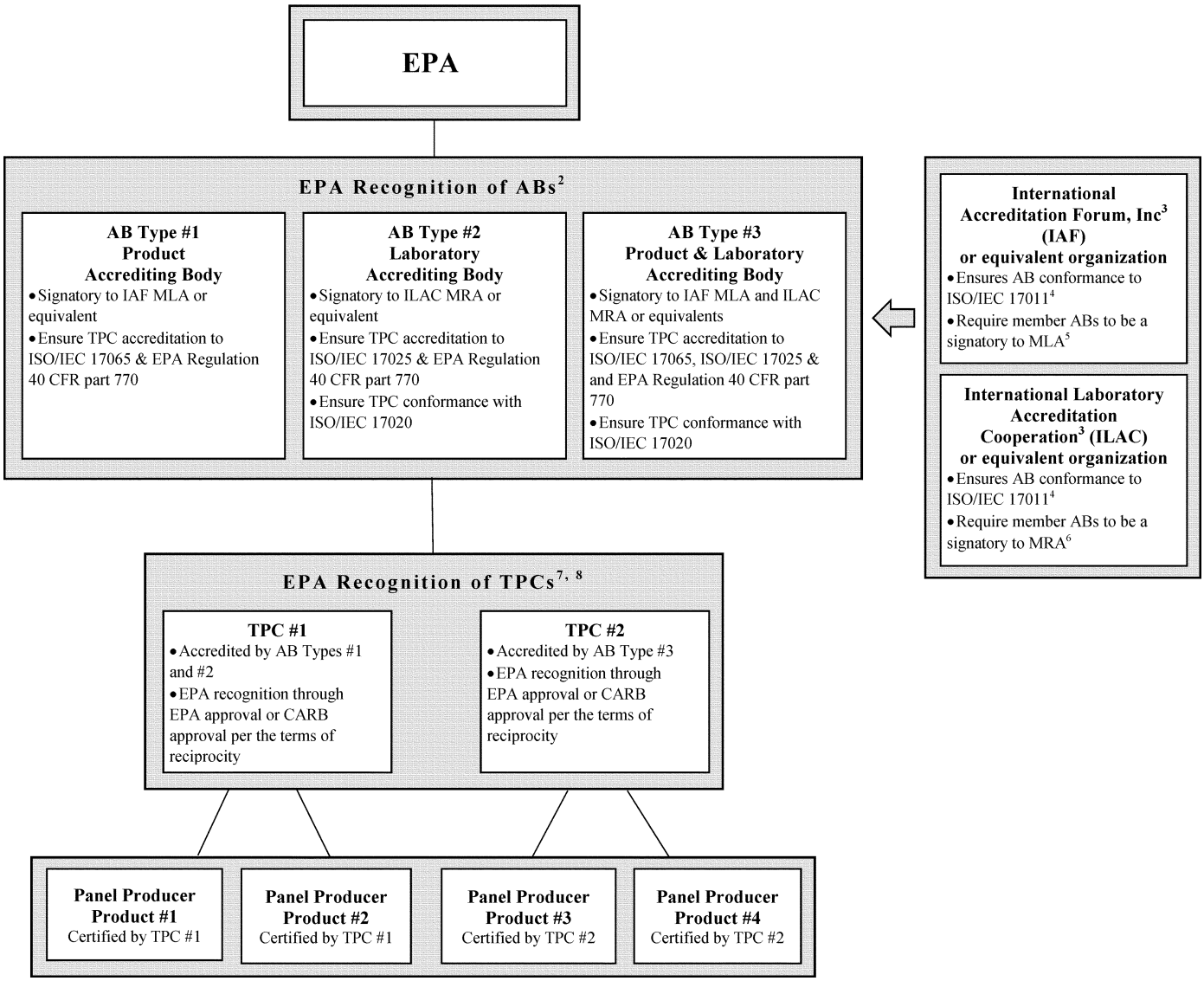
Illustration 1: Overview of the EPA TSCA Title VI Third-Party Certification Program[1]



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a. *Terminology.* EPA is finalizing most of the definitions associated with the TPC program as proposed. However, as a result of public comment, and in some cases to improve clarity or to be consistent with terms used in the referenced international consensus standards, in this final rule EPA has made some minor changes to terminology used in the proposed rule. Based on the comments received on a number of the AB and TPC provisions, EPA realizes that, where the proposal used the term ''accreditation,'' the term ''recognition'' would have been a more accurate description of the activities EPA intends to take with respect to ABs and TPCs. In this final rule, the term ''recognition'' is used instead of the term ''accreditation'' to refer to EPA's recognition of ABs or TPCs, including when discussing EPA's proposal. The term ''accreditation'' is retained in the final rule to refer to an activity that ABs perform as part of evaluating the competency of TPCs. Additionally, in this final rule, ABs recognized by EPA under the EPA TSCA Title VI Third-Party Certification Program are more specifically termed EPA TSCA Title VI Product ABs or EPA TSCA Title VI

[1] TSCA Title VI Third-Party Certification Program formerly called the TSCA Title VI Proposed Third-Party Certification Framework in the proposed rule.

[2] ABs recognized by EPA pursuant to 40 CFR part 770 are termed EPA TSCA Title VI ABs in this final rule.

[3] The International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) develop and publish consensus-based International Standards utilized by accreditation organizations IAF and ILAC.

[4] ISO/IEC 17011—General requirements for accreditation bodies accrediting conformity assessment bodies.

[5] MLA—IAF's Multilateral Recognition Arrangement requires AB signatories to demonstrate they are capable of accrediting product certification bodies to ISO/IEC 17065—Requirements for bodies certifying products, processes or services.

[6] MRA—ILAC's Mutual Recognition Arrangement requires AB signatories to demonstrate they are capable of accrediting testing laboratories to ISO/IEC 17025—General requirements for the competence of testing and calibration laboratories and ISO/IEC 17020—General criteria for the operation of various types of bodies performing inspection.

[7] TPCs recognized by EPA pursuant to 40 CFR part 770 are termed ''EPA TSCA Title VI TPCs'' in this final rule.

[8] TPCs may include contracted independent testing labs and inspection bodies that are accredited by EPA TSCA Title VI ABs.

Laboratory ABs (both are also referred to as EPA-recognized ABs). TPCs approved to certify products under the EPA TSCA Title VI Third-Party Certification Program are termed EPA TSCA Title VI TPCs (also referred to as EPA-recognized TPCs). A TPC laboratory means a laboratory or contract laboratory of an EPA TSCA Title VI TPC that is accredited by an EPA TSCA Title VI Laboratory AB.

EPA proposed that EPA-recognized Product and Laboratory ABs perform in-depth system audits on each candidate TPC as part of the accreditation process. This requirement is still maintained; however, in this final rule the term ''on-site assessment'' is used instead of the term ''in-depth systems audit.'' The standard ISO/IEC 17011:2004(E), entitled ''Conformity assessment—General requirements for accreditation bodies accrediting conformity assessment bodies,'' uses the terms ''assessment,'' ''reassessment,'' and ''surveillance on-site assessment'' (Ref. 55). EPA uses these terms to describe the activities EPA-recognized ABs are required to perform to evaluate the competency of TPCs to conduct the TSCA Title VI implementing regulations. The terms ''assessment,'' ''reassessment,'' and ''surveillance on-site assessment'' are defined in § 770.3. EPA has also incorporated comments on the proposed regulation related to ISO/IEC 17020:2012(E), entitled ''Conformity assessment—Requirements for the operation of various bodies performing inspection,'' so that the term ''audit'' is replaced with the term ''inspection'' as it relates to a TPC's evaluation of a panel producer in this final rule (Ref. 56).

EPA is finalizing as proposed that EPA-recognized ABs may suspend, modify or revoke a TPC's accreditation, as necessary. However, in this final rule, the terms ''modify'' and ''revoke'' have been replaced by the terms ''reduce'' and ''withdraw'' to make the terminology consistent with the terms used in ISO/IEC 17011:2004(E). The terms ''reduce'' and ''withdraw'' are more familiar to the ABs that will be performing TPC accreditation activities under the rule. However, this final rule continues to use the terms ''suspend,'' ''modify,'' and ''revoke'' to describe potential EPA actions with respect to EPA recognition of ABs and TPCs under TSCA Title VI because they more accurately describe the types of actions that EPA may need to take under this final rule.

b. ISO/IEC Standard Revisions. Since publication of the proposed rule, two of the ISO/IEC standards have been updated and this final rule incorporates the most current versions of those standards. EPA agrees with those commenters that thought that the final rule should incorporate the updated version of the standards because ABs will not be able to accredit to the previous versions once the transition period expires.

EPA proposed that TPCs be accredited to ISO/IEC Guide 65:1996(E) (Ref. 57), which was subsequently revised to be ISO/IEC 17065:2012(E), entitled ''Conformity assessment—Requirements for bodies certifying products, processes or services'' (Ref. 58). In this final rule, EPA is incorporating by reference ISO/IEC 17065:2012(E). This requirement reflects the change required by International Accreditation Forum (IAF) that Multilateral Recognition Arrangement (MLA) signatories transition their accreditation of TPCs to ISO/IEC 17065:2012(E) no later than September 14, 2015. In this final rule, EPA is also incorporating by reference ISO/IEC 17020:2012(E), which is an updated version of ISO/IEC 17020:1998(E) referenced in the proposed rule (Ref. 59).

2. *Requirements for Accreditation Bodies.* There are two primary types of ABs that will be involved in the implementation of the EPA TSCA Title VI Third-Party Certification Program: Product ABs and Laboratory ABs. EPA recognizes it is also possible that a single AB may be qualified to perform the roles of both types of ABs, and accredit a TPC for both its product certification capabilities and formaldehyde emissions laboratory testing capabilities. This scenario is shown as ''AB Type #3'' in Illustration 1 (see Unit III.B.1.). In such a case, only a single AB would need to be involved in implementing the two AB roles under the EPA TSCA Title VI Third-Party Certification Program.

a. *Necessary qualifications of Product ABs.* EPA proposed that to be an EPA-recognized Product AB, among other requirements, Product ABs must be signatories to the IAF MLA, or a member of an equivalent oversight body. As noted by commenters, in the proposal, EPA incorrectly stated that the IAF MLA level three endorsement ensures that the AB has demonstrated basic competence to perform accreditation activities for ISO/IEC17020:1998(E). The endorsement to accredit TPCs to ISO/IEC 17020:1998(E), now ISO/IEC 17020:2012(E), instead falls under the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA), which is discussed later in this final rule. The requirements in this final rule pertaining to ISO/IEC 17020:2012(E) are discussed in Unit III.B.3.a.i.

In this final rule, EPA retains the requirement that Product ABs be signatories to the IAF MLA and be endorsed by IAF through level three, the ''main scope'' of the IAF MLA, which ensures that the AB has policies and procedures in place in its operations and management plans to accredit a TPC for product certification to ISO/IEC 17065:2012(E). EPA will also recognize members of IAF regional bodies, as suggested by public comments. The four regional cooperations that are currently recognized by both IAF and ILAC as equivalent are the Asia Pacific Laboratory Accreditation Cooperation (APLAC), the European Accreditation Cooperation (EA), the Inter-American Accreditation Cooperation (IAAC), and the Pacific Accreditation Cooperation (PAC). However, EPA disagrees with a comment to remove the phrase ''or equivalent oversight body'' and, as proposed, EPA will still consider accepting into the program ABs that are members of organizations that EPA has determined to be equivalent. If any other oversight bodies exist in the future, ABs that are members of those oversight bodies should have the opportunity to be recognized under the EPA program, if EPA determines that membership in the new oversight body is equivalent to being an ILAC or IAF signatory.

b. *Required qualifications of Laboratory ABs.* A Laboratory AB is responsible for accrediting the TPC formaldehyde emissions testing laboratory. EPA proposed that Laboratory ABs be signatories to the ILAC MRA or a member of an equivalent organization.

As discussed for Product ABs in Unit III.B.2.a., EPA received similar comments that Laboratory ABs who are members of ILAC-recognized Regional Cooperations provide accreditation services that are equivalent to those provided by ILAC MRA signatories. EPA agrees and, as for Product ABs, in this final rule EPA will consider a Laboratory AB's membership in a regional ILAC cooperation as being equivalent to being a signatory to the ILAC MRA for the purposes of eligibility in the EPA TSCA Title VI Third-Party Certification Program. The four regional cooperations that are currently recognized by both IAF and ILAC as equivalent are the APLAC, the EA, the IAAC, and the PAC. EPA will also consider accepting into the program Laboratory ABs that are members of organizations equivalent to ILAC, as determined by EPA.

c. *Recognition agreement between EPA and ABs.* EPA proposed that Product ABs and Laboratory ABs interested in participating in the EPA TSCA Title VI Third-Party Certification Program would be required to submit an application to EPA to be formally recognized by EPA. Once EPA reviewed the AB's credentials and deemed that the AB was qualified, EPA proposed that it would enter into a recognition agreement with each Product and Laboratory AB to formally recognize each type of AB (or a single AB performing both AB roles) as qualified to implement their respective roles under the EPA TSCA Title VI Third-Party Certification Program. The proposed recognition agreement was proposed to be a signed agreement between EPA and each Product AB or Laboratory AB to abide by the proposed regulatory requirements.

EPA received several comments about the proposed requirement that each AB enter into a recognition agreement with EPA. These commenters opposed or questioned requiring ABs to enter into a recognition agreement with EPA, stating that an AB's status as a signatory to the IAF MLA and/or ILAC MRA should be sufficient without any further review by EPA.

Because many ABs and the TPCs that they accredit are not located in the United States, it is necessary for ABs to enter into a recognition agreement with EPA to establish a closer relationship between EPA and the ABs for the proper EPA oversight of its regulatory program. Furthermore, this requirement is not without precedent, as there are several third-party certification programs where ABs must enter into such agreements with government agencies to provide accreditation services to third-party certifiers, such as the EPA WaterSense Program and the EPA Energy Star Program. EPA also believes that requiring ABs through recognition agreements to meet with EPA in person, via teleconference, or other virtual methods on some regular or as-needed basis to discuss the implementation of the accreditation program strengthens the ongoing relationship between EPA and participating ABs, which in turn improves the overall implementation of the EPA TSCA Title VI Third-Party Certification Program. For these reasons, EPA in this final rule is retaining the requirement for ABs to apply to EPA and enter into a recognition agreement in order to become an EPA TSCA Title VI AB.

EPA also received comment that EPA should lengthen the recognition agreement with ABs from three years as proposed to four years to reflect the length of time between normal AB peer evaluations under the ILAC and IAF programs. Because the timing of the EPA recognition agreement with the ABs is unlikely to match the individual AB peer review cycles, matching up the two periods would not have any impact on the responsibilities of the ABs under the EPA TSCA Title VI Third-Party Certification Program. For these reasons, EPA will retain the provision for three-year recognition agreement cycles in the final rule.

d. *Agent for service requirement for EPA TSCA Title VI ABs.* In the event that legal notices would need to be served to an EPA-recognized AB, or should the need for administrative and judicial proceedings occur with an EPA-recognized AB, EPA proposed requiring ABs to designate an agent for service in the United States in their applications. The agent would need to be capable of accepting service of notices and processes made in administrative and judicial proceedings. Any information provided by EPA to the designated agent for service would be equivalent to providing that information directly to the EPA-recognized AB. Requiring a designated agent for service in the United States will help to facilitate communication between EPA and ABs and ensure compliance with the formaldehyde emission standards by facilitating the ability of EPA to enforce TSCA Title VI and its implementing regulations, which in turn encourages the regulated entities to fulfill their obligations under the statute and regulations.

EPA received several comments regarding the agent for service requirement for ABs. Some commenters misinterpreted this requirement to mean that an AB employee is expected to physically work or have an office in the United States, which it does not. Additionally, commenters expressed concern that ABs who function as part of foreign governments may have difficulty designating an agent for service.

EPA determined that an agent for service is necessary for legal matters, and is available at a relatively low cost from private firms that specialize in this role. Therefore, the Agency is retaining this requirement in this final rule. In response to public comments, EPA clarifies that the requirement permits EPA TSCA Title VI ABs and TPCs to share an agent for service. EPA TSCA Title VI ABs that are part of a foreign government or act on behalf of a foreign government may designate their U.S. embassy or a U.S. consulate as their agent for service.

e. *EPA Recognition Agreement Implementation Officer.* As discussed in the proposal and retained in this final rule, the EPA Recognition Agreement Implementation Officer is the EPA point of contact for ABs to consult with on the implementation of the recognition agreement with EPA and matters pertaining to the EPA-recognized AB's responsibilities under the recognition agreement. The EPA-recognized AB will also have an Implementation Officer that will serve as the point of contact for the EPA TSCA Title VI Third-Party Certification Program. The respective EPA and EPA-recognized AB Implementation Officers are identified in each recognition agreement between EPA and the EPA-recognized Product and/or Laboratory AB.

f. *Requirements for EPA TSCA Title VI ABs.* EPA proposed that once EPA had entered into a recognition agreement with an AB, that AB would become recognized by EPA as an EPA TSCA Title VI Product AB, Laboratory AB, or both. This section discusses the proposed EPA-recognized AB responsibilities and the public comments, as well as the AB responsibilities established in this final rule.

i. *Responsibilities of EPA TSCA Title VI Product ABs in the TPC application process.* EPA proposed that EPA-recognized Product AB responsibilities would include receiving and acting on applications from TPCs seeking to participate in the EPA TSCA Title VI Third-Party Certification Program. EPA also proposed that the EPA-recognized Product ABs send TPC applications and required supporting documentation to EPA and assign the TPC a unique number once the TPC became an EPA TSCA Title VI Accredited TPC.

EPA received several comments expressing concern with these responsibilities. Some commenters felt that the proposed approach would provide an increased burden on EPA-recognized ABs beyond normal industry accreditation practice, leading to increased costs passed on to TPCs. Based on these comments, EPA will not require Product ABs to review and approve or deny TPC applications from candidate TPCs that want to participate in the EPA TSCA Title VI Third-Party Certification Program. Instead, under this final rule, EPA will approve TPC applications directly or will recognize CARB-approved TPCs under the EPA TSCA Title VI Third-party Certification Program through the EPA/CARB memorandum of agreement (see Unit III.B.5.b.).

ii. *Responsibilities of ABs after TPC recognition into the EPA TSCA Title VI*

Third-Party Certification Program. Under the proposal, EPA-recognized Product ABs, when accrediting a TPC, would be responsible for ensuring that the TPC has a process in place to verify the accuracy of the formaldehyde quarterly and quality control tests. EPA TSCA Title VI Product ABs would also ensure the TPC has a process in place to monitor panel producer quality assurance programs, and conduct independent audits and inspections of panel producers, their quality control testing facilities and their laboratories. EPA also proposed that Product ABs keep certain records including checklists and other records documenting TPC compliance with the accreditation requirements and provide them to EPA within 30 calendar days upon request.

Several commenters thought the proposed requirement for ABs to make available to EPA on request, certain accreditation information such as checklists and other records documenting adherence to specific requirements under the ISO standards, such as inspections and on-site assessments, would present issues with the confidentiality agreements between ABs and TPCs and would violate the ISO/IEC17011:2004(E) confidentiality requirements (Ref. 55). EPA also was informed that it could obtain such information through the TPCs rather than the ABs. Based on these comments, in this final rule, EPA is requiring information pertaining to assessment results of a TPC from the TPC instead of the AB.

Under this final rule, as proposed, EPA-recognized Product ABs will retain the responsibility to accredit TPCs (if the TPC is found to be eligible) seeking recognition under the EPA TSCA Title VI Third-Party Certification Program by performing an initial assessment of each TPC. Once EPA recognizes the accredited TPC, EPA-recognized ABs must perform a reassessment or surveillance on-site assessment (as defined in section 770.3) of EPA-recognized TPCs in accordance with ISO/IEC 17011:2004(E) at least every two years.

Commenters also suggested that EPA require that TPCs have this final rule's requirements listed within their scope of accreditation for both ISO/IEC 17065:2012(E) and ISO/IEC 17025:2005(E) (Refs. 58, 60). They indicated that this would help to provide enough specificity in the certification scheme to ensure consistent performance by all the ABs, TPCs and panel producers in this program.

Because of this information, EPA is clarifying in this final rule that EPA-recognized Product ABs (and Laboratory ABs as discussed later in this unit) are required to include, as part of their initial ISO accreditation related assessment, reassessment and surveillance on-site assessment of a TPC, a review of the TPC's competence to perform its responsibilities under this rule pursuant to ISO/IEC 17011:2004(E). Additionally, a TPC's certificate of accreditation issued by the EPA-recognized Product AB must specifically include a written reference that the TPC scope of accreditation includes ''40 CFR part 770—Formaldehyde Standards for Composite Wood Products.''

EPA proposed that EPA-recognized Laboratory ABs would be responsible for verifying initially, and on an ongoing basis, that the TPC laboratory is experienced and capable of conducting formaldehyde emissions tests according to the requirements of TSCA Title VI and its implementing regulations.

In this final rule, the EPA-recognized Laboratory AB responsibilities remain largely unchanged from the proposal. EPA-recognized Laboratory ABs, like Product ABs, are required as part of their initial assessment, reassessment, and surveillance on-site assessment of a TPC, to conduct a review of the TPC's competence to perform its laboratory related responsibilities under this rule pursuant to ISO/IEC 17011:2004(E). The TPC's accreditation certificate issued by the EPA-recognized Laboratory AB must specifically include a written reference that the TPC's scope of accreditation includes ''40 CFR part 770—Formaldehyde Standards for Composite Wood Products'' and the formaldehyde test methods ASTM E1333–10 and ASTM D6007–02, if used.

EPA proposed that, upon request, EPA-recognized Laboratory ABs would allow EPA representatives to accompany their assessors during on-site assessments to observe the audit of a TPC. EPA received comments from ABs opposing this requirement. In response to these comments in this final rule, EPA will instead require that TPCs, upon request by EPA, allow EPA to attend their assessment, reassessment or surveillance on-site assessments conducted by their EPA-recognized AB.

g. *Revocation of EPA's recognition of an AB.* EPA proposed that it may suspend, revoke, or modify the recognition of an EPA-recognized AB, if the AB is not complying with the requirements promulgated for ABs under TSCA Title VI. As proposed, if an EPA-recognized AB is removed or withdraws from the EPA TSCA Title VI Third-Party Certification Program, that AB would be responsible for promptly notifying EPA and all EPA-recognized TPCs that receive its accreditation services. EPA proposed to allow the TPCs that were accredited by that EPA-recognized AB to have 365 calendar days, or 180 calendar days, if less than 365 calendar days were left on their three-year recognition period, to be accredited and recognized again as an EPA-recognized TPC by another EPA-recognized AB. EPA proposed that this grace period would not be afforded to TPCs if their EPA recognized-AB is removed or withdraws from the EPA TSCA Title VI Third-Party Certification Program for fraud or providing false or misleading statements related to a particular EPA-recognized TPC or TPCs, or any reason that implicates a particular TPC or TPCs in a violation of TSCA Title VI or its implementing regulations. While seeking accreditation from an alternate EPA-recognized AB, EPA proposed that an EPA-recognized TPC would need to continue to comply with all other aspects of TSCA Title VI and its implementing regulations, and the TPC could continue to certify composite wood products.

Based on comments received, under this final rule, EPA is retaining the authority to suspend, revoke or modify the recognition of an EPA-recognized AB, if the AB is not complying with the requirements promulgated for ABs under TSCA Title VI. If an EPA-recognized AB is removed or voluntarily withdraws from the EPA TSCA Title VI Third-Party Certification Program, that AB is responsible for promptly notifying all EPA-recognized TPCs that receive its accreditation services and EPA, in the case of a withdrawal. The regulations allow the TPCs that were accredited by that EPA-recognized AB to have 180 calendar days to be accredited by another EPA-recognized AB. This 180 day grace period would not be afforded to TPCs if their EPA-recognized AB is removed or withdraws from the EPA TSCA Title VI Third-Party Certification Program for fraud or providing false or misleading statements related to a particular EPA-recognized TPC or TPCs, or any reason that implicates a particular TPC or TPCs in a violation of TSCA Title VI or its implementing regulations. During the 180-day period TPCs may continue to certify products under TSCA Title VI. EPA agrees with those commenters who thought that portions of the EPA-recognized TPC's previous assessments could be considered by the new EPA-recognized AB in its reaccreditation of the TPC and therefore would not require the

proposed 365 calendar days. In this final rule, as proposed, if an EPA-recognized AB is removed from the EPA TSCA Title VI Third-Party Certification Program due to fraud for providing false or misleading statements with respect to a particular TPC, or for any other reason that implicates a particular TPC in a violation of TSCA Title VI or this final rule, that TPC may not provide any TSCA Title VI certification services until it has been accredited by another EPA-recognized AB. Should this situation occur, EPA will provide notifications to the affected EPA-recognized TPCs at the time it commences formal action (*i.e.* an action to suspend, modify or revoke a recognition under the procedures established in 40 CFR 770.7(e)) against the AB. Also under this final rule, and as proposed, any action EPA takes against an AB would not preclude an enforcement action against a TPC.

3. *Requirements for third-party certifiers of composite wood products.* a. *Requirements to apply for participation in the EPA TSCA Title VI Third-Party Certification Program.* EPA proposed that TPCs meet several qualifications to demonstrate experience and competency in certain areas that EPA believed were important to ensure a TPC's ability to conduct audits, inspections, testing, and certification of composite wood products. The basic requirements for candidate TPCs to qualify to participate in the TSCA Title VI program remain largely the same in this final rule except as noted in the following discussions.

EPA had proposed that the TPC must apply to an EPA-recognized Product AB to certify composite wood products pursuant to TSCA Title VI. As discussed in Unit III.B.2.f.i., EPA will instead require in this final rule that TPCs apply directly to EPA for recognition or for CARB-approved TPCs to provide EPA with documentation from CARB that specifies a TPC's eligibility for reciprocity as discussed in Unit III.B.5.b. TPCs must apply for EPA TSCA Title VI recognition electronically through the EPA CDX via *http://cdx.epa.gov* (discussed in more detail in Unit III.B.6.) or, if notified by EPA that the CDX portal is not available, via an online application on the EPA Web site found at: *http://www.epa.gov/formaldehyde/.*

i. *TPC accreditation requirements.* As discussed in Unit III.B.2.f.ii., candidate TPCs must be accredited to ISO/IEC 17065:2012 (E), and the accreditation must include a scope of accreditation to 40 CFR part 770—Formaldehyde Standards for Composite Wood Products.

EPA proposed that TPCs have experience in conducting inspections of panel producers pursuant to ISO/IEC 17020:1998(E). Some commenters noted that the proposal was unclear on whether TPCs needed to be accredited to ISO/IEC 17020:1998(E) or be in conformance with ISO/IEC 17020:1998(E). Other commenters stated that accreditation to ISO/IEC 17020:2012(E) is duplicative because inspection qualifications and responsibilities for TPCs and their sub-contractors are already incorporated into the required ISO/IEC 17065:2012(E) accreditation. Based on these comments, EPA is requiring in this final rule that EPA TSCA Title VI TPCs be in conformance with (but not necessarily accredited to) ISO/IEC 17020:2012(E), as is required under ISO/IEC 17065:2012(E) section 6.2.1. EPA TSCA Title VI TPCs must also be able to conduct inspections of panel producers and their products and properly train and supervise inspectors to inspect in conformance with ISO/IEC 17020:2012(E).

EPA also proposed that TPCs have experience operating or using laboratories that are accredited to ISO/IEC 17025:2005(E). EPA did not receive comments on this point and is therefore finalizing this requirement as proposed. Also, as previously noted, the TPCs' scope of accreditation to ISO/IEC 17025:2005(E) must include 40 CFR part 770—Formaldehyde Standards for Composite Wood Products and the formaldehyde test methods ASTM E1333–10 and ASTM D6007–02, if used.

ii. *TPC recognition periods.* EPA proposed that TPCs would be required to renew their application to EPA-recognized ABs every three years. EPA requested and received comments on the costs and benefits of a three-year renewal period for recognition under the TSCA Title VI Program as compared to a two-year renewal period (as under the CARB ATCM). EPA also requested and received comments on whether the proposed requirement for EPA TSCA Title VI ABs to audit TPCs and their laboratories every two years should be extended to every three years to align with the proposed three-year TPC recognition period.

Many commenters supported the proposed renewal periods of three years for TPCs. Other commenters also stated that the renewal periods should be in line with intervals of assessments as required by the ISO standards. The two-year renewal period is consistent with the maximum amount of time allowed between on-site assessments under ISO/IEC 17011:2004(E) and is also is consistent with ISO/IEC 17065:2012(E). In an effort to harmonize this final rule with the existing CARB regulations and better align with the on-site assessment requirements of the ISO standards highlighted above, EPA is requiring that all EPA TSCA Title VI TPCs submit a renewal application to EPA, or documentation to renew their eligibility for reciprocity every two years for EPA recognition and to have a reassessment or surveillance on-site assessment conducted by their EPA TSCA Title VI AB every two years to maintain their accreditation.

iii. *Experience in composite wood products.* EPA proposed that TPCs must have experience in the composite wood products industry because understanding the processes used by panel producers to produce composite wood products is crucial for the EPA TSCA Title VI TPC to adequately inspect panel producers. EPA requested comment on whether EPA should require that a TPC have experience with the specific type of composite wood product that it would certify or if experience with one type of product is sufficient to certify all types of composite wood product.

Several commenters stated that experience with one product type is sufficient to certify all composite wood products because the TPC's objectives to certify compliance with emission standards and correlation to quality control test methods are independent of product type. EPA agrees with the commenters, and will require in this final rule that TPCs have experience with at least one type of composite wood product. EPA is also requiring each TPC applicant to state its experience in the composite wood products industry and include the specific type of composite wood product(s) that it intends to certify.

iv. *Agent for service requirement for EPA TSCA Title VI TPCs.* In order to facilitate communication between EPA and TPCs, EPA proposed to require TPCs to designate an agent for service in the United States in their applications. EPA received several comments regarding the agent for service requirement for TPCs. As discussed in Unit III.B.2.d., for EPA-recognized ABs, an agent for service is necessary for legal matters and is available at a relatively low cost from private firms that specialize in this role. Therefore, the Agency is retaining this requirement in this final rule. However, in response to public comments, EPA clarifies that the requirement permits EPA TSCA Title VI ABs and TPCs to share an agent for service.

v. *Experience in formaldehyde testing.* The proposed TPC qualification

requiring TPC laboratories to have experience in performing or verifying formaldehyde emissions testing on composite wood products has been retained in this final rule. The proposed requirement for TPC laboratories to have experience with test method ASTM E1333–10 and experience evaluating correlation between test methods has been modified in the final rule. Based on public comment, candidate TPCs may provide a description of experience with test method ASTM E1333–10 and/or ASTM D6007–02, if used, and experience evaluating correlation between test methods when applying for EPA recognition into the TSCA Title VI program. Note, in a situation where a TPC is only providing a description of experience with ASTM D6007–02, the TPC must be contracting testing with a lab that has a large chamber and experience with ASTM E1333–10.

b. *Denied TPC applicants.* Under this final rule, if EPA denies a TPC's application for recognition in the EPA TSCA Title VI Third-Party Certification Program for failure to submit a complete application or for being unqualified, EPA will notify the TPC of the legal and factual basis for the denial, and actions, if any, which the affected TPC may take to receive recognition in the future.

EPA maintains the authority to deny recognition of CARB-approved TPCs who apply to be recognized through reciprocity (as discussed in more detail in Unit III.B.5.b.) in the EPA TSCA Title VI Third-Party Certification Program if the Agency believes the TPC is not qualified according to this rule.

c. *Responsibilities once a TPC is recognized into the EPA TSCA Title VI Third-Party Certification Program.* EPA proposed that once an applicant is recognized as a TPC under the TSCA Title VI Third-Party Certification Program, the EPA-recognized TPC would then certify panel producers' composite wood products under the requirements of TSCA Title VI and its implementing regulations.

In the proposed rule, EPA also required that EPA-recognized TPCs review and approve, when appropriate, applications from panel producers for reduced testing or exemption from third-party certification requirements for products made with ULEF or NAF-based resins. Under the CARB ATCM, CARB, not the TPCs, reviews and approves these applications. Several commenters opposed TPCs reviewing and approving applications for NAF and ULEF approvals. Their concerns include potential conflicts of interest, potential for inconsistency among TPC reviews, and the potential for inadvertent misuse of confidential business information. One commenter suggested that EPA conduct reviews and issue approvals, accept all current CARB approvals, and work with CARB as an alternate approval authority going forward. CARB requested reciprocity in its comments. Another commenter said that EPA may want to grandfather existing resin approvals made by CARB and continue to coordinate decisions with CARB.

To address these concerns, in this final rule, under the terms of reciprocity with CARB, EPA will accept CARB's NAF and ULEF approvals, as long as CARB's requirements for products made with NAF-based and ULEF resins are at least as stringent as EPA's requirements, which EPA affirms is currently true. Should EPA determine that CARB's requirements are no longer at least as stringent was EPA's requirements, then EPA will publish a notice in the **Federal Register** announcing EPA's determination.

Alternatively, panel producers can apply to an EPA TSCA Title VI TPC for NAF and ULEF approvals. EPA also notes that the provisions requiring TPC impartiality are applicable to TPCs reviewing and approving NAF/ULEF applications (see Unit III.B.7.). EPA believes the ability to apply to CARB for NAF and ULEF approvals, the dynamic market amongst TPCs, and the impartiality requirements for TPCs, mitigate any concerns about potential TPC conflicts of interest. As proposed, EPA is also separately requiring EPA TSCA Title VI TPCs to review and approve or deny applications from panel producers for reduced quality control testing for particleboard and medium-density fiberboard under the provisions discussed in Unit G.

EPA proposed to require that EPA-recognized TPCs inspect and provide an on-site audit of panel producers and their records at least quarterly and conform to ISO/IEC 17020:1998(E) (subsequently updated to ISO/IEC 17020:2012(E)) when conducting their inspections. EPA requested comment on whether enhanced testing or inspection requirements should be required where a TPC finds that a panel producer has failed quality control or quarterly tests at a certain frequency, or upon other circumstances. Considering comments received on this issue, in this final rule, EPA will not require additional enhanced testing. Instead, it would be most appropriate for each EPA TSCA Title VI TPC to establish its own process for determining the conditions that warrant enhanced testing and/or inspections as needed for panel producers with failed quality control or quarterly tests. However, this final rule requires that EPA TSCA Title VI TPCs notify panel producers and EPA within 72 hours of a failed quarterly test result. An EPA TSCA Title VI TPC must also notify EPA within 72 hours of becoming aware that a panel producer has exceeded its established quality control limit (QCL) for two or more consecutive quality control tests. EPA is not requiring TPCs to notify EPA each time a QCL is exceeded because isolated QCL exceedances, where potentially non-complying products have not left the panel producer, can be addressed by the EPA TSCA Title VI TPC and the panel producer without EPA intervention. Additionally, the panel producer will have to comply with the non-complying lot provisions of 40 CFR 770.22 with respect to any lot represented by a sample result that exceeds the applicable formaldehyde emission standard or indicates that the lot may exceed the applicable standard. Where multiple products are grouped in a single product type for testing, this includes all products in the group represented by the sample.

