WE 37 July 2017

Legislation Affecting the Wood Industry: Formaldehyde Emission Standards for Composite Wood Products

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Presentation Overview

Fabricators and Laminated Product Producers



- 1. Background on TSCA Title VI
- 2. Regulation Summary
- 3. Compliance Timeline
- 4. Product Exemptions
- 5. Emission Standards
- 6. Rule Framework
- 7. Impacted Entities
- 8. How to Comply
- 9. For More Information

Fabricators and Laminated Product Producers

Background on TSCA Title VI



- On July 7, 2010, the Formaldehyde Standards for Composite Wood Products Act was signed into law to become Toxic Substances Control Act (TSCA) Title VI.
- TSCA Title VI establishes formaldehyde emission standards identical to the California Air Resources Board (CARB) limits.
- TSCA Title VI directs the implementation of regulations to ensure compliance with formaldehyde emission standards.
- The final rule is available in the Federal Register under 40 CFR Part 770 and posted online at https://www.regulations.gov/document?D=EPA-HQ-OPPT-2016-0461-0001.
 - o Became effective on May 22, 2017 (extended from February 2017)

Note the following dates are under agency consideration and may change:

- o After December 12, 2017, emission standards, certification, testing, recordkeeping and labeling provisions begin.
- o After December 12, 2018, import certification begins.
- After December 12, 2023, non-exempt laminated products become hardwood plywood and must comply with panel producer requirements.

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Impacts of Extending the Rule Effective Date

Fabricators and Laminated Product Producers

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- Rule effective date was extended to May 22, 2017, to allow the new Administration time to review the rule provisions.
- Extending the effective date shortened the compliance timeline and created challenges for regulated entities, who are often part of long supply and distribution chains.
- EPA addressed this by promulgating a direct final rule on May 24, 2017 to extend the compliance dates; however, negative comment was received so a rulemaking is now required to finalize a change to the compliance dates.
- EPA is also planning to remove the prohibition in 770.45(f) that prohibits early labeling of compliant composite wood products and finished goods.
- See www.epa.gov/formaldehyde for updates to these actions.

Regulation Summary

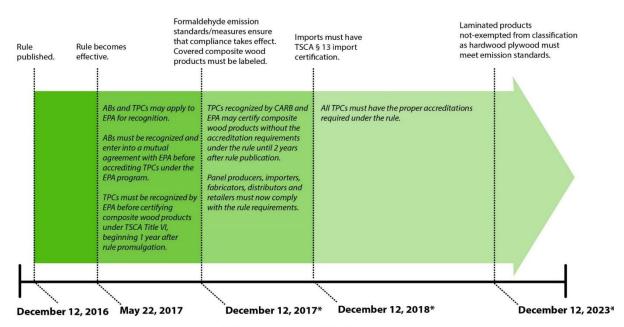
Fabricators and Laminated Product Producers

- **≎EPA**
- TSCA Title VI requires that composite wood products be tested and certified, ensuring only compliant products enter the product supply chain.
- Composite wood products must be certified by an EPA-recognized third-party certifier (TPC), also called an EPA TSCA Title VI TPC.
- Composite wood products affected under TSCA Title VI are:
 - 1. Hardwood Plywood;
 - 2. Medium-Density Fiberboard (MDF), including thin MDF; and
 - 3. Particleboard.
 - * There are limited testing and certification exemptions for no-added formaldehyde (NAF) resins or ultra-low emitting formaldehyde (ULEF) resins.
- The new regulation includes recordkeeping, reporting, and labeling provisions.

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Overall Compliance Timeline

≎EPA



*Dates under agency consideration.



Regulated composite wood products under TSCA Title VI include:

- Hardwood Plywood (HWPW): Hardwood or decorative panel that is intended for interior use and composed of an assembly of layers or plies of veneer, joined by adhesive with a lumber core, a particleboard core, a medium-density fiberboard core, a hardboard core, or a veneer core (or any other special core or special back).
- 2. Medium-Density Fiberboard (MDF): Panel composed of cellulosic fibers made by dry forming and pressing a resinated fiber mat.
- 3. Particleboard (PB): 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.
- 4. Laminated Product: A product with wood, or woody grass veneer affixed to a composite wood product platform by a fabricator as a finished product or a component part.

