November 10, 2010

Feasibility Advisory Committee
California Department of Industrial Relations
Division of Occupational Safety and Health
1515 Clay Street, Suite 101
Oakland CA 94612

Attn: Bob Barish

Dear Members of the Feasibility Advisory Committee:

As a follow-up to our previously submitted comments, and in response to the Committee's recent request for additional information regarding feasibility of a 1 mg/m^3 permissible exposure level (PEL) for wood dust, we wish to provide a cost analysis described below.

The American Wood Council (AWC) and the Inter-Industry Wood Dust Coordinating Committee (IWDCC)[1] including APA – The Engineered Wood Association, Composite Panel Association, Hardwood Plywood and Veneer Association and Kitchen Cabinet Manufacturers Association are pleased to provide the additional information.   Members of AWC and IWDCC have a number of wood manufacturing facilities and many customers and end-users in California, and therefore have a direct interest in development of a PEL for wood dust.

In 1987, in anticipation of Occupational Safety and Health Administration's (OSHA) rulemaking to update its PELs for chemical substances, the IWDCC commissioned Clayton Environmental Consultants Inc. to undertake a nationwide study[2] to determine wood dust exposures, evaluate control technologies and to estimate unit costs for wood dust controls. Following OSHA's proposed rule in June 1988, we also engaged National Economic Research Associates, Inc. (NERA) to assess the economic impact of the proposal on the wood products industries for wood dust. NERA utilized data from the Clayton Study in its economic evaluation of OSHA's proposed wood dust standard of 5 mg/m^3 for softwood and 1 mg/m^3 for hardwood dusts. Separate economic analyses were also done for a combined softwood and hardwood dust standard of 5 mg/m^3 and 1 mg/m^3.

In our earlier submittal to the Committee, we provided extensive workplace wood dust measurements from three large data sources. The data raise significant questions about the feasibility of a 1 mg/m^3 PEL. Below, we provide cost analysis and estimates

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[1] The IWDCC is a consortium of more than 20 North American trade associations with an interest in wood dust health and regulatory issues. The consortium includes wood source suppliers, processing operations, and finished goods manufacturers.
[2] *Final Report on an Industry-Wide Study of Wood Dust Exposures for the Wood Dust Coordinating Committee*. Clayton Environmental Consultants, Inc. 1988.

for complying with a 1 mg/m^3 PEL. In deriving the estimates, we have used data from the NERA report[3], scaled to California wood and wood product facilities, and converted to 2010 dollars using the Consumer Price Index (CPI) inflation adjustment factor. Also, we consider the operations studied in 1987 as generally relevant to current wood handling methods.

Clayton and NERA Studies

Clayton conducted wood dust sampling at 46 facilities across the U.S. in 1987-1988. They collected a total of 802 personal samples, and 109 samples for particle size determination. At each facility, Clayton engineers reviewed existing control technologies for different machine types, conducted ventilation measurements, and reviewed system specifications. In addition, engineers assessed engineering controls determined to be effective for achieving 5 mg/m^3 and 1 mg/m^3 limits at processes or discrete equipment. Clayton estimated capital and annual operating costs to upgrade existing systems to each of these limits, or where no ventilation system exists, the cost for installation of a new system.

In its economic analysis, NERA, using an industry survey which provided facility specific descriptions of discrete equipment processes, constructed prototypical plants at the four digit SIC code. NERA then applied Clayton's equipment and process ventilation costs to estimate the cost to bring the prototypical facility into compliance with a 5 mg/m^3 or 1 mg/m^3 standard. Next, NERA multiplied the prototypical plant cost by the number of plants in the SIC according to the 1982 Census of Manufacturers to obtain total annual compliance cost at the four digit SIC level. NERA summed across all wood and wood product SICs to derive nationwide annual compliance cost. In 1988 dollars, the estimated total annual costs to comply with a 5 mg/m^3 or a 1 mg/m^3 limit were $266 million and $1.9 billion respectively.

Estimation of Cost for California Wood and Wood Products Industry of a 1 mg/m^3 PEL.

To estimate the cost in 2010 dollars for California wood and wood product facilities to comply with a 1 mg/m^3 PEL we proceeded as follows:

1) For each four digit SIC in the NERA Study, we first calculated the average annualized _incremental_ cost in 1988 dollars between complying with a 5 mg/m^3 PEL and a 1 mg/m^3 PEL. The annualized incremental cost in 1988 dollars was then converted to 2010 dollars using a CPI inflation factor of 1.8465.