In the proposed rule, an EPA-recognized Product AB would supply the TPC with a unique TPC identification number once it has been accredited for TSCA Title VI purposes. Under this final rule, EPA TSCA Title VI TPCs will be supplied with a TPC identification number by EPA unless the TPC is CARB-approved and received EPA TSCA Title VI recognition through reciprocity. In this case, CARB-approved TPCs will use their CARB-issued TPC identification numbers. EPA TSCA Title VI TPCs must provide their identification numbers to panel producers so that the panel producers can include the TPC number on the label of their certified products and in their records.

EPA proposed to require EPA-recognized TPCs to maintain various records in electronic form for three years. EPA received several comments pertaining to the proposed three-year recordkeeping requirement. Two commenters contended that EPA should maintain CARB's two-year recordkeeping period for TPCs, one commenter supported recordkeeping beyond three years, and another commenter was supportive of EPA's proposed three-year record retention period for TPCs.

Under this final rule, EPA is maintaining its requirement that records be held in electronic form for three years. EPA has determined that certain records will assist EPA in monitoring compliance with the emission standards and other provisions. The records required are largely the same as proposed, but have been modified to

better align with the CARB ATCM and are listed in § 770.7(c)(4)(vii) of this rule.

EPA proposed to require EPA-recognized TPCs to submit an annual report to EPA and the EPA-recognized AB that accredits the TPC. Under this final rule, EPA will not require that this report be provided to the TPC's AB but will still require the EPA-recognized TPCs to submit these reports to EPA through the EPA CDX database. (Ref. 61). If the CDX database becomes unavailable for any reason, EPA will provide an alternate electronic reporting method and notify the EPA-recognized TPCs of how to access the alternate method. In addition, the requirements of this report have been, for the most part, modified to align with CARB's annual report requirements for consistency between the two programs and to respond to public comments. Aligning with CARB's annual report requirements expands the number of data elements beyond what EPA specifically proposed. However, adding these data elements will streamline annual reporting requirements for EPA-recognized and CARB-approved TPCs by allowing the acceptance of a single annual report by both regulatory programs. Under this final rule, EPA TSCA Title VI TPCs must electronically submit an annual report on or before March 1st of each year for TPC services performed during the previous calendar year. The required reporting elements of the annual report are listed at § 770.7(c)(4)(viii) of this rule.

d. TPC Interlaboratory Comparison. EPA proposed to require EPA-recognized TPCs to participate annually in an EPA-recognized interlaboratory comparison program or, if developed, a proficiency testing program. EPA requested comment on: Ways it might integrate with CARB's interlaboratory comparison program; the frequency of interlaboratory comparisons; what criteria should be used to determine the adequacy of performance; how and whether participating Laboratory ABs could administer an interlaboratory comparison or proficiency testing program for the TPCs that it accredits; and the cost of such a program.

Commenters supported either CARB or EPA conducting an interlaboratory comparison program for TPCs in both the state and federal programs. One commenter also provided suggestions on how to strengthen the existing CARB interlaboratory comparison program. In addition, EPA received several comments regarding the frequency of interlaboratory comparisons and/or proficiency testing. Most commenters felt that an annual interlaboratory comparison was sufficient to meet EPA and CARB's goal that laboratories regularly demonstrate their proficiency at testing formaldehyde emissions of composite wood products. Three commenters also supported the use of a standard reference material as a possible alternative material for using in interlaboratory comparison or similar testing.

Based on comments received, in this final rule, EPA is requiring all EPA TSCA Title VI TPC laboratories, of both CARB TPCs and non-CARB TPCs, to participate in the CARB interlaboratory comparison for formaldehyde emissions from composite wood products when offered. CARB intends to conduct the interlaboratory comparisons no less frequently than every two years. EPA has determined that requiring participation in the CARB interlaboratory comparison on a regular basis is necessary to verify that TPC laboratories under TSCA Title VI are able to properly measure formaldehyde emissions from composite wood products. EPA's decision to utilize the pre-existing CARB interlaboratory comparison program under the EPA TSCA Title VI Third-Party Certification Program is supported by public comments and will allow for one consolidated interlaboratory comparison program and further establish consistency between the CARB and federal regulatory programs. EPA will consult on a regular basis with CARB regarding the EPA TSCA Title VI TPCs' interlaboratory results, any other testing-related information, and the ongoing operation of the CARB interlaboratory comparison testing program. EPA will also require TPCs to submit to EPA the results compared with the mean of any interlaboratory comparison for formaldehyde emissions in which the TPC laboratory participates other than the CARB interlaboratory comparison or, if available, the TPC laboratory results from an EPA-recognized proficiency testing program. EPA retains the authority to make its own independent decision on the performance of an EPA TSCA Title VI TPC under the CARB interlaboratory comparison or any other future EPA-recognized interlaboratory comparison or proficiency testing program. EPA also retains the authority to derecognize the CARB interlaboratory comparison or any other future EPA-recognized interlaboratory comparison or proficiency testing program if it no longer meets the needs of the EPA TSCA Title VI Program.

Currently no reference material for formaldehyde emission is available. If a reference material for formaldehyde is developed and then approved by EPA, EPA will consider incorporating the use of that reference material into an EPA-recognized interlaboratory or proficiency testing program. As supported by public comment, if such an EPA-recognized interlaboratory or proficiency testing program by means of a reference material becomes available, EPA would also consider initiating a rulemaking to require any EPA-recognized third-party proficiency testing provider to be accredited to ISO/IEC 17043:2010(E).

e. *Removal, reaccreditation and reapplication process for third-party certifiers.* As proposed, if an EPA-recognized TPC loses its accreditation or discontinues participation in the EPA TSCA Title VI Third-Party Certification Program for any reason, it would be responsible for promptly notifying EPA and all panel producers to which it provides TSCA Title VI certification services. EPA proposed that panel producers that used the TPC to certify their products would need to enlist another EPA-recognized TPC to certify their products within 90 calendar days. This 90 day grace period would not be afforded if their EPA-recognized TPC loses its accreditation or discontinues participation in the program for fraud or providing false or misleading statements, or any reason that implicates a particular panel producer in a violation of TSCA Title VI or its implementing regulations.

EPA requested comment on whether it provided adequate time in the proposal for a panel producer to seek an alternate certification should their TPC lose its EPA recognition under TSCA Title VI. Based on the public comments, this final rule allows panel producers 90 calendar days to obtain a new EPA TSCA Title VI TPC in the event that their previous TPC loses its accreditation or recognition in the TSCA Title VI Program as long as they remain in compliance with all other relevant aspects of the rule. Panel producers who are not able to obtain a new EPA TSCA Title VI TPC within 90 calendar days may request from EPA a 90 calendar day extension, for good cause. If the panel producer does not obtain a new TPC within 90 calendar days, or if granted an extension by EPA, 180 calendar days, composite wood products produced thereafter are not certified and may not be sold, supplied or offered for sale.

4. Enforcement, suspension and revocation. a. *Enforcement under TSCA sections 15–17.* EPA proposed to conduct inspections of participating TPCs and ABs and issue subpoenas according to the requirements for recognition and/or pursuant to the

provisions of TSCA section 11 (15 U.S.C. 2610) to ensure compliance with TSCA Title VI and the regulations promulgated thereunder. EPA proposed to exercise the authority to withdraw from a recognition agreement with an EPA-recognized AB and pursue penalties under TSCA section 15 (15 U.S.C. 2614) for any violation of TSCA Title VI or the regulations promulgated thereunder. In addition to an administrative or judicial finding of violation, EPA proposed the grounds for withdrawing from a recognition agreement and/or pursuing an enforcement action against an EPA-recognized AB would include submitting false information to EPA, falsifying records, or failing to comply with program requirements. EPA is finalizing these enforcement provisions as proposed.

b. *Suspension, revocation and modification of TPC and AB recognition.* EPA proposed to exercise the authority to suspend, revoke, or modify a TPC's TSCA Title VI recognition, with or without the participation of the EPA-recognized AB that provided the accreditation, if the EPA-recognized TPC fails to comply with TSCA Title VI or the regulations promulgated thereunder. EPA proposed that any violation of TSCA Title VI or the regulations promulgated thereunder would also be a prohibited act under TSCA section 15. Proposed grounds for suspending, modifying, or revoking an EPA TSCA Title VI TPC's recognition included submitting false information to EPA or an AB, falsifying records, or failing to comply with program requirements.

EPA proposed that should an EPA-recognized AB identify a non-conformity or discrepancy with the EPA-recognized TPC's implementation of one of the ISO standards via an internal audit or other means, that TPC must take remedial action within the timeframe specified by the AB or the time specified in the TPC's quality management plan. Timely remedial action would not preclude enforcement actions by EPA for non-conformities or discrepancies that constitute violations of TSCA Title VI or these implementing regulations. Prior to withdrawal from a recognition agreement with an EPA-recognized AB, or the suspension, revocation, or modification of an EPA TSCA Title VI TPC's recognition, EPA proposed to provide notification to the affected AB or TPC of the action.

EPA proposed that an individual or organization may request a hearing prior to the final action. EPA would appoint an impartial official of EPA as Presiding Officer to conduct a hearing within 90 calendar days of the request. The Presiding Officer would consider all relevant evidence, explanations, comments, and arguments submitted and notify the affected entity in writing within 90 calendar days of completion of the hearing of his or her decision and order. EPA clarifies that, depending on the circumstances, a hearing need not involve real-time exchanges and may be conducted through written correspondence, for example.

EPA proposed that if it determines that the public health, interest, or welfare warrants immediate action to suspend the recognition of an AB or a TPC prior to the opportunity for a hearing, it would notify the affected AB or TPC of its right to request a hearing on the immediate suspension within 15 calendar days of the suspension taking place and the procedures for the conduct of such a hearing.

EPA proposed that any notice, decision, or order issued by EPA in response to a hearing, any transcript or other verbatim record of oral testimony, and any documents filed in response to a hearing will be available to the public, except as otherwise provided by TSCA section 14. Any such hearing at which oral testimony is presented will be open to the public, except that the Presiding Officer may exclude the public to the extent necessary to allow presentation of information which may be entitled to confidential treatment under TSCA section 14.

Commenters pointed out that EPA cannot revoke a TPC's accreditation but rather its recognition in the EPA TSCA Title VI Third-Party Certification Program. As discussed in Unit III.B.1.a, EPA agrees that recognition is the correct term. In this final rule EPA may revoke a TPC's recognition in the EPA TSCA Title VI Third-party Certification Program for the conditions mentioned previously. EPA is otherwise finalizing these provisions for suspension, modification and revocation as proposed.

5. CARB-approved TPC transitional period and reciprocity. EPA proposed that CARB-approved TPCs have one year after the promulgation of the TSCA Title VI implementing regulations to become accredited by an AB that has entered into a recognition agreement with EPA. The Agency also proposed that for one year after promulgation of the final rule CARB-approved TPCs would be allowed to carry out certification activities under TSCA Title VI provided that they were compliant with all other aspects of TSCA Title VI and the regulations promulgated thereunder. EPA requested comment on ways to better synchronize the timing for the TSCA Title VI recognition period for existing CARB-approved TPCs. EPA also asked whether the TPCs should be required to obtain accreditation from an EPA-recognized AB no later than one-year after the first EPA-recognized AB enters into a recognition agreement with the EPA under the TSCA Title VI.

EPA agrees with comments received that it could take longer than one year for CARB TPCs to align with the EPA requirements including being accredited by an AB that has entered into a recognition agreement with EPA. EPA will therefore allow for a two-year transition period in this final rule.

a. *Transitional Period for CARB-Approved TPCs.* Under this final rule, a TPC approved by CARB may certify composite wood products under TSCA Title VI for a two-year transitional period that begins February 10, 2017 so long as the TPC remains approved by CARB and complies with all aspects of the final rule other than the accreditation requirements under this rule.

Existing CARB TPCs and CARB TPCs approved during the transition period must provide panel producers with their TPC number issued by CARB. The annual report must be provided to CARB and EPA during the two-year transitional period. Notifications to EPA must also be provided during the two-year transition period.

After the two-year transition period, CARB-approved TPCs may continue to certify composite wood products under TSCA Title VI provided the TPC maintains its CARB approval, follows all the requirements under this part (including the accreditation requirements), submits to EPA documentation from CARB supporting their eligibility for reciprocity and has received EPA recognition as an EPA-recognized TPC.

b. *Reciprocity for CARB TPCs.* EPA received several comments that asked EPA to align with the CARB program and accept CARB-approved TPCs into the EPA program. CARB suggested that EPA enter into a mutual recognition agreement with them to accept CARB TPC approvals through reciprocity such that CARB TPC approvals would be accepted by the EPA without need for further review.

EPA has worked closely with CARB to establish a means for reciprocity and will enter into a memorandum of agreement that recites the requirements in this rule for CARB-approved TPCs to receive EPA recognition through reciprocity and the process that EPA and CARB will use to implement reciprocity. To be eligible to obtain EPA recognition through reciprocity, CARB-

approved TPCs must meet all of the TPC qualifications discussed in Unit III.B.3.a. and provide EPA with documentation from CARB that specifies their eligibility for reciprocity via the EPA CDX at *http://cdx.epa.gov*. In the event that CDX becomes unavailable, EPA will provide an alternate electronic submission method and inform TPCs how to access the alternate method *at http://www.epa.gov/formaldehyde*. EPA maintains the authority to deny recognition of CARB-approved TPCs who apply to be recognized through reciprocity in the EPA TSCA Title VI Third-Party Certification Program if the Agency believes the TPC is not qualified under this rule. An overview of the EPA TSCA Title VI Third-Party Certification Program and CARB TPC reciprocity is shown in Illustration 2.

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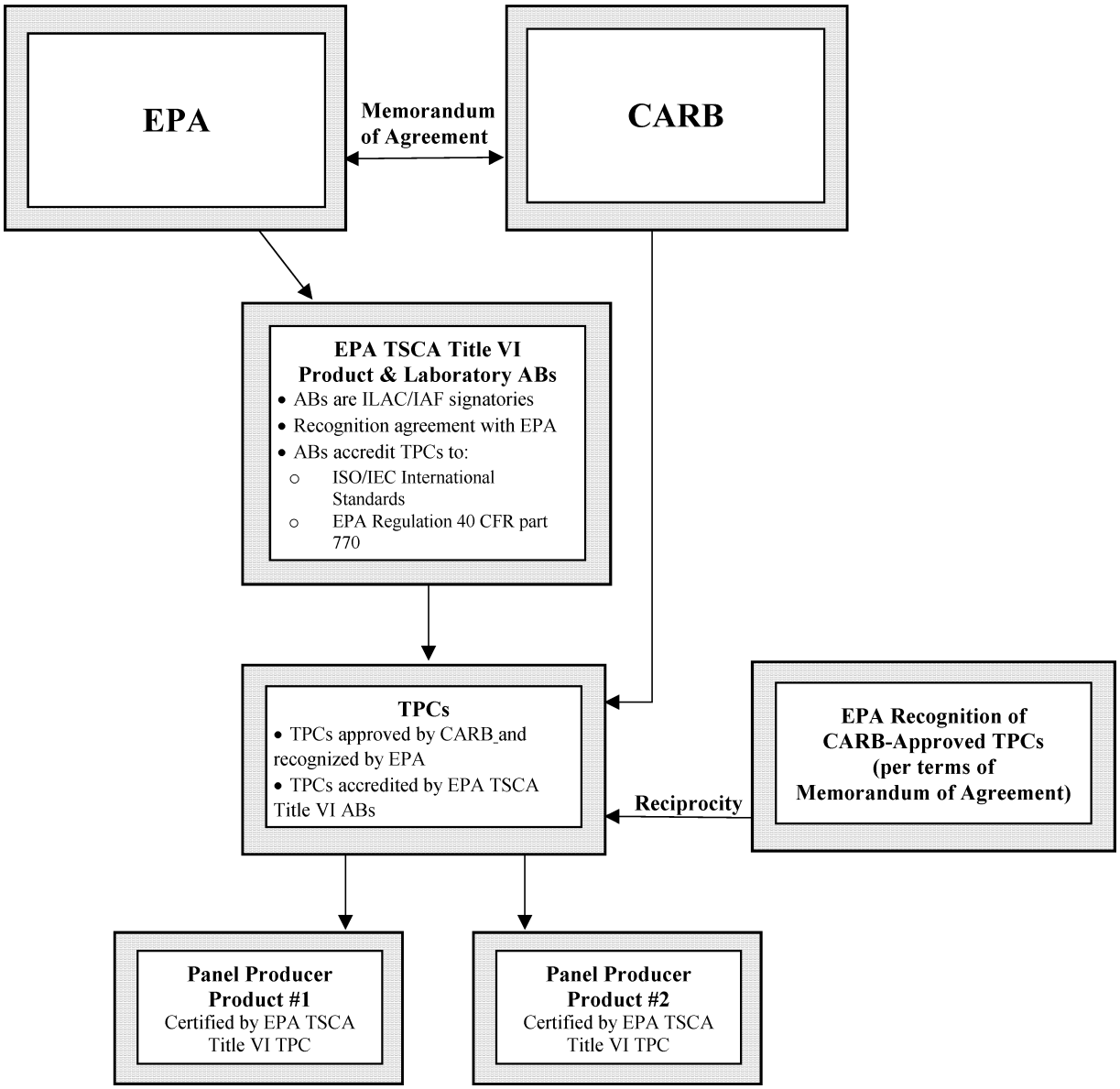
Illustration 2: Overview of the EPA TSCA Title VI Third-Party Certification Program and CARB TPC Reciprocity



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6. *Electronic reporting.* The Government Paperwork Elimination Act (GPEA), 44 U.S.C. 3504 *note,* provides that, when practicable, Federal organizations use electronic forms, electronic filings, and electronic signatures to conduct official business with the public. EPA's Cross-Media Electronic Reporting Regulation (CROMERR) (40 CFR part 3) (Ref. 62), provides that any requirement in title 40 of the Code of Federal Regulations (CFR) to submit a report directly to EPA can be satisfied with an electronic submission that meets certain conditions once the Agency publishes a regulation that an electronic document submission process is available for that requirement. In addition, the Paperwork Reduction Act (PRA) requires Federal agencies to manage information resources to reduce information collection burdens on the public;

increase program efficiency and effectiveness; and improve the integrity, quality, and utility of information to all users within and outside an agency, including capabilities for ensuring dissemination of public information, public access to Federal Government information, and protections for privacy and security (44 U.S.C. 3506). Section 2 of TSCA expresses the intent of Congress that EPA carry out TSCA in a reasonable and prudent manner, and in consideration of the impacts that any action taken under TSCA may have on the environment, the economy, and society (15 U.S.C. 2601). Electronic reporting was not available when TSCA was enacted nor when several underlying reporting requirements were subsequently promulgated by EPA. EPA believes that it is now reasonable and prudent to manage and leverage its information resources, including information technology (IT), to require the use of electronic reporting in the implementation of certain TSCA provisions. Electronic reporting can reduce burden and costs for the regulated entities by eliminating the costs associated with printing and mailing this information to EPA, while at the same time improving EPA's efficiency in reviewing submitted information and making decisions.

EPA proposed requiring that information reported to EPA from TPCs and ABs be reported electronically through EPA's CDX. EPA requested comment on whether it should require mandatory electronic reporting. Most commenters were not opposed to electronic reporting and some commenters were amenable to electronic reporting but did not want it required. One commenter also contended that, no matter what form of reporting is eventually utilized, all proprietary business information should be kept confidential by the EPA.

In this final rule, EPA will require TPCs and ABs to report electronically because such a requirement streamlines the reporting process and reduces the administrative costs associated with information submission and recordkeeping. In light of the limited number of reporting entities (TPCs and ABs) participating in the TSCA Title VI program, the most cost-effective and efficient solution for all concerned is a single database developed by EPA.

Most of the information requested in the reporting requirements of these collections is not of a confidential nature. Nonetheless, the application is designed to support acceptance of TSCA confidential business information (CBI) by providing a secure environment that meets Federal standards.

While information collected under TSCA may be entitled to confidential treatment if it meets the standard for Exemption 4 in the Freedom of Information Act (FOIA), 5 U.S.C. 552(b)(4), TSCA section 14 provides that health and safety studies and data derived from health and safety studies, are not entitled to confidential treatment, irrespective of the Exemption 4 standard, unless the release of data derived from such studies would disclose processes used in the manufacturing or processing of a chemical substance or mixture or, in the case of a mixture, would disclose the portion of the mixture comprised by any of its chemical substances. EPA has determined that certain information that is submitted by TPCs in their annual reports and notifications is not eligible for treatment as CBI, irrespective of the Exemption 4 standard, because that information is health and safety studies and data derived from health and safety studies. This includes information pertaining to the compliance status of a particular lot, batch, or shipment of composite wood. Quarterly test results, the test date, the panel producer and product tested, test method and test results cannot be claimed CBI. The ''product tested'' can be a general product description such as particle board of a certain thickness.

TPCs and ABs will be able to submit CBI claims on behalf of themselves or their clients for the other information reported to EPA. CBI claims for information that is generally already publicly available (status of a TPC or AB's participation in the EPA TSCA Title VI Third-Party Certification program, and the basic credentials and contact information for those entities) may be substantiated contemporaneously. This type of information is expected to typically be publicly available (*e.g.,* on an entity's own Web site or marketing material), but in case there are exceptions EPA is allowing the opportunity to claim this information as CBI with contemporaneous substantiation. EPA notes that ABs and TPCs may use a business email and phone number, and write the descriptions of their credentials broadly so that it excludes information the entity considers to be confidential.

The Frank R. Lautenberg Chemical Safety for the 21st Century Act (Pub. L. 114–182) was signed into law on June 22, 2016, and became immediately effective. Section 14(c) now requires a supporting statement and certification for confidentiality claims asserted after June 22, 2016. The final rule contains one minor change to reflect the new statutory requirements for asserting confidentiality claims. EPA is requiring a statement and certification consistent with the section 14(c)(1)(B) statement (and with a related certification requirement in section 14(c)(5) of the revised statute) to meet the new statutory requirements. While this change was not discussed in the proposed rule, EPA finds there is good cause to make this change without notice and comment. Notice and comment are unnecessary because the new statement is required by statute, and EPA anticipates no significant effect of the change on companies reporting under the rule or on the public in general.

To submit information via the CDX, each AB and TPC must designate an individual representative (registrant) who will then register with the CDX system at *http://cdx.epa.gov.* The registration process includes completing an electronic signature agreement, preparing a data file for submission, agreeing to the Terms and Conditions of CDX, providing information about the submitter and organization, selecting a user name and password, and following the procedures outlined in the guidance document for CDX available at: *https://cdx.epa.gov/Content/Documents/CDX_Quick_User_Guide.pdf.* (Ref. 63). The registrant must select a role and complete an electronic signature agreement either through electronic validation or through wet ink signature.

To streamline reporting, CARB may, at a future date, offer their approved TPCs the choice of submitting the CARB annual report and other ongoing reporting obligations through the CDX electronic reporting database.

7. *Impartiality provisions for TPCs and ABs.* EPA received comments from CARB that EPA should specifically state that a panel producer cannot be a TPC under the EPA program. EPA has determined that such a prohibition would be a useful clarification of the impartiality provisions of the ISO/IEC standards that EPA proposed to incorporate and is incorporating into this rule. Therefore, this final rule expressly prohibits a panel producer from also being a TPC. Additionally, as a result of a review of the impartiality provisions of the ISO/IEC standards in response to CARB's comment, EPA is specifying other impartiality requirements to highlight key portions of the ISO/IEC standards that are incorporated by reference in the proposed and final regulations. In addition to requiring that a TPC not be a panel producer, a TPC is not allowed to be a laminated product producer, designer, distributor or retailer of

composite wood products, or have a financial interest in any of these entities. EPA is also requiring that employees and management personnel of a TPC involved in the panel producer review and product certification decision-making process cannot be involved in advocacy or consulting activities on behalf of the composite wood industry. To further document impartiality, EPA-recognized TPC and EPA-recognized AB management personnel and personnel involved in certifying products are required to commit in writing that they will receive no financial benefit from the outcome of certification testing. Finally, EPA is requiring that an EPA-recognized AB ensure that an accreditation decision regarding a TPC is made by persons different from those who conducted the assessment of the TPC. All of these points reflect provisions in the ISO/IEC standards that EPA believes are worth underscoring.

C. Formaldehyde Emission Standards

TSCA Title VI establishes formaldehyde emission standards for composite wood products (hardwood plywood, particleboard, and medium-density fiberboard) so that when they take effect on December 12, 2017, as discussed in Unit III.C., the standards are identical to the CARB ATCM Phase 2 emission levels. The emission standards will be 0.05 ppm formaldehyde for hardwood plywood, 0.09 ppm formaldehyde for particleboard, 0.11 ppm formaldehyde for medium-density fiberboard, and 0.13 ppm formaldehyde for thin medium-density fiberboard. The statute does not give EPA authority to modify these emission standards.

TSCA Title VI describes two emission standards for hardwood plywood, one for that made with a veneer core and the other for that made with a composite core. In the preamble to the proposed regulations, EPA argued that, because the two standards are the same, 0.05 ppm formaldehyde, for implementing regulations taking effect after July 1, 2012, the 0.05 ppm limit should be applied to all composite wood products that meet the definition of hardwood plywood, regardless of the core type. Many commenters opposed this interpretation and urged EPA to be consistent with the CARB ATCM in this area. The CARB ATCM has a similar definition of hardwood plywood. It includes a variety of core types, but the CARB ATCM emission standards apply only to hardwood plywood made with a veneer core or a composite core. Thus, for example, hardwood plywood made with a lumber core or a hardboard core is not required to comply with the emission standards or the testing and certification requirements of the ATCM. EPA agrees with those commenters that recommended consistency with the CARB ATCM. In EPA's view, the better reading of TSCA Title VI is that it only imposes the hardwood plywood formaldehyde emission standard on hardwood plywood made with a veneer or a composite core. Therefore, EPA is promulgating a hardwood plywood emission standard that specifically applies only to hardwood plywood with either a veneer core or a composite core.

D. Product Certification in General

Under this final rule, composite wood products that are sold, supplied, offered for sale, or manufactured (including imported) within the United States must be certified, unless they are specifically exempted by TSCA or excluded by this final rule. In general, this means that the formaldehyde emission levels from the composite wood products would have been demonstrated to be below the emission standards in TSCA Title VI. This demonstration would be through a combination of testing performed by an accredited TPC laboratory, and repeated on a quarterly basis, and more frequent quality control testing performed by the Panel Producer of the composite wood product, an accredited TPC laboratory, or a contract laboratory. Specific requirements for this testing are discussed in Unit III.E.

EPA is requiring panel producers of composite wood products to apply to an EPA TSCA Title VI TPC for product certification, and to design and establish a quality control program, including testing, that is both approved by the TPC and specific to the panel producer. EPA has slightly different requirements for certification, depending on whether the panel producer has other product types that are already certified under the CARB ATCM or TSCA Title VI. For a panel producer that does not have any certifications from a CARB-approved TPC or an EPA TSCA Title VI TPC, or that is switching to a new TPC, the panel producer must provide to the TPC the panel producer's contact information, a copy of its quality control manual, contact information for its quality control manager, an identification of the specific products for which certification is requested and the resin system used, results from at least five quarterly and five quality control tests, a linear regression equation and correlation data, and results of an initial, on-site inspection by a TPC. For panel producers applying for certification of a new product type but that have previous product certifications from a CARB-approved TPC or an EPA TSCA Title VI TPC, the application must contain the panel producer's contact information, an identification of the specific products for which certification is requested and the resin system used, at least five quarterly and five quality control tests, a linear regression equation and correlation data, and a description of any changes in the panel producer's quality control manual and a copy of those changes. Regardless of whether panel producers are applying for certification of a new product type, the test results must demonstrate an adequate correlation between the quality control test results and the TPC's quarterly test results as described in Unit III.E. Test results must also indicate that the formaldehyde emissions of the products are below the emission standards established by TSCA Title VI as discussed in greater detail in Unit III.C. The initial on-site inspection must demonstrate that the panel producer has the required quality control and quality assurance procedures in place to ensure that the products will continue to meet the emission standards. Multiple products can be grouped into a single product type for certification; however, formaldehyde emissions test results must demonstrate that grouped products have similar formaldehyde emission characteristics and that their emissions fit the same correlation curve or linear regression. Uncertified product produced after the manufactured-by date cannot be sold, supplied, or offered for sale in the United States.

EPA had proposed to require three months of quality control testing prior to certification but received numerous comments stating that this requirement was unnecessary, would create an undue delay in bringing new products to the market, and is not required by CARB. Commenters recommended that EPA's requirements for certification be consistent with the requirements in the CARB ATCM. EPA has decided to harmonize with the CARB ATCM by requiring correlation data and an initial on-site inspection conducted by the TPC, but not the proposed three months of testing. This is consistent with how products are being certified under the CARB ATCM and is sufficient to demonstrate that the panel producer is manufacturing products that meet the emission standard and has quality control procedures in place to ensure that the product will continue to meet the standards. Under this final rule, products currently certified by CARB-approved TPCs will be considered

certified for purposes of TSCA Title VI. However, as described in Unit III.B., EPA is allowing CARB-approved TPCs two years to become recognized by EPA under TSCA Title VI. Therefore, a panel producer whose TPC does not become recognized under TSCA Title VI in a timely manner would have to apply to an EPA-Recognized TPC to continue to make certified products after the manufactured-by date.

E. Formaldehyde Emissions Testing Requirements

TSCA Title VI requires that composite wood products be measured for compliance with the statutory emission standards by quarterly tests pursuant to test methods ASTM E1333–96 (2002) or ASTM D6007–02 (Refs. 39, 64). TSCA Title VI also requires that quality control tests be conducted pursuant to ASTM D6007–02, ASTM D–5582 (Ref. 65), or such other test methods as may be established by EPA through rulemaking. Under the statute, test results conducted using any test method other than ASTM E1333–96 (2002) must include a showing of equivalence by means that EPA must establish through rulemaking. Under TSCA Title VI, EPA must also establish, through rulemaking, the number and frequency of tests required to demonstrate compliance with the emission standards. This unit of the preamble discusses EPA's rulemaking on each of these statutory elements.

1. General testing requirements. EPA is finalizing the testing requirements as proposed with a few minor changes to definitions and terms used in the requirements based on public comments.

EPA received numerous comments on the proposed definitions of the terms ''product type,'' ''production line,'' ''lot,'' and the lack of definitions for the terms ''production run'' and ''batch.'' Many commenters were concerned that as proposed, every single batch or lot of product would need to be tested, and commenters stated that under the proposed definitions, producers of low volume specialty products would need to test more often than large volume producers. Therefore, EPA has made some changes to these definitions and to the terms used in the testing requirements to clarify that products with similar formaldehyde emissions can be grouped for testing purposes (both quality control testing and quarterly testing). EPA is adding a definition of the term ''resin system''. EPA is changing the definition of ''lot'' to be consistent with the definition in the CARB ATCM. In addition, EPA is no longer using the term ''batch'' as it was redundant with use of the term ''lot'' in the proposed rule and was confusing. EPA is modifying the definition of the term ''production line'' slightly to be consistent with use of the term not only in the particleboard and medium density fiberboard industry, but also the hardwood plywood industry. In addition, EPA is no longer using the term ''production run.''

EPA is finalizing as proposed the requirement that entities conducting formaldehyde testing must use the procedures, such as testing conditions and loading ratios, specified in the method being used. EPA is also finalizing the requirement that all equipment used in formaldehyde testing be calibrated and otherwise maintained and used in accordance with the equipment manufacturer's instructions. EPA received numerous public comments supporting these requirements. EPA is also finalizing the requirement that all panels be tested in an unfinished condition, prior to the application of a finishing or topcoat.

a. Quarterly testing requirements. EPA proposed to require that accredited TPCs conduct the quarterly tests required by TSCA Title VI. EPA is finalizing this requirement essentially as proposed except to clarify that the quarterly testing must be overseen by an EPA TSCA Title VI TPC but that the testing can be conducted by an accredited laboratory, owned or operated by a TPC or an accredited contract laboratory, which this final rule will refer to as a ''TPC laboratory.'' The statute requires these tests to be performed using ASTM E1333–96 (2002) or, upon a showing of equivalence as discussed in this Unit, ASTM D6007–02 (Refs. 39, 64). Under the authority provided by TSCA section 601(d)(5), EPA is incorporating ASTM E1333–10 into the final rule's testing requirements, rather than the 2002 version (Ref. 43). EPA is aware that these test methods and several other standards referenced in this final rule have been updated and plans to substitute successor standards after public notice and opportunity for comment, as appropriate.

Under the final rule, TPC laboratories must test randomly chosen samples from a single lot that is ready for shipment by the panel producer. Neither the top nor bottom composite wood product of a bundle can be selected because the emissions from these products may not be representative of the bundle. For particleboard and medium-density fiberboard, quarterly tests must be conducted on randomly selected samples of each product type (unless they qualify for reduced testing based on ULEF or NAF-based resin). For hardwood plywood, in consideration of a comment from HPVA that hardwood plywood producers may not be producing all of their product types when the TPC selects samples for testing, EPA is removing the requirement that samples be selected from the hardwood plywood product with the highest potential to emit formaldehyde and, instead, is requiring TPCs to randomly select samples for testing that are representative of the range of products produced by the panel producer.

As discussed previously, EPA is allowing products to be grouped for quarterly and quality control testing. EPA is allowing EPA TSCA Title VI TPCs to approve the grouping of products with similar formaldehyde emission characteristics, based on correlation data as described in Unit III.E.

EPA is finalizing the quarterly sample handling requirements as proposed, except for minor changes in use of the terms ''lot'' and ''product type,'' and in the requirements for product grouping as discussed in this Unit. Samples must be closely stacked or air tight wrapped between the time of sample selection and the start of test conditioning. Samples will also have to be labeled as such, signed by the TPC, protected by cover sheets, and promptly shipped to the laboratory testing facility. EPA is finalizing the requirement that conditioning begin as soon as possible, but no more than 30 calendar days after production.

b. Quality control test methods. With a showing of adequate correlation, EPA is allowing use of the following methods: ASTM D6007–02, ASTM D5582, EN 717–2 (Gas Analysis Method) (Ref. 66), DMC (Dynamic Microchamber) (Refs. 67–68), EN 120 (Perforator Method) (Ref. 69), and JIS A 1460 (24-hr Desiccator Method) (Ref. 70). EPA has determined that these are appropriate methods for quality control testing based on public comments, CARB's evaluation and approval of these methods as alternative small scale test methods, and because test results using these methods have been demonstrated to have adequate correlations with test results using ASTM E1333–10. EPA is establishing these methods pursuant to section 601(b)(3)(A)(ii) for quality control testing. EPA does not endorse any particular method over others.

Few comments were received in support of the addition of any other method, and the supporting commenters did not provide data or information

demonstrating equivalence or adequate correlation with ASTM E1333 that would justify their inclusion with the established methods. However, if EPA receives additional information and chooses to pursue adding another method, EPA will provide notice in the **Federal Register** and an opportunity for public comment as required by TSCA Title VI. EPA received several comments indicating that both the 2012 and 2007 user's manuals should be allowed for the Dynamic Microchamber Method; therefore, EPA is incorporating by reference both versions of the user's manuals.

For each quality control test method that will be used to perform quality control testing for a particular panel producer, the EPA TSCA Title VI TPC must establish, in consultation with the panel producer, a QCL. The QCL is the quality control test value that is the correlative equivalent to the emission standard based on the ASTM E1333–10 method. The QCL is established by using a simple linear regression where the dependent variables (Y-axis) are the quality control test results and the independent variables (X-axis) are the ASTM E1333–10 test results.

c. *Quality control testing frequency for particleboard and medium-density fiberboard that do not qualify for reduced testing based on ULEF or NAF-based resins.* EPA is finalizing the quality control testing frequency for particleboard and medium-density fiberboard as proposed. Quality control tests will be required at least once per shift for each production line for each product type. Quality control tests must also be conducted whenever a product type production ends, whenever there is a significant change to resin formulation or use, when a decrease in press time of more than 20 percent occurs, and any time quality control employees have reason to believe that the panel being produced may not meet the requirements of the applicable standards.