Product Exemptions

Product Producers



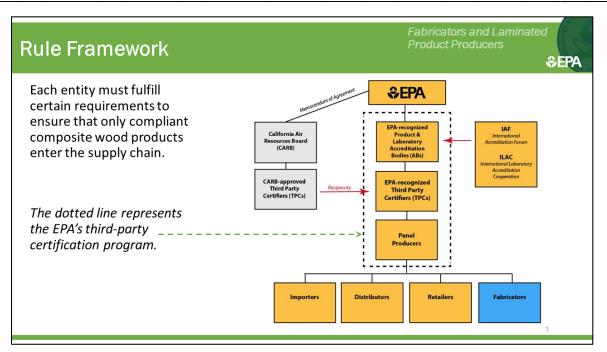
If you produce any other component parts or finished goods that contain only exempt products, you are not subject to the new regulation.

Exemptions include the following products:

- 1) Hardboard
- 2) Structural plywood
- 3) Structural panels
- 4) Structural composite lumber
- 5) Military-specified plywood
- 6) Curved plywood
- 7) Oriented strand board
- 8) Glued laminated lumber
- 9) Prefabricated wood I-joists
- 10) Finger-jointed lumber
- Wood packaging (e.g., pallets, crates, spools, dunnage)

- 11) Composite wood products used inside a new vehicle other than a recreational vehicle, such as:
 - Rail cars, boats, and aircraft
- 12) Windows that contain composite wood products if the windows contain less than 5% composite wood product by volume
- Exterior doors and garage doors that contain composite wood products, if:
 - The doors are made from composite wood products manufactured with NAF of ULEF resins; or
 - The doors contain less than 3% composite wood product by volume
- 14) Refurbished or antique furniture
- 15) Finished goods previously sold/supplied to an end user who purchased or acquired the finished good in good faith for purposes other than resale are exempt

Fabricators and Laminated Product Producers **Emissions Standards \$EPA** Regulated products must meet the emission standards after December 12, 2017* * Date under agency consideration. **Product Emission Standard** Hardwood Plywood - Veneer Core 0.05 ppm of formaldehyde Hardwood Plywood - Composite Core 0.05 ppm of formaldehyde Medium-Density Fiberboard (MDF) 0.11 ppm of formaldehyde Thin MDF 0.13 ppm of formaldehyde Particleboard 0.09 ppm of formaldehyde



Fabricators and Laminated Product Producers **Impacted Entities \$EPA** Entities in the supply chain: Businesses likely to be covered under TSCA Title VI as fabricators: Panel producers Furniture and related product manufacturing (e.g., kitchen cabinets, Importers, distributors, and retailers other cabinetry, home goods, etc.) Third-Party Certifiers and Prefabricated wood building manufacturing Accreditation Bodies Fabricators (includes laminated Motor home manufacturing product producers) Travel trailer and camper manufacturing Manufactured home (mobile home) manufacturing <u>Note:</u> Under TSCA Title VI laminated product producers are also fabricators. After December 12, 2023* laminated product producers must also comply as hardwood plywood panel producers. *Date under agency consideration. **How to Comply**

Your Responsibilities Under TSCA Title VI

Fabricators and Laminated
Product Producers



After December 12, 2017*, you must:

- Ensure you purchase only compliant composite wood products, whether they are unfinished panels or incorporated into component parts or finished goods.
- Keep records (e.g., bills of lading, invoices, or comparable documents with a written statement from the supplier) documenting your sourcing of compliant products.
 - If you are fabricating exempt laminated products, you are required to maintain additional records after December 12, 2023*.
- Label any finished goods you produce or every box/bundle containing finished goods you produce.

*Dates are under agency consideration.

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Stockpiling

Fabricators and Laminated Product Producers



- You are not permitted to sell any composite wood products or finished goods containing composite wood products if they have been stockpiled.
- Products are stockpiled if:
 - Between July 7, 2010 and June 12, 2017you have purchased at least 20% greater than your average rate of purchase during the 2009 calendar year; and
 - $\bullet\,$ You purchased the products at a higher rate specifically to circumvent emission standards.
- Products are not stockpiled when:
 - Composite wood products are manufactured or purchased for legitimate business reasons at a higher rate, because of increased demand, natural disaster, planned business expansion, etc.