2) The four digit SIC codes were then translated into corresponding NAICS classifications. The costs from step 1 were applied to the corresponding NAICS. Three of the NAICS classifications (337121, 337122, 337215) encompass wood and non-wood related products, and were not included. This results in an underestimation of affected facilities and total cost.

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[3] *The Economic Impact of OSHA's Proposed Air Contaminants Rule on the Wood Products Industries.* National Economic Research Associates, Inc. 1988.

3) From the 2002 US Census of Manufacturers, we obtained the number of wood and wood product facilities in California within each NAICS category.

4) The number of facilities for each NAICS classification in step 3 were then multiplied by the annualized costs from step 2.

5) The total annualized cost for wood and wood product facilities were then summed across all NAICS in step 4.

The estimated total annualized cost of complying with a 1 mg/m^3 PEL for wood and wood products facilities in California is $447,440,759. The results of the above analysis are shown in table 1.

Respiratory Protection Implications
Although the last method of control in the hierarchy of controls is personal protective equipment, a 1 mg/m^3 PEL would force many employers into mandatory use of respiratory protection if engineering controls were not feasible. The current CAL-OSHA standard permits the voluntary use of filtering facepiece respirators ("dust masks") with minimal program requirements. Adoption of a 1 mg/m^3 PEL would eliminate the voluntary option in many instances since use would become mandatory in order to comply with the lower PEL. Employers would then require a full ongoing respiratory protection program including medical clearance, fit testing and training for every respirator user. These are very time consuming and often complex requirements that require significant time and funds to administer.

 Small business in particular would be hard hit by a respiratory protection program requirements since they would need to rely on more costly external services since they can't hire additional staff needed to run extra programs.

Additional Economic Implications
The 1988 NERA Study also included the economic impacts that compliance with a 1 mg/m^3 standard would have on the industry nationwide. It included impacts on job losses, industry profits and plant closures.

The economic impacts were considered to be substantial, with smaller firms estimated to bear higher compliance costs per dollar of sales. Competitive pressures on the wood and wood products industries, particularly from foreign competition, were deemed to make it very difficult for producers to pass on compliance costs. As discussed below, the economic and competitive pressures on the industry are even much greater today.

**Current Economic Conditions of Wood and Wood Products Industry**
The U.S. primary wood industry, which manufactures lumber, panels, and other wood products, has been extremely hard hit by the sharp downturn in new home construction and weak pricing. According to a 2008 Standard & Poor's report the housing slump, high input costs, low prices for lumber and other building materials are shaping the current economic environment for the primary wood products industry. According to

data compiled by the Federal Reserve Board, production of wood products declined 36% between 2006 and 2009. [4] The primary wood products capacity utilization rate shows a faster rate of decline than the entire manufacturing sector.[5] (See Chart 3)

The latest decline in manufacturing employment hit virtually all sub-sectors of manufacturing. As a percent of total jobs in the sub-sector, losses from June 2006 to December 2009 were largest in primary wood products (40%). As a result, over 200,000 jobs were lost in the primary wood industry sector between 2006 and 2009 nation-wide. (See Chart 1) Employment from wood household furniture has fallen by almost half from 130,000 to 70,000 since 2000. Wood furniture has been significantly affected by imports which currently make up more than 50% of U.S. consumption. China has been the principal source of imports in wood household furniture. China's imports have impacted California which is the second leading state in wood household furniture. California had 9 plant closings between 2000 and 2003.[6]

Including cabinet and furniture manufacturing, the wood and wood products industry employs over 67,600 people and has over 3000 facilities in the state of California.