EPA is finalizing reduced quality control testing requirements as proposed for particleboard and medium-density fiberboard when the panel producer demonstrates consistent operations and low variability of test values. The panel producer must request approval from an EPA TSCA Title VI TPC. If approved, quality control testing will still have to occur at least once per 48-hour production period. As proposed, a 30 panel running average, consisting of the average of the results of the 30 most recently sampled panels, must be maintained, and depending on whether the average remains two or three standard deviations below the designated QCL for the previous 60 consecutive days or more, testing frequency may be reduced to one test per 24-hour or 48-hour production period, respectively. An EPA TSCA Title VI TPC must approve a request for reduced quality control testing as long as the data submitted by the panel producer demonstrate compliance with the criteria and the TPC does not otherwise have reason to believe that the data are inaccurate or that the panel producer's production processes are inadequate to ensure continued compliance with the emission standards. Based on comments received, EPA is clarifying in this final rule that reduced testing privileges will continue unless revoked by a TPC as a result of an emission test exceedance or if testing indicates the panel producer no longer meets the eligibility requirements.

d. Proposed quality control testing frequency for hardwood plywood that does not qualify for reduced testing based on ULEF or NAF-based resins. EPA is finalizing the frequency of quality control testing for hardwood plywood essentially as proposed. EPA is removing the proposed requirement to test per production line based on comments indicating that a hardwood plywood panel producer's production line can consist of several multiple-opening hot presses and glue spreaders that are often used to produce any and all of the panel producer's certified product types. EPA's quality control testing frequency requirements for hardwood plywood are generally similar to CARB's requirements and are likewise based on production volume. Hardwood plywood panel producers must generally test each product type weekly, with one to four tests being required based on total weekly hardwood plywood production by the panel producer. For some small specialty panel producers, even one quality control test per week per product type would be excessive. In order to address the inequity of requiring small manufacturers to conduct many more tests than required of large manufacturers for the same production volume, if weekly production of hardwood plywood at the panel producer is less than 100,000 square feet, but more than 100,000 square feet is produced per month, EPA is requiring one quality control test per 100,000 square feet of each product type produced. If the panel producer produces less than 100,000 square feet of a particular product type per month, EPA is requiring only one quality control test of that product type per month when the product type is produced. For low volume producers, EPA had proposed to require testing per production run and per lot; however, numerous commenters pointed out that with the proposed definition of lot, this requirement could lead to low volume producers testing at a higher frequency than some high volume producers. By removing the requirement to test per production run and per lot, EPA is ensuring that the testing requirement will not be too burdensome for panel producers that manufacture low volumes of hardwood plywood. EPA is including the requirement of periodic testing to ensure that if a product type is produced several times per year, at less than 100,000 square feet, several quality control tests will be conducted. EPA is concerned that one test would not be sufficient to ensure compliance if there is a gap in production of more than one month. In addition, EPA is clarifying that product types not being manufactured during a particular week do not need to be manufactured just so that they can be tested.

Based on supporting comments, EPA is also including a requirement for hardwood plywood panel producers to conduct quality control testing when certain changes are made to resin formulation or use, press time is reduced by more than 20%, or quality control employees have reason to believe that the panel being produced may not meet the requirements of the applicable standard. CARB included these requirements in the March 2014 mark-up of the ATCM (Ref. 51).

EPA is not promulgating a reduced quality control testing provision for hardwood plywood similar to the provision for particle board and medium-density fiberboard because HPVA's comments indicated that such a provision is not necessary and because no commenters suggested criteria for qualification.

2. Means of showing test method equivalence. EPA is finalizing the means of showing test method equivalence essentially as proposed. EPA proposed to require that equivalence between ASTM E1333–10 and any other test method used be demonstrated by the TPC for each laboratory used by the TPC or panel producer that is using the alternative method at least once each year or whenever there is a significant change in equipment, procedures, or the qualifications of testing personnel. In this final rule, EPA is clarifying that TPCs are responsible for demonstrating equivalence between ASTM E1333–10 and ASTM D6007–02 if the TPC laboratory uses ASTM D6007–02 for

quarterly or verification testing. In this final rule, EPA is allowing demonstration of equivalence to be reduced to at least once every two years once it has been established every year for three consecutive years. EPA is making this change to match CARB amendments to the ATCM currently under consideration by CARB (Ref. 51) and because CARB recommended this in submitted comments. In EPA's view, after a TPC has consistently demonstrated equivalence over a three year period, it is not necessary to require the TPC to continue to demonstrate equivalence every year.

Many commenters indicated that EPA used the term ''equivalence'' incorrectly in the proposed rule when referring to comparison of ASTM E1333–10 and quality control test methods. EPA used the term ''equivalence'' because it is the term used in TSCA Title VI. However, in this final rule, EPA will use the term ''correlation'' for the comparison of ASTM E1333–10 and quality control methods to meet the TSCA Title VI requirement of demonstrating equivalence. EPA is also clarifying in this final rule that the panel producer is responsible for ensuring that an adequate correlation has been demonstrated between the quality control methods that are used for testing its products annually or at least once every two years once it has been established for three consecutive years. Panel producers must also establish a new correlation whenever there is a significant change in equipment, procedures, or the qualifications of testing personnel. EPA is requiring that a new correlation needs to be established whenever a TPC's quarterly test results compared with the panel producer's quality control test results do not fit the previously established correlation. In addition, if a panel producer fails two quarterly tests in a row, a new correlation curve needs to be established. EPA did not receive any adverse comments regarding these requirements. The panel producer may use its own laboratory, a TPC laboratory, or any other laboratory for testing, but it is the panel producer's responsibility to ensure that this requirement is met. The panel producer's TPC (or the TPC's laboratory) will evaluate the quality control data and compare it with the quarterly test data to establish a linear regression equation and determine whether the correlation is adequate as described later in this Unit.

One commenter stated that EPA should clarify that the equivalence is specific not only to the test methods, but also the equipment. EPA agrees and is therefore clarifying in this final rule that equivalence or correlation must be demonstrated for each testing apparatus. Several commenters indicated that EPA should not require the equivalence protocol when ASTM D6007–02 is used as a quality control method and that the equivalence protocol should only be required for TPCs or their contract laboratories using ASTM D6007–02 for quarterly testing. Therefore, EPA is clarifying in this final rule that when ASTM D6007–02 is used for quality control testing, only a demonstration of correlation between ASTM D6007–02 and ASTM E1333–10 is required.

EPA is requiring that equivalence be demonstrated in the ranges of formaldehyde concentrations that are representative of the emissions of the products that the TPC certifies. EPA is requiring a minimum of five comparison sample sets. In addition, EPA is allowing for flexibility in sampling and not requiring testing of nine specimens representing evenly distributed portions of an entire panel for demonstrating equivalence between ASTM D6007–02 and ASTM E1333–10 as is required in the CARB ATCM. Most commenters support this flexibility. For some types of panels, within panel variability is such that fewer specimens can be tested, but for other panels, testing of at least nine specimens will be needed. TPCs and panel producers are best able to determine the sampling and testing needed to account for within panel variability for a specific product type, and EPA is therefore allowing for flexibility in the distribution and number of specimens to require for the small chamber test comparison sample set. If laboratories have difficulty meeting the equivalence or correlation requirements, they may need to increase the number of samples. Specifics on how the equivalence demonstration must be performed can be found in 40 CFR 770.20(d)(1).

For the purposes of meeting the TSCA Title VI requirement of demonstrating equivalence between ASTM E1333–10 and any quality control test method used for measuring formaldehyde emissions, EPA is requiring a demonstration of correlation. A linear regression with an acceptable correlation must be established, as defined by the correlation coefficient, or ''r'' value. As discussed in the preamble of the proposed rule, although correlation does not show that the test methods give equal results, it demonstrates whether a quality control test method can be used to adequately estimate the corresponding ASTM E1333–10 test result. Therefore, if there is an acceptable correlation, the quality control test method can be used to estimate whether the product meets the emission standards. The correlation will be based on a minimum sample size of five data pairs and a simple linear regression where the dependent variable (Y-axis) is the quality control test value and the independent variable (X-axis) is the ASTM E1333–10 test value. EPA is finalizing the minimum acceptable correlation coefficients (''r'' values) for the correlation as proposed; they can be found at § 770.20(d)(2) of this rule. The number of data pairs is represented by the letter ''n'' in the regulatory text. For example, correlations based on five data pairs have 3-degrees of freedom, and the correlation coefficient needs to be 0.878 or greater. As discussed in the proposed rule, because of the low emissions required for composite wood products, it may be necessary to include more than five data pairs and/or a range of products (with a suitable range in emissions, *e.g.,* 0–0.1 ppm) in the testing to achieve acceptable correlation coefficients.

3. Non-complying lots. EPA received many comments on the proposed provisions for non-complying lots. Nearly all commenters objected to EPA's proposed requirement that a panel producer retain product belonging to lots selected for sampling until the panel producer receives the test result. Commenters also made suggestions with regard to the definition of non-complying lot.

EPA agrees with the commenter who noted that quality control tests are often not directly comparable to the emission standard and has modified the proposed definition so that the term ''non-complying lot'' means any lot of composite wood product represented by a quarterly test value or quality control test result that indicates that the lot exceeds the applicable standard for the particular composite wood product in § 770.10(b). EPA is also clarifying in the definition that a quality control test result that exceeds the QCL is considered a test result that indicates that the lot from which the sample was taken exceeds the applicable standard. As proposed, the definition in the final rule also states that, in the case of a quarterly test value, only the particular lot from which the sample was taken would be considered a non-complying lot; lots produced after the previous quarterly test but before the lot from which the sample was taken would still be considered certified product. The final rule definition further states that future production of product type(s) represented by a failed quarterly test would not be considered certified and would have to be treated as a non-complying lot until the product type(s)

are re-qualified through a successful quarterly test.

Most commenters did not support EPA's proposed requirement that panel producers retain product belonging to lots selected for sampling until the test results are received by the panel producer. EPA proposed this requirement to ensure that non-complying products do not end up in the stream of commerce. However, commenters thought that this would disrupt supply chains and be very costly for panel producers, particularly in the case of quarterly tests, because of the time involved in shipping and testing product. Commenters were concerned that panel producers would not have sufficient warehouse capacity to store lots associated with quarterly test samples until the test results are received. On the other hand, a trade association representing fabricators supported EPA's proposed requirement, stating that fabricators have been in the position of receiving non-complying product from panel producers but not being informed of the product's non-complying status until after the product had moved into downstream production. In EPA's view, holding lots until test results are received is the best way to ensure that non-complying product is not distributed in commerce, but EPA is also concerned about the impacts on industry supply chains from holding product, particularly product belonging to lots selected for quarterly testing. Most commenters supported a requirement to notify customers that had received products belonging to a non-complying lot. Many automatically assumed that panel producers would support their customers and address non-complying product that had been distributed before the test results were received, whether by recalling the product, by retesting samples retained by the panel producer, or by working with the customer to age or otherwise treat the product. The panel producer is responsible for non-complying product that it has inadvertently distributed, but EPA also understands the importance of allowing panel producers flexibility in managing their responsibility. Therefore, the final rule requires panel producers to notify, within 72 hours of receiving notice of a failing test result, any fabricators, distributors, or retailers that received non-complying product. The notification must inform the customer of the type of test failed and include a description of the composite wood product belonging to the non-complying lot, a statement that the non-complying product must be isolated from other composite wood products and must not be further distributed in commerce, and a description of the steps the panel producer intends to take with respect to the product. The rule further requires panel producers to either treat, retest, and certify the non-complying product while it remains in the possession of the customer or recall the non-complying product and dispose of it or treat, retest and certify it.

EPA is generally finalizing the rest of the provisions relating to the handling of non-complying lots as proposed, except that several commenter suggestions for clarification were incorporated. Under this final rule, panel producers must segregate the non-complying lot from other product and products in non-complying lots must only be sold, supplied, or offered for sale in the United States if a test value that meets the applicable standard is obtained after the products are treated with scavengers to absorb excess formaldehyde, or treated through another process that reduces formaldehyde emissions, *e.g.* aging. Retesting must include at least one test panel selected from each of three separate bundles, with the selected panels being representative of the entire non-complying lot and not from the top or bottom of a bundle. The test panels may be selected from properly stored samples set aside by the panel producer for retest in the event of a failure. In order to recertify the lot, the average of all of the samples must test below the applicable standard. EPA also proposed to require panel producers to keep records of the disposition of non-complying lots, including the specific treatment used and the subsequent test results demonstrating compliance. As pointed out by commenters, quality control test results are not always directly comparable with the emission standards, so the test result language in this section clarifies that results of a retest of a failed quarterly test must demonstrate compliance with the applicable emission standard, while results of a retest of a failed quality control test must be at or below the level that indicates that the product is in compliance with the emission standards. Finally, in response to commenter suggestions, EPA is promulgating a definition of the term ''scavenger'' that more precisely describes the role of scavengers in the context of this regulation.

F. Quality Assurance and Quality Control Requirements for Composite Wood Product Panel Producers

Panel producers are responsible for ensuring that their products meet the emission standards of TSCA Title VI. Quality assurance and quality control requirements for panel producers are necessary to ensure that all of their products comply with the applicable standards, including those that are not actually tested. EPA proposed quality assurance and quality control requirements that would be virtually identical to the requirements of the CARB ATCM and that would help ensure proper handling of test samples, test equipment, and quality control testing. EPA is generally finalizing these provisions as proposed, with some clarifications and additions suggested by commenters that address important aspects of producing and supplying a product that meets TSCA Title VI requirements.

The final rule requires each panel producer to have a written quality control manual at each location that produces composite wood products. The manual must include a description of the organization of the quality control department, sampling procedures and sample handling, quality control testing frequency, procedures to identify production changes that may result in changes in formaldehyde emissions, recordkeeping and labeling procedures, description of product type, and resin percentage and press time for each product type, and procedures for handling non-complying lots, including a description of how the panel producer will ensure compliance with the notification requirements. The manual must be reviewed and approved by an EPA TSCA Title VI TPC to ensure that the manual is complete and that the panel producer's procedures are adequate to ensure that the TSCA Title VI emission standards are being met on an ongoing basis. The requirement for a quality control manual is consistent with CARB.

Each panel producer must designate a quality control facility for conducting quality control formaldehyde testing of their product. The quality control facility must be a laboratory owned and operated by the panel producer, a TPC, or a contract laboratory.

Each panel producer must also designate a person as quality control manager with adequate experience and/or training to be responsible for formaldehyde emissions quality control. The quality control manager must have the authority to take actions necessary to ensure that applicable emission standards are being met. The panel producer must identify the quality control manager and his or her qualifications in writing to the TPC and must notify the TPC in writing within ten calendar days of any change in the identity of the quality control manager

and provide the TPC with the new quality control manager's qualifications. The quality control manager must review and approve all reports of quality control testing conducted on the production of the panel producer. The quality control manager is also responsible for ensuring that the samples are collected, packaged, and shipped according to the procedures specified in the quality control manual. The panel producer quality control manager must monitor the testing facility's results, and immediately inform the TPC in writing of any significant changes in production that could affect formaldehyde emission rates.

Each quality control facility must have quality control employees with adequate experience and/or training to conduct accurate and precise chemical quantitative analytical tests. The quality control manager must identify each person conducting formaldehyde quality control testing in the quality control manual.

EPA requested comment on whether the regulation should include minimum qualifications for quality control managers and quality control staff, such as education, experience, or training requirements. Commenters did not favor minimum qualifications, preferring instead to allow panel producers, with TPC input, more flexibility in choosing quality control managers and employees that are capable of performing the required duties. EPA agrees with these commenters and is not incorporating minimum education, experience, or training requirements into the regulation.

Panel producers are required to submit monthly product data reports for each panel producer, production line and product type, to their TPC. The content requirements for the product data reports are virtually identical to the CARB requirements and include a data sheet for each specific product type with test and production information, a quality control graph containing the established QCL and shipping QCL (if applicable) the results of quality control tests, and retest values. As discussed in more detail in Unit III.F., these quality assurance and quality control requirements do not apply to any product type made with a NAF-based resin or ULEF resin for which the panel producer is eligible for an exemption from the third-party certification requirements, except for the purpose of applying for re-approval for the exemption.

G. NAF-Based and ULEF Resins

TSCA Title VI section 601(d)(2)(D) and (E) directs EPA to include, in its implementing regulations, provisions related to products made with NAF-based and ULEF resins. The statute also defines, under section 601(a)(7) and (10) respectively, what constitutes NAF-based and ULEF resins, in terms of the composition of the resin system and maximum formaldehyde emissions for composite wood products made with these resin systems. In general, a NAF composite wood product cannot incorporate a resin formulated with formaldehyde as part of the crosslinking structure. A ULEF composite wood product is one made from resins that may contain formaldehyde, but emit it at particularly low levels. The statutory maximum emissions for products made with NAF-based or ULEF resins are identical to those in the CARB ATCM.

EPA is finalizing NAF and ULEF provisions essentially as proposed. If certain emission thresholds are met, EPA is providing producers of panels made with NAF-based resins or ULEF resins with an exemption from TPC oversight and formaldehyde emissions testing after an initial testing period of three months for each product type made with NAF-based resins or six months for each product type made with ULEF resins. These specific initial testing periods are required by the statute and are designed to ensure that the products meet the TSCA section 601(a) formaldehyde emission standards for products made with NAF-based or ULEF resins. Because EPA is only requiring quality control testing when products are actually produced and is including provisions for reduced testing for hardwood plywood panel producers that manufacture low volumes of products, EPA is adding the clarification that the three or six months of quality control testing must include at least 5 quality control tests for NAF approvals and at least 10 quality control tests for ULEF approvals. This requirement is meant to preclude the possibility of panel producers manufacturing low volumes or infrequently just to qualify for NAF or ULEF reduced testing or exemption from certification, and because fewer quality control tests would be insufficient to judge whether a product should qualify for reduced testing or exemption from certification. EPA chose a minimum of five tests for NAF approval because this is the minimum needed for demonstrating correlation. EPA is requiring at least 10 quality control tests for ULEF approvals because the statutory testing requirements for ULEF qualification under TSCA Title VI are double those for NAF qualification.

Whether using a NAF-based or ULEF resin to qualify for the exemption from TPC oversight and formaldehyde emissions testing for a particular product type, there can be no test result indicating emissions higher than 0.05 ppm of formaldehyde for hardwood plywood and 0.06 ppm for particleboard, medium-density fiberboard, and thin medium-density fiberboard during the initial testing period. In addition, test results for 90 percent of the required quality control testing must indicate emissions of no higher than 0.04 ppm of formaldehyde.

If less stringent emission standards than these are met, producers of panels made with ULEF resins may still qualify for reduced formaldehyde emissions testing—but not the third-party certification exemption or the exemption from emissions testing after the initial six months. To qualify for this reduced testing provision for products made with ULEF resins, there can be no test result indicating emissions higher than 0.05 ppm of formaldehyde for hardwood plywood, 0.08 ppm for particleboard, 0.09 ppm for medium-density fiberboard, and 0.11 ppm for thin medium-density fiberboard during the initial six month testing period. In addition, test results for 90 percent of the required quality control testing must indicate emissions of no higher than 0.05 ppm of formaldehyde for particleboard, 0.06 ppm for medium-density fiberboard, and 0.08 ppm for thin medium-density fiberboard. Under this reduced testing provision, qualifying panels would only need to be quality control tested at least once per week per product type, except that hardwood plywood panel producers who qualify for less frequent quality control testing may continue to perform the lesser amount of testing. For these panels, what would otherwise be quarterly testing by an EPA TSCA Title VI TPC would instead only be required every six months.

An EPA TSCA Title VI TPC must oversee the testing during the initial testing period, which must include at least one test result for the NAF exemption or two test results for either ULEF provision under ASTM E1333–10 or, upon a showing of equivalence as discussed in this Unit, ASTM D6007–02 (Refs. 43–44). To receive a third-party certification exemption or reduced testing under this NAF/ULEF provision, the panel producer will be required to apply to an EPA TSCA Title VI TPC or CARB for approval for reduced testing or a third-party certification exemption based on the regulatory requirements.

EPA had proposed to have TPCs review all of the applications; however, several commenters expressed concern about this. Their concerns include potential conflicts of interest, and potential for inconsistency among TPC reviews. Therefore, EPA is also allowing CARB to review applications for NAF and ULEF under the TSCA Title VI program, as long as CARB continues to have requirements that are at least as stringent as EPA's requirements, which EPA affirms is currently true. Should EPA determine that CARB's requirements are no longer at least as stringent was EPA's requirements, then EPA will publish a notice in the **Federal Register** announcing EPA's determination.

As noted, panel producers can also apply to their EPA TSCA Title VI TPC for NAF and ULEF approvals. EPA has determined that allowing TPCs to approve applications for NAF/ULEF reduced testing and/or a limited exemption from TPC oversight does not inherently present a conflict of interest and the provisions of this final rule that require TPC impartiality are applicable to TPCs reviewing and approving NAF/ULEF applications (see Unit III.B.7.). The specific testing requirements and eligibility criteria applicable to NAF/ULEF exemptions will greatly reduce the likelihood of inconsistency in TPC reviews.

To maintain eligibility for a third-party certification exemption, at least once every two years after the conclusion of the initial testing period, the panel producer must reapply for exemption to an EPA TSCA Title VI TPC or CARB. Because the CARB ATCM requires applications and reapplications for these third-party certification exemptions to be submitted to CARB, EPA will accept CARB approvals and re-approvals for as long as CARB's exemption criteria remain at least as stringent as EPA's. This will avoid duplicate applications for those panel producers that operate in California. Re-applicants to the EPA program must include one test result for NAF renewal and two test results for ULEF renewal under ASTM E1333–10 or, upon a showing of equivalence as discussed in this Unit, ASTM D6007–02, that demonstrate continued compliance with the reduced formaldehyde emission standards for each product type (Refs. 43–44). The test(s) must be based on products randomly selected and tested by a TPC laboratory. In the case of approval for ULEF reduced testing, no periodic reapplication to a TPC is necessary because the panel producer must have ongoing TPC oversight. However, if CARB approves reduced testing for ULEF, CARB may require periodic reapplications. The current CARB regulations require panel producers eligible for reduced testing to reapply to CARB every two years.

In general, testing records and other records demonstrating eligibility for a third-party certification exemption or reduced testing, such as records showing the resin used to manufacture the eligible products, must be maintained for a minimum of three years from the date that the record was created. Commenters generally indicated that initial testing records should be kept for as long as a panel producer claims exemption or reduced testing. EPA agrees with these commenters. In addition, EPA agrees that a review of the initial testing period documentation may be useful in the event that a product made under a NAF or ULEF exemption is determined to exceed the applicable standard. Therefore, the final rule requires records of the initial testing period be kept for as long as a panel producer is producing composite wood products under an exemption.

Numerous commenters indicated that EPA should minimize the amount of potentially confidential information (*e.g.,* resin formulation) that TPCs are required to maintain. To address the comments on CBI concerns, EPA is removing the requirement included in the proposal that specific resin formulation information be included with applications for NAF and ULEF approvals and instead only requiring identification of the resin system. The resin system is meant to be a generalized description of the type of resin used. This is unlikely to be CBI, but an entity that believes the resin system is CBI can have their TPC submit a claim for this information on their behalf.

EPA proposed that any change in the resin formulation, the core material, or any other part of the manufacturing process that may affect formaldehyde emission rates would render the product ineligible for the reduced testing approval or third-party certification exemption and requested comment on whether other events, such as failed quarterly or routine quality control tests, should invalidate a reduced testing approval. Commenters provided suggestions for how EPA should handle changes in manufacture or emission test result failures for products that have received NAF or ULEF approvals. Taking these comments into consideration, EPA is requiring at least one quality control test and one quarterly test for NAF products, or five quality control tests and one quarterly test for ULEF products, every time there is an operational or process change that may affect formaldehyde emissions, such as a change in resin formulation, press cycle duration, temperature, or amount of resin used per panel. EPA has concluded that a change in resin system and addition of products requires a new NAF or ULEF application for third-party certification exemption or reduced testing since these are major changes, which could require designation as a new product type, rather than operational or process changes. In addition, EPA is including in this final rule that a failed TPC quarterly test or quality control test invalidates an approval for a third-party certification exemption or reduced testing, and EPA is requiring that a panel producer reapply with a complete new application if its approval is invalidated because of a failed test result. A failed test is a serious concern and therefore, a panel producer needs to be able to demonstrate that its product can meet the NAF or ULEF requirements by requalifying with the full testing requirements.

EPA proposed a ULEF reduced testing provision and requested comment on the utility of this option. Very few manufacturers have sought the ULEF reduced testing provision under the CARB ATCM in lieu of the total exemption from TPC oversight and formaldehyde emissions testing requirements after the initial testing period. As such, EPA anticipates that the vast majority of ULEF resin-based composite wood product manufacturers will apply for the full exemption from TPC oversight and formaldehyde emissions testing after the initial testing period. However, commenters indicated that they support the reduced testing provision; therefore, EPA is including this provision in this final rule.

EPA also requested comments, information, and data on the broader question of giving composite wood products made with ULEF resins preferential treatment under TSCA. EPA discussed some concerns about products made with urea-formaldehyde-based resins. In EPA's view, it is more difficult to ensure that formaldehyde emissions from products made with these resins remain low over time, irrespective of environmental conditions. It is well known that urea-formaldehyde resins can release formaldehyde when exposed to heat and humidity because of the chemistry of the resin, and EPA discussed some studies in the proposed rule on formaldehyde emissions under conditions of high heat and humidity. Several commenters expressed concern

about these studies, indicating that TSCA Title VI cites test methods that specify temperature and humidity; these commenters argue that the studies are therefore inappropriate and irrelevant.

EPA specifically requested comment on whether the ULEF provisions should be limited to products made with a subset of ULEF resins that do not contain urea-formaldehyde polymer—in other words, limited to no-added urea formaldehyde-based (NAUF) resins. Most commenters were opposed to this idea and instead support having both NAF and ULEF provisions that are identical to the provisions in the CARB ATCM. In contrast, one commenter only supports NAF and NAUF exemptions from TPC oversight, not ULEF. This commenter stated that ''UF resin, with its propensity to emit formaldehyde continuously upon aging, makes it distinct from all other formaldehyde-based resin systems'' (Ref. 71). EPA recognizes that the chemistry of urea-formaldehyde resins presents challenges for controlling formaldehyde emissions from the resulting composite wood products. However, EPA is finalizing the NAF and ULEF provisions as proposed. In making this decision, EPA considered the fact that TSCA Title VI requires upfront testing to confirm that panels made with ULEF resins (as well as panels made with NAF-based resins) meet statutory emission limits that are lower than the basic emission standards for composite wood products. EPA also considered Congressional intent and the interest in harmonization with the CARB ATCM.

H. De Minimis Exception

Section 601(d)(2)(L) of TSCA allows EPA to promulgate, for products and components containing *de minimis* amounts of composite wood products, an exception to all of the requirements of the implementing regulations other than the formaldehyde emission standards. While EPA did not propose an exception from any of the regulatory requirements for products containing *de minimis* amounts of composite wood products, commenters overwhelmingly favored a *de minimis* exception.

After considering the comments, EPA is promulgating a *de minimis* exception from the labeling requirements for finished goods and component parts sold separately to end users that contain no more than 144 square inches of composite wood products, based on the surface area of its largest face. For example, a frame for an eight-inch by ten-inch picture is made up of two-inch wide and one-inch thick composite wood product strips. The outer dimensions of the frame would be 14 inches by 12 inches and the inner dimensions would be 10 inches by 8 inches. This frame contains 88 square inches of composite wood product and would qualify for the *de minimis* exception ($[12 \times 14] - [10 \times 8]$). This *de minimis* level, suggested by a commenter, is appropriate because it would eliminate the labeling requirements for very small products. It would also eliminate the labeling requirements for finished goods made of non-regulated material, such as solid wood, that contain small amounts of composite wood, such as hardwood plywood joining biscuits. A labeling requirement for such products could create confusion amongst consumers as to whether or not the product is solid wood. Finally, in this context, EPA has determined that 144 square inches of composite wood product in a finished good actually represents a trivial amount of composite wood product, as opposed to the much larger thresholds suggested by some commenters.

The exception does not apply to finished goods (and component parts sold separately to end users) which are used in combination or in multiples in order to create larger surfaces in the final use, such as flooring or ceiling tiles. Products that are sold separately to consumers and not intended to be used in multiples would be eligible for this exception (*e.g.,* a plywood rack designed to be attached to a bicycle). Component parts that are sold to fabricators of finished goods would not be eligible for this exception.

EPA notes that this exception is for the labeling requirements alone. EPA does not believe it can ensure compliance with the emission standards if it finalizes a *de minimis* exception to the recordkeeping requirements. EPA notes that its authority to establish a *de minimis* exception applies only to the regulatory requirements, not the statutory emission standards. Thus, even products containing a *de minimis* amount of composite wood must be made from panels that are compliant with the regulatory requirements and emission standards. Without records, there would be no way for the Agency, or a downstream purchaser, to determine whether these products were made from compliant composite wood panels.

I. Chain-of-Custody, Recordkeeping, and Labeling Requirements

Section 601(d)(2) of TSCA Title VI also directs EPA to consider chain of custody, recordkeeping, and labeling requirements. EPA proposed chain of custody, recordkeeping, and labeling requirements that were similar to those under the CARB ATCM, reasoning that these requirements also support compliance with TSCA Title VI without undue burden. EPA's proposal departed from the CARB ATCM approach by including a three-year recordkeeping period, instead of CARB's two years, and by reducing recordkeeping for distributors and retailers. EPA also proposed to require that panel producers make quarterly and quality control testing records available to their customers upon request. All of these elements are discussed in more detail in this Unit.

1. Chain of custody and recordkeeping requirements. Most records required to be retained under this regulation must be kept for a period of three years from the date that they are generated. Many commenters supported a two-year recordkeeping requirement, citing consistency with the CARB ATCM, while others supported longer periods. The three-year recordkeeping period is reasonable, given that EPA must monitor TSCA Title VI compliance on the part of hundreds of thousands of entities nationwide. In addition, required records would have to be provided to EPA upon request to facilitate compliance monitoring activities.

As proposed, producers of hardwood plywood, particleboard, and medium-density fiberboard panels must maintain records of quarterly emissions testing and records of quality control testing. These records must identify the TPC conducting or overseeing the testing, and must include the date, the product type tested, the lot number that the tested material represents, and the test results. In addition, panel producers must maintain production records, purchaser and transporter information, and information on the disposition of non-complying lots.

After December 12, 2023, laminated product producers whose products are exempt from the definition of hardwood plywood will have to maintain records demonstrating use of compliant cores or platforms and phenol-formaldehyde resins or resins formulated with no added formaldehyde as part of the resin cross-linking structure, including platform production or purchase records, the resin trade name, resin manufacturer contact information, and resin supplier contact information, or, if the resin is made in-house, records sufficient to demonstrate that the resin qualifies for the exemption.

In order to assist customers such as fabricators, distributors, importers, and retailers in determining whether they are purchasing compliant composite wood products, EPA is requiring that

panel producers make available to their direct customers, upon request, the results of quarterly emissions test results for the product types purchased. While information collected under TSCA may be entitled to confidential treatment if it meets the standard for Exemption 4 in the Freedom of Information Act (FOIA), 5 U.S.C. 552(b)(4), TSCA section 14 provides that health and safety studies and data derived from health and safety studies, are not entitled to confidential treatment, irrespective of the Exemption 4 standard, unless the release of data derived from such studies would disclose confidential processes used in the manufacturing or processing of a chemical substance or mixture or, in the case of a mixture, disclose the confidential portion of the mixture comprised by any of its chemical substances. For the reasons discussed in the proposal, EPA has determined that quarterly test results are not entitled to treatment as CBI. In order to minimize paperwork and preserve the confidentiality of the supply chain, EPA is limiting the disclosure requirement to direct purchasers (*i.e.,* those purchasing directly from mills). Thus the quarterly test results and associated information (date of test, test method, panel producer name and produce description) do not need to be carried with the product through the supply chain.

Because of the volume and complexity of quality control test results, EPA is not requiring panel producers to release this quality control information to direct purchasers. However, EPA considers quality control test results and the fact that a mill has had failed quality control tests to be health and safety studies and data derived from health and safety studies. Also as proposed, producers of hardwood plywood, particleboard and medium-density fiberboard panels using NAF-based resins or ULEF resins who qualify for the reduced testing and/or third-party certification exemption discussed in Unit III.G. must maintain records demonstrating initial and continued eligibility for the reduced testing or third-party certification exemption. In addition, the panel producer must keep production records and information on resin trade name, resin manufacturer and supplier contact information, and resin use.

Under the proposal, importers, fabricators, distributors, and retailers would be required to take steps to ensure that they are purchasing composite wood products or component parts that comply with the emission standards and to document these steps. As proposed, in order to document compliance, the importer or fabricator would have to obtain from the supplier records identifying the panel producer(s) that produced the composite wood products and the dates that the composite wood products were manufactured and purchased from the panel producer(s), as well as bills of lading or invoices that include a written affirmation from the supplier that the composite wood products, whether in the form of panels or incorporated into component parts or finished goods, are compliant with this subpart.

The proposed requirement to take steps to ensure that compliant products are being purchased would also have applied to distributors and retailers. Rather than include specific required documentation for these entities, the proposal requested comment on the documentation that should be required. The only specific records the proposal would have required distributors and retailers to keep were invoices and bills of lading, and compliance statements on these documents would not have been mandatory. EPA reasoned in the proposal that this would be sufficient because these records would enable EPA to identify the producer or importer of composite wood panels, component parts, or finished goods being sold by distributors and retailers. EPA also stated that, for finished goods, these records would also permit the identification of the producer of the composite wood panels that make up the finished goods. EPA concluded that, without imposing additional recordkeeping burdens on most distributors and retailers, these records would allow EPA to effectively monitor compliance with TSCA Title VI.

EPA received a number of comments on these requirements, some specific to importer responsibilities. Commenters argued that, in many cases, the importer is two or more steps in the supply chain removed from the panel producer and would not be able to obtain this information, particularly for imported finished goods. Some commenters were concerned about supply chain confidentiality and objected to a requirement that distributors disclose their suppliers to their customers. EPA understands the concerns expressed by these commenters. However, in order to be able to ensure that imported composite wood products, component parts, and finished goods were produced in compliance with TSCA Title VI, EPA needs to know the mill and the date that the composite wood products were produced. For composite wood products made by overseas mills, EPA must look to the importer for this information. Without mill and production date information, EPA will not be able to check with the appropriate TPC to determine whether the product was certified. For these reasons, EPA is finalizing a requirement that the importer be able to provide these records to EPA within 30 calendar days of request. Because of the supplier chain issues raised by commenters, EPA is not requiring importers to obtain these records directly from suppliers. Importers may arrange, by contact or some other means, to have their suppliers provide these records directly to EPA within 30 calendar days of request. Importers must keep the compliance statements located on invoices, bills of lading, or other comparable documents. EPA notes that the recordkeeping requirements for imported products will be equivalent to the aggregate recordkeeping requirements for domestically produced products. The only distinction would be that the responsibility for ensuring pre-importation supply chain records are maintained would fall on the importer instead of being spread out amongst different entities in the supply chain.