Reasonable Precautions & Records

Fabricators and Laminated Product Producers

- **≎EPA**
- You must take reasonable precautions to ensure that any composite wood products you sell, supply, offer for sale, or hold for sale (whether in the form of panels, component parts, or finished goods) comply with TSCA Title VI.
- You must demonstrate that you've taken reasonable precautions by obtaining bills of lading, invoices, or comparable documents that include a written statement from the supplier that the composite wood product is compliant with TSCA Title VI.
- These records must be kept on file for a period of three years from the import date or date of the purchases or shipments.

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Labels

Fabricators and Laminated Product Producers



- You must label all finished goods you produce or all boxes/bundles of finished goods you produce.
- Component parts to be sold directly to consumers must also be labeled as if they were finished goods.
- Labels should include in legible English:
 - · Your name:
 - The date of production (month/year format); and
 - A statement that the good is compliant with TSCA Title VI.
- Labels are *not* required on component parts not sold separately or on finished goods if they contain a de minimis amount of composite wood product (i.e., no more than 144 square inches of composite wood products, based on the surface area of its largest face).

Laminated Product Producers

Fabricators and Laminated Product Producers



- A laminated product:
 - Is a component part used in the construction or assembly of a finished good;
 - Has a wood or woody-grass veneer affixed to a particleboard, MDF, or veneer core or platform; and
 - 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 Producers must:
 - Prior to December 12, 2023*, comply with the requirements for fabricators.
 - After December 12, 2023* comply with all the requirements for fabricators and hardwood plywood panel producers; or
 - Obtain an exemption under the 40 CFR §770.4 from the HWPW requirements by using no-added formaldehyde (NAF) or phenol-formaldehyde (PF) resins to attach veneer to composite wood products, and adhere to the recordkeeping requirements starting after December 12, 2023*.

*Date under agency consideration.

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Laminated Product Producers

Fabricators and Laminated Product Producers



- Laminated product exemption petition:
 - The final rule allows any person to petition the Agency to expand the exemption for laminated products from the definition of the term "hardwood plywood."
 - EPA will review each submitted petition and, where appropriate, publish a proposed rule in the Federal Register based on the petition with a public comment period of generally 30 days before taking a final action.

Additional Laminator Records



<u>Laminated product producers exempt</u> from the hardwood plywood definition after December 12, 2023* must keep records for composite wood products and resins, including those they purchase or produce, such as:

* Date under agency consideration.

For Products You Purchase

For Products You Produce

Composite Wood Products

- · Purchase records.
- · Panel producer information.
- Contact Information.
- · Records demonstrating that the panels have been certified by an EPA TSCA Title VI TPC; or
- Records showing they were produced under a limited thirdparty certification exemption for panels made with NAF resins or ULEF resins.

- NOTE: After December 12, 2023*, laminated product producers that are not exempt from hardwood plywood are considered to be panel producers and must keep panel producer records.

Resins

- · Purchase records. · Resin trade name.
- · Resin manufacturer contact information.
- · Resin supplier contact information.
- Records demonstrating the production for NAF or PF resins, or eligibility of an additional resin exemption established after petition to FPA.

Key Responsibilities Under TSCA Title VI



Importers, distributors, and retailers are responsible for recordkeeping and labeling requirements, including:

- 1. Ensuring they purchase only compliant composite wood products, whether unfinished panels or incorporated into component parts or finished goods;
- Ensuring labels stay intact on individual items or on file if items were purchased by the bundle and sold separately (label information must be made available to potential customers upon request);
- 3. Using a method sufficient to identify the supplier of the panel or finished good, and linking the information on the label to the product; and
- Importers must also provide an import certification for all imports two years (date under agency consideration) after publication of the final rule.

Top Three Follow-Ups!



- 1. Monitor the rule's compliance dates.
- 2. Look for products with TSCA Title VI compliant labels.
- 3. Maintain your records.







