California Wood Industries Coalition
c/o Composite Panel Association
19465 Deerfield Avenue #306
Leesburg, Virginia 20176

May 20, 2019

By Electronic Filing and Email
Ms. Martina Diaz
Incentives and Technology Advancement Branch
Mobile Source Control Division
1001 I Street
Sacramento, California 95814
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Re: CAP Incentives – Composite Wood Products

Dear Ms. Diaz:

These comments are submitted by the California Wood Industries Coalition ("CWIC") in response to the California Air Protection Incentives ("CAP") proposal to replace existing school desks, chairs, cabinets and other finished goods that contain composite wood products with similar new products containing no added formaldehyde ("NAF") or ultra-low emitting formaldehyde ("ULEF") composite wood products (the "Proposal"). CWIC respectfully submits that the Proposal would do little, if anything, to reduce formaldehyde emissions in the classrooms, is cost ineffective, and is unworkable. For these reasons, we request that it be removed in its entirety. We also request that the discussion of this item at the May 23 Board meeting be postponed allowing for full consideration of public comments which are not due until May 20.

CWIC is a coalition of industry trade associations that represent the manufacturers and users of composite wood products[1] in items such as cabinets, furniture, flooring, moldings and other applications. The Coalition and its members individually have worked closely with CARB since the mid-2000's in support of the promulgation of the Air Toxic Control Measure to Reduce Emissions of Formaldehyde from Composite Wood Products (the "ATCM")[2] and in conjunction with the Sierra Club, the American Academy of Pediatricians, the Alliance for Healthy Homes and other environmental organizations successfully lobbied for the enactment of the

[1] "Composite wood products" is the term used to collectively describe the primary regulated products in the ATCM and TSCA Title VI. The definition includes four panel products: hardwood plywood, medium density fiberboard ("MDF"), particleboard and thin MDF. These panels are incorporated into "finished goods" and "components." The Proposal sometimes conflates these two concepts, e.g. "This chapter funds the replacement of existing composite wood products containing formaldehyde at public schools including tables, desks, countertops, chairs and storage cabinets." (Page 5-3)
[2] 17 CCR 93120.

Formaldehyde Standards for Composite Wood Products Act[3] ("TSCA Title VI"), which implemented the CARB ATCM on a national basis. These associations represent members who manufacture and utilize CARB Phase II as well as NAF and ULEF panel products.

I. The Proposal Would Not Provide Any Meaningful Benefits

The Proposal would authorize payment of the incremental cost of new chairs, desks, cabinets, etc. made from NAF or ULEF composite wood panels compared to new items made from composite wood products meeting TSCA Title VI and CARB Phase II. ULEF containing products would receive 90% of the incremental cost while NAF would garner 100%. One of the underlying principles for CAP proposals is that they "consider both cost effectiveness and relative exposure reduction in funding decisions." CWIC respectfully submits that there would be little, if any, reduction in exposure by implementing this program, while the districts would be required to expend precious resources buying new furniture and fixtures.

A. Emissions from Existing School Equipment Likely Already at Background Levels.

It is well-documented that formaldehyde emissions from composite wood panels decline rapidly after production and eventually come into equilibrium with background levels found in every home, office and school. One study indicated that the first half-life of reduction was approximately seven months with background achieved in just under one and a half years.[4] In many cases, the school furniture and fixtures subject to the Proposal would have been in service for many years and have essentially "off-gassed" whatever free formaldehyde was originally in the product. Replacement of this old, but still serviceable equipment could actually result in introducing de minimis amounts of new formaldehyde into the classroom. It would also unnecessarily increase the solid waste stream to landfills and ultimately result in the release of additional carbon embedded in the disposed of wood furniture and cabinetry.

B. New Furniture and Cabinets Are Covered with Barrier Materials that Substantially Reduce Emissions.

Historically, formaldehyde regulation has focused on standards for the "raw" composite wood panels, measuring emissions shortly after panels leave the presses. This has no doubt been done because of the difficulty in regulating emissions from the myriad finished goods in which they are incorporated. How would one compare emissions from a picture frame or piece of molding to those of a built-in wall cabinet or floor?