For the reason stated in the proposal, that invoices and bills of lading will permit EPA to identify the sources of composite wood products, component parts, or finished goods for a particular distributor or retailer, EPA is also finalizing the recordkeeping requirements for distributors and retailers as proposed. In addition, because invoices and bills of lading will allow EPA to identify a fabricator's sources of composite wood products or component parts, just as such records facilitate the identification of distributor's or retailer's sources, EPA will only require fabricators to keep invoices and bills of lading. Fabricators who are also laminators must keep these records as well as the records required for laminated product producers.

EPA specifically asked for comment on whether distributors and retailers should be required to obtain and retain bills of lading or invoices with a written affirmation from the supplier, and whether other recordkeeping requirements would be appropriate. While CARB's comments indicated that these statements were required under CARB and recommended that EPA require the same, other commenters believed that the requirement was unnecessary. EPA has determined that requiring a compliance statement is minimally burdensome, that many are already complying with the CARB requirement, and that obtaining these statements will enlist fabricators, distributors, and retailers in helping to

ensure compliance with TSCA Title VI by requiring them to ask questions of their suppliers if they do not see the compliance statement on their purchase documentation. The compliance statement refers to the compliance of the products as of the date of manufacture. So, for example, non-exempt laminated products made after December 12, 2023 would need to be compliant with the requirements for hardwood plywood in order to affirm compliance with TSCA Title VI. Obtaining and maintaining these bills of lading and invoices, or comparable documents, with a written statement from the supplier are reasonable precautions taken to purchase compliant products for fabricators, distributors, and retailers.

Entities that fit within two or more of these recordkeeping categories, such as a distributor that buys finished goods from both foreign and domestic companies for resale, must keep only the records for each product that correspond to the activities the entity undertook with respect to that product. For example, a distributor who purchases both foreign and domestic finished goods for resale must keep the following records:

- For foreign finished goods that the distributor imports, records identifying the panel producer(s) that produced the composite wood products incorporated into the finished goods and the dates that the products were produced or the ability to produce this information within 30 days, records identifying the supplier and the date of purchase, and bills of lading or invoices that include a written statement from the supplier that the composite wood products, whether in the form of panels or incorporated into component parts or finished goods, are either compliant with this subpart or were manufactured before the manufactured-by date.
- For domestic finished goods, only bills of lading or invoices would need to be kept.

In the case of imported finished goods, only the importer would be responsible for ensuring that the records identifying the panel producer and the date that the composite wood products were manufactured are accessible to EPA upon request. For example, if the importer sells the goods to a domestic distributor, who then sells them to a domestic retailer, only the importer would have to ensure the additional records are kept. The domestic distributor and retailer would only be required to keep invoices and bills of lading.

2. Labeling. EPA is finalizing the labeling provisions as proposed, with several minor modifications. Panels or bundles of panels that are sold, supplied, or offered for sale in the United States must be labeled with the name of the panel producer, the lot number, the number of the accredited TPC, and markings indicating that the product complies with the TSCA Title VI emission standards. Fabricators of finished goods containing composite wood products must label every finished good they produce, or every box containing finished goods. These labels must contain the fabricator's name, the date the finished good was produced, and a statement that the finished goods are TSCA Title VI compliant. Panels may be shipped into, out of, and around the United States for quality control or quarterly tests provided that they are labeled ''For TSCA Title VI testing only, not for sale in the United States.'' The information required on the labels must be legible and in English, but it need not all be on a single label. Also, entities are free to combine the TSCA Title VI labels with CARB labels so long as all the required information is present, legible, in English and accurate. EPA notes that the phrase ''the date the finished good was produced'' means the actual date of production in ''Month/Year'' format, not the date the product was imported.

EPA does agree that in certain situations, this information has the potential to confuse consumers and may take up additional space on labels. For example, where a finished good is composed of multiple composite wood products, some of which are not produced under the NAF or ULEF provisions, and some of which are, it may be difficult for fabricators to design a label that efficiently describes the product. Thus, in the final regulations, labeling indicating that the composite wood products are NAF or ULEF is voluntary and at the discretion of the panel producer or fabricator. For finished goods that are partially made with panels produced under the NAF or ULEF exemptions, they may, at the discretion of the fabricator, be labeled with phrases such as ''product contains TSCA Title VI products and NAF/ULEF products,'' ''product contains TSCA Title VI products and NAF products,'' or ''product contains TSCA Title VI products and ULEF products,'' if is this is accurate. EPA disagrees with those commenters who thought that the labeling of products as NAF or ULEF creates an inappropriate market bias. TSCA Title VI explicitly allows EPA to provide an exemption from third-party certification and testing for these products, so the statute itself confers the opportunity for special treatment on these products. Far from creating an inappropriate market bias, labeling a product as NAF and ULEF provides valuable information to consumers (*e.g.,* some panels may not have a TPC because they are exempt from third-party certification), and allows consumers to know that these products meet the emission standards described in Unit III.C. EPA also notes that the CARB ATCM has NAF/ULEF labeling requirements.

The final rule allows panel producers to use a panel producer number or other identifier to protect supply chain confidentiality, as long as EPA is ultimately able to use the label information along with the records required by this rule to identify the panel producer. The expectation is that EPA will be able to trace back through the supply chain, using records identifying each entity's supplier, to eventually arrive at the panel producer, or an importer for composite wood products not produced domestically. For finished goods, EPA is requiring either the fabricator's name on the label or the name of a responsible downstream entity (*e.g.,* an importer, wholesaler, distributor, or retailer). Where a non-fabricator's name appears on the label, that entity is responsible for identifying the fabricator, and is responsible for the compliance of the labeled products, as if they were the fabricator. Fabricators may not put a downstream entity's name on the labels unless they have written consent from that entity to do so.

Although EPA proposed to allow labels to be in barcode format, the Agency agrees with commenters who thought that a barcode, as the sole form of label, would inhibit transparency. Even if the barcode was a universal open system, all entities along the supply chain may not have access to smartphones or barcode readers. This would create a technology barrier to accessing this information, and could prevent retailers that wish to check the information on labels to ensure it conforms to the information provided to them by their supplier. Thus, the final rule prohibits the use of barcodes, or non-text labels, as the sole label. Entities that wish to use barcodes or other non-text labels may do so but must also have the encoded TSCA Title VI information printed on the label in English text.

The final rule allows composite wood products and finished goods to be labeled by bundle or box, as opposed to being labeled individually. EPA generally agrees with those commenters who cited cost and feasibility concerns with an individual product labeling requirement. In addition, as noted by

some commenters, EPA agrees that an individual labeling requirement provides minimal benefit when applied to composite wood products supplied to fabricators who then incorporate them into finished goods. In lieu of labeling of individual products, EPA is requiring entities that divide and repackage bundles of regulated composite wood products or purchase these products for resale to have a system sufficient to identify the supplier of the panel and link the information on the label to the products. This information must be made available to potential customers upon request. Similarly, entities importing, selling, offering for sale or supplying finished goods that are not individually labeled must retain a copy of the label and make it available to potential customers upon request.

J. Sell-Through Provisions and Stockpiling

TSCA Title VI directs EPA to establish sell-through provisions for composite wood products, and finished goods containing regulated composite wood products, based on a designated date of manufacture, or ''manufactured-by'' date. Under the statute, composite wood products or finished goods manufactured before the specified manufactured-by date are not subject to statutory emission standards or testing requirements. TSCA Title VI requires that the manufactured-by date be no earlier than 180 calendar days after promulgation of the final implementing regulations.

TSCA Title VI also directs EPA to prohibit the sale of inventory that was stockpiled, which is defined in the statute as manufacturing or purchasing composite wood products between the date the statute was enacted and the date 180 calendar days following the promulgation of these regulations at a rate significantly greater than the rate during a particular base period. EPA is directed to define what constitutes ''a rate significantly greater'' and to establish the base period. Under the statute, the base period must end before July 7, 2010, the date that the Formaldehyde Standards for Composite Wood Products Act was enacted.

As proposed, EPA is finalizing the manufactured-by date at December 12, 2017, except that, as discussed in Unit III.A., the manufactured-by date for laminated products is December 12, 2023. EPA has determined that, for panel producers other than laminated product producers, this year will be sufficient to get all of the infrastructure in place.

The manufactured-by dates apply to regulated composite wood products, including laminated products, as well as finished goods containing such products. Composite wood products manufactured before the applicable manufactured-by date are not subject to the emission standards, nor are they required to be labeled or tested for emissions. Laminated products manufactured before the manufactured-by date for laminated products are not subject to the emission standards, but, after the manufactured-by date for composite wood products other than laminated products, they must be made with compliant composite wood product platforms and must be labeled in accordance with the fabricator labeling requirements. Composite wood products and laminated products manufactured before the applicable manufactured-by date can be incorporated into finished goods at any time. Retailers, fabricators, and distributors are permitted to continue to buy and sell these composite wood products and laminated products, as well as finished goods that incorporate these products, because they would be considered compliant with TSCA Title VI and its implementing regulations, assuming the absence of stockpiling as discussed later. Under TSCA, the term ''manufacture'' includes import, so the ''manufactured-by'' date would effectively be an ''imported-by'' date for imported goods.

In order to establish that a regulated composite wood product was made before the manufactured-by date, the panel producer or importer and any subsequent distributor, retailer or fabricator must document when the product was manufactured or that the panel was in their inventory on or before the date 180 calendar days after promulgation of these regulations. In the case of a finished good, any subsequent distributor, retailer or fabricator must document that the composite wood products making up the finished good were either manufactured before the manufactured-by date or were manufactured in accordance with TSCA Title VI. Documentation that the finished goods were in their inventory on or before that date 180 calendar days after promulgation of these regulations would be sufficient for these purposes. In order to reduce consumer confusion, products that are entirely made before the manufactured-by date may not be labeled as compliant with TSCA Title VI.

Selling stockpiled regulated composite wood panels and finished goods containing regulated composite wood products is prohibited. EPA proposed to define stockpiling as manufacturing or purchasing composite wood products between July 7, 2010, the date that the Formaldehyde Standards for Composite Wood Products Act was signed into law by the President, and 180 calendar days after promulgation of these regulations, for the purpose of circumventing the TSCA Title VI emission standards, at an average annual rate 20 percent greater than the amount manufactured or purchased during the 2009 calendar year. EPA is finalizing the provisions substantially as proposed, but clarifying that the Agency has the burden of showing that an increase in production or purchasing was for the purpose of circumventing the emission standards. Entities that have a greater than 20 percent increase in purchasing or production of regulated composite wood panels for some reason other than circumventing the emission standards will not be deemed to be stockpiling. Other reasons may include an immediate increase in customer demand or sales, or a planned business expansion. The stockpiling provisions do not apply to entities that were not in existence at the beginning of calendar year 2009 because a pre-TSCA Title VI baseline of production does not exist for these companies.

K. Import Certification

TSCA Title VI directs EPA, in coordination with U.S. Customs and Border Protection (CBP) and other appropriate Federal departments and agencies, to revise regulations promulgated pursuant to TSCA section 13 as necessary to ensure compliance. The TSCA section 13 regulations, promulgated by CBP, require importers to certify that shipments of chemical substances and mixtures are either in compliance with TSCA or not subject to TSCA. Most, if not all, products subject to TSCA Title VI would be considered articles. Articles, defined in 19 CFR 12.120(a), are generally formed to specific shapes or designs during manufacture and have end use functions related to their shape or design. Articles are generally exempt from the TSCA section 13 certification requirements, but the regulations at 19 CFR 12.121(b) recognize that EPA has the authority to, by regulation or order, make the requirements applicable to articles.

As proposed, no changes are being made to the regulations promulgated pursuant to TSCA section 13, but this final rule requires TSCA section 13 import certification for composite wood products that are articles. This does not represent a statement on the relative toxicity of formaldehyde, or of composite wood products; rather, it is a certification of compliance with TSCA.

Although this requirement is being finalized as proposed, EPA is delaying the compliance date for the import certification requirements until two years after the date of the publication of this rule to provide additional time for the supply chain to become familiar with the requirements and make any necessary adjustments to existing business processes. The Agency is committed to conducting outreach with regulated parties and working with industry associations to help educate producers and importers of composite wood products about the requirements of this final rule, including the TSCA section 13 import certification requirements. Beginning shortly after publication of the final rule, EPA will conduct outreach to the importer community which will entail providing training on the importer provisions and how to comply with the certification requirement. The outreach will include webinars, attending industry conferences, and meeting with interested groups. In addition, EPA is developing guidance for importers with additional information about how to comply with the certification requirement. The guidance will be in the form of documents that can be downloaded from EPA's Web site at: *http://www.epa.gov/formaldehyde.*

To comply with the import certification requirements, importers (or their agents) will be required to provide the following certification statement with other paperwork accompanying the imported shipment:

> I certify that all chemical substances in this shipment comply with all applicable rules or orders under TSCA and that I am not offering a chemical substance for entry in violation of TSCA or any applicable rule or order thereunder.

The documentation required by this final rule will generally be a sufficient basis for the import certification to the extent that such documentation demonstrates compliance. TSCA certification statements provided in paper have commonly been included on or attached to bills of lading, commercial invoices, or comparable documents. In order to submit a TSCA certification statement electronically, importers or their agents would need to submit it with their Customs entry filings for shipments in the Automated Commercial Environment (*i.e.,* CBP's primary automated and electronic system for commercial trade processing.) or any other CBP-authorized electronic data interchange system.

L. Enforcement

The failure to comply with any provision of TSCA Title VI, or the regulations implementing TSCA Title VI, is a prohibited act under TSCA section 15. Any person who commits a prohibited act under TSCA section 15 can be held liable for civil and criminal penalties, as appropriate.

M. HUD's Manufactured Housing Program

Under the authority of the National Manufactured Housing Construction and Safety Standards Act of 1974, 42 U.S.C. 5401 *et seq.,* HUD regulates the construction of all manufactured homes built in the United States. The HUD standards established pursuant to the 1974 Act cover many aspects of manufactured home construction, including body and frame requirements, thermal protection, plumbing, electrical, and fire safety. (*See* 24 CFR parts 3280 and 3282). HUD oversees the enforcement of the construction standards through third party inspection agencies and State governments.

EPA and HUD are working together to ensure the appropriate application and implementation of requirements under the Formaldehyde Standards for Composite Wood Products Act of 2010. The HUD standards for manufactured housing include specific formaldehyde emission limits for plywood and particleboard materials installed in manufactured housing. In contrast, TSCA Title VI covers only hardwood plywood, a subset of plywood. In addition, TSCA Title VI also covers medium-density fiberboard, which is not covered by the current HUD standards. The HUD emission limits apply to any plywood or particleboard bonded with a resin system and to any plywood or particleboard coated with a surface finish containing formaldehyde. HUD's current formaldehyde emission limits are 0.2 ppm for plywood and 0.3 ppm for particleboard, as measured by ASTM E1333–96. These emission limits are higher than those established by the 2010 Act, but section 4 of the 2010 Act directs HUD to update its regulations to ensure that the regulations reflect the standards established by section 601 of TSCA.

In addition, the 2010 Act established a definition of ''recreational vehicle'' that is based on the definition established by HUD that is in effect at 24 CFR 3282.8 on the date of promulgation of regulations pursuant to TSCA Title VI. EPA acknowledges that HUD issued a proposed rule (81 FR 6806, February 9, 2016) that would, among other things, remove the current definition of ''recreational vehicle'' from 24 CFR 3282.8 and add an amended version of this definition in a proposed new CFR section. EPA and HUD believe that it was the intent of Congress that same definition of ''recreational vehicle'' be used in both this final rule and HUD's manufactured housing regulations. Therefore, EPA and HUD will continue working together to ensure that the regulatory definition is appropriately harmonized.

In the proposal, EPA requested comment on how best to harmonize EPA's regulatory program under TSCA Title VI with HUD's manufactured homes program. EPA received a handful of comments on this aspect of the proposal. Two commenters recommended a general consistency between the EPA and HUD regulations, although they did not offer specifics. At the suggestion of one of the commenters, EPA has added a sentence to the applicability provisions of the final rule to make it clear that the requirements apply to composite wood products used in manufactured housing.

IV. Incorporation by Reference

This final rule incorporates a variety of voluntary consensus standards by reference. In many cases, the consensus standards are used because TSCA Title VI directs that they be used. TSCA Title VI provides for quarterly and quality control testing for hardwood plywood, particleboard, and MDF using specified methods developed by ASTM International. TSCA Title VI also refers freely to voluntary consensus standards to assist in defining the composite wood products that are subject to the statute, such as hardwood plywood (ANSI/HPVA HP–1–2009), particleboard (ANSI A208.1–2009), and medium-density fiberboard (ANSI A208.2–2009) (Refs. 26, 47, and 72). Other voluntary consensus standards are being incorporated by reference into this final rule to provide flexibility to panel producers by permitting them to use additional quality control test methods already allowed by CARB under their ATCM. Finally, EPA is relying on voluntary consensus standards developed by ISO/IEC and already in use in the conformity assessment sector to establish a third-party certification program that is as robust as possible. Most of the entities that would have to comply with one of these standards, or at least have a good understanding of the contents of one of these standards, already own a copy. It would be difficult to be in business as a hardwood plywood mill, for example, if you were not familiar with the industry consensus on what is hardwood plywood. The

standards are all readily available electronically or in print, and are relatively inexpensive (less than $150 a copy).

The voluntary consensus standards being incorporated by reference into this final rule are summarized in this unit, along with contact information for purchasing a copy of each standard. Each of these standards is available for inspection at the OPPT Docket in the EPA Docket Center (EPA/DC) at Rm. 3334, EPA, West Bldg., 1301 Constitution Ave. NW., Washington, DC. The EPA/DC Public Reading Room hours of operation are 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number of the EPA/DC Public Reading room is (202) 566–1744, and the telephone number for the OPPT Docket is (202) 566–0280.

(a) *AITC, CPA, and HPVA standards.* Copies of these standards may be obtained from the specific publisher, as noted below, or from the American National Standards Institute, 1899 L Street NW., 11th Floor, Washington, DC 20036, or by calling (202) 293–8020, or at *http://ansi.org/.* Note that ANSI/AITC A190.1–2002 is published by the American Institute of Timber Construction. ANSI A135.4–2012, ANSI A135.5–2012, ANSI A135.6–2012, ANSI A135.7–2012, ANSI A208.1–2009, and ANSI A208.2–2009 are published by the Composite Panel Association. And ANSI ANSI/HPVA–HP–1–2009 is published by the Hardwood Plywood Veneer Association.

1. ANSI A135.4–2012, American National Standard, Basic Hardboard. This standard defines hardboard and describes requirements and test methods for water absorption, thickness swelling, modulus of rupture, tensile strength, surface finish, dimensions, squareness, moisture content, and edge straightness of five classes of basic hardboard, along with methods of identifying products conforming to the standard.

2. ANSI A135.5–2012, American National Standard, Prefinished Hardboard Paneling. This standard describes requirements and methods of testing for the dimensions, squareness, edge straightness, and moisture content of prefinished hardboard paneling and for the finish of the paneling, along with methods of identifying products conforming to the standard.

3. ANSI A135.6–2012, American National Standard, Engineered Wood Siding. This standard describes requirements and methods of testing for the dimensions, straightness, squareness, physical properties, and surface characteristics of engineered wood siding. This standard also defines trade terms used and describes methods of identifying products conforming to the standard.

4. ANSI A135.7–2012, American National Standard, Engineered Wood Trim. This standard describes requirements and methods of testing for the properties of engineered wood trim intended to be used as architectural trim. While primarily for exterior applications, these products can also be used indoors. Trim is the woodwork in the finish of a building, especially around openings and at corners, that is intended to be decorative and/or provide protection for joints covered by the product. Typical exterior trim includes corner boards, fascia, brick mold and window trim. Because engineered wood trim is not intended to be used as a structural material, it has no structural load-bearing performance requirements.

5. ANSI A208.1–2009, American National Standard, Particleboard. This standard describes the requirements and test methods for dimensional tolerances, physical and mechanical properties and formaldehyde emissions for particleboard, along with methods of identifying products conforming to the standard.

6. ANSI A208.2–2009, American National Standard, Medium Density Fiberboard (MDF) for Interior Applications. This standard describes the requirements and test methods for dimensional tolerances, physical and mechanical properties and formaldehyde emissions for MDF, along with methods of identifying products conforming to the standard.

7. ANSI/AITC A190.1–2002, American National Standard for Wood Products, Structural Glued Laminated Timber. This standard describes minimum requirements for the manufacture and production of structural glued laminated timber, including size tolerances, grade combinations, lumber, adhesives, and appearance grades.

8. ANSI/HPVA HP–1–2009, American National Standard for Hardwood and Decorative Plywood. This standard details the specific requirements for all face, back, and inner ply grades of hardwood plywood as well as formaldehyde emission limits, moisture content, tolerances, sanding, and grade marking.

(b) *ASTM material.* Copies of these materials may be obtained from ASTM International, 100 Barr Harbor Dr., P.O. Box C700, West Conshohocken, PA 19428–2959, or by calling (877) 909–ASTM, or at *http://www.astm.org.*

1. ASTM D5055–05, Standard Specification for Establishing and Monitoring Structural Capacities of Prefabricated Wood I-Joists. This specification gives procedures for establishing, monitoring, and reevaluating structural capacities of prefabricated wood I-joists, such as shear, moment, and stiffness. The specification also provides procedures for establishing common details and itemizes certain design considerations specific to wood I-joists.

2. ASTM D5456–06, Standard Specification for Evaluation of Structural Composite Lumber Products. This specification describes initial qualification sampling, mechanical and physical tests, analysis, and design value assignments. Requirements for a quality-control program and cumulative evaluations are included to ensure maintenance of allowable design values for the product.

3. ASTM D5582–00 (Reapproved 2006), Standard Test Method for Determining Formaldehyde Levels from Wood Products Using a Desiccator. This test method describes a small scale procedure for measuring formaldehyde emissions potential from wood products. The formaldehyde level is determined by collecting airborne formaldehyde in a small distilled water reservoir within a closed desiccator. The quantity of formaldehyde is determined by a chromotropic acid test procedure.

4. ASTM D6007–02, Standard Test Method for Determining Formaldehyde Concentrations in Air from Wood Products Using a Small-Scale Chamber. This test method measures the formaldehyde concentrations in air from wood products under defined test conditions of temperature and relative humidity. Results obtained from this small-scale chamber test method are intended to be comparable to results obtained testing larger product samples by the large chamber test method for wood products, Test Method E 1333.

5. ASTM E1333–10, Standard Test Method for Determining Formaldehyde Concentrations in Air and Emission Rates from Wood Products Using a Large Chamber. This test method measures the formaldehyde concentration in air and emission rate from wood products containing formaldehyde under conditions designed to simulate product use. The concentration in air and emission rate is determined in a large chamber under specific test conditions of temperature and relative humidity. The general procedures are also intended for testing product combinations at product-loading ratios and at air-exchange rates typical of the indoor environment.

(c) *CEN materials.* Copies of these materials are not directly available from the European Committee for Standardization, but from one of CEN's National Members, Affiliates, or Partner Standardization Bodies. To purchase a standard, go to CEN's Web site, *http://www.cen.eu,* and select ''Products'' for more detailed information.

1. BS EN 120:1992, Wood based panels. Determination of formaldehyde content- Extraction method called the perforator method, English Version. This European standard describes an extraction method, known as the perforator method, for determining the formaldehyde content of unlaminated and uncoated wood-based panels.

2. BS EN 717–2:1995, Wood-based panels—Determination of formaldehyde release—Part 2: Formaldehyde release by the gas analysis method, English Version. This European standard describes a procedure for determination of accelerated formaldehyde release from wood-based panels.

(d) *Georgia Pacific material.* Copies of this material may be obtained from Georgia-Pacific Chemicals LLC, 133 Peachtree Street, Atlanta, GA 30303, or by calling (877) 377–2737, or at *http://www.gp-dmc.com/default.aspx.*

1. The GP Dynamic Microchamber computer-integrated formaldehyde test system, User Manual. Copyright 2012. The Dynamic Micro Chamber is a patented process for testing formaldehyde emissions (U.S. Patent # 5,286,363). The DMC provides a means of obtaining accurate formaldehyde emissions information from pressed panel products. This Manual describes the process for using the DMC.

2. The Dynamic Microchamber computer integrated formaldehyde test system, User Manual, Copyright 2007. This is the older version of the DMC Manual, which may also be followed when using the DMC to conduct formaldehyde emissions testing.

(e) *ISO material.* Copies of these materials may be obtained from the International Organization for Standardization, 1, ch. de la Voie-Creuse, CP 56, CH–1211, Geneve 20, Switzerland, or by calling +41–22–749–01–11, or at *http://www.iso.org.*

1. ISO/IEC 17011:2004(E), Conformity assessments—General requirements for accreditation bodies accrediting conformity assessment bodies (First edition), September 1, 2004. This standard specifies general requirements for accreditation bodies assessing and accrediting conformity assessment bodies. For the purposes of this standard, conformity assessment bodies are organizations providing the following conformity assessment services: Testing, inspection, management system certification, personnel certification, product certification and, in the context of this standard, calibration.

2. ISO/IEC 17020:2012(E), General criteria for the operation of various types of bodies performing inspections (Second Edition) March 1, 2012. This standard covers the activities of inspection bodies whose work can include the examination of materials, products, installations, plants, processes, work procedures or services, and the determination of their conformity with requirements and the subsequent reporting of results of these activities.

3. ISO/IEC 17025:2005(E), General requirements for the competence of testing and calibration laboratories (Second Edition), May 15, 2005. This standard specifies the general requirements for the competence to carry out tests or calibrations, including sampling. It covers testing and calibration performed using standard methods, non-standard methods, and laboratory-developed methods.

4. ISO/IEC 17065:2012(E), Conformity assessment—Requirements for bodies certifying products, processes and services (First Edition), September 15, 2012. This standard specifies requirements that are intended to ensure that certification bodies operate certification schemes in a competent, consistent and impartial manner. This standard can be used as a criteria document for accreditation or peer assessment or designation by governmental authorities, scheme owners and others.

(f) Copies of JIS A 1460:2001 Building boards-Determination of formaldehyde emission-Desiccator method, English Version, may be obtained from Japanese Industrial Standards, 1–24, Akasaka 4, Minatoku, Tokyo 107–8440, Japan, or by calling +81–3–3583–8000, or at *http://www.jsa.or.jp/.* This method describes a method for testing formaldehyde emissions from construction boards by measuring the concentration of formaldehyde absorbed in distilled or deionized water from samples of a specified surface area placed in a glass desiccator for 24 hours.

(g) *NIST material.* Copies of these materials may be obtained from the National Institute of Standards and Technology (NIST) by calling (800) 553–6847 or from the U.S. Government Printing Office (GPO). To purchase a NIST publication you must have the order number. Order numbers may be obtained from the Public Inquiries Unit at (301) 975–NIST. Mailing address: Public Inquiries Unit, NIST, 100 Bureau Dr., Stop 1070, Gaithersburg, MD 20899–1070. If you have a GPO stock number, you can purchase printed copies of NIST publications from GPO. GPO orders may be mailed to: U.S. Government Printing Office, P.O. Box 979050, St. Louis, MO 63197–9000, placed by telephone at (866) 512–1800 (DC Area only: (202) 512–1800), or faxed to (202) 512–2104. Additional information is available online at: *http://www.nist.gov.*

1. Voluntary Product Standard PS 1–07 (2007), Structural Plywood. This standard describes the principal types and grades of structural plywood, covering the wood species, veneer grading, adhesive bonds, panel construction and workmanship, dimensions and tolerances, marking, moisture content and packaging of structural plywood intended for construction and industrial uses. Test methods to determine compliance and a glossary of trade terms and definitions are included, as is a quality certification program involving inspection, sampling, and testing of products identified as complying with this standard by qualified testing agencies.

2. Voluntary Product Standard PS 2–04 (2004), Performance Standard for Wood-Based Structural-Use Panels. This standard covers performance requirements, adhesive bond performance, panel construction and workmanship, dimensions and tolerances, marking, and moisture content of structural-use panels, such as plywood, waferboard, oriented strand board (OSB), structural particle board, and composite panels. The standard includes test methods, a glossary of trade terms and definitions, and a quality certification program involving inspection, sampling, and testing of products for qualification under the standard.

V. References

The following is a listing of the documents that are specifically referenced in this document. The docket includes these documents and other information considered by EPA, including documents that are referenced within the documents that are included in the docket, even if the referenced document is not physically located in the docket. For assistance in locating these other documents, please consult the technical person listed under **FOR FURTHER INFORMATION CONTACT.**

1. California Environmental Protection Agency Air Resources Board (CARB). Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products. Final Regulation Order. April 2008. *http://*

www.arb.ca.gov/regact/2007/compwood07/compwood07.htm.
2. USEPA. Policy on Evaluating Health Risks to Children. 1995. *http://www.epa.gov/sites/production/files/2014-5/documents/1995_childrens_health_policy_statement.pdf.*
3. USEPA, Office of Chemical Safety and Pollution Prevention (OCSPP). Economic Analysis of the Formaldehyde Standards for Composite Wood Products Act Final Rule (Economic Analysis). December 2015.
4. World Health Organization. Concise International Chemical Assessment Document 40: Formaldehyde. Published under the joint sponsorship of the United Nations Environment Programme, the International Labour Organization, and the World Health Organization, and produced within the framework of the Inter-Organization Programme for the Sound Management of Chemicals. Geneva. 2002.
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VI. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at *http://www2.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 an economically significant regulatory action that was submitted to the Office of Management and Budget (OMB) for review under Executive Order 12866 (58 FR 51735, October 4, 1993) and Executive Order 13563 (76 FR 3821, January 21, 2011). Any changes made in response to OMB recommendations have been documented in the docket. EPA prepared an analysis of the potential costs and benefits associated with this action. This analysis, ''Economic Analysis of the Formaldehyde Standards for Composite Wood Products Act Final Rule'' (Economic Analysis, Ref. 3) is available in the docket and is summarized here.

1. *Entities subject to the rule.* EPA analyzed the effect of this rule on accreditation bodies, TPCs, panel producers, fabricators, wholesalers (*i.e.,* distributors and importers), and retailers. Due to the similarities between this rule and the CARB ATCM, the incremental costs and benefits of this rule are determined in part by the degree to which firms are already complying with the ATCM. Table 3 summarizes the estimated number of entities subject to the TSCA Title VI rule and their baseline compliance with the CARB ATCM.

TABLE 3—NUMBER OF ENTITIES IN THE UNITED STATES SUBJECT TO THE RULE

Type	TSCA universe	Baseline condition (CARB ATCM universe)
Accreditation bodies	4 firms	All 4 ABs currently accredit TPCs participating in the CARB ATCM program.
Third-party certifiers	11 firms	All 11 TPCs currently certify stock panels mills under the CARB ATCM.
Stock panel producers (*i.e.,* manufacturers).	90 mills operated by 54 firms	79 mills have been certified by CARB for at least one product, but 16 mills make at least one product that is not CARB certified. Depending on the product type, 98% to 100% of U.S. production volume is CARB certified.
Laminated product producers (*i.e.,* laminators).	7,000 to 14,000 firms	Laminators are considered fabricators under the CARB ATCM. Nationally, 32,000 of the combined group are subject to CARB ATCM requirements.
Fabricators	66,000 to 73,000 firms	

TABLE 3—NUMBER OF ENTITIES IN THE UNITED STATES SUBJECT TO THE RULE—Continued

Type	TSCA universe	Baseline condition (CARB ATCM universe)
Wholesalers (i.e., distributors)	86,000 firms, of which 24,000 are importers.	32,000 are subject to CARB ATCM requirements, of which 9,000 are importers.
Retailers	759,000 firms	195,000 are subject to CARB ATCM requirements.
Total	925,000 firms	

2. *Options evaluated.* Congress directed EPA to consider a number of elements for inclusion in the implementing regulations, and EPA considered various options for addressing these elements. For many of the provisions, such as the product-inventory sell-through provision and the stockpiling prohibition, EPA did not have the data needed to make quantitative estimates of the effects of different options. EPA did have sufficient information to analyze options for how the definition of hardwood plywood addresses laminated products, the recordkeeping required by the rule, and the frequency of quality control testing for small production volumes of hardwood plywood. The options EPA analyzed are displayed in Table 4.

TABLE 4—OPTIONS ANALYZED IN THE ECONOMIC ANALYSIS

Option	Description
Option 1: Laminates included in hardwood plywood (HWPW) definition with NAF exemption.	Laminated products made with resins formulated with no-added formaldehyde as part of the resin cross-linking structure are exempt from the definition of hardwood plywood. Otherwise, laminated product producers must be certified by a TPC, and have products tested to demonstrate that they meet a 0.05 ppm emission standard beginning 1 year after promulgation of the final rule. This option is equivalent to EPA's proposed rule from June 2013. Reduced recordkeeping for wholesalers and retailers that do not import. Reduced quality control (QC) testing for small hardwood plywood production.
Option 2 (*Final Rule*): Laminates included in HWPW definition with NAF and PF exemption.	Laminated products made with phenol-formaldehyde (PF) resins or resins formulated with no-added formaldehyde as part of the resin cross-linking structure are exempt from the definition of hardwood plywood. Otherwise, laminated product producers have 7 years after promulgation of the rule to be certified by a TPC, and have products tested to demonstrate that they meet a 0.05 ppm emission standard. Construction firms are not considered fabricators or retailers. Reduced recordkeeping for fabricators, wholesalers and retailers that do not import. Reduced QC testing for small hardwood plywood production.
Option 3: Platform-specific emissions limits for laminates with reduced testing with NAF and PF exemption.	Laminated products made with phenol-formaldehyde resins or resins formulated with no-added formaldehyde as part of the resin cross-linking structure are exempt from the definition of hardwood plywood. Otherwise, laminated products must have an annual small chamber test demonstrating that they meet the emission standards of the platform used (0.05, 0.09, 0.11, or 0.13 ppm) beginning 2 years after promulgation, but certification is not required. Reduced recordkeeping for wholesalers and retailers that do not import. Reduced QC testing for small hardwood plywood production.
Option 4: Laminate emissions standard consistent with CARB discussion draft.	Laminated products must meet an emissions standard of 0.13 ppm beginning 3 years after promulgation, but no testing or certification is required for laminated product producers. (The laminated product requirements are consistent with the CARB discussion proposal for laminated products from March 2014.) Reduced recordkeeping for wholesalers and retailers that do not import. Reduced QC testing for small hardwood plywood production. Supplier notification required.
Option 5: All laminates exempt from HWPW definition.	No emission standards apply to laminated products, and there are no testing or certification requirements for laminated product producers. Reduced recordkeeping for wholesalers and retailers that do not import. Reduced QC testing for small hardwood plywood production. Supplier notification required.
Option 6: Fully consistent with current CARB ATCM.	No emissions standard and no testing or certification required for laminated products. This option does not include the reductions in recordkeeping requirements or the reductions in QC testing for small volume hardwood plywood production that are included in the other options. Supplier notification required.

3. *Benefits.* Reductions in formaldehyde emissions from composite wood products benefits individuals who reside, work, or otherwise spend a substantial amount of time where new composite wood products are introduced to an indoor space. The Economic Analysis (Ref. 3) estimates the benefits of lowering formaldehyde emissions from composite wood products.