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Outreach and More Information

Fabricators and Laminated Product Producers

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- Presentations at meetings, workshops and conferences
- E-mail list-serve distribution to stakeholders
- Produced compliance guides and webinars



Call EPA's TSCA Hotline: 202-554-1404



 ${\sf Email} \ \underline{\sf NPCD\text{-}HCHO@epa.gov} \ to \ join \ the \ list-serve$

Visit EPA's website for updates: http://www.epa.gov/formaldehyde

Contacts



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EPA TSCA Title VI and CARB

Jackson Morrill
President
Composite Panel Association
AWFS
July 2017



Presentation Overview

- Brief Background on TSCA Title VI
- Similarities with CARB
- Key Differences with CARB
- Open Issues for TSCA Title VI
- Additional Resources re TSCA Title VI
- CARB Update



U.S. EPA Formaldehyde Regulation

- Congress passed law in 2010 (TSCA Title VI)
 - Supported by NGO, union and industry stakeholders
 - □ Called for regulations by Jan. 1, 2013
 - Specified emission limits, test methods to align with CARB 2
- Prepublication version published (7/27/16)
- □ Published in Federal Register (12/12/16)
- □ Entered into effect (5/22/17)
 - TPCs and ABs can now apply for EPA accreditation



Key Provisions – CARB Alignment

- □ Same product coverage HWPW, PB, MDF
- Same exemptions
 - Hardboard
 - Softwood plywood
 - OSB
 - Various structural wood products
 - Certain wood windows and doors
- Same emission limits
 - HWPW 0.05 ppm
 - MDF 0.11 ppm
 - Thin MDF 0.13 ppm
 - PB 0.09 ppm





Key Provisions – CARB Alignment

- □ Rigorous TPC system
- Reduced testing and no third-party certification required for "exempt" ULEF and NAF
- Same test methodologies
- Similar methods for recognition of equivalency and correlation (although EPA sets "r values")
- Similar labeling requirements
- Similar reporting requirements
- Similar record-keeping requirements



Differences - Laminated Products

- Defines laminated products (LPs)
 - Wood or woody grass veneers only
 - Component part used in construction or assembly of finished good
- Composite wood using other veneers, papers, etc. are not LPs
 - Considered "finished goods"
 - Must document compliant core w/in 1 year of effectiveness





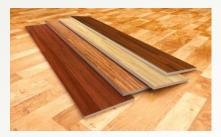


Two Types of Laminated Products

- □ Type #1 "exempt"
 - Panels where veneer attached to substrate with NAF or PF resin
 - Compliant core and recordkeeping
- □ Type #2 "non-exempt"
 - Panels that use any other resin to attach veneer (e.g., UF, ULEF)
 - HWPW requirements







Differences – Non-Complying Lots

Panel Producer responsibilities:

- 1. If not shipped:
 - > Treat and retest or dispose
 - Report to TPC within 72 hours



- 2. If shipped and received by purchaser:
 - > Treated as non-complying lot
 - > 72 hour notification to purchaser
 - Recall shipment and treat and retest or retest from material sampled from purchaser's location
 - Notify TPC regarding final disposition 7 calendar days

Note: removal of excursion limit – 100% compliance



Differences – Non-Complying Lots

Fabricators, distributors, importers and retailers:

- 1. Intact non-compliant panels in inventory:
 - Work with panel producer to isolate, treat and retest those panels as needed.
- 2. Further distributed panels in the supply chain:
 - Notify purchaser within 72 hours of awareness of noncomplying lot
- Incorporated panels into a component part or finished good:
 - No obligation to notify downstream entities in the supply chain