Chart 1.   **Wood Industry Sector Employment**
Source: Bureau of Labor Statistics
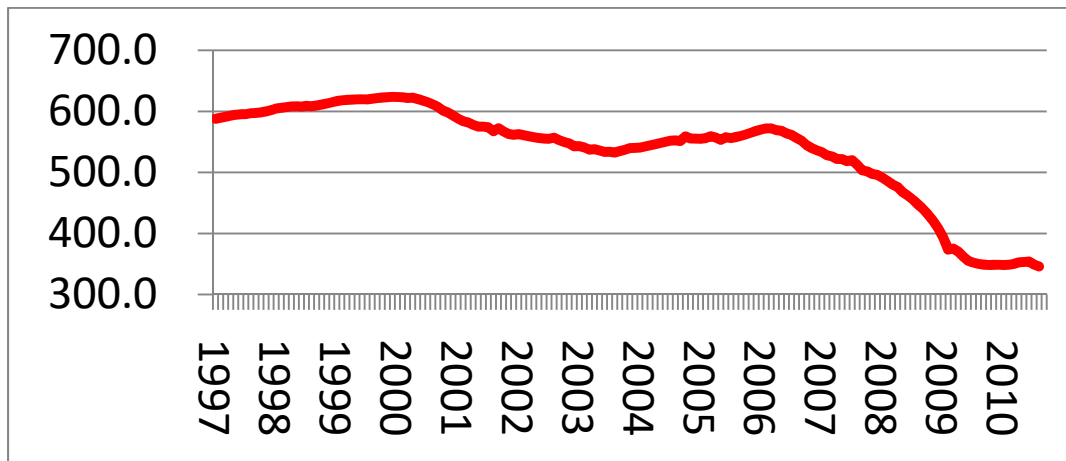
*Numbers are in 000s and does not include furniture and cabinets

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[4] U.S. Environmental Protection Agency. Office of Air Quality Planning and Standards. *Regulatory Impact Analysis: National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters.* April 2010. Available at: www.epa.gov/**air**quality/combustion/docs/**boiler**ria20100429.pdf. Pg. 2-16.

[5] *Regulatory Impact Analysis.* Pg 2-28.

[6] Congressional Research Service. *U.S. Furniture Manufacturing: Overview and Prospects*. May 2007. Available at www.policyarchive.org/handle/10207/bitstreams/19500.pdf.

Conclusion

Our analysis shows that costs to the California wood and wood products industry of complying with a 1 mg/m^3 PEL would be substantial, and likely to result in significant and unnecessary economic impacts on the industry. Exposure data we have examined and previously submitted to the Committee demonstrate that a 1 mg/m^3 level is not readily met and is not scientifically justified. We encourage the Committee to give serious consideration to our data submissions and cost analyses. We would welcome the opportunity to meet with the committee to discuss our comments and a feasible protective PEL for wood dust.

On a related issue, we cannot provide a reasoned assessment of California's Short-term Exposure Limit (STEL) for wood dust of 10 mg/m^3 since the regulation's definition does not specify the frequency of short–term exposures over a work shift or the low exposure intervals between higher exposure periods. We recommend that STELs in general be more fully defined under the regulations and that the current STEL of 10 mg/m^3 remain based on the general theory and practice around short-term exposures as published by agencies such as the American Conference for Governmental Industrial Hygienists (ACGIH).

We appreciate the opportunity to provide this additional analysis to the Committee. If you have any questions, please contact Laurie Holmes at lholmes@awc.org or 202-463-5174.

Sincerely,

American Wood Council
APA-The Engineered Wood Association
Composite Panel Association
Hardwood Plywood and Veneer Association
Kitchen Cabinet Manufacturers Association

Table 1. Estimated Annualized Cost to Comply with a 1 mg/m^3 Wood Dust PEL 2010 Dollars

SIC	NAICS	Average	Number of	Annualized Costs
2421, 2499	321113	$25,418	86	$2,185,948
2426	321918	$127,224	217	$27,607,608
2431	321911	$124,329	207	$25,736,103
2434	337110	$117,785	1162	$136,866,170
2435	321211	$46,203	21	$970,263
2436	321212	$16,807	7	$117,649
2439	321213, 321214	$11,570	99	$1,145,430
2441, 2448, 2449	321920	$9,573	284	$2,718,732
2451	321991	$27,374	46	$1,259,204
2452	321992	$44,371	54	$2,396,034
2491	321114	$69,434	25	$1,735,850
2493	321219	$103,751	22	$2,282,522
2499	321999	$129,973	191	$24,824,843
2511	337122	$312,989	567	$177,464,763
2517	337129	$275,965	50	$13,798,250
2521	337211	$292,571	90	$26,331,390
			TOTAL	$447,440,759

Chart 3. Percent Capacity Utilization: Wood Products Industry
Source: Federal Reserve Board