Formaldehyde is classified as a known human carcinogen by the National Toxicology Program, based on evidence in humans and animals (Ref. 3). EPA's quantified benefits estimates include the avoided cases of nasopharyngeal cancer (representing upper respiratory tract cancers caused by exposure to formaldehyde). The National Toxicology Program (NTP) has identified formaldehyde as causing myeloid leukemia, and the NRC review of the formaldehyde assessment in NTP's 12th Report on Carcinogens (Ref. 13) concluded that there is a causal association between formaldehyde exposure and myeloid leukemia. The International Agency for Research on Cancer Monograph 100F concluded that formaldehyde causes leukemia with a majority of the Working Group viewing the evidence as sufficient. EPA did not

have sufficient information to derive a concentration-response function for myeloid leukemia and thus could not estimate the number of cases that would be avoided by reducing formaldehyde exposure.

In addition to cancer, the 2010 draft IRIS assessment identified seven categories of non-cancer health effects from formaldehyde exposure (sensory irritation, upper respiratory tract pathology, pulmonary function effects, asthma and allergic sensitization, immune function effects, neurological and behavioral toxicity, and developmental and reproductive toxicity) and it proposed reference concentrations (RfCs) based on four effects: sensory irritation, pulmonary function effects, asthma and allergic sensitization (atopy), and reproductive toxicity. The NRC review of the draft IRIS assessment was released in April 2011 (Ref. 73), and EPA is currently revising the draft in response.

Overall, EPA concluded that, at this time, it only has sufficient information on the relationship between formaldehyde exposure and sensory irritation (*i.e.,* irritation of the eye, nose, and throat) to include a valuation estimate in the overall benefits analysis. However, the valuation studies that were the basis of EPA's benefits estimate only reflected the willingness to pay to avoid eye irritation or itching eyes. EPA's quantified benefits calculation may be underestimating the benefits of avoided exposures, because individuals are likely to have a higher willingness to pay to avoid the additional symptoms of nose and throat irritation.

Formaldehyde exposure is associated with a range of respiratory related effects. Effects from repeated exposure in humans include irritation of the upper respiratory tract, decrements in pulmonary function, and nasal epithelial lesions such as metaplasia and loss of cilia. Animal studies suggest that formaldehyde may also cause airway inflammation. The potential effects of occupational and residential formaldehyde exposure on asthma have been investigated in a number of studies. Although findings are mixed, formaldehyde appears to trigger asthma attacks or related respiratory symptoms (such as wheezing or decreased pulmonary function) in those occupationally exposed and/or sensitized. A number of studies have found no association between formaldehyde exposure and the prevalence of asthma symptoms at low exposure levels; other studies, however, observed increased risks of other allergic conditions or increased severity of asthma symptoms among children with wheeze in the previous year. There are several studies that suggest that formaldehyde may increase the risk of asthma, particularly in the young, including a study that provided suggestive evidence that children are more sensitive than adults to exposure to formaldehyde in relation to chronic respiratory symptoms and pulmonary function. Formaldehyde exposure has been associated with immune system perturbations, suggesting that potential effects of formaldehyde exposure on the immune system may be an important part of biological pathways for triggering asthmatic responses or the severity of asthma symptoms. EPA does not feel that it has sufficient information at this time on the relationship between formaldehyde exposure and respiratory outcomes to include a valuation estimate in the overall benefits analysis.

Epidemiologic studies suggest an association between occupational exposure to formaldehyde and adverse reproductive outcomes in women, including reduced fertility. EPA does not feel that it has sufficient information at this time on the relationship between formaldehyde exposure and reduced fertility to include a valuation estimate in the overall benefits analysis.

EPA concluded that, at this time, it only has sufficient information about the relationship of formaldehyde exposure and the number of cases of nasopharyngeal cancer and eye irritation to include valuation estimates of the endpoints in the quantified benefits analysis. Although uncertainty remains regarding how best to quantify formaldehyde exposure's effect on other health outcomes, EPA considers these effects to be important unquantified impacts that contribute to the overall benefits of this rule, as indicated by the ''+B'' in the various tables summarizing benefits.

Table 5 shows the number of cases avoided for an average year of regulation. The avoided cancer cases occur over the lifetimes of the individuals with exposure reductions.

TABLE 5—NUMBER OF CASES AVOIDED FOR AN AVERAGE YEAR OF REGULATION

Option	Cancer		Eye irritation	
	Lower estimate	Higher estimate	Lower estimate	Higher estimate
Option 1: Laminates Included in HWPW Definition with NAF Exemption	30	74	101,840	686,754
Option 2: Final Rule—Laminates Included in HWPW Definition after 7 Years with NAF and PF Exemption	26	65	92,218	604,155
Option 3: Platform-Specific Emissions Limits for Laminates with Reduced Testing	28	69	98,279	642,120
Option 4: Laminate Emissions Standard Consistent with CARB Discussion Draft	19	64	79,190	600,072
Option 5: Exempt All Laminates from HWPW Definition	11	27	53,730	273,758
Option 6: Fully Consistent with Current CARB ATCM	11	27	53,730	273,758

Table 6 displays the benefits for the options. The total quantified benefits of the rule are between $64 million and $186 million per year (in 2013 dollars) using a 3% discount rate for annualization, and between $26 million and $79 million per year using a 7% discount rate. The majority of the quantified benefits are attributable to reductions in cancer risk.

TABLE 6—BENEFITS OF THE OPTIONS

[Millions 2013$]

Option	3% Discount rate		7% Discount rate	
	Lower estimate	Higher estimate	Lower estimate	Higher estimate
Option 1: Laminates included in HWPW Definition with NAF Exemption	$77 + B	$226 + B	$34 + B	$105 + B
Option 2: Final Rule—Laminates included in HWPW definition after 7 Years with NAF and PF Exemption.	64 + B	186 + B	26 + B	79 + B
Option 3: Platform-Specific Emissions Limits for Laminates with Reduced Testing	71 + B	207 + B	30 + B	95 + B
Option 4: Laminate Emissions Standard Consistent with CARB Discussion Draft	48 + B	189 + B	21 + B	86 + B
Option 5: All Laminates Exempt from HWPW Definition	29 + B	82 + B	13 + B	37 + B
Option 6: Fully Consistent with Current CARB ATCM	29 + B	82 + B	13 + B	37 + B

"B" represents the unquantified health benefits

There are various reasons why the total quantified benefits may be underestimated. For example, there are a number of potential health effects that are not included in this analysis, which are represented in the table using the indicator "+B". Monetization of any health endpoint identified requires an estimated concentration-response function that can be appropriately linked for use in the economic analyses. At this time, EPA only has sufficient data to quantify the benefits of avoided cases of cancer and sensory irritation, and the benefits estimates for these two endpoints are incomplete. The estimated cancer benefits do not include avoided cases of myeloid leukemia. The estimated benefits for sensory irritation are only based on eye irritation, and do not reflect the benefits of avoiding nose and throat irritation.

4. *Costs.* The Economic Analysis estimates the incremental cost to firms located in the U.S. of complying with the requirements of the rule compared to the activities that firms are already undertaking, often in response to the CARB ATCM. The total costs by option are displayed in Table 7. Annualized costs of the rule are $38 million to $83 million per year using a 3% discount rate and $43 million to $78 million per year using a 7% discount rate. Annualized costs for the other options ranged from $87 million to $297 million per year using a 3% discount rate, and $105 million to $301 million per year using a 7% discount rate.

TABLE 7—TOTAL COSTS BY OPTION

[Millions 2013$]

Option	Annualized (3%)		Annualized (7%)	
	Low	High	Low	High
Option 1: Laminates included in hardwood plywood (HWPW) definition with NAF exemption	$155	$297	$167	$301
Option 2: Final Rule—Laminates included in HWPW definition with NAF and PF exemption	38	83	43	78
Option 3: Platform-specific emissions limits for laminates with reduced testing	97	102	114	119
Option 4: Laminate emissions standard consistent with CARB discussion draft	88	88	105	105
Option 5: All laminates exempt from HWPW definition	87	87	105	105
Option 6: Fully consistent with current CARB ATCM	124	124	142	142

Table 8 indicates the cost of the final rule (Option 2) by industry type.

TABLE 8—COSTS OF FINAL RULE BY INDUSTRY TYPE

[Millions 2013$]

Industry type	Annualized (3%)		Annualized (7%)	
	Low	High	Low	High
Accreditation Bodies	$0.01	$0.01	$0.01	$0.01
Third-Party Certifiers	0.01	0.01	0.01	0.01
Stock panel producers	2	2	2	2
Laminators	26	72	26	62
Fabricators (excluding laminators)	6	5	9	8
Wholesalers	1	1	2	2
Retailers	3	3	5	5
Total	38	83	43	78

The cost estimates for Options 1 and 2 may be overestimates, in that they underestimate the savings that may accrue to laminated product producers that switch to phenol-formaldehyde resins or resins formulated with no-added formaldehyde as part of the resin cross-linking structure in order to avoid the costs of TPC certification and product testing. EPA's calculations assumed that producers switching to qualified resins may incur capital costs for new equipment in order to use qualified resins, and ongoing costs (such as decreases in productivity, or increases in resin costs and product rejection rates) such that the total cost of switching resins would be equivalent to the cost of certification and testing. In reality, EPA believes that Option 1's NAF exemption and Option 2's NAF and PF exemption would result in significant cost savings for some producers. However, EPA lacked sufficient information to estimate the magnitude of such cost savings.

Furthermore, EPA may be overestimating the cost for Option 2 because the analysis does not account for potential long-term savings that may accrue as a result of setting the manufactured-by date for laminated products 7 years from the promulgation of the rule. EPA believes that the 7 year period will reduce costs because laminated product producers will be able to more efficiently evaluate different resin technologies and, where they choose to switch to a phenol-formaldehyde resin or a resin formulated with no-added formaldehyde as part of the resin cross-linking structure, to successfully implement a new resin in their production process. There may also be technological innovation during this 7 year period that will reduce the cost or remove some of the technical barriers to using qualified resins in some applications. However, EPA did not have sufficient information to estimate the savings to due efficiencies or innovation. Furthermore, the industry may be able to develop and conduct studies that support additional exemptions or changes to the rule during this 7 year period, or after that period, and apply to the Agency for an exemption of their laminated product from the definition of hardwood plywood. Again, EPA was unable to predict the cost savings that may result from such activities.

5. *Net benefits.* Net benefits are the difference between benefits and costs. The net benefits for the options are displayed in Table 9. The rule is estimated to result in quantified net benefits of −$19 million to $148 million per year using a 3% discount rate, and −$53 million to $36 million per year using a 7% discount rate. Quantified net benefits for the other options range from −$220 million to $109 million per year using a 3% discount rate and −$268 million to −$20 million per year using a 7% discount rate. There are additional unquantified benefits due to other avoided health effects. EPA considers health benefits from avoided health effects to be potentially important non-monetized impacts that contribute to the overall net benefits of this rule, and has represented their inclusion in Table 9 using the letter ''B''.

TABLE 9—NET BENEFITS OF THE OPTIONS

[Millions 2013$]

Option	3% Discount rate		7% Discount rate	
	Lower estimate	Higher estimate	Lower estimate	Higher estimate
Option 1: Laminates included in HWPW Definition with NAF Exemption	($220) + B	$71 + B	($268) + B	($62) + B
Option 2: Final Rule—Laminates included in HWPW definition after 7 Years with NAF and PF Exemption.	($19) + B	$148 + B	($53) + B	$36 + B
Option 3: Platform-Specific Emissions Limits for Laminates with Reduced Testing	($31) + B	$109 + B	($88) + B	($20) + B
Option 4: Laminate Emissions Standard Consistent with CARB Discussion Draft	($40) + B	$101 + B	($85) + B	($20) + B
Option 5: All Laminates Exempt from HWPW Definition	($58) + B	($6) + B	($92) + B	($67) + B
Option 6: Fully Consistent with Current CARB ATCM	($95) + B	($43) + B	($130) + B	($105) + B

''B'' represents the unquantified health benefits.

The final rule (Option 2) has higher estimated net benefits than the other options. The lower estimate of quantified net benefits for the final rule are negative, but EPA believes these quantified estimates overstate costs and significantly undercount the benefits. After assessing both the costs and the benefits of the rule, and considering the unquantified cost savings and benefits, EPA has made a reasoned determination that the benefits of the rule justify its costs.

B. Paperwork Reduction Act (PRA)

The information collection requirements in this rule have been submitted to OMB for review and approval under the PRA, 44 U.S.C. 3501 *et seq.* The Information Collection Request (ICR) document prepared by EPA has been assigned EPA ICR number 2446.02, and the OMB Control No. 2070–0185 (Ref. 74). You can find a copy of the ICR in the docket for this rule, and it is briefly summarized here. The information collection requirements are not enforceable until OMB approves them.

The new information collection activities contained in this rule are designed to assist the Agency in meeting the requirement in section 601(d) of TSCA that EPA promulgate implementing regulations in a manner that ensures compliance with the TSCA Title VI emission standards. The new information collection requirements affect firms that sell, supply, offer for sale, or manufacture (including import) hardwood plywood, particleboard, MDF, or finished goods containing these materials in the United States, as well as firms that provide testing and third-party certification or oversight services. Although firms have the option of choosing to engage in the covered activities, once a firm chooses to do so, the information collection activities contained in this rule become mandatory for that firm.

Respondents/affected entities: Panel producers, fabricators, distributors, retailers, TPCs, and ABs.

Respondent's obligation to respond: Mandatory (15 U.S.C. 2697 *et seq.*).

Estimated number of respondents: 990,000 firms, including 66,000 foreign firms.

Frequency of response: On occasion.

Total estimated burden: 1.5 million hours per year when excluding burden for activities performed in the baseline; 1.7 million hours per year when including burden for activities

performed in the baseline. Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: $105 million per year when excluding cost for activities performed in the baseline; $138 million per year when including cost for activities performed in the baseline; with no annualized capital or operation & maintenance costs. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for 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 final rule.

C. Regulatory Flexibility Act (RFA)

Pursuant to sections 603 and 609(b) of the RFA, 5 U.S.C. 601 *et seq.,* EPA prepared an initial regulatory flexibility analysis (IRFA) for the proposed rule and convened a Small Business Advocacy Review (SBAR) Panel to obtain advice and recommendations from small entity representatives that potentially would be subject to the rule's requirements. Summaries of the IRFA and Panel recommendations are presented in the proposed rule at 78 FR 34820.

As required by section 604 of the RFA, the EPA prepared a final regulatory flexibility analysis (FRFA) for this action (Ref. 75). The complete FRFA is available in the docket and is summarized here.

1. Need For and Objectives of the Rule. TSCA section 601(d) directs EPA to promulgate regulations to implement the formaldehyde standards for composite wood products described in TSCA section 601(b)(2). EPA is issuing this rule under TSCA Title VI to implement the statutory formaldehyde emission standards for hardwood plywood, medium-density fiberboard, and particleboard sold, supplied, offered for sale, or manufactured (including imported) in the United States. As directed by the statute, this rule includes provisions relating to, among other things, laminated products, products made with ultra-low emitting formaldehyde or no-added formaldehyde resins, third-party testing and certification requirements, product labeling, chain of custody documentation and other recordkeeping requirements, and product inventory sell-through provisions, including a product stockpiling prohibition.

The legal basis for the rule is TSCA section 601(d), which provides authority for the Administrator to ''promulgate regulations to implement the standards required under subsection (b) in a manner that ensures compliance with the emission standards described in subsection (b)(2).'' Therefore, the central objective of this rule is to ensure compliance with the TSCA Title VI formaldehyde emission standards.

2. Description and Number of Small Entities to Which the Rule Will Apply. The rule potentially affects small ABs and TPCs, as well as manufacturers (including importers), fabricators, distributors, and retailers of composite wood products. For purposes of assessing the impacts of the rule on small entities, small entity is defined as: (1) A small business as defined by the Small Business Administration's (SBA) regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field. EPA estimates that the rule will affect approximately 922,000 small entities.

3. Projected Compliance Requirements. As directed by the statute, this rule includes provisions relating to, among other things, laminated products, products made with no-added formaldehyde resins or ultra-low emitting formaldehyde resins, third-party testing and certification requirements, product labeling, chain of custody documentation and other recordkeeping requirements, and product inventory sell-through provisions, including a product stockpiling prohibition. This rule establishes requirements for ABs, TPCs, manufacturers (including importers), fabricators, distributors, and retailers of composite wood products.

The regulatory provisions in this rule are designed to ensure compliance with the TSCA Title VI formaldehyde emission standards while aligning, where practical, with the regulatory requirements under the CARB ATCM to reduce formaldehyde emissions from composite wood products. By aligning itself with the existing CARB requirements where practical, EPA seeks to avoid differing or duplicative regulatory requirements that would result in an increased burden on the regulated community. However, EPA deviated from the CARB ATCM where doing so would reduce burden while still ensuring compliance with the TSCA Title VI emission standards. The rule has annualized costs that are $41 million to $99 million per year less than an alternative that is fully consistent with the CARB ATCM, and benefits that are $13 million to $104 million per year higher.

4. Classes of Small Entities Subject to the Compliance Requirements. Small entities include small businesses, small organizations, and small governmental jurisdictions. The small businesses that are potentially directly regulated by this rule are ABs, TPCs, manufacturers (including importers), fabricators, distributors, or retailers of composite wood products. The small organizations that are potentially directly regulated by the rule are small ABs and TPCs. No small governments are expected to be directly regulated by the rule.

5. Professional Skills Needed to Comply. ABs must assess TPCs to determine whether they are eligible for accreditation. Product ABs are responsible for ensuring that a TPC has a process in place to verify the accuracy of the formaldehyde quarterly and quality control tests, and that the TPC has a process in place to monitor panel producer quality assurance programs, and conduct independent inspections of panel producers, their quality control testing facilities and their laboratories. Laboratory ABs are responsible for verifying that the TPC laboratory is experienced and capable of conducting formaldehyde emissions tests. These activities are the part of the basic function of ABs, so qualified ABs should already have the skills needed to conduct them. ABs must also submit an application to EPA and enter into a recognition agreement, keep records, and submit notifications and an annual report, but these activities do not require any special skills.

TPCs must conduct inspections of composite wood products and properly train and supervise inspectors to inspect composite wood products, and have demonstrated experience in performing or verifying formaldehyde emissions testing on composite wood products. TPCs must also verify that each panel producer has adequate quality assurance and quality control procedures and inspect each panel producer, its products, and its records at least quarterly. These activities are the part of the basic function of TPCs, so qualified TPCs should already have the skills needed to conduct them. TPCs must also submit an application to EPA, keep records, and submit notifications and an annual report, but these activities do not require any special skills.

Each panel producer must designate a person as quality control manager with adequate experience and/or training to

be responsible for formaldehyde emission quality control. EPA has not incorporated minimum education, experience, or training requirements for this position, but experience in the wood products industry or a degree in chemistry or a related field might provide the skills needed to comply with the requirements.

A panel producer must be able to follow sampling and handling procedures for the material that is to be tested. However, those procedures must be described in the facility's quality control manual, and specified skills should not be needed to follow the written procedures.

Each panel producer must also designate a quality control facility for conducting quality control formaldehyde testing, and the quality control facility must have quality control employees with adequate experience and/or training to conduct accurate chemical quantitative analytical tests. But instead of performing these functions themselves, panel producers have the option of hiring an accredited TPC or a contract laboratory to fulfill these requirements.

To obtain product certification, a panel producer must apply to an accredited TPC, and must provide information and notifications to the TPC. Finally, manufacturers, fabricators, distributors, or retailers of composite wood products must maintain records. None of these activities requires any special skills.

6. Other Federal Rules that may Duplicate, Overlap, or Conflict with the Rule. HUD has regulations governing formaldehyde emission levels from plywood and particleboard materials installed in manufactured homes. (See 24 CFR 3280.308.) However, TSCA Title VI establishes specific formaldehyde emission standards for hardwood plywood, particleboard, and medium-density fiberboard and does not provide EPA with the authority to modify these standards. Furthermore, the Formaldehyde Standards for Composite Wood Products Act, which includes TSCA Title VI, directs HUD to revise their regulations to ensure that they reflect the emission standards in TSCA Title VI. And the HUD regulations do not deal with the other elements addressed in these implementing regulations (where EPA does have the authority to make determinations) such as laminated products, products made with no-added formaldehyde resins or ultra-low emitting formaldehyde resins, testing requirements, chain of custody documentation, and product inventory sell-through provisions. Therefore, the regulatory provisions for which EPA has flexibility in implementing the statute do not duplicate, overlap, or conflict with any other Federal rules.

7. Potential Economic Impacts on Small Entities. Of the approximately 922,000 small entities affected by the rule, almost 910,000 (about 99 percent) are expected to have costs impacts that are less than one percent of their revenues, nearly 7,000 entities (less than 1 percent) are expected to experience impacts at levels between one and three percent of their revenue, and 5,000 entities (less than 1 percent) are expected to incur costs exceeding three percent of their revenues.

Many of the entities with cost impacts above 1 percent of their revenues are fabricators, wholesalers, and retailers with annualized costs less than $250 (*i.e.,* they are firms with annual revenues below $25,000). These entities account for 98 percent of those with cost impacts that are between 1 and 3 percent and 100 percent of those with cost impacts that exceed 3 percent.

8. Small Business Advocacy Review Panel. As required by section 609(b) of the RFA, as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA), EPA conducted outreach to small entities and convened a Small Business Advocacy Review Panel to obtain advice and recommendations of representatives of the small entities that potentially would be subject to the rule's requirements. The Panel solicited input on all aspects of the rule. Consistent with the RFA/SBREFA requirements, the Panel evaluated the assembled materials and small-entity comments on issues related to elements of the FRFA. It is important to note that the Panel's findings and discussion were based on the information available at the time the final report was prepared (Ref. 23). EPA has continued to conduct analyses relevant to the rule. The Panel's most significant findings and recommendations on the TSCA Title VI implementing regulations are discussed in the preamble to the proposed rule and in the FRFA for this action.

9. Alternatives incorporated into the rule. Over the course of this rulemaking, EPA considered alternatives for various provisions of the rule. EPA made a concerted effort to keep the costs and burdens associated with this rule as low as possible while still ensuring compliance with the TSCA Title VI emission standards. In developing the rule, EPA considered the statutory requirements and the benefits from protection of human health and the environment, as well as the compliance costs imposed by the rule, both in general and on small entities. EPA took a number of steps to reduce the economic impact that might be imposed by this rule, on both small and large entities, where doing so was consistent with the statutory mandate. For example, EPA established a different compliance schedule for laminated product producers by setting the manufactured-by date for laminated products at 7 years after promulgation. As another example, EPA has simplified compliance requirements by allowing laminated product producers, wholesalers, and retailers that do not import products to use invoices, bills of lading, or comparable documents to fulfil their recordkeeping and chain-of-custody obligations. The emission standards are performance standards rather than design standards. And the rule does not regulate construction firms that are renovating, remodeling, or selling buildings from the definitions of fabricator and retailer. These provisions are not limited to small entities but, given the number of small entities in the affected industries, they will benefit many small entities.

EPA's Economic Analysis analyzed options with different provisions for the definition of hardwood plywood; the emission standards for laminated products; the testing and certification requirements for laminated products; the implementation dates for laminated product emissions, testing and certification requirements; and the chain of custody and recordkeeping requirements. Although EPA did not have sufficient information to analyze and quantify the cost and burden reductions resulting from many of the provisions it adopted, they still reduce the impacts of the rule. Some of the steps that EPA took include the following, which are described in more detail in the FRFA for this action. These steps include:

- Aligning with the CARB ATCM where practical.
- Defining hardwood plywood to exempt laminated products made with phenol-formaldehyde resins or resins formulated with no-added formaldehyde as part of the resin cross-linking structure and compliant platforms, and allowing laminated products made into component parts to take advantage of the exemption.
- Establishing the manufactured-by date for laminated products at 7 years after promulgation.
- Reducing recordkeeping for non-manufacturers.
- Reducing testing for NAF and ULEF products.
- Not requiring retailers to relabel products that they divide or repackage.

- Reducing quality control testing for small hardwood plywood production.
- Reducing quality control testing for certain panel producers with consistent operations.
- Allowing grouping of products and product types for testing.
- Defining hardboard based on industry standards.
- Extending the manufactured-by date for the sell-through provisions.
- Allowing alternate test methods for quality control testing.
- Not requiring recordkeeping for most exempt products.
- Allowing TPCs approved by CARB to certify products under TSCA Title VI for two years after the publication of the final rule.
- Allowing reciprocity for CARB-approved TPCs.
- Allowing representative emission levels to be used to demonstrate test method equivalence.
- Creating a *de minimis* exception.
- Not requiring retention of tested lots while awaiting the test results.

10. Alternatives considered but not incorporated into the rule. EPA also considered and rejected several alternatives for the regulation of laminated products, which could have reduced the economic impacts of the rule on small entities. For the reasons described below, these alternatives are not consistent with the statutory objectives and thus are not incorporated in the final rule. Additional information on the alternatives that EPA considered is presented elsewhere in this notice.

a. *Complete exemption of laminated products from the definition of hardwood plywood.* This alternative is consistent with the current CARB ATCM. However, the rulemaking record contains ample evidence that some laminated products can have high formaldehyde emissions. CARB provided data on laminated product testing conducted in cooperation with the American Home Furnishings Alliance (AHFA). CARB tested 16 different sets of samples, each consisting of the same type of MDF or particleboard panel in three different states: Raw; with a veneer attached with a urea-formaldehyde resin; and with a stain or finish applied to the veneer. In most cases, the laminated products emitted more formaldehyde than was emitted by the platforms, likely due to the resin used to affix the veneer. In several cases, the formaldehyde emissions from the laminated product were considerably higher than the emissions from the platform.

Considering the laminated products in the CARB/AHFA data set without stain or finish (which is how the TSCA Title VI emission standards are applied), only one of the 16 samples had emissions below 0.05 ppm, the standard for hardwood plywood. For 13 of 16 samples, the emissions from the veneered product were higher than from the corresponding raw platform, with increases ranging from 0.04 ppm to 1.17 ppm. Laminated product often had emissions that were an order of magnitude higher than the particleboard or MDF platforms that they were made from. Eleven of the 16 samples had emissions above the standard for their platform type. Five of the eight samples made with MDF exceeded the 0.11 ppm Phase II standard for MDF, with emissions ranging from 0.17 ppm to 1.35 ppm. Six of the eight samples made with particleboard exceeded the 0.09 ppm Phase II standard for particleboard, with emissions ranging from 0.13 to 1.29 ppm.

EPA reads TSCA Title VI to include laminated products as hardwood plywood unless EPA can make the case, based on available and relevant information, that they should be excluded. EPA finds that the CARB/AHFA data set provides ample evidence that the process of lamination with urea-formaldehyde resins generally increases formaldehyde emissions from composite wood products. Therefore, completely exempting laminated products from the definition of hardwood plywood would not be consistent with the statutory objectives.

b. *Emission standard of 0.13 ppm for laminated products with no testing or certification.* This alternative is consistent with CARB's March 2014 discussion draft. The record, especially the CARB/AHFA data set, demonstrates that some laminated products have high formaldehyde emissions, so a requirement that the platform be compliant does not ensure that a laminated product made with urea-formaldehyde resin will also be compliant with a 0.13 ppm standard. While thirteen of the raw platforms in the CARB/AHFA data set complied with the relevant Phase II emissions standard, only 5 of the 16 veneered samples without stain or finish met the 0.13 ppm level. Nine of the 16 samples had emissions ranging from 0.17 to 1.35 ppm. For 13 of 16 samples, the emissions from the veneered product were higher than from the raw platform. These increases ranged from 0.04 ppm to 1.17 ppm, and represented an increase of 57 percent to 2,533 percent compared to the platform emissions.

Given the CARB/AHFA data set, with formaldehyde emissions from most veneered samples exceeding 0.13 ppm, EPA is unable to find that this approach is consistent with the statutory objectives. To the contrary, this data set provides evidence that without some sort of active effort to control formaldehyde emissions, whether through the use of phenol-formaldehyde resins or resins formulated with no-added formaldehyde as part of the resin cross-linking structure or some emissions testing, it is likely that many laminated products will exceed a 0.13 ppm emission standard. Therefore, a 0.13 ppm emission standard for laminated products with no testing or certification would not be consistent with the statutory objectives.

c. *Platform-specific emission standards, annual testing, no certification.* Under this alternative, unfinished laminated products would have to meet the emissions limit for the type of platform they are made with (0.05 ppm for veneer core, 0.09 ppm for particleboard, 0.11 ppm for MDF, and 0.13 ppm for thin MDF). An annual emissions test would be required, but TPC certification would not be required.

The record, especially the CARB/AHFA data set, demonstrates that some laminated products have high formaldehyde emissions, so a requirement that the platform be compliant does not, by itself, ensure that a laminated product made with urea-formaldehyde resin will also be compliant with the platform emission standard. While 13 of the 16 platforms met the Phase II emission standards, only 5 of 16 of the veneered products without stain or finish met the emission standard for their platform.

Furthermore, an annual emission test may not be sufficient to ensure compliance for products, particularly those made with urea-formaldehyde resin. Several public commenters were concerned about the effect of reduced testing requirements for laminated products. One questioned whether an annual test could account for variation in production processes and seasonal variations. Another claimed that it is inconceivable that an effective and reliable enforcement scheme could be developed that hinged on a single yearly test. Yet another stated that annual testing could be misleading, because the testing may not be accurate or representative of average emissions. EPA agrees that more than one test per year is important to ensure that laminated products that are not made with phenol-formaldehyde resins or resins formulated with no-added formaldehyde as part of the resin cross-linking structure comply with the emission standard.

EPA also believes that TPCs have an important role to play in ensuring

compliance. Various factors (such as resin system, core type, core resin type, veneer type, and number of plies) could influence formaldehyde emissions from hardwood plywood, including laminated products. EPA is allowing TPCs to approve the grouping of products with similar formaldehyde emission characteristics for quarterly and quality control testing. EPA believes that the TPC, working in conjunction with the platform producer, is in the best position to select the product(s) to be tested in order to determine whether production at the facility is in compliance with the emission standards.

Therefore, a platform-specific emission standard for laminated products with annual testing but no certification would not be consistent with the statutory objectives.

d. *Conclusion.* On the basis of information currently available to the Agency, EPA has concluded that these alternative options are not consistent with TSCA Title VI's statutory objective to reduce formaldehyde emissions from composite wood products.

In addition, EPA is preparing a Small Entity Compliance Guide to help small entities comply with this rule. The guide or guides will have information to assist small TPCs, ABs, fabricators, panel producers, importers, distributors, and retailers. After the date that this rule's requirements take effect the guide or guides will be available on EPA's Web site *http://www.epa.gov/formaldehyde.*

D. Unfunded Mandates Reform Act (UMRA)

This action contains a Federal mandate under UMRA, 2 U.S.C. 1531–1538, that may result in expenditures of $100 million or more for State, local, and tribal governments, in the aggregate, or the private sector in any one year. Accordingly, EPA has prepared a written statement required under section 202 of UMRA (Ref. 76). The statement is included in the docket for this action and briefly summarized here.

1. *Authorizing legislation.* This rule is issued under the authority of section 601 of TSCA, 15 U.S.C. 2697.

2. *Cost-benefit analysis.* The Economic Analysis (Ref. 3) presents the costs of the rule as well as various regulatory options and is summarized in Unit VI.A. The rule is calculated to result in a total cost of $253 million to $359 million in the first year, although this is likely an overestimate. (The rule allows laminators 7 years before they must begin using NAF or PF resins and compliant platforms, or have their products tested and certified. EPA's analysis assumes that laminated product producers that decide to switch to qualified resins would incur all the transition costs in the first year, while in reality those costs are likely to be spread over the 6 year period.) The subsequent year costs are lower, so that the total annualized cost of this rule is $38 million to $83 million per year when using a 3 percent discount rate and $43 million to $78 million per year using a 7 percent discount rate. When adjusted for inflation, the $100 million UMRA threshold is equivalent to approximately $153 million in 2013 dollars. Thus, the first cost of the rule to the private sector and State, local, and Tribal governments in the aggregate may exceed the inflation-adjusted UMRA threshold.

This rule will reduce exposures to formaldehyde, resulting in benefits from avoided adverse health effects. For the subset of health effects where the results were quantified, the estimated annualized benefits (due to avoided incidence of nasopharyngeal cancer and eye irritation) are $64 million to $186 million per year using a 3% discount rate, and $26 million to $79 million per year using a 7% discount rate. There are additional unquantified benefits due to other avoided health effects.

Net benefits are the difference between benefits and costs. The rule is estimated to result in quantified net benefits of −$19 million to $148 million per year using a 3% discount rate, and −$53 million to $36 million per year using a 7% discount rate. EPA considers unquantified cost savings for laminated product producers (from the NAF and PF exemption and the 7 year period to meet the emission standards) as well as the additional unquantified health benefits to be potentially important non-monetized impacts that contribute to the overall net benefits of this rule.

3. *State, local, and Tribal government input.* Consistent with the intergovernmental consultation provisions of section 204 of the UMRA EPA has consulted with governmental entities affected by this rule. With the assistance of the National Conference of State Legislatures, EPA consulted with state environmental health directors, who were generally supportive of EPA's efforts. And EPA has met with officials from the state of California on numerous occasions to discuss aspects of the CARB ATCM and its implementation. California is very supportive of EPA's efforts to promulgate regulations to implement national composite wood product formaldehyde emission standards that are modeled on the CARB ATCM.

4. *Least burdensome option.* Consistent with section 205, EPA has identified and considered a reasonable number of regulatory alternatives. TSCA Title VI establishes specific formaldehyde emission standards for hardwood plywood, particleboard, and medium-density fiberboard and does not provide EPA with the authority to modify these standards. The statute further directs EPA to promulgate implementing regulations that address elements such as laminated products, products made with ultra low-emitting formaldehyde resins, products made with no-added formaldehyde resins, testing requirements, product labeling, chain of custody documentation and other recordkeeping requirements, and product inventory sell-through provisions. EPA has considered a number of regulatory alternatives for regulating laminated products, as described in Unit III and elsewhere in this Unit, as well as in the Economic Analysis (Ref. 3). The final rule has the lowest cost of the alternatives that EPA considered. Furthermore, the available information indicates that laminated products made with urea-formaldehyde resins can have high formaldehyde emissions. Therefore, on the basis of information currently available to the Agency, EPA has concluded that the alternative options for laminated products would not be consistent with the statutory objective to reduce formaldehyde emissions from composite wood products. After assessing both the costs and the benefits of the rule (both quantified and unquantified), EPA has determined that the rule is the least burdensome option that is consistent with TSCA Title VI's objective.

This action is not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments.

E. Executive Order 13132: Federalism

This action does not have federalism implications, as specified in Executive Order 13132 (64 FR 43255, August 10, 1999). 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.

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

This action does not have tribal implications, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000). The rule would not regulate tribal governments directly, it would regulate

entities that accredit TPCs, certify panel producers, or manufacture (including import), fabricate, distribute, or sell composite wood products. Governments do not typically engage in these activities. Tribal governments do not typically engage in these activities. Thus, Executive Order 13175 does not apply to this action.

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

This action is subject to Executive Order 13045 because it is an economically significant regulatory action as defined by Executive Order 12866, and the EPA believes that the environmental health or safety risk addressed by this action may have a disproportionate effect on children. Accordingly, we have evaluated the environmental health or safety effects on children. This action's health and risk assessments are described in Units I.F. and II.A. and contained in the economic analysis (Ref. 3). As described therein, exposure to formaldehyde may cause disproportionate effects on children compared to adults both in terms of cancer risk, and respiratory effects. The rule itself will not have disproportionally high and adverse effects on children. Rather, these standards would reduce emissions of formaldehyde from composite wood products for individuals of all ages that are exposed and children may accrue higher benefits from the exposure reductions compared to adults.