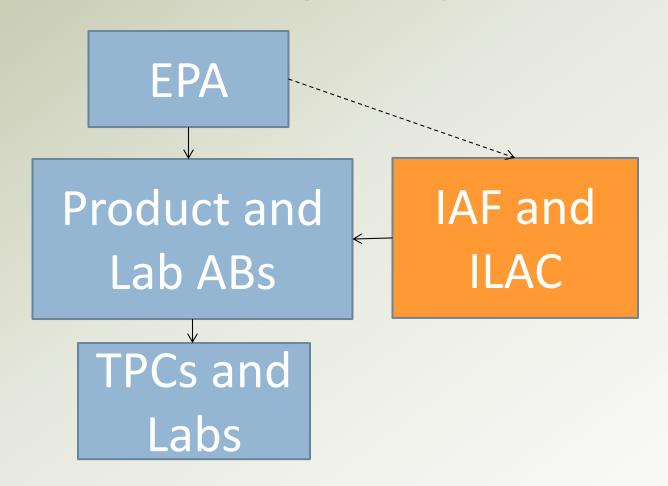


Differences – NAF/ULEF Reqmt's

- Different emission level requirements for NAF/ULEF exclusions and ULEF reduced testing
 - Primary/secondary tests that must be submitted for NAF/ULEF exemption
 - 0.04 ppm for CARB
 - 0.06 ppm for TSCA Title VI
 - ULEF reduced testing also different
 - Renewals and process/operations changes also impacted
- □ TSCA Title VI allows for CARB or TPC executive orders
 - CARB still deciding if will recognize EO's by TPCs



Differences - Hierarchy of Certification Oversight Responsibilities





Other Differences

- De Minimis Exemption
 - New not in CARB
 - Exempt from labeling 144 square inches
 - Must use compliant composite wood products
 - Comply with record-keeping
- Unlimited Sell-Through Provision
 - Can incorporate any panels sold/imported prior to compliance date at any time
- Import Declaration
 - Covers imported composite wood products or articles containing them







EPA Fix Labeling, Other Issues?

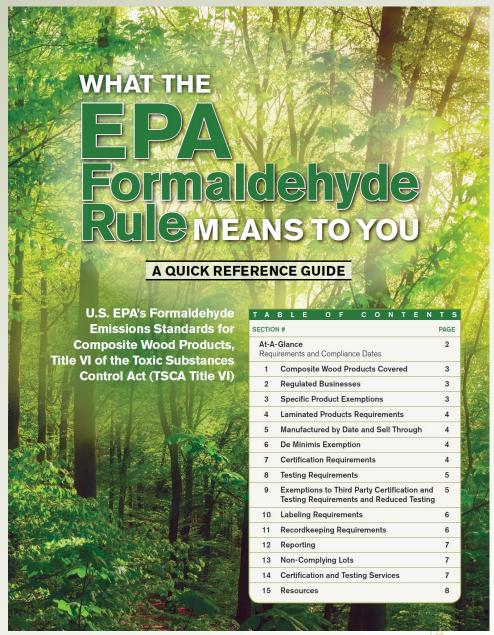
- Key issues
 - Compliance date
 - Proposed rulemaking extend compliance date to March 22, 2018
 - Prohibition on labeling prior to compliance date
 - Proposed direct final rule comments by July 26
 - Change to allow for voluntary, truthful labeling prior to compliance date
 - Clarify sell-through provisions
 - Outdated references to consensus standards



Resources

CPA Brochure

- Summarizes key requirements
- At-a-glance reference guide
- Identifies additional contacts





Other Resources

EPA Resources, Guidance Materials, Q&A and Small Entity Guidance Document for Panel Producers
https://www.epa.gov/formaldehyde/resources-guidance-materials-formaldehyde-emission-standards-composite-wood-products

California Air Resources Board

- Draft amendments to ATCM expected in late 2018 or early 2019
 - Question whether will align with EPA Regulation
 - Verbal indication will recognize TSCA Title VI labels
- Deconstructive testing
 - Exploring inter-laboratory comparison work to address concerns over repeatability and reproducibility
- Additional enforcement in 2017 imported laminate flooring
 - \$60k (January 2014 to August 2015)
 - \$27,750 (December 2013 and July 2014)



Thank you!







Wood Dust: The California Conundrum

Stewart E. Holm

Chief Scientist

AWFS

July 2017

What Happened?

- CA OSHA lowered PEL from 5 mg/m³ to 2 mg/m³ total dust
- Lowered the existing 15-minute short term exposure limit from 10 mg/m³ to 5 mg/m³
- Lowered the existing PEL for Western Red Cedar from 2.5 mg/m³ to 0.5 mg/m³
- Was this necessary?
- Can we meet this value?
- What can we do now?





Overview

- Background on wood dust toxicology
 - Important concepts in industrial hygiene measurement
- Was the California process necessary? Adequate?
- The Concept of Dose Metric
 - Default assumption versus wood dust specific effect
- The Concept of Feasibility
- What is next?
- What you can do?