However, composite wood panels are usually incorporated into finished goods in ways that substantially reduce emissions. For example, desks are invariably covered with a high-density laminate or other material which provides a tough work surface. Other surface treatments include foils, impregnated papers, thermally fused laminates and wet finishes among many others. These materials add both surface properties and decorative elements to the finished

[3] 15 U.S.C. §2697 et seq. Implementing regulations are found at 40 CFR Part 770.

[4] Zinn, T.W., Cline, D. and Lehmann, W.F. (1990). Long-term study of formaldehyde emission decay from particleboard. Forest Prod. J. 40(6): 15-18.

goods. Almost all of them also serve as barriers to formaldehyde emissions, thus reducing product emissions further below ATCM/TSCA Title VI levels. Attached as Appendix B is a CPA Technical Bulletin describing this phenomenon and detailing barrier effects of between 50% and 95% depending on the surface material.[5] Additional references are also included in the Bulletin.

Because of this barrier effect, emissions of formaldehyde from desks, chairs, etc. made with NAF, ULEF and Phase II composite wood products are not meaningfully different, particularly when considering the already low emissions levels mandated under the ATCM and TSCA Title VI.

II. The Proposal is Confusing

There are several anomalies in the Proposal. First, the emission limitations for hardwood plywood are 0.05 ppm for CARB Phase II, NAF and ULEF. There is no difference. There is no need to use NAF or ULEF when the emission limitations are the same as those for regular hardwood plywood.

Second, Table 5-1of the Proposal is ambiguous – it does not differentiate the two separate types of ULEF panels described in the ATCM and Title VI. Manufacturers can qualify for reduced testing of ULEF products if they meet one set of criteria; they can qualify for exemption from certification if they meet another. For example, particleboard may be labeled as ULEF if 90% of the six months of routine quality control data do not exceed 0.05 ppm and no data point exceeds 0.08 ppm.[6] However, this only permits less frequent testing. Another section exempts ULEF products from certification.[7] As noted in the Proposal, that section requires 90% of the data to meet 0.04 ppm with no value exceeding 0.06 ppm. Which requirements apply to the CAP? Can panels that are legitimately labeled "ULEF" because they qualify for reduced testing be used in CAP materials, or do the lower limits in Table 5-1 control? If the latter is the intent, how will a furniture manufacturer using ULEF stamped panels know that its panels were exempt from certification as opposed to subject to reduced testing? The provision is unworkable.

Another serious issue is raised by Table 5-2 – "Funding Levels for Ultra-Low/Zero Formaldehyde Emissions Composite Wood Products Used in Schools." (Emphasis added.) Throughout the California and federal regulations, the defined term "no added formaldehyde" is used for a specific purpose. Raw wood naturally emits formaldehyde. Zero emissions from a wood product is impossible.[8]

Some chair backs and seats are made of curved plywood. These products are not covered by the ATCM.[9] How would these products be treated under the Proposal?

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[5] CPA, *VOC Emission Barrier Effects of Laminates, Overlays and Coatings for Particleboard, Medium Density Fiberboard (MDF) and Hardboard* (2003).

[6] 93120.3(d)(1); 40 CFR 77018 (c).

[7] 93120.3(c)(1); 40 CFR 770.18(d).

[8] Meyer B. and Boehme C., (1997). Formaldehyde Emission from Solid Wood, Forest Prod. J. 47(6): 45-48.

[9] 93120.1(19). See also CARB FAQ 18: **Does the ATCM apply to curved or bent plywood?** Curved plywood is excluded from the definition of HWPW and is not subject to the ATCM. Due to the difficulty differentiating

III. The Proposed Certification Requirement is Unworkable

One of the critically successful aspects of the ATCM and TSCA Title VI is the detailed third-party certification ("TPC") program pursuant to which particleboard, MDF, and hardwood plywood producers are rigorously examined on an on-going basis to ensure compliance. This program includes initial qualification of mills, quarterly testing of products by the TPCs and oversight of the plants' quality control testing. This TPC program only applies to the manufacturers of the composite wood products (i.e. panels); it does not cover any finished goods such as those included in the CAP Proposal.