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

This rule is not a ''significant energy action'' as defined in Executive Order 13211 (66 FR 28355, May 22, 2001), because it is not likely to have any adverse effect on the supply, distribution, or use of energy. Further, this rule is not likely to have any adverse energy effects because it regulates formaldehyde emissions from composite wood products and does not require any action related to the supply, distribution, or use of energy.

I. National Technology Transfer and Advancement Act (NTTAA)

This action involves technical standards, many of which EPA is directed to use by TSCA Title VI. Technical standards identified in the statute include the two quarterly test methods, ASTM E1333–96 and ASTM D6007–02, a quality control test method, ASTM D5582–00, and various standards that define specific composite wood products, such as ASTM D–5456–06 (Structural Composite Lumber Products), ASTM D–5055–05 (Prefabricated Wood I-Joists), ANSI/AITC A190.1 (Structural Glued Laminated Timber), ANSI/HPVA HP–1–2009 (Hardwood and Decorative Plywood), ANSI A208.2–2009 (Medium Density Fiberboard), ANSI A208.1–2009 (Particleboard), PS 1–07 (Structural Plywood), and PS 2–04 (Wood-Based Structural-Use Panels).

In addition, EPA has identified other voluntary consensus standards and incorporated them into this action. These include standards for accreditation and certification (ISO/IEC 17011, ISO/IEC 17020, ISO/IEC 17025, and ISO/IEC 17065), as well as the revised quarterly test method, ASTM E1333–10, and standards that define hardboard, ANSI A135.4, ANSI A135.5, ANSI A135.6, and ANSI 135.7. EPA is allowing certain alternative quality control test methods that are incorporated in voluntary consensus standards, EN 717–2 (gas analysis), EN 120 (perforator), and JIS A 1460 (24-hour desiccator).

EPA is using voluntary consensus standards issued by the International Organization for Standardization, ASTM International, the American National Standards Institute, the National Institute of Standards and Technology, the European Committee for Standardization, Georgia Pacific Chemicals LLC, and the Japanese Standards Association. Copies of the standards referenced in the regulatory text have been placed in the docket for this rule. See Unit IV for information on how to obtain copies of these standards from other sources.

J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

EPA has determined that the human health or environmental risk addressed by this action will not have potential disproportionately high and adverse human health or environmental effects on minority, low-income or indigenous populations, as specified in Executive Order 12898 (59 FR 7629, February 16, 1994). The results of this evaluation are contained in the Economic Analysis (Ref. 3).

The Economic Analysis, described in Unit VI.A, monetizes the benefits from reducing the number of cases of nasopharyngeal cancer and sensory irritation and includes an environmental justice analysis that expands on the primary benefits analysis by analyzing the monetized impacts specifically for minority and low-income populations. Results indicate that disaggregation of total benefits by population groups leads to variation in the range of individual benefits, by minority population. The affected Non-Hispanic White population accounts for 63% of the total affected population, and accrues 59% of the quantified benefits. In comparison, for minority populations the quantified benefits equal or exceed their share of the total population. Minority populations represent about 37% of the individuals affected by the rule and are estimated to accrue about 41% of the rule's quantified benefits. The affected Non-Hispanic Black population account for 11% of the total affected population, accrue 12% of the quantified benefits. The affected Hispanic population account for 17% of the total affected population, and accrue 19% of the quantified benefits. The affected Non-Hispanic American Indian or Alaska Native population account for 0.7% of the total affected population, accrue 0.7% of the quantified benefits. The affected low-income population account for 15% of the total affected population and accrue 18% of the quantified benefits.

K. Congressional Review Act (CRA)

This action is subject to the CRA, 5 U.S.C. 801 *et seq.,* and EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This action is a ''major rule'' as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 770

Environmental protection, Formaldehyde, Incorporation by reference, Reporting and recordkeeping requirements, Third-party certification, Toxic substances, Wood.

Dated: July 27, 2016.

Gina McCarthy,

Administrator.

Therefore, 40 CFR chapter I, subchapter R, is amended by adding part 770 to read as follows:

PART 770—FORMALDEHYDE STANDARDS FOR COMPOSITE WOOD PRODUCTS

Subpart A—General Provisions

Sec.

770.1 Scope and applicability.
770.2 Effective dates.
770.3 Definitions.
770.4 Exemption from the hardwood plywood definition for certain laminated products.
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770.10 Formaldehyde emission standards.
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770.17 No-added formaldehyde-based resins.
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770.20 Testing requirements.
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770.22 Non-complying lots.
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770.30 Importers, fabricators, distributors, and retailers.
770.40 Reporting and recordkeeping.
770.45 Labeling.

Subpart D—Incorporation by Reference

770.99 Incorporation by reference.

Authority: 15 U.S.C. 2697(d).

Subpart A—General Provisions

§ 770.1 Scope and applicability.

(a) This part contains formaldehyde emission standards, testing and certification provisions, and other requirements for the manufacture (including import), distribution, and sale of composite wood products, component parts that contain composite wood products, and finished goods that contain composite wood products.

(b) This part applies to:

(1) Laboratory Accreditation Bodies (ABs) and Product ABs that are accrediting third-party certifiers (TPCs) for TSCA Title VI (15 U.S.C. 2697(d)) purposes and those that wish to commence accrediting TPCs for TSCA Title VI purposes.

(2) TPCs that are certifying composite wood products for TSCA Title VI compliance and those that wish to commence certifying composite wood products for TSCA Title VI compliance.

(3) Any composite wood products, and component parts or finished goods containing these materials, that are sold, supplied, offered for sale, or manufactured (including imported) in the United States, including composite wood products used or installed in manufactured housing.

(c) Subparts B, C, and D of this part do not apply to the following:

(1) Any finished good that has previously been sold or supplied to an end user, an individual or entity that purchased or acquired the finished good in good faith for purposes other than resale. For example, subparts B, C, and D of this part do not apply to antiques or secondhand furniture.

(2) Hardboard.

(3) Structural plywood, as specified in PS 1–07, Voluntary Product Standard—Structural Plywood (incorporated by reference, see § 770.99).

(4) Structural panels, as specified in PS 2–04, Voluntary Product Standard—Performance Standard for Wood-Based Structural-Use Panels (incorporated by reference, see § 770.99).

(5) Structural composite lumber, as specified in ASTM D5456–06, Standard Specification for Evaluation of Structural Composite Lumber Products (incorporated by reference, see § 770.99).

(6) Oriented strand board.

(7) Glued laminated lumber, as specified in ANSI/AITC A190.1–2002, Structural Glued Laminated Timber (incorporated by reference, see § 770.99).

(8) Prefabricated wood I-joists, as specified in ASTM D5055–05, Standard Specification for Establishing and Monitoring Structural Capacities of Prefabricated Wood I-Joists (incorporated by reference, see § 770.99).

(9) Finger-jointed lumber.

(10) Wood packaging, including pallets, crates, spools, and dunnage.

(11) Composite wood products used inside the following:

(i) New vehicles (other than recreational vehicles) that are constructed entirely from new parts and that have never been the subject of a retail sale or registered with the applicable State or other governmental agency.

(ii) New rail cars.

(iii) New boats.

(iv) New aerospace craft.

(v) New aircraft.

(d) The emission standards in § 770.10 do not apply to windows that contain composite wood products, if the windows contain less than five percent by volume of composite wood products, combined, in relation to the total volume of the finished window.

(e) The emission standards in § 770.10 do not apply to exterior doors and garage doors that contain composite wood products, if:

(1) The doors are made from composite wood products manufactured with no-added formaldehyde-based resins or ultra low-emitting formaldehyde resins; or

(2) The doors contain less than three percent by volume of composite wood products, combined, in relation to the total volume of the finished exterior door or garage door.

§ 770.2 Effective dates.

(a) This rule is effective February 10, 2017.

(b) Laboratory and Product ABs that wish to accredit TPCs for TSCA Title VI purposes may apply to EPA beginning February 10, 2017 to become recognized. Laboratory and Product ABs must be recognized by EPA before they begin to provide and at all times while providing TSCA Title VI accreditation services.

(c) TPCs that are not approved by the California Air Resources Board (CARB) that wish to provide TSCA Title VI certification services may apply to EPA beginning February 10, 2017 to become recognized. TPCs must be recognized by EPA and comply with all of the applicable requirements of this part before they begin to provide and at all times while providing TSCA Title VI certification services.

(d) Notwithstanding any other provision of this part, TPCs that are approved by CARB to certify composite wood products have until December 12, 2018 to become accredited by an EPA TSCA Title VI AB(s) pursuant to the requirements of this part. During this two-year transition period, existing CARB-approved TPCs and CARB TPCs approved during this transition period may carry out certification activities under TSCA Title VI, provided that they remain approved by CARB and comply with all aspects of this part other than the requirements of § 770.7(c)(1)(i) and (ii) and (c)(2)(iii) and (iv). After the two-year transition period, CARB-approved TPCs may continue to certify composite wood products under TSCA Title VI provided the TPC maintains its CARB approval, follows the requirements under this part, submits to EPA documentation from CARB supporting their eligibility for reciprocity and has received EPA recognition as an EPA TSCA Title VI TPC. All TPCs that are certifying products as compliant with TSCA Title VI, both during and after the transition period, are subject to enforcement actions for any violations of TSCA Title VI or these regulations.

(e) After December 12, 2017, all manufacturers (including importers), fabricators, suppliers, distributors, and retailers of composite wood products, and component parts or finished goods containing these materials, must comply with this part, subject to the following:

(1) After December 12, 2017, laminated product producers must comply with the requirements of this part that are applicable to fabricators.

(2) After December 12, 2023, producers of laminated products must comply with the requirements of this part that are applicable to hardwood

plywood panel producers (in addition to the requirements of this part that are applicable to fabricators) except as provided at § 770.4.

(3) After December 12, 2023, producers of laminated products that, as provided at § 770.4, are exempt from the definition of ''hardwood plywood'' must comply with the recordkeeping requirements in § 770.40(c) and (d) (in addition to the requirements of this part that are applicable to fabricators).

(4) Composite wood products manufactured (including imported) before December 12, 2017 may be sold, supplied, offered for sale, or used to fabricate component parts or finished goods at any time.

§ 770.3 Definitions.

For the purposes of this part, the following definitions apply:

Accreditation Body or *AB* means an organization that provides an impartial verification of the competency of conformity assessment bodies or TPCs.

Agent for Service means an entity designated by a TPC or AB to receive legal documents on their behalf.

Article means a manufactured item which:

(1) Is formed to a specific shape or design during manufacture;

(2) Has end use functions dependent in whole or in part upon its shape or design during the end use; and

(3) Has either no change of chemical composition during its end use or only those changes of composition which have no commercial purpose separate from that of the article and that may occur as described in 19 CFR 12.120(a)(2), except that fluids and particles are not considered articles regardless of shape or design.

Assessment means a process to include an on-site review undertaken by an AB to assess the competence of all operations of a conformity assessment body and TPC, based on particular standard(s) and/or other normative documents for a defined scope of accreditation, as defined in ISO/IEC 17011:2004(E) (incorporated by reference, see § 770.99).

Bundle means more than one composite wood product, component part, or finished good fastened together for transportation or sale.

Combination core means a platform for making hardwood plywood or laminated products that consists of a combination of layers of veneer and particleboard or medium density fiberboard.

Component part means an object other than a panel that contains one or more composite wood products and is used in the construction or assembly of finished goods. Component parts that are sold directly to consumers are considered finished goods.

Composite core means a platform for making hardwood plywood or laminated products that consists of particleboard and/or medium density fiberboard, or combination core.

Composite wood product means hardwood plywood made with a veneer or composite core, medium-density fiberboard, and particleboard.

Distributor means any person or entity to whom a composite wood product, component part, or finished good is sold or supplied for the purposes of resale or distribution in commerce, except that manufacturers and retailers are not distributors.

Engineered veneer means a type of veneer that is created by dyeing and gluing together leaves of veneer in a mold to produce a block. The block is then sliced into leaves of veneer with a designed appearance that is highly repeatable.

EPA TSCA Title VI Laboratory Accreditation Body or *EPA TSCA Title VI Laboratory AB* means an AB that has a recognition agreement with EPA under the EPA TSCA Title VI Third-Party Certification Program, accredits a TPC's testing laboratory or contract testing laboratory to ISO/IEC 17025:2005(E) (incorporated by reference, see § 770.99) with a scope of accreditation to include this part and the formaldehyde test methods used to comply with this part, and assesses the testing laboratory's conformance to ISO/IEC 17020:2012(E) (incorporated by reference, see § 770.99) in order to perform laboratory testing services.

EPA TSCA Title VI Product Accreditation Body or *EPA TSCA Title VI Product AB* means an AB that has a recognition agreement with EPA under the EPA TSCA Title VI Third-Party Certification Program, accredits a TPC to ISO/IEC 17065:2012(E) (incorporated by reference, see § 770.99) with a scope of accreditation to include composite wood products and this part, and assesses the TPC's conformance to ISO/IEC 17020:1998(E) (incorporated by reference, see § 770.99) in order to perform product certification.

EPA TSCA Title VI Third-Party Certifier or *EPA TSCA Title VI TPC* means a conformity assessment body that provides both product certification services and laboratory testing services (either directly or through contracted services), is accredited by an EPA TSCA Title VI Product AB and an EPA TSCA Title VI Laboratory AB (unless the laboratory testing services are contracted to a laboratory accredited by an EPA TSCA Title VI Laboratory AB), and is recognized by EPA pursuant to § 770.7(c).

Fabricator means a person or entity who incorporates composite wood products into component parts or into finished goods. This includes laminated product producers, but persons or entities in the construction trades are not fabricators by renovating or remodeling buildings.

Finished good means any good or product, other than a panel, that contains hardwood plywood (with a veneer or composite core), particleboard, or medium-density fiberboard and that is not a component part or other part used in the assembly of a finished good. Site-built buildings or other site-built real property improvements are not considered finished goods.

Hardboard means a composite panel composed of cellulosic fibers, consolidated under heat and pressure in a hot press by: A wet process; or a dry process that uses a phenolic resin, or a resin system in which there is no formaldehyde as part of the resin cross-linking structure; or a wet formed/dry pressed process; and that is commonly or commercially known, or sold, as hardboard, including any product conforming to one of the following ANSI standards: Basic Hardboard (ANSI A135.4–2012) (incorporated by reference, see § 770.99), Prefinished Hardboard Paneling (ANSI A135.5–2012) (incorporated by reference, see § 770.99), Engineered Wood Siding (ANSI A135.6–2012) (incorporated by reference, see § 770.99), or Engineered Wood Trim (ANSI A135.7–2012) (incorporated by reference, see § 770.99). There is a rebuttable presumption that products emitting more than 0.06 ppm formaldehyde as measured by ASTM E1333–10 (incorporated by reference, see § 770.99) or ASTM D6007–02 (incorporated by reference, see § 770.99) are not hardboard.

Hardwood plywood means a hardwood or decorative panel that is intended for interior use and composed of (as determined under ANSI/HPVA HP–1–2009 (incorporated by reference, see § 770.99)) an assembly of layers or plies of veneer, joined by an adhesive with a lumber core, a particleboard core, a medium-density fiberboard core, a hardboard core, a veneer core, or any other special core or special back material. Hardwood plywood does not include military-specified plywood, curved plywood, or any plywood specified in PS 1–07, Voluntary Product Standard—Structural Plywood (incorporated by reference, see § 770.99), or PS 2–04, Voluntary Product

Standard—Performance Standard for Wood-Based Structural-Use Panels (incorporated by reference, see § 770.99). In addition, hardwood plywood includes laminated products except as provided at § 770.4.

Importer means any person or entity who imports composite wood products, component parts, or finished goods into the customs territory of the United States (as defined in general note 2 of the Harmonized Tariff Schedules of the United States pursuant to 15 U.S.C. 2612(a)(1)). Importer includes:

(1) The entity primarily liable for the payment of any duties on the products; or

(2) An authorized agent acting on the entity's behalf.

Intended for interior use means intended for use or storage inside a building or recreational vehicle, or constructed in such a way that it is not suitable for long-term use in a location exposed to the elements. Windows, doors, and garage doors with at least one interior-facing side are intended for interior use.

Laboratory Accreditation Body or *Laboratory AB* means an AB that accredits conformity assessment body testing laboratories.

Laminated product means a product in which a wood or woody grass veneer is affixed to a particleboard core or platform, a medium-density fiberboard core or platform, or a veneer core or platform. A laminated product is a component part used in the construction or assembly of a finished good. In addition, a laminated product is produced by either the fabricator of the finished good in which the product is incorporated or a fabricator who uses the laminated product in the further construction or assembly of a component part.

Laminated product producer means a manufacturing plant or other facility that manufactures (excluding facilities that solely import products) laminated products on the premises. Laminated product producers are fabricators and, after December 12, 2023, laminated product producers are also hardwood plywood panel producers except as provided at § 770.4.

Lot means the panels produced from the beginning of production of a product type until the first quality control test; between one quality control test and the next; or from the last quality control test to the end of production for a particular product type.

Medium-density fiberboard means a panel composed of cellulosic fibers made by dry forming and pressing a resinated fiber mat (as determined under ANSI A208.2–2009 (incorporated by reference, see § 770.99)).

No-added formaldehyde-based resin means a resin formulated with no added formaldehyde as part of the resin crosslinking structure in a composite wood product that meets the emission standards in § 770.17(c).

Non-complying lot means any lot of composite wood product represented by a quarterly test value or quality control test result that indicates that the lot exceeds the applicable standard for the particular composite wood product in § 770.10(b). A quality control test result that exceeds the QCL is considered a test result that indicates that the lot exceeds the applicable standard. Future production of the product type(s) represented by a failed quarterly test are not considered certified and must be treated as a non-complying lot until the product type(s) are re-qualified through a successful quarterly test.

Panel means a thin (usually less than two inches thick), flat, usually rectangular piece of particleboard, medium-density fiberboard or hardwood plywood. Embossing or imparting of an irregular surface on the composite wood products by the original panel producer during pressing does not remove the product from this definition. Cutting a panel into smaller pieces, without additional fabrication, does not make the panel into a component part or finished good. This does not include items made for the purpose of research and development, provided such items are not sold, supplied, or offered for sale.

Panel producer means a manufacturing plant or other facility that manufactures (excluding facilities that solely import products) composite wood products on the premises.

Phenol-formaldehyde resin means a resin that consists primarily of phenol and formaldehyde and does not contain urea-formaldehyde.

Particleboard means a panel composed of cellulosic material in the form of discrete particles (as distinguished from fibers, flakes, or strands) that are pressed together with resin (as determined under ANSI A208.1–2009 (incorporated by reference, see § 770.99)). Particleboard does not include any product specified in PS 2–04, Performance Standard for Wood-Based Structural-Use Panels (incorporated by reference, see § 770.99).

Product Accreditation Body or *Product AB* means an AB that accredits conformity assessment bodies who perform product certification.

Product type means a type of composite wood product, or group of composite wood products, made by the same panel producer with the same resin system that differs from another product type based on panel composition and formaldehyde emission characteristics. Grouped products must have similar formaldehyde emission characteristics and their emissions must fit the same correlation curve or linear regression.

Production line means a set of operations and physical industrial or mechanical equipment used to produce a composite wood product in one facility utilizing the same or similar equipment and quality assurance and quality control procedures.

Purchaser means any panel producer, importer, fabricator, distributor, or retailer that acquires composite wood products, component parts, or finished goods for purposes of resale in exchange for money or its equivalent.

Quality control limit or *QCL* means the value from the quality control method test that is the correlative equivalent to the applicable emission standard based on the ASTM E1333–10 method (incorporated by reference, see § 770.99).

Reassessment means an assessment, as described in sections 7.5 to 7.11 of ISO/IEC 17011:2004(E) (incorporated by reference, see § 770.99), except that experience gained during previous assessments shall be taken into account.

Recreational vehicle means a vehicle which is:

(1) Built on a single chassis;

(2) Four hundred square feet or less when measured at the largest horizontal projections;

(3) Self-propelled or permanently towable by a light duty truck; and

(4) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

Retailer means any person or entity that sells, offers for sale, or supplies directly to consumers composite wood products, component parts or finished goods that contain composite wood products, except that persons or entities in the construction trades are not considered retailers by selling, renovating, or remodeling buildings.

Resin system means type of resin used, including but not limited to urea-formaldehyde, soy, phenol-formaldehyde, or melamine-urea-formaldehyde.

Scavenger means a chemical or chemicals that can be applied to resins or composite wood products either during or after manufacture and that react with residual or excess formaldehyde to reduce the amount of

formaldehyde that can be emitted from composite wood products.

Shipping quality control limit means a quality control limit that is developed in conjunction with an EPA TSCA Title VI TPC that is based on panels prior to shipment rather than immediately after manufacturing.

Stockpiling means manufacturing or purchasing composite wood products, whether in the form of panels or incorporated into component parts or finished goods, between July 7, 2010 and June 12, 2017 at an average rate at least 20% greater than the average rate of manufacture or purchase during the 2009 calendar year for the purpose of circumventing the emission standards and other requirements of this subpart.

Thin medium-density fiberboard means medium-density fiberboard that has a thickness less than or equal to 8 millimeters or 0.315 inches.

Third-party certifier or *TPC* means a conformity assessment body that provides both product certification services and laboratory testing services (either directly or through contracted services).

TPC laboratory means a laboratory or contract laboratory of an EPA TSCA Title VI TPC that is accredited by an EPA TSCA Title VI Laboratory AB to ISO/IEC 17025:2005(E) (incorporated by reference, see § 770.99), and whose inspection activities are in conformance with ISO/IEC 17020:1998(E) (incorporated by reference, see § 770.99).

Surveillance On-Site Assessment means a set of on-site activities that are less comprehensive than reassessment, to monitor the continued fulfilment by accredited conformance assessment bodies of requirements for accreditation, as described in sections 7.5 to 7.11 of ISO/IEC 17011:2004(E) (incorporated by reference, see § 770.99).

Ultra low-emitting formaldehyde resin means a resin in a composite wood product that meets the emission standards in § 770.18(c).

Veneer means a sheet of wood or woody grass with a maximum thickness of 6.4 millimeters (¼ inch) that is rotary cut, sliced, or sawed from a log, bolt, flitch, block, or culm; including engineered veneer.

Veneer core means a platform for making hardwood plywood or laminated products that consists of veneer.

Woody grass means a plant of the family *Poaceae* (formerly *Gramineae*) with hard lignified tissues or woody parts.

§ 770.4 Exemption from the hardwood plywood definition for certain laminated products.

(a) *Current exemptions.* The definition of the term ''hardwood plywood'' in § 770.3 does not include:

(1) Laminated products made by attaching a wood or woody grass veneer with a phenol-formaldehyde resin to a platform that has been manufactured in compliance with this part (including either certified in accordance with § 770.15, manufactured with no-added formaldehyde-based resins under § 770.17, or manufactured with ultra low-emitting formaldehyde-based resins under § 770.18).

(2) Laminated products made by attaching a wood or woody grass veneer with a resin formulated with no-added formaldehyde as part of the resin cross-linking structure to a platform that has been manufactured in compliance with this part (including either certified in accordance with § 770.15, manufactured with no-added formaldehyde-based resins under § 770.17, or manufactured with ultra low-emitting formaldehyde-based resins under § 770.18).

(b) *Rulemaking petitions for exemption.* (1) Any person may petition the Agency to initiate a rulemaking for additional exemptions for laminated products from the definition of the term ''hardwood plywood,'' pursuant to 15 U.S.C. 2697(a)(3)(C)(i)(I).

(2) Each petition should provide all available and relevant information, including studies conducted and formaldehyde emissions data, and should be submitted to: Director, National Program Chemicals Division, Office of Pollution Prevention and Toxics (MC 7404T), U.S. Environmental Protection Agency, 1200 Pennsylvania Ave NW., Washington, DC 20460–001.

(3) EPA will promptly review each submitted petition and, where appropriate, publish a proposed rule in the **Federal Register** based on the petition and provide a public comment period of generally 30 days before taking a final action.

§ 770.5 Prohibited acts.

(a) Failure or refusal to comply with any requirement of TSCA section 601 (15 U.S.C. 2697) or this part is a violation of TSCA section 15 (15 U.S.C. 2614).

(b) Failure or refusal to establish and maintain records or to make available or permit access to or copying of records, as required by this part, is a violation of TSCA section 15 (15 U.S.C. 2614).

(c) Making false or misleading statements in any statement, certification, or record required by this part is a violation of TSCA section 15 (15 U.S.C. 2614).

(d) Violators may be subject to civil and criminal sanctions pursuant to TSCA section 16 (15 U.S.C. 2615) for each violation.

Subpart B—EPA TSCA Title VI Third-Party Certification Program

§ 770.7 Third-party certification.

(a) *EPA TSCA Title VI Product ABs.* To participate in the EPA TSCA Title VI Third-Party Certification Program as an EPA TSCA Title VI Product AB, a Product AB must have the qualifications described in this section, submit an application and enter into a recognition agreement with EPA as described in this section, and, upon recognition from EPA, impartially perform the responsibilities described in this section.

(1) *Qualifications.* To qualify for recognition by EPA in the EPA TSCA Title VI Third-Party Certification Program as an EPA TSCA Title VI Product AB, an applicant Product AB must:

(i) Be a signatory to the International Accreditation Forum, Inc.'s (IAF) Multilateral Recognition Arrangement (MLA) through level three, or have membership in one of the IAF recognized regional accreditation cooperations, or an equivalent organization as determined by EPA;

(ii) Be in conformance with ISO/IEC 17011:2004(E) (incorporated by reference, see § 770.99); and

(iii) Be competent to perform accreditation activities for product certification according to ISO/IEC 17065:2012(E) (incorporated by reference, see § 770.99).

(2) *Application.* To be recognized by EPA under the EPA TSCA Title VI Third-Party Certification Program, a Product AB must submit an application to EPA in accordance with § 770.8 that contains the following:

(i) Name, address, telephone number, and email address of the organization or primary contact;

(ii) Documentation of IAF MLA signatory status, membership in one of the IAF recognized regional accreditation cooperations, or an equivalent organization as determined by EPA;

(iii) Description of any other qualifications related to the Product AB's experience in performing product accreditation of TPCs for manufactured products including an affirmation that assessors will be technically competent to assess a TPC's ability to perform their activities under paragraph (c)(4) of this section; and

(iv) If not a domestic entity, name and address of an agent for service located in the United States. Service on this agent constitutes service on the AB or any of its officers or employees for any action by EPA or otherwise by the United States related to the requirements of this part. ABs may share an agent for service.

(3) *Recognition agreement.* To be recognized by EPA under the EPA TSCA Title VI Third-Party Certification Program, a Product AB must enter into a recognition agreement with EPA that describes the EPA TSCA Title VI Product AB's responsibilities under this subpart.

(i) Each recognition agreement will be valid for three years.

(ii) Each recognition agreement will identify an EPA Recognition Agreement Implementation Officer and an EPA TSCA Title VI Product AB Implementation Officer that will serve as the point of contact for the EPA TSCA Title VI Third-Party Certification Program.

(iii) To renew a recognition agreement for an additional three-year period, the EPA TSCA Title VI Product AB must submit an application for renewal in accordance with § 770.8 before the three-year period of the recognition agreement lapses. The application must indicate any changes from the EPA TSCA Title VI Product AB's initial application or most recent renewal application.

(iv) If an EPA TSCA Title VI Product AB fails to submit an application for renewal prior to the expiration of the previous recognition agreement, its recognition will lapse and the EPA TSCA Title VI Product AB may not provide accreditation services under TSCA Title VI.

(v) If an EPA TSCA Title VI Product AB does submit an application for renewal prior to the expiration of the previous recognition agreement, it may continue to provide TSCA Title VI accreditation services under the terms of its previous recognition agreement until EPA has taken action on its application for renewal of the recognition agreement.

(4) *Impartiality.* EPA TSCA Title VI Product ABs must act impartially when performing activities under the EPA TSCA Title VI Third-Party Certification Program. To demonstrate impartiality, Product ABs must:

(i) Ensure that an accreditation decision regarding a TPC is made by persons different from those who conducted the assessment of the TPC; and

(ii) Ensure that the AB's personnel who assess TPCs or make decisions regarding accreditation do not receive financial benefit from the outcome of an accreditation decision.

(5) *Responsibilities.* Each EPA TSCA Title VI Product AB has the following responsibilities under the EPA TSCA Title VI Third-Party Certification Program:

(i) *Accreditation.* EPA TSCA Title VI Product ABs must determine the accreditation eligibility, and accredit if appropriate, each TPC seeking recognition under the EPA TSCA Title VI Third-Party Certification Program by performing an assessment of each TPC as described in this section. The assessment must include all of the following components:

(A) An on-site assessment by the EPA TSCA Title VI Product AB to determine whether the TPC meets the requirements of ISO/IEC 17065:2012(E), is in conformance with ISO/IEC 17020:1998(E) as required under ISO/IEC 17065:2012(E) section 6.2.1 (incorporated by reference, see § 770.99) and the EPA TSCA Title VI TPC requirements under this part. In performing the on-site assessment, the EPA TSCA Title VI Product AB must:

(*1*) Develop a checklist of the EPA TSCA Title VI TPC requirements under paragraph (c)(4) of this section and the key accreditation elements of ISO/IEC 17065:2012(E) (incorporated by reference, see § 770.99); and

(*2*) Use the checklist for each on-site assessment.

(B) A review of the approach that the TPC will use to verify the accuracy of the formaldehyde emissions tests conducted by the TPC laboratory and the formaldehyde quality control tests conducted by or for the panel producers producing composite wood products that are subject to the requirements of TSCA Title VI.

(C) A review of the approach that the TPC will use for evaluating a panel producer's quality assurance and quality control processes, the proficiency of the panel producer's quality assurance and quality control personnel, the required elements of a panel producer's quality assurance and quality control manual, and sufficiency of on-site testing facilities as applicable.

(D) A review of the approach that the TPC laboratory will use for establishing correlation or equivalence between ASTM E1333–10 and ASTM D6007–02, if used, (incorporated by reference, see § 770.99) or allowable formaldehyde test methods listed under § 770.20.

(E) A review of the approach that the TPC will use for evaluating the process for sample selection, handling, and shipping procedures that the panel producer will use for quality control testing as applicable.

(F) A review of the accreditation credentials of the TPC laboratory, including a verification that the laboratory has been accredited to ISO/IEC 17025:2005(E) (incorporated by reference, see § 770.99) with a scope of accreditation to include this part—Formaldehyde Standards for Composite Wood Products and the formaldehyde test methods ASTM E1333–10 and ASTM D6007–02, if used, by an EPA TSCA Title VI Laboratory AB (incorporated by reference, see § 770.99).

(ii) *Reassessment.* Each EPA TSCA Title VI Product AB must, in accordance with ISO/IEC 17011:2004(E) section 7.11 (incorporated by reference, see § 770.99), conduct an on-site reassessment or surveillance on-site assessment at least every two years of each EPA TSCA Title VI TPC that the AB has accredited.

(iii) *Suspension, reduction, withdrawal.* Each EPA TSCA Title VI Product AB must suspend, reduce, or withdraw the accreditation of an EPA TSCA Title VI TPC that the AB has accredited when circumstances warrant.

(iv) *Notifications.* Each EPA TSCA Title VI Product AB must provide, in accordance with § 770.8, the following notifications to EPA, as applicable:

(A) Notification of the loss of its status as a signatory to the IAF MLA, or loss of membership in one of the IAF recognized regional accreditation cooperations, or an equivalent organization as determined by EPA must be provided within five calendar days of the date that the body receives notification of the loss of its signatory or membership status.

(B) Notification that an EPA TSCA Title VI TPC has failed to comply with any provision of this part must be provided within 72 hours of the time the Product AB identifies the deficiency. The notice must include a description of the steps taken to address the deficiency.

(C) Notification of suspension, reduction or withdrawal of an EPA TSCA Title VI TPC's accreditation must be provided within 72 hours of the time that the suspension, reduction or withdrawal takes effect.

(D) Notification of a change in a non-domestic Product AB's agent for service must be provided within five calendar days.

(v) *Records.* Each EPA TSCA Title VI Product AB must maintain, in electronic form, the checklists and other records documenting compliance with the requirements for assessment, reassessment, and surveillance on-site

assessments of EPA TSCA Title VI TPCs for three years.

(vi) *Annual report.* Each EPA TSCA Title VI Product AB must provide, in accordance with § 770.8, an annual report on or before March 1st of each year for the AB services performed during the previous calendar year including the number and locations of assessment, reassessment, and surveillance on-site assessments performed for each EPA TSCA Title VI TPC.

(vii) *EPA meetings.* Each EPA TSCA Title VI Product AB must meet with EPA at least once every two years in person, via teleconference, or through other virtual methods to discuss the implementation of the EPA TSCA Title VI Third-Party Certification Program.

(viii) *Inspections.* Each EPA TSCA Title VI Product AB must allow inspections of the AB's facilities by EPA, at reasonable times, within reasonable limits, and in a reasonable manner, upon the presentation of appropriate credentials and a written notification to the AB.

(b) *EPA TSCA Title VI Laboratory ABs.* To participate in the EPA TSCA Title VI Third-Party Certification Program as an EPA TSCA Title VI Laboratory AB, a Laboratory AB must have the qualifications described in this section, submit an application and enter into a recognition agreement with EPA as described in this section, and, upon recognition from EPA, impartially perform the responsibilities described in this section.

(1) *Qualifications.* To qualify for recognition by EPA under the EPA TSCA Title VI Third-Party Certification Program as an EPA TSCA Title VI Laboratory AB, an applicant Laboratory AB must:

(i) Be a signatory to the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA), or have membership in one of the ILAC recognized regional accreditation cooperations, or an equivalent organization as determined by EPA;

(ii) Be in conformance with ISO/IEC 17011:2004(E) (incorporated by reference, see § 770.99);

(iii) Be competent to perform accreditation activities for laboratory accreditation according to ISO/IEC 17025:2005(E) (incorporated by reference, see § 770.99); and

(iv) Be competent to ensure EPA TSCA Title VI TPC inspection activities are in conformance with ISO/IEC 17020:1998(E) (incorporated by reference, see § 770.99).

(2) *Application.* To be recognized by EPA under the EPA TSCA Title VI Third-Party Certification Program, a Laboratory AB must submit an application to EPA, which may be submitted in conjunction with a Product AB application. For recognition, a Laboratory AB must submit an application in accordance with § 770.8 that contains the following:

(i) Name, address, telephone number, and email address of the organization or primary contact;

(ii) Documentation of ILAC MRA signatory status, membership in one of the ILAC recognized regional accreditation cooperations, or an equivalent organization as determined by EPA;

(iii) Description of any other qualifications related to the Laboratory AB's experience in performing laboratory accreditation and inspection certification of TPCs including an affirmation that assessors will be technically competent to assess TPCs ability to perform their activities under paragraph (c)(4) of this section; and

(iv) If not a domestic entity, name and address of an agent for service located in the United States. Service on this agent constitutes service on the AB or any of its officers or employees for any action by EPA or otherwise by the United States related to the requirements of this part. ABs may share an agent for service.

(3) *Recognition agreement.* To be recognized by EPA under the EPA TSCA Title VI Third-Party Certification Program, a Laboratory AB must enter into a recognition agreement with EPA that describes the EPA TSCA Title VI Laboratory AB's responsibilities under this subpart.