Wood Dust Toxicology: Relevance for Predicting a PEL

- Contrary to many chemicals, laboratory animal data are inadequate
 - Animals appear to be resilient to wood dust
- Worker studies for cancer are available but due to high dose only relevant for binary question
 - Adenocarcinoma of the nasal cavity and paranasal sinus
- Worker lung function studies are most useful for establishing an adequate PEL, but...
 - Literature can be difficult to interpret
 - Studies should be rigorously evaluated, not simply accepted
- Safety of the workers is paramount





Summary of 15 Lung Function Studies: Examining the Need for Further Information

- Inconsistent health effects findings across all studies
- Most are cross-sectional
- Many have relatively small numbers of study subjects
- Many have limited number of dust measurements
- New study that focuses on ending these flaws was necessary
- Industry sponsored study conducted by Tulane University





California Process Includes Technical and Feasibility Analyses

- Health Expert Advisory Committee in 2010 supported lowering the PEL to 1 mg/m³ (I)
 - Equivalent to 0.4 mg/m³ (T)
 - Later suggested that 1 mg/m³ (T) was sufficient
 - AWC argued that 1 mg/m³ was overprotective
- Feasibility Advisory Committee
 - Split 2 for 1 mg/ m^3 ; 2 for 2 mg/ m^3
 - Staff disregarded Industry data showing high costs for compliance with the new standard
 - "...CA wood products industry has changed a great deal since the time of this study, and wood dust control technologies available and in use have also changed significantly..."
 - No data on how they have changed were provided





CA OSHA Worker Health Study Summaries on Lung Function

- Mandryk et al. (1999) saw mill workers
 - Reduced lung function values at four sawmills
 - "Range of exposures of 0.83 to 12.32 mg/m³ with a mean of 4.8 mg/m³" (CA OSHA)
 - Actual range exceeds 74 mg/m³, maybe higher
- Chan-Yeung et al. (1980) pulp and paper mill
 - Exposures ranged from <0.1 to 2.7 mg/m³ with a mean of 0.5 mg/m³
 - Reported slight decrease in lung function; however, the study showed no statistical differences
 - The prevalence of lung symptoms was sometimes higher for the exposed group and sometimes higher for the control group
 - OSHA stated that other organizations concluded that 0.5 mg/m³ would be an appropriate NOEL. "Therefore, citing Chan-Yeung is appropriate..." (??)
- Tulane study (2008) was not included in the analysis
 - HEAC, "clearly the most comprehensive analyses published to date."





Tulane Study of Respiratory Health in Wood Processing

Glindmeyer et al.: Longitudinal respiratory health study of the wood processing industry.

Amer. J. Ind. Med. 51:595-609, 2008.

Objective: Investigate lung effects for cohort of workers across the wood processing industry

- 5-year longitudinal study of 1,164 workers, > 2,300 personal lung function samples in 10 wood processing plants selected from a survey of 480 plants located across the USA
 - Both softwood and hardwood included
 - Both greenwood and dry wood included
 - Minimal use of PPE
 - Included 1 saw/planer/plywood mill, 1 plywood mill, 1 secondary millworks, 3 cabinet plants, 4 furniture plants
- Annual symptom survey, questionnaire, and research quality spirometry





Tulane Study Conclusion: No effects in lung function

	FEV1(ml/yr)	FVC (ml/yr)	FEV1/FVC(%/yr)	FEF25-75(ml/s/yr)
Regression categorical	Coefficient	Coefficient	Coefficient	Coefficient
exposure comparisons	(P-Value)	(P-Value)	(P-Value)	(P-Value)
Inhalable dust mg/m ³				
≥1 compared to <1	4.55	-2.79	14.04	22.32
	(0.40)	(0.67)	(0.04)	(0.04)
≥2 compared to <2	- 2.89	-5.09	2.10	4.41
	(0.49)	(0.31)	(0.68)	(0.61)
≥ 3 compared to <3	3.41	7.93	-2.89	2.02
	(0.55)	(0.25)	(0.68)	(0.86)
Interval ≥ 2 to < 5	1.92	1.14	7.38	6.53
	(0.69)	(0.84)	(0.25)	(0.50)

Source : Dr. John J. Lefante and Dr. Roy J. Rando, Tulane University

⁺ Regression coefficients are adjusted for baseline lung function, age, sex and cumulative pack years, using multiple linear regression models.