The Project Eligibility Requirements indicate that "[p]roduct emissions will be verified by a CARB-approved third-party certifier." It elaborates:

> (C) Replacement equipment materials must be certified by a CARB approved their-party certifier to ensure all materials used are NAF/ULEF.

Several questions arise as to these requirements. First, presumably the "product emissions" to be verified are the composite panels used in the finished goods, not the finished goods themselves. TPCs are not authorized by CARB to certify finished goods containing composite wood products and indeed this would be improper.[10]

More problematic is the fact that NAF composite wood products and some ULEF products are exempt from certification.[11] The concept behind these designations is to exclude some otherwise applicable requirements if it can be shown that consistent, very low emissions come from the product. It would be both unnecessary and costly to require certification for these products.

The Proposal would require manufacturers of composite wood products for these limited number of school districts to employ TPCs to certify what was previously not certified material. The certification process requires extensive quarterly chamber tests and ongoing, frequent quality control testing – it is a significant undertaking. Panel manufacturers rarely know in

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between finished products that were made using plywood made in a curved mold/press and plywood made from panels that were bent, CARB exempted both curved and bent plywood. Curved/bent plywood comprises a small segment of the composite wood products, for which there is not a standard test method for measuring formaldehyde emissions.

[10] CARB FAQ 31: **Can entities other than CARB determine whether finished goods comply with CARB's Composite Wood Products Regulation?** No. CARB is the only entity that has the authority to determine compliance of finished goods. Currently, CARB has approved 40 organizations (third party certifiers or TPCs) to independently verify that producers of composite wood products (panels) have manufacturing systems that produce panels with formaldehyde emissions at or below the levels required by the ATCM. The TPC verifications include quarterly inspections and testing, and review of a producer's quality control testing results (also refer to question #82). CARB's approval of TPCs does not include finished goods (e.g., furniture, cabinets, flooring) because the ATCM does not require third party certification of finished goods. Other entities may choose to use CARB's sample preparation and emissions testing procedures for panels and/or finished goods to perform informational analyses for customers, but only CARB staff can determine whether finished goods comply with the regulation. (Emphasis added.)

[11] 93120.3(c)(1) & (d)(1). 40 CFR 770.17(a) & 770.18(d).

which finished goods their panels will be used and where those finished goods will be sold. The likelihood of composite wood panel producers obtaining TPC certification for all their NAF and ULEF-exempt production to satisfy this very small demand is remote.

IV. There Should be a Meaningful Period to Evaluate Public Comments

CWIC appreciates the opportunity to comment on the CAP Proposal. Input from all interested parties can only improve the selection of appropriate and effective measures to satisfy the legislature's intent. We note with some concern that the CAP initiative is on the agenda for the CARB Board meeting of May 23, 2019, just three days after the deadline for comments. This is not an adequate time to consider and digest this important input. We would urge that the item be postponed so that there can be full evaluation of comments before Board discussion.

V. Conclusion

The CARB ATCM, now implemented nationwide through TSCA Title VI, is the most rigorous and effective regulation of formaldehyde emissions from composite wood products in the world. It has been endorsed by environmentalists including the Sierra Club and is effectively regulating these products. In the event that schools truly have outdated equipment that requires replacement, then we strongly believe that chairs, tables, desks and cabinets made with CARB ATCM/TSCA Title VI compliant composite wood panels are the best choice, no matter the resin used.

We submit that the Composite Wood Products CAP Proposal would not achieve any meaningful lessening of formaldehyde emissions or ambient levels in the schools. School districts would be encouraged to discard perfectly safe and useable items in the hope of minor, but almost certainly illusory, reductions. Considering also schools with limited budgets, landfills stretched to capacity, and other arguably more pressing emissions challenges in traditionally underserved areas, this does not appear to be a good use of funding under the CAP program. We urge that the Proposal be removed from the CAP plan.

Sincerely,

American Chemistry Council
American Forest and Paper Association
American Home Furnishings Alliance
American Wood Council
APA – The Engineered Wood Association
Association of Woodworking & Furnishing Suppliers
Business & Institutional Furniture Manufacturers Association
Composite Panel Association
Decorative Hardwoods Association
Kitchen Cabinet Manufacturers Association
International Wood Products Association
National Wood Flooring Association
Window & Door Manufacturers Association