(i) Each recognition agreement will be valid for three years.

(ii) Each recognition agreement will identify an EPA Recognition Agreement Implementation Officer and an EPA TSCA Title VI Laboratory AB Implementation Officer that will serve as the point of contact for the EPA TSCA Title VI Third-Party Certification Program.

(iii) To renew a recognition agreement for an additional three-year period, the EPA TSCA Title VI Laboratory AB must submit an application for renewal in accordance with § 770.8 before the three-year period of the recognition agreement lapses. The application must indicate any changes from the EPA TSCA Title VI Laboratory AB's initial application or most recent renewal application.

(iv) If an EPA TSCA Title VI Laboratory AB fails to submit an application for renewal prior to the expiration of the previous recognition agreement, its recognition will lapse and the EPA TSCA Title VI Laboratory AB may not provide accreditation services under TSCA Title VI.

(v) If an EPA TSCA Title VI Laboratory AB does submit an application for renewal prior to the expiration of the previous recognition agreement, it may continue to provide TSCA Title VI accreditation services under the terms of its previous recognition agreement until EPA has taken action on its application for renewal of the recognition agreement.

(4) *Impartiality.* EPA TSCA Title VI Laboratory ABs must act impartially when performing activities under the EPA TSCA Title VI Third-Party Certification Program. To demonstrate impartiality, Laboratory ABs must:

(i) Ensure that an accreditation decision regarding a TPC is made by persons different from those who conducted the assessment of the TPC; and

(ii) Ensure that the AB's personnel who assess TPCs or make decisions regarding accreditation do not receive financial benefit from the outcome of an accreditation decision.

(5) *Responsibilities.* Each EPA TSCA Title VI Laboratory AB has the following responsibilities under the EPA TSCA Title VI Third-Party Certification Program:

(i) *Accreditation.* EPA TSCA Title VI Laboratory ABs must determine the accreditation eligibility, and accredit if appropriate, each TPC seeking recognition under the EPA TSCA Title VI Third-Party Certification Program by performing an assessment of each TPC. The assessment must include an on-site assessment by the EPA TSCA Title VI Laboratory AB to determine whether the laboratory meets the requirements of ISO/IEC 17025:2005(E) (incorporated by reference, see § 770.99), is in conformance with ISO/IEC 17020:1998(E) (incorporated by reference, see § 770.99) and the EPA TSCA Title VI TPC requirements under this part including the formaldehyde test methods ASTM E1333–10 and ASTM D6007–02 (incorporated by reference, see § 770.99), if used. In performing the on-site assessment, the EPA TSCA Title VI Laboratory AB must:

(A) Develop a checklist of the TPC requirements under paragraph (c)(4) of this section and the key conformity elements of ISO/IEC 17025:2005(E) (incorporated by reference, see § 770.99); and

(B) Use the checklist for each on-site assessment.

(ii) *Reassessment.* Each EPA TSCA Title VI Laboratory AB must, in accordance with ISO/IEC 17011:2004(E) section 7.11 (incorporated by reference,

see § 770.99), conduct a follow-up reassessment or surveillance on-site assessment of each TPC laboratory that the AB has accredited.

(iii) *Proficiency.* Each EPA TSCA Title VI Laboratory AB must verify the accuracy of the formaldehyde emissions tests conducted by the TPC laboratory by ensuring the TPC laboratory participates in the CARB interlaboratory comparison for formaldehyde emissions when offered. In lieu of participation in the CARB interlaboratory comparison ensure that the TPC laboratory participates in an EPA-recognized proficiency testing program, if available.

(iv) *Suspension, reduction, withdrawal.* Each EPA TSCA Title VI Laboratory AB must suspend, reduce, or withdraw the accreditation of a TPC laboratory that the AB has accredited when circumstances warrant.

(v) *Notifications.* Each EPA TSCA Title VI Laboratory AB must provide, in accordance with § 770.8, the following notifications to EPA as applicable:

(A) Notification of the loss of its status as a signatory to the ILAC MRA, or loss of membership in one of the ILAC recognized regional accreditation cooperations, or an equivalent organization as determined by EPA, within five calendar days of the date that the body receives notice of the loss of its signatory or membership status.

(B) Notification that a TPC laboratory has failed to comply with any provision of this part within 72 hours of the time the Laboratory AB identifies the deficiency. The notice must include a description of the steps taken to address the deficiency.

(C) Notification of suspension, reduction or withdrawal of a TPC laboratory's accreditation within 72 hours of the time that the suspension, reduction or withdrawal takes effect.

(D) Notification of a change in a non-domestic Laboratory AB's agent for service within five calendar days.

(vi) *Records.* Each EPA TSCA Title VI Laboratory AB must maintain, in electronic form, the checklists and other records documenting compliance with the requirements for assessment, reassessment, and surveillance on-site assessments of TPC laboratories for three years.

(vii) *Annual report.* Each EPA TSCA Title VI Laboratory AB must provide, in accordance with § 770.8, an annual report to EPA on or before March 1st of each year for AB services performed during the previous calendar year including the number and locations of assessment, reassessment, and surveillance on-site assessments performed for each TPC laboratory.

(viii) *EPA meetings.* Each EPA TSCA Title VI Laboratory AB must meet with EPA at least once every two years in person, via teleconference, or through other virtual methods to discuss the implementation of the EPA TSCA Title VI Third-Party Certification Program.

(ix) *Inspections.* Each EPA TSCA Title VI Laboratory AB must allow inspections of the AB's facilities by EPA, at reasonable times, within reasonable limits, and in a reasonable manner, upon the presentation of appropriate credentials and a written notification to the AB.

(c) *EPA TSCA Title VI Third-Party Certifiers.* To participate in the EPA TSCA Title VI Third-Party Certification Program as an EPA TSCA Title VI TPC, a TPC must be accredited by an EPA TSCA Title VI Product AB, use a laboratory that is accredited by an EPA TSCA Title VI Laboratory AB, have the other qualifications described in this subsection, submit an application and be recognized by EPA, and, upon recognition from EPA, impartially perform the responsibilities described in this section. Alternatively, CARB-approved TPCs must meet the criteria for reciprocity in paragraph (d) of this section and comply with the requirements of this part in order to be recognized by EPA as an EPA TSCA Title VI TPC.

(1) *Qualifications.* To qualify for recognition by EPA in the EPA TSCA Title VI Third-Party Certification Program as an EPA TSCA Title VI TPC, an applicant TPC must:

(i) Be accredited by an EPA TSCA Title VI Product AB to ISO/IEC 17065:2012(E) (incorporated by reference, see § 770.99), with a scope of accreditation that includes include composite wood products and this part—Formaldehyde Standards for Composite Wood Products;

(ii) Be, or have a contract with a laboratory that is, accredited by an EPA TSCA Title VI Laboratory AB to ISO/IEC 17025:2005(E) (incorporated by reference, see § 770.99) with a scope of accreditation to include this part—Formaldehyde Standards for Composite Wood Products and the formaldehyde test methods ASTM E1333–10 and ASTM D6007–02, if used (incorporated by reference, see § 770.99);

(iii) Have the ability to conduct inspections of composite wood products and properly train and supervise inspectors to inspect composite wood products in conformance with ISO/IEC 17020:1998(E) as required under ISO/IEC 17065:2012(E) section 6.2.1 (incorporated by reference, see § 770.99);

(iv) Have demonstrated experience in the composite wood product industry with at least one type of composite wood product and indicated the specific product(s) the applicant intends to certify; and

(v) Have demonstrated experience in performing or verifying formaldehyde emissions testing on composite wood products, including experience with test method ASTM E1333–10 and ASTM D6007–02, if used, (incorporated by reference, see § 770.99), and experience evaluating correlation between test methods. Applicant TPCs that have demonstrated experience with test method ASTM D6007–02 only, must be contracting testing with a laboratory that has a large chamber and demonstrate its experience with ASTM E1333–10.

(2) *Application.* Before certifying any products under this part, a TPC must be recognized by EPA under the EPA TSCA Title VI Third-Party Certification Program. To be recognized by EPA, a TPC must submit an application in accordance with § 770.8 and renew that application every two years. The application must contain the following:

(i) Email address of the organization or primary contact, organization name, organization telephone number, and organization address;

(ii) Type of composite wood products that the applicant intends to certify;

(iii) A copy of the TPC's certificate of accreditation from an EPA TSCA Title VI Product AB to ISO/IEC 17065:2012(E) (incorporated by reference, see § 770.99) with a scope of accreditation that includes composite wood products and this part—Formaldehyde Standards for Composite Wood Products;

(iv) A copy of the TPC laboratory's certificate of accreditation from an EPA TSCA Title VI Laboratory AB to ISO/IEC 17025:2005(E) (incorporated by reference, see § 770.99) with a scope of accreditation to include this part—Formaldehyde Standards for Composite Wood Products and the formaldehyde test methods ASTM E1333–10 and ASTM D6007–02 (incorporated by reference, see § 770.99), if used;

(v) An affirmation of the TPC's ability to conduct inspections of composite wood products and properly train and supervise inspectors to inspect composite wood products in conformance with ISO/IEC 17020:1998(E) as required under ISO/IEC 17065:2012(E) section 6.2.1 (incorporated by reference, see § 770.99);

(vi) A description of the TPC's experience in the composite wood product industry with at least one type of composite wood product and indicate

the specific product(s) the applicant intends to certify;

(vii) A description of the TPC's experience in performing or verifying formaldehyde emissions testing on composite wood products;

(viii) A description of the TPC's experience with test method ASTM E1333–10 and/or ASTM D6007–02, if used, (incorporated by reference, see § 770.99), and experience evaluating correlation between test methods. Applicant TPCs that have experience with test method ASTM D6007–02 only, must be contracting testing with a laboratory that has a large chamber and describe its experience with ASTM E1333–10; and

(ix) If not a domestic entity, the name and address of an agent for service located in the United States. Service on this agent constitutes service on the TPC or any of its officers or employees for any action by EPA or otherwise by the United States related to the requirements of this part. TPCs may share an agent for service.

(3) *Impartiality.* EPA TSCA Title VI TPCs must act impartially in accordance with their accreditation when performing activities under the EPA TSCA Title VI Third-Party Certification Program. To demonstrate impartiality, TPCs must:

(i) Not also be, or have a financial interest in a panel producer, fabricator, laminated product producer, importer, designer, distributor or retailer of composite wood products;

(ii) Ensure that TPC management personnel and TPC personnel involved in the review and certification decision-making process for composite wood products are not involved in activities within the same or separate legal entity that may compromise the impartiality of its certification decision-making process, such as advocacy or consulting activities;

(iii) Ensure that TPC management personnel and TPC personnel of the same or separate legal entity involved in activities such as advocacy or consulting are not involved in the management of the certification body, the review, or the certification decisions; and

(iv) Ensure that TPC management personnel and TPC personnel certifying composite wood products sign a conflict of interest statement attesting that they will receive no financial benefit from the outcome of certification.

(4) *Responsibilities.* Each EPA TSCA Title VI TPC has the following responsibilities under the EPA TSCA Title VI Third-Party Certification Program:

(i) *Certification.* EPA TSCA Title VI TPCs certify composite wood products that are produced in accordance with this part and that comply with the emission standards of TSCA Title VI and this part, in accordance with ISO/IEC 17065:2012(E) (incorporated by reference, see § 770.99). For each panel producer making composite wood products certified by the TPC, the EPA TSCA Title VI TPC must:

(A) Verify that each panel producer has adequate quality assurance and quality control procedures and is complying with the applicable quality assurance and quality control requirements of this part;

(B) Verify each panel producer's quality control test results compared with test results from ASTM E1333–10 and ASTM D6007–02, if used, (incorporated by reference, see § 770.99) by having the TPC laboratory conduct quarterly tests and evaluate test method equivalence and correlation as required under § 770.20;

(C) In consultation with the panel producer, establish quality control limits (QCLs) for formaldehyde emissions, and, if applicable, shipping quality control limits or other formaldehyde emission limits, for each panel producer and product type;

(D) Establish, for each panel producer, the process that will be used to determine if products are exceeding the applicable QCL;

(E) Provide its CARB or EPA TPC number to each panel producer for labeling and recordkeeping; and

(F) Inspect each panel producer, its products, and its records at least quarterly in conformance with ISO/IEC 17020:1998(E) as required under ISO/IEC 17065:2012(E) section 6.2.1 (incorporated by reference, see § 770.99).

(ii) *Laboratories.* For quarterly testing, each EPA TSCA Title VI TPC must use only laboratories that have been accredited by an EPA TSCA Title VI Laboratory AB and that either participate in the CARB interlaboratory comparison for formaldehyde emissions when offered or in an EPA-recognized proficiency or interlaboratory program, if available.

(iii) *NAF and ULEF.* For panel producers that do not receive approval for NAF or ULEF third-party certification exemptions or ULEF reduced testing from CARB, EPA TSCA Title VI TPCs must review applications for NAF or ULEF third-party certification exemptions or ULEF reduced testing. Each EPA TSCA Title VI TPC must approve these applications within 90 calendar days of receipt if the panel producer demonstrates that the requirements for third-party certification exemption under § 770.17 or § 770.18 or reduced testing under § 770.18 are met.

(iv) *Reduced testing for medium-density fiberboard or fiberboard.* EPA TSCA Title VI TPCs must review applications from panel producers to reduce the number of quality control tests for particleboard and medium-density fiberboard, and approve these applications within 90 calendar days of receipt if the panel producer demonstrates that the requirements for reduced testing under § 770.20(b)(2)(ii) are met.

(v) *Notifications to EPA.* Each EPA TSCA Title VI TPC must provide, in accordance with § 770.8, the following notifications to EPA, as applicable:

(A) Notification of an approved or rejected application, including a renewal application, for a NAF or ULEF third-party certification exemption or ULEF reduced testing within five calendar days of the approval or rejection with copies of all approved applications forwarded to EPA within 30 calendar days of approval.

(B) Notification of an approved or rejected application, including a renewal application, for reduced testing for medium-density fiberboard or particleboard within five calendar days of the approval or rejection with copies of all approved applications forwarded to EPA within 30 calendar days of approval.

(C) Notification of a panel producer exceeding its established QCL for more than two consecutive quality control tests within 72 hours of the time that the TPC becomes aware of the second exceedance. The notice must include the product type, dates of the quality control tests that exceeded the QCL, quality control test results, ASTM E1333–10 (incorporated by reference, see § 770.99) correlative equivalent values, the established QCL value(s) and the quality control method used.

(D) Notification of each failed quarterly test, that is any sample that exceeds the applicable formaldehyde emission standard in § 770.10, within 72 hours. Information in this notification is not eligible for treatment as confidential business information.

(E) Notification of a change in a non-domestic TPC's agent for service within five calendar days.

(F) Notification of a loss of accreditation or notification that the TPC has discontinued its participation in the EPA TSCA Title VI Third-Party Certification Program must be provided within 72 hours.

(vi) *Other notifications.* Each EPA TSCA Title VI TPC must provide the following notifications, if applicable:

(A) Notification of each failed quarterly test, that is any sample that exceeds the applicable formaldehyde emission standard in § 770.10, to the panel producer in writing within 72 hours. Information in this notification is not eligible for treatment as confidential business information.

(B) Notification of a loss of accreditation or notification that the TPC has discontinued its participation in the EPA TSCA Title VI Third-Party Certification Program within 72 hours to all panel producers for which it provides EPA TSCA Title VI certification services.

(C) Notification of any changes in personnel qualifications, procedures, or laboratories used, to the TPC's EPA TSCA Title VI ABs within 30 calendar days.

(vii) *Records.* Each EPA TSCA Title VI TPC must maintain, in electronic form, the following records for three years from the date the record is created, and provide them to EPA within 30 calendar days of a request from EPA:

(A) A list of panel producers and their respective products and product types, including type of resin systems used, that the EPA TSCA Title VI TPC has certified;

(B) Results of inspections and formaldehyde emissions tests conducted for and linked to each panel producer and product type;

(C) A list of laboratories used by the EPA TSCA Title VI TPC, as well as all test methods used, including test conditions and conditioning time, and quarterly test results;

(D) Methods and results for establishing test method correlations and equivalence;

(E) Documentation for NAF or ULEF third-party certification exemptions or ULEF reduced testing approvals, including the name of the panel producer, facility, products approved, type of resin systems used and dates of approval;

(F) Documentation of reduced testing approval for panel producers of medium-density fiberboard or particleboard, including the name of the panel producer, products approved and dates of approval; and

(G) A copy of the most recent assessment, reassessment, and/or surveillance on-site assessment report provided by its EPA TSCA Title VI ABs.

(viii) *Annual report.* Each EPA TSCA Title VI TPC must provide, in accordance with § 770.8, an annual report on or before March 1st of each year for the TPC services performed during the previous calendar year. Quarterly test results, the test method, date of test, and product tested (including the product name or description and panel producer name) are not eligible for treatment as confidential business information. The report must contain all of the following elements, as applicable:

(A) The following information for each panel producer making composite wood products certified by the TPC, the EPA TSCA Title VI TPC:

(*1*) Composite wood products that the EPA TSCA Title VI TPC has certified during the previous calendar year;

(*2*) Types of resin systems used for the composite wood products certified;

(*3*) Dates of quarterly inspections;

(*4*) For each quarterly test, the date, result, test method, and whether a contract laboratory was used;

(*5*) For each failed quarterly test, the product type, the volume of product affected, the results of recertification testing, and a description of the final disposition of the affected product, including how the non-complying lot was addressed;

(*6*) For each non-complying lot resulting from a failed quality control test, the test date, method, product type, volume of product affected, lot numbers, the results of retesting, and a description of the final disposition of the affected product, including how the non-complying lot was addressed; and

(*7*) Any corrective actions that resulted from quarterly tests and inspections.

(B) A list of laboratories and test methods used by the TPC, number and volume (cubic meters) of large and small chambers, date of equivalence determination and equivalence data.

(C) Any non-conformities identified by its EPA TSCA Title VI AB(s) and how they were addressed.

(D) The results compared with the mean of the interlaboratory comparison for all formaldehyde emissions interlaboratory comparison tests other than the CARB interlaboratory comparison or, if available, the results of an EPA-recognized proficiency testing program.

(ix) *Assessments and inspections.* Upon request, each EPA TSCA Title VI TPC must allow EPA representatives to:

(A) Accompany the TPC's staff during an assessment, reassessment or surveillance on-site assessment of the TPC by its AB(s); and

(B) Inspect the TPC's facilities, at reasonable times, within reasonable limits, and in a reasonable manner, upon the presentation of appropriate credentials and a written notification to the TPC.

(d) *Reciprocity for third-party certifiers approved by the California Air Resources Board (CARB)*—(1) *During transitional period.* The transitional period is defined as the two-year period beginning on December 12, 2016 and ending on December 12, 2018. TPCs already approved by CARB and TPCs subsequently approved by CARB during the transition period must apply for EPA recognition in accordance with § 770.8 before they can certify any products under this part. Once recognized by EPA, CARB-approved TPCs become EPA TSCA Title VI TPCs and may certify composite wood products under TSCA Title VI until December 12, 2018 as long as they:

(i) Remain approved by CARB; and

(ii) Comply with all aspects of this part other than the requirements of paragraphs (c)(1)(i) and (ii) and (c)(2)(iii) and (iv) of this section. This includes:

(A) Provide panel producers with the TPC number issued by CARB; and

(B) Provide the annual report required by paragraph (c)(4)(viii) of this section to CARB and EPA during the two-year transitional period.

(C) Provide notifications required by paragraph (c)(4)(v) to EPA.

(2) *After transition period.* (i) TPCs approved by CARB may continue to certify composite wood products under TSCA Title VI after the two-year transitional period if the TPC:

(A) Maintains its CARB approval;

(B) Complies with the requirements of this part;

(C) Submits to EPA, in accordance with § 770.8:

(*1*) Documentation from CARB that specifies eligibility for reciprocity; and

(*2*) A copy of the application submitted to CARB to be recognized as a TPC under the CARB ATCM.

(D) Receives EPA recognition as an EPA TSCA Title VI TPC.

(ii) EPA retains the authority to deny recognition of CARB-approved TPCs who seek recognition through reciprocity in the EPA TSCA Title VI Third-Party Certification Program if EPA has information indicating that the TPC is not qualified.

(e) *Suspension, revocation or modification of recognition*—(1) *Third-party certifiers.* EPA may suspend, revoke or modify the recognition of a TPC, if the TPC:

(i) Fails to comply with any requirement of TSCA Title VI or this part;

(ii) Makes any false or misleading statements on its application, records, or reports; or

(iii) Makes substantial changes to personnel qualifications, procedures, or laboratories that make the TPC or TPC

laboratory unable to comply with any applicable requirements of this part.

(2) *ABs.* EPA may suspend, revoke or modify the recognition of an AB if the AB:

(i) No longer maintains signatory status to the IAF MLA or ILAC MRA, membership in one of the IAF/ILAC recognized regional accreditation cooperations, or an equivalent organization as determined by EPA;

(ii) Fails to comply with any requirement of TSCA Title VI or this part;

(iii) Makes any false or misleading statements on its application, records, or reports; or

(iv) Makes substantial changes to personnel qualifications or procedures that make the AB, TPC and/or TPC laboratory unable to comply with any applicable requirements of this part.

(3) *Process for suspending, revoking or modifying recognition.* (i) Prior to taking action to suspend, revoke or modify recognition, EPA will notify the participant AB or the participant TPC in writing of the following:

(A) The legal and factual basis for the proposed suspension, revocation or modification;

(B) The anticipated commencement date and duration of the suspension, revocation or modification;

(C) Actions, if any, which the affected AB or TPC may take to avoid suspension, revocation or modification, or to receive recognition in the future; and

(D) The opportunity and method for requesting a hearing with EPA prior to final suspension, revocation or modification.

(ii) If the affected AB or TPC requests a hearing in writing to EPA within 30 calendar days of receipt of the notification, EPA will:

(A) Provide the affected AB or TPC an opportunity to offer written statements in response to EPA's assertions of the legal and factual basis for the proposed action; and

(B) Appoint an impartial EPA official as Presiding Officer to conduct the hearing. The Presiding Officer will:

(*1*) Conduct a fair, orderly, and impartial hearing within 90 calendar days of the request for a hearing;

(*2*) Consider all relevant evidence, explanations, comments, and arguments submitted; and

(*3*) Notify the affected AB or TPC in writing within calendar 90 days of completion of the hearing of his or her decision and order. Such an order is a final EPA action which may be subject to judicial review. The order must contain the basis, commencement date, and duration of the suspension, revocation or modification.

(iii) If EPA determines that the public health, interest, or welfare warrants immediate action to revoke the recognition of an AB or TPC prior to the opportunity for a hearing, it will notify the affected AB or TPC of its right to request a hearing on the immediate revocation within 15 calendar days of the revocation taking place and the procedures for the conduct of such a hearing.

(iv) Any notification, decision, or order issued by EPA under this section, any transcript or other verbatim record of oral testimony, and any documents filed by a certified individual or firm in a hearing under this section will be available to the public, except as otherwise provided by TSCA section 14. Any such hearing at which oral testimony is presented will be open to the public, except that the Presiding Officer may exclude the public to the extent necessary to allow presentation of information which may be entitled to confidential treatment under TSCA section 14.

(v) EPA will maintain a publicly available list of ABs on its Web site whose recognition has been suspended, revoked or modified, or reinstated and a publicly available list of TPCs whose recognition has been suspended, revoked, modified, or reinstated.

(vi) Unless the decision and order issued under paragraph (e)(3) of this section specify otherwise, an AB or a TPC whose recognition has been revoked must reapply for recognition in order to become recognized under this part again.

(vii) Unless the decision and order issued under paragraph (e)(3) of this section specify otherwise, an AB whose recognition has been revoked or a TPC whose recognition has been revoked, must immediately notify all TPCs or panel producers to which it provides TSCA Title VI accreditation or certification services of the revocation.

(f) *Effect of the loss of recognition or accreditation.* (1) If an AB is removed or withdraws from the EPA TSCA Title VI Third-Party Certification Program:

(i) For reasons other than fraud or providing false or misleading statements, and other than a reason that implicates a particular TPC in a violation of TSCA Title VI, TPCs accredited by that AB can continue to certify products under TSCA Title VI for 180 calendar days, after which the TPCs must be accredited again by another EPA TSCA Title VI AB and re-recognized by EPA.

(ii) Due to fraud or providing false or misleading statements with respect to a particular TPC, or for any other reason that implicates a particular TPC in a violation of TSCA Title VI, that TPC may not provide any TSCA Title VI certification services until it has been accredited again by another EPA TSCA Title VI AB and re-recognized by EPA.

(2) If a TPC loses its accreditation, or if TPC is removed or withdraws from the EPA TSCA Title VI Third-Party Certification Program:

(i) For reasons other than fraud or providing false or misleading statements, and other than a reason that implicates a particular panel producer in a violation of TSCA Title VI, the panel producers that used the TPC to certify their products must enlist another EPA TSCA Title VI TPC to certify their products within 90 calendar days. If the panel producer is not able to obtain the services of another EPA TSCA Title VI TPC within 90 days, the panel producer may request from EPA a 90 calendar day extension. During the time a panel producer is seeking a new TPC, it must continue to comply with all other requirements of TSCA Title VI, including quality control testing.

(ii) Due to fraud or providing false or misleading statements with respect to a particular panel producer, or for any other reason that implicates a particular panel producer in a violation of TSCA Title VI, that panel producer may not sell, supply, offer for sale, or manufacture composite wood products for sale in the United States until its composite wood products have been recertified by another EPA TSCA Title VI TPC.

(g) *Process for denying EPA TSCA Title VI recognition.* (1) Upon EPA denying a request for recognition of an AB or TPC, EPA will notify the AB or TPC in writing of the following:

(i) The legal and factual basis for the denial; and

(ii) Actions, if any, which the affected AB or TPC may take to receive recognition in the future.

(2) [Reserved]

§ 770.8 Applications, notifications, and reports.

(a) All applications, notifications, and reports that are required to be submitted to EPA under this subpart must be submitted via the EPA Central Data Exchange (CDX) found at *https://cdx.epa.gov.*

(b) If the EPA CDX is unavailable, EPA will so inform EPA TSCA Title VI ABs and TPCs and will make electronic applications and reporting forms available online at *http://www.epa.gov/formaldehyde.*

(c)(1) Persons submitting a notice under this rule are subject to EPA confidentiality regulations at 40 CFR part 2, subpart B, except that the

certification in paragraph (c)(2) of this section must also be provided when asserting a claim of confidentiality.

(2) In submitting a claim of confidentiality, a person must certify the truth of the following four statements concerning all information which is claimed as confidential:

(i) My company has taken measures to protect the confidentiality of the information.

(ii) I have determined that the information is not required to be disclosed or otherwise made available to the public under any other Federal law.

(iii) I have a reasonable basis to conclude that disclosure of the information is likely to cause substantial harm to the competitive position of the person.

(iv) I have a reasonable basis to believe that the information is not readily discoverable through reverse engineering.

Subpart C—Composite Wood Products

§ 770.10 Formaldehyde emission standards.

(a) Except as otherwise provided in this part, the emission standards in this section apply to composite wood products sold, supplied, offered for sale, or manufactured (including imported) on or after December 12, 2017 in the United States. These emission standards apply regardless of whether the composite wood product is in the form of a panel, a component part, or incorporated into a finished good.

(b) The emission standards are based on test method ASTM E1333–10 (incorporated by reference, see § 770.99), and are as follows:

(1) For hardwood plywood made with a veneer core or a composite core, 0.05 parts per million (ppm) of formaldehyde.

(2) For medium-density fiberboard, 0.11 ppm of formaldehyde.

(3) For thin medium-density fiberboard, 0.13 ppm of formaldehyde.

(4) For particleboard, 0.09 ppm of formaldehyde.

§ 770.12 Stockpiling.

(a) The sale of stockpiled inventory of composite wood products, whether in the form of panels or incorporated into component parts or finished goods, is prohibited after December 12, 2017.

(b) To determine whether stockpiling has occurred, the rate of manufacture or purchase is measured as follows:

(1) For composite wood products in the form of panels, the rate is measured in terms of square footage of panels produced.

(2) For composite wood products incorporated into component parts or finished goods, the rate is measured in terms of the square footage of composite wood product panels purchased for the purpose of incorporating them into component parts or finished goods.

(c) Manufacturers or purchasers who have, in an annual year, a greater than 20% increase in manufacturing or purchasing composite wood products relative to annual year 2009 for some reason other than circumventing the emission standards would not be in violation of this section. Such reasons may include, but are not limited to:

(1) A quantifiable immediate increase in customer demand or sales.

(2) A documented and planned business expansion.

(3) The manufacturer or purchaser was not in business at the beginning of calendar year 2009.

(4) An increase in production to meet increased demand resulting from an emergency event or natural disaster.

(d) In order to be found to be stockpiling an entity must be increasing the rate of manufacturing or purchasing for the purpose of circumventing the emission standards.

§ 770.15 Composite wood product certification.

(a) After December 12, 2017, only certified composite wood products, whether in the form of panels or incorporated into component parts or finished goods, are permitted to be sold, supplied, offered for sale, or manufactured (including imported) in the United States, unless the product is specifically exempted by this part.

(b) Certified composite wood products are those that are produced or fabricated in accordance with all of the provisions of this part.

(c) To obtain product certification, a panel producer must apply to an EPA TSCA Title VI TPC.

(1) For panel producers that do not have any previous product certifications from a CARB-approved TPC or an EPA TSCA Title VI TPC, the application must contain the following:

(i) The panel producer's name, address, telephone number, and other contact information;

(ii) A copy of the panel producer's quality control manual as required by § 770.21(a);

(iii) Name and contact information for the panel producer's quality control manager;

(iv) An identification of the specific products for which certification is requested, and the resin system used in panel production;

(v) At least five tests conducted under the supervision of an EPA TSCA Title VI TPC pursuant to test method ASTM E1333–10 or ASTM D6007–02 (incorporated by reference, see § 770.99). Test results obtained by ASTM D6007–02 must include a showing of equivalence in accordance with § 770.20(d)(1);

(vi) At least five quality control tests conducted in accordance with § 770.20(b)(1);

(vii) Linear regression equation and correlation data; and

(viii) Results of an initial, on-site inspection by the TPC of the panel producer.

(2) For panel producers applying for certification of a new product type but that have previous product certifications from a CARB-approved TPC or an EPA TSCA Title VI TPC, the application must contain the following:

(i) The panel producer's name, address, and telephone number;

(ii) An identification of the specific products for which certification is requested, and the resin system used in panel production;

(iii) At least five tests conducted under the supervision of an EPA TSCA Title VI TPC pursuant to test method ASTM E1333–10 or ASTM D6007–02 (incorporated by reference, see § 770.99). Test results obtained by ASTM D6007– 02 must include a showing of equivalence in accordance with § 770.20(d)(1);

(iv) At least five quality control tests conducted in accordance with § 770.20(b)(1);

(v) Linear regression equation and correlation data; and

(vi) Description of any changes in the panel producer's quality control manual and a copy of those changes.

(d) The EPA TSCA Title VI TPC must act on a panel producer's complete application within 90 calendar days of receipt by reviewing all of the components of the application.

(1) If the application indicates that the candidate product achieves the applicable emission standards described in § 770.10, adequate correlation as described in § 770.20(d)(2), and that the panel producer is meeting the requirements in § 770.21, the EPA TSCA Title VI TPC will approve the application.

(2) If the application is from a panel producer that did not previously have products certified by a CARB-approved TPC or an EPA TSCA Title VI TPC, the EPA TSCA Title VI TPC will review the quality control manual and results of the on-site initial inspection and approve or disapprove the quality control manual.

(3) If the application does not demonstrate that the candidate product achieves the applicable emission

standards described in § 770.10, the EPA TSCA Title VI TPC will disapprove the application. A new application may be submitted for the candidate product at any time.

(e) If a product is certified by a CARB-approved TPC, it will also be considered certified under TSCA Title VI until December 12, 2018 after which the TPC needs to receive recognition as an EPA TSCA Title VI TPC under § 770.7(d) in order for the product to remain certified.

(f) To maintain certification, the panel producer making the certified product must get inspected by its EPA TSCA Title VI TPC quarterly as well as meet the testing requirements under § 770.20.

(g) If the certified product fails a quarterly test, certification for any product types represented by the sample is suspended until a compliant quarterly test result is obtained in accordance with § 770.22.

§ 770.17 No-added formaldehyde-based resins.

(a) Producers of composite wood product panels made with no-added formaldehyde-based resins may apply to an EPA TSCA Title VI TPC or to CARB for a two-year exemption from the testing requirements in § 770.20 and certification requirements in §§ 770.15 and 770.40(b). The application must contain the following:

(1) The panel producer's name, address, and telephone number;

(2) An identification of the specific product and the resin system;

(3) At least one test conducted under the supervision of an EPA TSCA Title VI TPC pursuant to test method ASTM E1333–10 or ASTM D6007–02 (incorporated by reference, see § 770.99). Test results obtained by ASTM D6007–02 must include a showing of equivalence in accordance with § 770.20(d)(1); and

(4) Three months of routine quality control tests under § 770.20, including a showing of correlation in accordance with § 770.20(d)(2), totaling not less than five quality control tests.

(b) The EPA TSCA Title VI TPC will approve a panel producer's application within 90 calendar days of receipt if the application is complete and demonstrates that the candidate product achieves the emission standards described in paragraph (c) of this section.

(c) As measured according to paragraphs (a)(3) and (4) of this section, the emission standards for composite wood products made with no-added formaldehyde-based resins are as follows:

(1) No test result higher than 0.05 parts per million (ppm) of formaldehyde for hardwood plywood and 0.06 ppm for particleboard, medium-density fiberboard, and thin medium-density fiberboard.

(2) No higher than 0.04 ppm of formaldehyde for 90% of the three months of routine quality control testing data required under paragraph (a)(4) of this section.

(d) Products that meet the requirements specified under § 770.17(c)(1) and (2) and have obtained exemption from the California Air Resources Board will also be exempt from the requirements in §§ 770.15, 770.20, and 770.40(b), as long as the requirements of the California Air Resources Board remain as stringent as EPA's requirements.

(e) After the two-year period of the initial exemption, and every two years thereafter, in order to continue to qualify for the exemption from the testing and certification requirements, the panel producer must reapply to an EPA TSCA Title VI TPC or to CARB and obtain at least one test result in accordance with paragraph (a)(3) of this section that complies with the emission standards in paragraph (c)(1) of this section.

(f) Any time there is an operational or process change that is likely to affect formaldehyde emissions, such as a change in resin formulation, press cycle duration, temperature, or amount of resin used per panel, at least one quality control test under § 770.20 and at least one test result in accordance with paragraph (a)(3) of this section that indicate compliance with the emission standards in paragraph (c)(1) of this section are required.

(g) A change in the resin system invalidates the exemption for any product produced with the different resin after such a change.

§ 770.18 Ultra low-emitting formaldehyde resins.

(a) Producers of composite wood product panels made with ultra low-emitting formaldehyde resins may apply to an EPA TSCA Title VI TPC or CARB for approval either to conduct less frequent testing than is specified in § 770.20 or approval for a two-year exemption from the testing requirements in § 770.20 and certification requirements in §§ 770.15 and 770.40(b). The application must contain the following:

(1) The panel producer's name, address, and telephone number;

(2) An identification of the specific product type, including resin system;

(3) At least two tests conducted under the supervision of an EPA TSCA Title VI TPC pursuant to test method ASTM E1333–10 or ASTM D6007–02 (incorporated by reference, see § 770.99). Test results obtained by ASTM D6007–02 must include a showing of equivalence in accordance with § 770.20(d)(1); and

(4) Six months of routine quality control tests under § 770.20, including a showing of correlation in accordance with § 770.20(d)(2), totaling not less than ten quality control tests.