Dose Metric, Data Interpretation, Date Use

- Why is Tulane different than other studies?
 - -Study design:
 - longitudinal design eliminates residual confounding
 - Size, number of measurements
 - Dose metric
 - Contemporary data versus older data
 - What you see is not necessarily what you get
 - Tulane study caps at around 7 mg/m³
 - Mandryk and other worker health studies at much higher levels (>74 mg/m³)
 - Is using a mean concentration default inappropriate?
 - Lung congestion effects, mucocilliary clearance issues





Rourke, T., et al. "Decreasing incidence of nasal adenocarcinoma in Wycombe woodworkers." *The Laryngoscope* 124, no. 5 (2013): 1078-1082

- Cancer of the ethmoid sinuses is significantly declining in High Wycombe, and just possibly disappearing
- It is almost certain that the timing of the reduction of the carcinogenic effect of the wood dust precedes the COSHH initiative
- Ventilation began to improve during the 1960s and 1970s from the original "choking" levels..."
- "As far as onset of this disease is concerned the introduction of high-speed machinery in the 1930s and 1940s could have been crucial. This would have increased overall dust levels, which without adequate ventilation in the many small and cramped factories would only have worsened working conditions with greatly increased dust levels in the factory atmosphere."





Feasibility of Lower Wood Dust Levels

- CA OSHA, "Most of the wood manufacturing studies in the Kalliny study that are not in compliance with the proposed PEL were smaller scale facilities, employing in most cases only a few workers."
 - "There will be no significant adverse economic impact on businesses..."
- Kalliny
 - The number of exposed workers at each of the 10 study plants ranged from 142 to 760
 - **—** ??





Re-evaluation of Kalliny data set

CA states in its Initial Statement of Reasons (ISOR),

"... of 2430 valid air samples in a variety of tasks, between 70 and 80% of results were below the 1 mg/m³ total dust level being proposed as an 8 hour TWA PEL based on a conversion factor of 1 divided by 2.5 from results of inhalable samples..."
FSOR states that 75% of samples are already below the proposed PEL.

PLANT	n	MLEM mg/m³ (inhalable)	MLEM mg/m³ (total dust)
Furniture	1042	2.94	1.2
Cabinet	450	2.64	1.1
Milling	471	2.06	0.82
Sawmill/plywood	467	1.09	0.44
All sanding ops.	620	3.76	1.5



California Decision

- Staff recommendation was 1 mg/m³
- AWC provided testimony on state of the science and feasibility
- Board rejected staff recommendation
- New Final Statement or Reason was prepared within a week with a PEL of 2 mg/m³
- AWC filed comments in favor of this revision and stressed that this PEL was based on the traditional measurement technique
- Effective compliance date: July 1, 2017





What is facing the industry next?

- EU Parliament Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens and mutagens at work.
 - Proposed 3 mg/m³ (I)
 - Suggests a future "best practice" limit value based on France's 1 mg/m³
 - Suggests that an even stricter limit value of 0.5 mg/m³ should be evaluated
- Fails to summarize any studies
- Fails to mention Rourke et al, 2013





What can you do?

- Join the wood dust coalition
 - American Wood Council
 - American Forest & Paper Association
 - Composite Panel Association
 - Kitchen Cabinet Manufacturers Association
 - Hardwood Plywood and Veneer Association
 - National Wood Flooring Association
 - National Hardwood Lumber Association
 - Hardwood Federation
- Let us know if a state is considering a PEL update
 - Earlier engagement is more effective





Conclusions

- Data on wood dust need to be reviewed carefully and cautiously
- Older studies or older exposures are helpful in establishing the hazard of wood dust; they are not very helpful in generating a PEL
- The current PEL of 5 mg/m³ is protective for lung function and cancer
- The final PEL of 2 mg/m³ may require mitigation at some facilities
- Current proposals may likely impact the entire industry
- A broader coalition has greater ability for impact





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