(b) The EPA TSCA Title VI TPC will approve a panel producer's application within 90 calendar days of receipt if the application is complete and demonstrates that the candidate product achieves the emission standards required for reduced testing as described in paragraph (c) of this section or the emission standards required for a two-year exemption as described in paragraph (d) of this section.

(c) As measured according to paragraphs (a)(3) and (4) of this section, the emission standards for reduced testing for composite wood products made with ultra low-emitting formaldehyde resins are as follows:

(1) No test result higher than 0.05 parts per million (ppm) of formaldehyde for hardwood plywood, 0.08 ppm for particleboard, 0.09 ppm for medium-density fiberboard, and 0.11 ppm for thin medium-density fiberboard.

(2) For 90% of the six months of routine quality control testing data required under paragraph (a)(4) of this section, no higher than 0.05 ppm of formaldehyde for particleboard, no higher than 0.06 ppm of formaldehyde for medium-density fiberboard, and no higher than 0.08 ppm of formaldehyde for thin medium-density fiberboard.

(d) As measured according to paragraphs (a)(3) and (4) of this section, the emission standards for an exemption from the testing and certification requirements of § 770.20 for composite wood products made with ultra low-emitting formaldehyde resins are as follows:

(1) No test result higher than 0.05 ppm of formaldehyde for hardwood plywood or 0.06 ppm of formaldehyde for particleboard, medium-density fiberboard, and thin medium-density fiberboard.

(2) For 90% of the six months of routine quality control testing data required under paragraph (a)(4) of this section, no higher than 0.04 parts per million of formaldehyde.

(e) Products that have obtained an exemption from the California Air Resources Board will also be exempt from the requirements in §§ 770.15, 770.20, and 770.40(b) if they meet the requirements under § 770.18(d) and the

requirements of the California Air Resources Board remain as stringent as EPA's requirements. Products that have obtained approval for reduced testing from the California Air Resources Board will be granted approval to conduct less frequent testing than is specified in § 770.20 if they meet the requirements under § 770.18(c) and the requirements of the California Air Resources Board remain as stringent as EPA's requirements.

(f) Products that are represented by a quarterly test result that exceeds the applicable emission standard in this section or a quality control test that indicates that the product exceeds the applicable emission standard in this section lose their reduced testing approval and must reapply as specified under § 770.18(a).

(g) After the two-year period of the initial exemption, and every two years thereafter, in order to continue to qualify for the exemption from the testing and certification requirements, the panel producer must reapply to an EPA TSCA Title VI TPC or CARB and obtain at least two test results in accordance with paragraph (a)(3) of this section that comply with the emission standards in paragraph (d)(1) of this section.

(h) Any time there is an operational or process change such as a change in resin formulation, press cycle duration, temperature, or amount of resin used per panel, at least five quality control tests under § 770.20 and at least one test result in accordance with paragraph (a)(3) of this section that indicate compliance with the emission standards in paragraph (d)(1) of this section are required.

(i) A change in the resin system invalidates the exemption or reduced testing approval for any product type produced after such a change.

§ 770.20 Testing requirements.

(a) *General requirements.* (1) All panels must be tested in an unfinished condition, prior to the application of a finishing or topcoat, as soon as possible after their production but no later than 30 calendar days after production.

(2) Facilities that conduct the formaldehyde testing required by this section must follow the procedures and specifications, such as testing conditions and loading ratios, of the test method being used.

(3) All equipment used in the formaldehyde testing required by this section must be calibrated and otherwise maintained and used in accordance with the equipment manufacturer's instructions.

(b) *Quality control testing*—(1) *Allowable methods.* Quality control testing must be performed using any of the following methods, with a showing of correlation for each method pursuant to paragraph (d) of this section:

(i) ASTM D6007–02 (incorporated by reference, see § 770.99).

(ii) ASTM D5582–00 (incorporated by reference, see § 770.99).

(iii) BS EN 717–2:1995 (Gas Analysis Method) (incorporated by reference, see § 770.99).

(iv) DMC 2007 User's Manual (incorporated by reference, see § 770.99).

(v) DMC 2012 GP User's Manual (incorporated by reference, see § 770.99).

(vi) BS EN 120:1992 (Perforator Method) (incorporated by reference, see § 770.99).

(vii) JIS A 1460:2001(E) (24-hr Desiccator Method) (incorporated by reference, see § 770.99).

(2) *Frequency of testing.* (i) Particleboard and medium-density fiberboard must be tested at least once per shift (eight or twelve hours, plus or minus one hour of production) for each production line for each product type. Quality control tests must also be conducted whenever:

(A) A product type production ends, even if eight hours of production has not been reached;

(B) The resin formulation is changed so that the formaldehyde to urea ratio is increased;

(C) There is an increase by more than ten percent in the amount of formaldehyde resin used, by square foot or by panel;

(D) There is a decrease in the designated press time by more than 20%; or

(E) The quality control manager or quality control employee has reason to believe that the panel being produced may not meet the requirements of the applicable standards.

(ii) Particleboard and medium-density fiberboard panel producers are eligible for reduced quality control testing if they demonstrate consistent operations and low variability of test values.

(A) To qualify, panel producers must:

(*1*) Apply in writing to an EPA TSCA Title VI TPC; and

(*2*) Maintain a 30 panel running average.

(B) With respect to reduced quality control testing, EPA TSCA Title VI TPCs:

(*1*) May approve a reduction to one quality control test per 24-hour production period if the 30 panel running average remains two standard deviations below the designated QCL for the previous 60 consecutive calendar days or more;

(*2*) May approve a reduction to one quality control test per 48-hour production period if the 30 panel running average remains three standard deviations below the designated QCL for the previous 60 consecutive calendar days or more;

(*3*) Will approve a request for reduced quality control testing as long as the data submitted by the panel producer demonstrate compliance with the criteria and the EPA TSCA Title VI TPC does not otherwise have reason to believe that the data are inaccurate or the panel producer's production processes are inadequate to ensure continued compliance with the emission standards; and

(*4*) Will revoke approval for reduced quality control testing if testing or inspections indicate a panel producer no longer demonstrates consistent operations and low variability of test values.

(iii) Hardwood plywood must be tested as follows:

(A) At least one test per week per product type if the weekly hardwood plywood production at the panel producer is more than 100,000 but less than 200,000 square feet.

(B) At least two tests per week per product type if the weekly hardwood plywood production at the panel producer is 200,000 square feet or more, but less than 400,000 square feet.

(C) At least four tests per week per product type if the weekly hardwood plywood production at the panel producer is 400,000 square feet or more.

(D) If weekly production of hardwood plywood at the panel producer is 100,000 square feet or less, at least one test per 100,000 square feet for each product type produced; or, if less than 100,000 square feet of a particular product type is produced, one quality control test of that product type every month that it is produced.

(E) Quality control tests must also be conducted whenever:

(*1*) The resin formulation is changed so that the formaldehyde to urea ratio is increased;

(*2*) There is an increase by more than ten percent in the amount of formaldehyde resin used, by square foot or by panel;

(*3*) There is an increase by more than 20% in the adhesive application rate;

(*4*) There is a decrease in the designated press time by more than 20%; or

(*5*) The quality control manager or quality control employee has reason to believe that the panel being produced

may not meet the requirements of the applicable standard.

(iv) Composite wood products that have been approved by an EPA TSCA Title VI TPC or CARB for reduced testing under § 770.18(b) through (c) must be tested at least once per week per product type and, for particle board and medium-density fiberboard, per production line, for products produced that week, except that hardwood plywood panel producers who qualify for less frequent testing under paragraph (b)(2)(iii)(D) of this section may continue to perform quality control testing under that provision.

(3) *Results.* Any test result that exceeds the QCL established pursuant to § 770.7(c)(4)(i)(C) must be reported to the EPA TSCA Title VI TPC in writing within 72 hours. The panel producer must comply with § 770.22 with respect to any lot represented by a quality control sample that exceeds the QCL. Where multiple products are grouped in a single product type for testing, this includes all products in the group represented by the sample.

(c) *Quarterly testing.* Quarterly testing must be supervised by EPA TSCA Title VI TPCs and performed by TPC laboratories.

(1) *Allowable methods.* Quarterly testing must be performed using ASTM E1333–10 (incorporated by reference, see § 770.99) or, with a showing of equivalence pursuant to paragraph (d) of this section, ASTM D6007–02 (incorporated by reference, see § 770.99).

(2) *Sample selection.* (i) Samples must be randomly chosen by an EPA TSCA Title VI TPC.

(ii) Samples must be selected from each certified product type for quarterly testing purposes. For hardwood plywood samples, the samples must be randomly selected from products that represent the range of formaldehyde emissions of products produced by the panel producer.

(iii) Samples must not include the top or the bottom composite wood product of a bundle.

(3) *Sample handling.* Samples must be closely stacked or air-tight wrapped between the time of sample selection and the start of test conditioning. Samples must be labeled as such, signed by the EPA TSCA Title VI TPC, bundled air-tight, wrapped in polyethylene, protected by cover sheets, and promptly shipped to the TPC laboratory. Conditioning must begin as soon as possible, but no later than 30 calendar days after the samples were produced.

(4) *Results.* Any sample that exceeds the applicable formaldehyde emission standard in § 770.10 must be reported by the EPA TSCA Title VI TPC to the panel producer in writing and to EPA, in accordance with § 770.8, within 72 hours. The panel producer must comply with § 770.22 with respect to any lot represented by a sample result that exceeds the applicable formaldehyde emission standard. Where multiple products are grouped in a single product type for testing, this includes all products in the group represented by the sample.

(5) *Reduced testing frequency.* Composite wood products that have been approved by an EPA TSCA Title VI TPC or CARB for reduced testing under § 770.18(c) need only undergo quarterly testing every six months.

(d) *Equivalence or correlation.* Equivalence or correlation between ASTM E1333–10 (incorporated by reference, see § 770.99) and any other test method used for quarterly or quality control testing must be demonstrated by EPA TSCA Title VI TPCs or panel producers, respectively, at least once each year for each testing apparatus or whenever there is a significant change in equipment, procedure, or the qualifications of testing personnel. Once equivalence or correlation have been established for three consecutive years, equivalence or correlation must be demonstrated every two years or whenever there is a significant change in equipment, procedure, or the qualifications of testing personnel.

(1) *Equivalence between ASTM E1333–10 and ASTM D6007–02 when used by the TPC for quarterly testing.* Equivalence must be demonstrated for at least five comparison sample sets, which compare the results of the two methods. Equivalence must be demonstrated for each small chamber used and for the ranges of emissions of composite wood products tested by the TPC.

(i) *Samples.* (A) For the ASTM E1333–10 method (incorporated by reference, see § 770.99), each comparison sample must consist of the result of testing panels, using the applicable loading ratios specified in the ASTM E1333–10 method (incorporated by reference, see § 770.99), from similar panels of the same product type tested by the ASTM D6007–02 method (incorporated by reference, see § 770.99).

(B) For the ASTM D6007–02 method (incorporated by reference, see § 770.99), each comparison sample shall consist of testing specimens representing portions of panels similar to the panels tested in the ASTM E1333–10 method (incorporated by reference, see § 770.99) and matched to their respective ASTM E1333–10 method (incorporated by reference, see § 770.99) comparison sample result. The ratio of air flow to sample surface area specified in ASTM D6007–02 (incorporated by reference, see § 770.99) must be used.

(C) The five comparison sample—must consist of testing a minimum of five sample sets as measured by the ASTM E1333–10 method (incorporated by reference, see § 770.99).

(ii) *Average and standard deviation.* The arithmetic mean, *x*, and standard deviation, *S,* of the difference of all comparison sets must be calculated as follows:

$$\overline{X} = \sum_{i=1}^{n} D_i / n \qquad S = \sqrt{\sum_{i=1}^{n} (D_i - \overline{X})^2 / (n-1)}$$

Where $\bar{x}$ = arithmetic mean; S = standard deviation; n = number of sets; D_i = difference between the ASTM E1333–10 and ASTM D6007–02 method (incorporated by reference, see § 770.99) values for the *i*th set; and *i* ranges from 1 to *n.*

(iii) *Equivalence determination.* The ASTM D6007–02 method (incorporated by reference, see § 770.99) is considered equivalent to the ASTM E1333–10 method (incorporated by reference, see § 770.99) if the following condition is met:

$$\left|\overline{X}\right| + 0.88S \leq C$$

Where C is equal to 0.026.

(2) *Correlation between ASTM E1333–10 and any quality control test method.* Correlation must be demonstrated by

establishing an acceptable correlation coefficient (''r'' value).

(i) *Correlation.* The correlation must be based on a minimum sample size of five data pairs and a simple linear regression where the dependent variable (Y-axis) is the quality control test value and the independent variable (X-axis) is the ASTM E1333–10 (incorporated by reference, see § 770.99) test value. Either composite wood products or formaldehyde emissions reference materials can be used to establish the correlation.

(ii) *Minimum acceptable correlation coefficients (''r'' values).* The minimum acceptable correlation coefficients are as follows, where ''n'' is equal to the number of data pairs, and ''r'' is the correlation coefficient:

Degrees of freedom (n-2)	''r'' value
3	0.878
4	0.811
5	0.754
6	0.707
7	0.666
8	0.632
9	0.602
10 or more	0.576

(iii) *Variation from previous results.* If data from an EPA TSCA Title VI TPC's quarterly test results and a panel producer's quality control test results do not fit the previously established correlation, the panel producer must have its TPC establish a new correlation and new QCLs.

(iv) *Failed quarterly tests.* If a panel producer fails two quarterly tests in a row for the same product type, the panel producer must have its TPC establish a new correlation curve.

(e) *Quality assurance and quality control requirements for panel producers.* Panel producers are responsible for product compliance with the applicable emission standards.

§ 770.21 Quality control manual, facilities, and personnel.

(a) *Quality control manual.* (1) Each panel producer must have a written quality control manual. The manual must contain, at a minimum, the following:

(i) A description of the organizational structure of the quality control department, including the names of the quality control manager and quality control employees;

(ii) A description of the sampling procedures to be followed;

(iii) A description of the method of handling samples, including a specific maximum time period for analyzing quality control samples;

(iv) A description of the frequency of quality control testing;

(v) A description of the procedures used to identify changes in formaldehyde emissions resulting from production changes (*e.g.,* increase in the percentage of resin, increase in formaldehyde/urea molar ratio in the resin, or decrease in press time);

(vi) A description of provisions for additional testing;

(vii) A description of recordkeeping procedures;

(viii) A description of labeling procedures;

(ix) The average percentage of resin and press time for each product type;

(x) A description of product types, and if applicable, a description of product variables covered under each product type;

(xi) Procedures for reduced quality control testing, if applicable; and

(xii) Procedures for handling non-complying lots, including a description of how the panel producer will ensure compliance with the notification requirements of § 770.22(d)(1).

(2) The quality control manual must be approved by an EPA TSCA Title VI TPC.

(b) *Quality control facilities.* Each panel producer must designate a quality control facility for conducting quality control formaldehyde testing.

(1) The quality control facility must be an EPA TSCA Title VI TPC, a contract laboratory, or a laboratory owned and operated by the panel producer.

(2) Each quality control facility must have quality control employees with adequate experience and/or training to conduct accurate chemical quantitative analytical tests. The quality control manager must identify each person conducting formaldehyde quality control testing to the EPA TSCA Title VI TPC.

(c) *Quality control manager.* Each panel producer must designate a person as quality control manager with adequate experience and/or training to be responsible for formaldehyde emissions quality control. The quality control manager must:

(1) Have the authority to take actions necessary to ensure that applicable formaldehyde emission standards are being met on an ongoing basis;

(2) Be identified to the EPA TSCA Title VI TPC that will be overseeing the quality control testing. The panel producer must notify the EPA TSCA Title VI TPC in writing within ten calendar days of any change in the identity of the quality control manager and provide the EPA TSCA Title VI TPC with the new quality control manager's qualifications;

(3) Review and approve all reports of quality control testing conducted on the production of the panel producer;

(4) Ensure that the samples are collected, packaged, and shipped according to the procedures specified in the quality control manual; and

(5) Inform the EPA TSCA Title VI TPC in writing of any significant changes in production that could affect formaldehyde emissions within 72 hours of making those changes.

§ 770.22 Non-complying lots.

(a) Non-complying lots are not certified composite wood products and they may not be sold, supplied or offered for sale in the United States except in accordance with this section.

(b) Non-complying lots must be isolated from certified lots.

(c) Non-complying lots must either be disposed of or retested and certified using the same test method, if each panel is treated with a scavenger or handled by other means of reducing formaldehyde emissions, such as aging. Tests must be performed as follows:

(1) *Quality control tests.* (i) At least one test panel must be selected from each of three separate bundles. The panels must be selected so that they are representative of the entire non-complying lot and they are not the top or bottom panel of a bundle. The panels may be selected from properly stored samples set aside by the panel producer for retest in the event of a failure.

(ii) All samples must test at or below the level that indicates that the product is in compliance with the applicable emission standards in § 770.10.

(2) *Quarterly tests.* (i) At least one test panel must be randomly selected so that it is representative of the entire non-complying lot and is not the top or bottom panel of a bundle. The panel may be selected from properly stored samples set aside by the panel producer for retest in the event of a failure.

(ii) The sample must test at or below the applicable emission standards in § 770.10.

(d) If composite wood products belonging to a non-complying lot have been shipped to a fabricator, importer, distributor, or retailer before the test results are received, the panel producer must:

(1) Ensure that the composite wood products are not distributed further by notifying, within 72 hours of the time that the panel producer is made aware of the failing test result, the fabricators, importers, distributors, and retailers that received the composite wood products.

The notification must include the following:

(i) Panel producer name, contact information, and date of notice;

(ii) A description of the composite wood products that belong to the non-complying lot that is sufficient to allow the fabricator, importer, distributor, or retailer to identify the products;

(iii) Whether the failed test result was of a quarterly test, a quality control test, or a retest of composite wood products belonging to a non-complying lot;

(iv) A statement that composite wood products belonging to the non-complying lot must be isolated from other composite wood products and cannot be further distributed in commerce; and

(v) A description of the steps the panel producer intends to take to either recall the composite wood products belonging to the non-complying lot or to treat and retest the products and certify the lot.

(2) Do one of the following:

(i) Recall the composite wood products belonging to the non-complying lot and either treat and retest products belonging to the non-complying lot or dispose of them; or

(ii) Treat and retest composite wood products belonging to the non-complying lot while they remain in possession of a fabricator, importer, distributor, or retailer.

(e) Information on the disposition of non-complying lots, including product type and amount of composite wood products affected, lot numbers, mitigation measures used, results of retesting, and final disposition, must be provided to the EPA TSCA Title VI TPC within seven calendar days of final disposition.

(f) Fabricators, importers, distributors, or retailers who are notified that they have received composite wood products belonging to a non-complying lot and who have further distributed the composite wood products are responsible for notifying the purchasers of the composite wood products in accordance with paragraph (d)(1) of this section.

§ 770.24 Samples for testing.

(a) Composite wood products may be shipped into and transported across the United States for quality control or quarterly tests. TPCs that ship composite panels into or across the United States solely for quality control or quarterly tests are not considered importers or distributors or importers for the purposes of § 770.7(c)(3)(i).

(1) Such panels must not be sold, offered for sale or supplied to any entity other than a TPC laboratory before testing in accordance with § 770.17, § 770.18, or § 770.20.

(2) If test results for such products demonstrate compliance with the emission standards in this subpart, the panels may be relabeled in accordance with § 770.45 and sold, offered for sale, or supplied.

(b) [Reserved]

§ 770.30 Importers, fabricators, distributors, and retailers.

(a) Importers, fabricators, distributors, and retailers must take reasonable precautions to ensure that the composite wood products they sell, supply, offer for sale, or hold for sale, whether in the form of panels, component parts, or finished goods, comply with the emission standards and other requirements of this subpart.

(b) Importers must demonstrate that they have taken reasonable precautions by maintaining, for three years, bills of lading, invoices, or comparable documents that include a written statement from the supplier that the composite wood products, component parts, or finished goods are TSCA Title VI compliant or were produced before December 12, 2017 and by ensuring the following records are made available to EPA within 30 calendar days of request:

(1) Records identifying the panel producer and the date the composite wood products were produced; and

(2) Records identifying the supplier, if different, and the date the composite wood products, component parts, or finished goods were purchased.

(c) Fabricators, distributors, and retailers must demonstrate that they have taken reasonable precautions by obtaining bills of lading, invoices, or comparable documents that include a written statement from the supplier that the composite wood products, component parts, or finished goods are TSCA Title VI compliant or that the composite wood products were produced before December 12, 2017.

(d) On and after December 12, 2018, importers of articles that are regulated composite wood products, or articles that contain regulated composite wood products, must comply with the import certification regulations for ''Chemical Substances in Bulk and As Part of Mixtures and Articles,'' as found at 19 CFR 12.118 through 12.127.

(e) Records required by this section must be maintained in accordance with § 770.40(d).

§ 770.40 Reporting and recordkeeping.

(a) Panel producers must maintain the following records for a period of three years, except that records demonstrating initial eligibility for reduced testing or third-party certification exemption under § 770.17 or § 770.18 must be kept for as long as the panel producer is producing composite wood products with reduced testing or under a third-party certification exemption. The following records must also be made available to the panel producers' EPA TSCA Title VI TPCs. Panel producers must make the records described in paragraph (a)(1) of this section available to direct purchasers of their composite wood products. This information may not be withheld from direct purchasers as confidential business information.

(1) Records of all quarterly emissions testing. These records must identify the EPA TSCA Title VI TPC conducting or overseeing the testing. These records must also include the date, the product type tested, the lot number that the tested material represents, the test method used, and the test results.

(2) Records of all ongoing quality control testing. These records must identify the EPA TSCA Title VI TPC conducting or overseeing the testing and the facility actually performing the testing. These records must also include the date, the product type tested, the lot number that the tested material represents, the test method used, and the test results.

(3) Production records, including a description of the composite wood product(s), the date of manufacture, lot numbers, and tracking information allowing each product to be traced to a specific lot produced.

(4) Records of changes in production, including changes of more than ten percent in the resin use percentage, changes in resin composition that result in a higher ratio of formaldehyde to other resin components, and changes in the process, such as changes in press time by more than 20%.

(5) Records demonstrating initial and continued eligibility for the reduced testing provisions in §§ 770.17 and 770.18, if applicable. These records must include:

(i) Approval for reduced testing from an EPA TSCA Title VI TPC or CARB;

(ii) Amount of resin use reported by volume and weight;

(iii) Production volume reported as square feet per product type;

(iv) Resin trade name, resin manufacturer contact information (name, address, phone number, and email), and resin supplier contact information (name, address, phone number, and email); and

(v) Any changes in the formulation of the resin.

(6) Purchaser information for each composite wood product, if applicable, including the name, contact person if

available, address, telephone number, email address if available, purchase order or invoice number, and amount purchased.

(7) Transporter information for each composite wood product, if applicable, including name, contact person, address, telephone number, email address if available, and shipping invoice number.

(8) Information on the disposition of non-complying lots, including product type and amount of composite wood products affected, lot numbers, purchasers who received product belonging to non-complying lots (if any), copies of purchaser notifications used (if any), mitigation measures used, results of retesting, and final disposition.

(9) Representative copies of labels used.

(b) Panel producers must provide their EPA TSCA Title VI TPC with monthly product data reports for each production facility, production line, and product type, maintain copies of the reports for a minimum of three years from the date that they are produced. Monthly product data reports must contain a data sheet for each specific product type with test and production information, and a quality control graph containing the following:

(1) QCL;

(2) Shipping QCL (if applicable);

(3) Results of quality control tests; and

(4) Retest values.

(c) Laminated product producers whose products are exempt from the definition of hardwood plywood must keep records demonstrating eligibility for the exemption. These records must be kept for a minimum of three years from the date they are produced and must include:

(1) Resin trade name, resin manufacturer contact information (name, address, phone number, and email), resin supplier contact information (name, address, phone number, and email), and resin purchase records;

(2) Panel producer contact information and panel purchase records;

(3) For panels produced in-house, records demonstrating that the panels have been certified by an EPA TSCA Title VI TPC; and

(4) For resins produced in-house, records demonstrating the production of phenol-formaldehyde resins or resins formulated with no added formaldehyde as part of the resin cross-linking structure.

(d) Importers, fabricators, distributors, and retailers must maintain the records described in § 770.30 for a minimum of three years from the import date or the date of the purchases or shipments described therein.

§ 770.45 Labeling.

(a) Panels or bundles of panels that are sold, supplied, or offered for sale in the United States must be labeled with the panel producer's name, the lot number, the number of the EPA TSCA Title VI TPC, and a statement that the products are TSCA Title VI certified. If a composite wood panel is not individually labeled, the panel producer, importer, distributor, fabricator, or retailer must have a method (*e.g.,* color-coded edge marking) sufficient to identify the supplier of the panel and linking the information on the label to the products. This information must be made available to potential customers upon request. The label may be applied as a stamp, tag, or sticker.

(1) A panel producer number may be used instead of a name to protect identity, so long as the identity of the panel producer can be determined at the request of EPA.

(2) Only panels or bundles of panels manufactured in accordance with § 770.17 may also be labeled that they were made with no-added formaldehyde-based resins in addition to the other information required by this section.

(3) Only panels or bundles of panels manufactured in accordance with § 770.18 may also be labeled that they were made with ultra low-emitting formaldehyde resins in addition to the other information required by this section.

(b) Panels imported into or transported across the United States for quarterly or quality control testing purposes in accordance with § 770.20 must be labeled ''For TSCA Title VI testing only, not for sale in the United States.'' The panels may be re-labeled if test results are below the applicable emission standards in this subpart.

(c) Fabricators of finished goods containing composite wood products must label every finished good they produce or every box or bundle containing finished goods. If a finished good (including component parts sold separately to end users) is not individually labeled, the importer, distributor, or retailer must retain a copy of the label, be able to identify the products associated with that label, and make the label information available to potential customers upon request.

(1) The label may be applied as a stamp, tag, or sticker.

(2) The label must include, at a minimum, in legible English text, the fabricator's name, the date the finished good was produced (in month/year format), and a statement that the finished goods are TSCA Title VI compliant.

(3) Finished goods made from panels manufactured in accordance with § 770.17 and/or § 770.18 may also be labeled that they were made with no-added formaldehyde-based resins, or ultra low-emitting formaldehyde resins in addition to the other information required by this section. They may be labeled as being made with a combination of compliant composite wood, no-added formaldehyde-based resins, and ultra low-emitting formaldehyde resins, if this is accurate.

(4) Fabricators may substitute the name of a responsible downstream fabricator, importer, distributor, or retailer for their name on the label if they obtain and maintain written consent from the downstream entity.

(d) Importers, distributors, and retailers must leave intact labels on finished goods, including component parts sold separately to end users.

(e) Finished goods, including component parts sold separately to end users, containing only a *de minimis* amount of regulated composite wood product are excepted from the labeling requirements. A finished good, including component parts sold directly to consumers, contains a *de minimis* amount of regulated composite wood product if its regulated composite wood product content does not exceed 144 square inches, based on the surface area of its largest face. The exception does not apply to finished goods or component parts that are designed to be used in combination or in multiples to create larger surfaces, finished goods, or component parts.

(f) Composite wood products and finished goods made entirely of composite wood products manufactured before the manufactured-by date must not be labeled as TSCA Title VI compliant.

Subpart D—Incorporation by Reference

§ 770.99 Incorporation by reference.

The materials listed in this section are incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, a document must be published in the **Federal Register** and the material must be available to the public. All approved materials are available for inspection at the OPPT Docket in the Environmental Protection Agency Docket Center (EPA/DC), West William

Jefferson Clinton Bldg., Rm. 3334, 1301 Constitution Ave. NW., Washington, DC. The EPA/DC Public Reading Room hours of operation are 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number of the EPA/DC Public Reading room is (202) 566–1744, and the telephone number for the OPPT Docket is (202) 566–0280. In addition, these materials are also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741–6030 or go to *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.* These materials may also be obtained from the sources listed in this section.

(a) *CPA, AITC, and HPVA material.* Copies of these materials may be obtained from the specific publisher, as noted below, or from the American National Standards Institute, 1899 L Street NW., 11th Floor, Washington, DC 20036, or by calling (202) 293–8020, or at *http://ansi.org/.* Note that ANSI/AITC A190.1–2002 is published by the American Institute of Timber Construction; ANSI A135.4–2012, ANSI A135.5–2012, ANSI A135.6–2012, ANSI A135.7–2012, ANSI A208.1–2009, and ANSI A208.2–2009 are published by the Composite Panel Association; and ANSI ANSI/HPVA–HP–1–2009 is published by the Hardwood Plywood Veneer Association.

(1) ANSI A135.4–2012, Basic Hardboard, Approved June 8, 2012, IBR approved for § 770.3.

(2) ANSI A135.5–2012, Prefinished Hardboard Paneling, Approved March 29, 2012, IBR approved for § 770.3.

(3) ANSI A135.6–2012, Engineered Wood Siding, Approved June 5, 2012, IBR approved for § 770.3.

(4) ANSI A135.7–2012, Engineered Wood Trim, Approved July 17, 2012, IBR approved for § 770.3.

(5) ANSI A208.1–2009, Particleboard, Approved February 2, 2009, IBR approved for § 770.3.

(6) ANSI A208.2–2009, Medium Density Fiberboard (MDF) for Interior Applications, Approved February 2, 2009, IBR approved for § 770.3.

(7) ANSI/AITC A190.1–2002, American National Standard for Wood Products—Structural Glued Laminated Timber, Approved October 10, 2002, IBR approved for § 770.1(c).

(8) ANSI/HPVA HP–1–2009, American National Standard for Hardwood and Decorative Plywood, Approved January 26, 2010, IBR approved for § 770.3.

(b) *ASTM material.* Copies of these materials may be obtained from ASTM International, 100 Barr Harbor Dr., P.O. Box C700, West Conshohocken, PA 19428–2959, or by calling (877) 909–ASTM, or at *http://www.astm.org.*

(1) ASTM D5055–05, Standard Specification for Establishing and Monitoring Structural Capacities of Prefabricated Wood I-Joists, Approved October 1, 2005, IBR approved for § 770.1(c).

(2) ASTM D5456–06, Standard Specification for Evaluation of Structural Composite Lumber Products, Approved March 1, 2006, IBR approved for § 770.1(c).

(3) ASTM D5582–00 (Reapproved 2006), Standard Test Method for Determining Formaldehyde Levels from Wood Products Using a Desiccator, October 1, 2006, IBR approved for § 770.20(b).

(4) ASTM D6007–02, Standard Test Method for Determining Formaldehyde Concentrations in Air from Wood Products Using a Small Scale Chamber, Approved April 10, 2002, IBR approved for §§ 770.3, 770.7(a) through (c), 770.15(c), 770.17(a), 770.18(a) and 770.20(b) through (d).

(5) ASTM E1333–10, Standard Test Method for Determining Formaldehyde Concentrations in Air and Emission Rates from Wood Products Using a Large Chamber, Approved May 1, 2010, IBR approved for §§ 770.3, 770.7(a) through (c), 770.10(b), 770.15(c), 770.17(a), 770.18(a) and 770.20(c) through (d).

(c) *CEN materials.* Copies of these materials are not directly available from the European Committee for Standardization, but from one of CEN's National Members, Affiliates, or Partner Standardization Bodies. To purchase a standard, go to CEN's Web site, *http://www.cen.eu,* and select ''Products'' for more detailed information.

(1) BS EN 120:1992, Wood based panels—Determination of formaldehyde content—Extraction method called the perforator method, incorporating Amendment No. 1, English Version, copyright BSI 1997, IBR approved for § 770.20(b).

(2) BS EN 717–2:1995, Wood-based panels—Determination of formaldehyde release—Part 2: Formaldehyde release by the gas analysis method, incorporating Corrigendum No. 1, English Version, copyright BSI 9 December 2002, IBR approved for § 770.20(b).

(d) *Georgia Pacific material.* Copies of this material may be obtained from Georgia-Pacific Chemicals LLC, 133 Peachtree Street, Atlanta, GA 30303, or by calling (877) 377–2737, or at *http://www.gp-dmc.com/default.aspx.*

(1) The Dynamic Microchamber computer integrated formaldehyde test system, User Manual, revised March 2007 (DMC 2007 User's Manual) IBR approved for § 770.20(b).

(2) The GP Dynamic Microchamber Computer-integrated formaldehyde test system, User Manual, copyright 2012 (DMC 2012 GP User's Manual), IBR approved for § 770.20(b).

(e) *ISO material.* Copies of these materials may be obtained from the International Organization for Standardization, 1, ch. de la Voie-Creuse, CP 56, CH–1211, Geneve 20, Switzerland, or by calling +41–22–749–01–11, or at *http://www.iso.org.*

(1) ISO/IEC 17011:2004(E), Conformity assessments—General requirements for accreditation bodies accrediting conformity assessments bodies, First edition, Corrected version, 2005–02–15, IBR approved for §§ 770.3 and 770.7(a) through (b).

(2) ISO/IEC 17020:2012(E), Conformity assessment–Requirements for the operation of various bodies performing inspection, Second edition, 2012–03–01 IBR approved for §§ 770.3 and 770.7(a) through (c).

(3) ISO/IEC 17025:2005(E), General requirements for the competence of testing and calibration laboratories, Second edition, 2005–05–15, IBR approved for §§ 770.3 and 770.7(a) through (c).

(4) ISO/IEC 17065:2012(E), Conformity assessment—Requirements for bodies certifying products, processes and services, First edition, 2012–09–15, IBR approved for §§ 770.3 and 770.7(a) and (c).

(f) *Japanese Standards Association.* Copies of this material may be obtained from Japanese Industrial Standards, 1–24, Akasaka 4, Minatoku, Tokyo 107–8440, Japan, or by calling +81–3–3583–8000, or at *http://www.jsa.or.jp/.*

(1) JIS A 1460:2001(E), Building boards Determination of formaldehyde emission—Desiccator method, First English edition, published 2003–07 IBR approved for § 770.20(b).

(2) [Reserved]

(g) *NIST material.* Copies of these materials may be obtained from the National Institute of Standards and Technology (NIST) by calling (800) 553–6847 or from the U.S. Government Printing Office (GPO). To purchase a NIST publication you must have the order number. Order numbers may be obtained from the Public Inquiries Unit at (301) 975–NIST. Mailing address: Public Inquiries Unit, NIST, 100 Bureau Dr., Stop 1070, Gaithersburg, MD 20899–1070. If you have a GPO stock number, you can purchase printed copies of NIST publications from GPO.

GPO orders may be mailed to: U.S. Government Printing Office, P.O. Box 979050, St. Louis, MO 63197–9000, placed by telephone at (866) 512–1800 (DC Area only: (202) 512–1800), or faxed to (202) 512–2104. Additional information is available online at: *http://www.nist.gov.*

(1) PS 1–07, Structural Plywood, May 2007, IBR approved for §§ 770.1(c) and 770.3.

(2) PS 2–04, Performance Standard for Wood-Based Structural-Use Panels, December 2004, IBR approved for §§ 770.1(c) and 770.3.

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