State of California
AIR RESOURCES BOARD

Resolution 07-14

April 26, 2007

Agenda Item No.: 07-4-3

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (Board/ARB) to adopt standards, rules and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, under section 39650 of the Health and Safety Code, the Legislature finds and declares that it is the public policy of the State that emissions of toxic air contaminants should be controlled to levels which prevent harm to the public health;

WHEREAS, on March 12, 1992, the Board identified formaldehyde as a toxic air contaminant pursuant to article 3 (commencing with section 39660), chapter 3.5, part 2, division 26 of the Health and Safety Code;

WHEREAS, formaldehyde is listed as a known human carcinogen by the International Agency for Research on Cancer;

WHEREAS, in identifying formaldehyde as a toxic air contaminant, the Board determined that there is not sufficient scientific evidence to support identification of a threshold level below which no significant adverse health effects are anticipated (see title 17, California Code of Regulations, section 93000);

WHEREAS, sections 39658 and 39666 of the Health and Safety Code authorize the Board to establish airborne toxic control measures (ATCM) for substances identified as toxic air contaminants in accordance with specified criteria;

WHEREAS, for a toxic air contaminant for which the Board has not specified a threshold exposure level, section 39666 of the Health and Safety Code requires ATCMs to be designed to reduce emissions to the lowest level achievable through the application of best available control technology or a more effective control method, considering factors specified in section 39665, unless the Board determines, based on an assessment of risk, that an alternative level of emissions reduction is adequate or necessary to prevent an endangerment of public health;

WHEREAS, the Office of Environmental Health Hazard Assessment (OEHHA) has identified formaldehyde as a Tier II compound under the Children's Environmental Health Act;

WHEREAS, ARB staff has undertaken an evaluation of formaldehyde emissions from hardwood plywood, particleboard, and medium density fiberboard and has determined that there are significant public health risks associated with emissions from raw panels and finished goods such as cabinets, furniture, and flooring containing these products;

WHEREAS, the primary source of formaldehyde emissions from hardwood plywood, particleboard, and medium density fiberboard is unreacted formaldehyde molecules in urea-formaldehyde resins and temporal chemical decomposition;

WHEREAS, formaldehyde is emitted into the air from hardwood plywood, particleboard, and medium density fiberboard at the manufacturing plant; fabrication facilities; new home construction; remodeling construction; truck, rail and ship transportation; lumberyards; and through windows, doors, and ventilation systems in homes and other buildings;

WHEREAS, near-source modeling analyses show that formaldehyde concentrations near stockpiles of composite wood products can potentially cause significant health risks to nearby sensitive receptors by increasing the cancer risk from outdoor air;

WHEREAS, statewide annual average ambient formaldehyde concentrations are presently above the chronic reference exposure level of 3 $\mu g/m^3$ that OEHHA has established;

WHEREAS, formaldehyde concentrations in indoor settings may be five to ten times higher than outdoors due to higher amounts of emissions sources (including hardwood plywood, particleboard, and medium density fiberboard) and reduced rates of ventilation;

WHEREAS, the majority of formaldehyde emitted indoors, including emissions from hardwood plywood, particleboard, and medium density fiberboard, moves outdoors and contributes to outdoor formaldehyde concentrations;

WHEREAS, formaldehyde emissions from hardwood plywood, particleboard, and medium density fiberboard made with urea-formaldehyde resins occur from the time they are manufactured and for multiple years thereafter;

WHEREAS, more stringent formaldehyde emission standards for hardwood plywood, particleboard, and medium density fiberboard have been established in Europe, Japan, and Australia;

WHEREAS, alternative "no-added formaldehyde" resins are currently available and being used to manufacture some products with very low formaldehyde emission levels;

WHEREAS, there are no federal, State, or local emission standards for hardwood plywood, particleboard, and medium density fiberboard except for hardwood plywood and particleboard materials installed in manufactured homes;

WHEREAS, ARB staff has proposed the adoption of an ATCM to reduce formaldehyde emissions from composite wood products; the proposed ATCM is set forth in Attachment A hereto;

WHEREAS, ARB staff has proposed the ATCM after conducting a thorough review of composite wood product technology and an industry survey; the information gathered through this process shows that the proposed emission standards can be achieved;

WHEREAS, ARB staff has provided updates to and solicited input from air pollution control and air quality management districts (air districts), the affected industry, and the public as required by Health and Safety Code section 39665, in preparing a report identifying the need for a control measure and the appropriate degree of control for formaldehyde;

WHEREAS, ARB staff has prepared a staff report entitled "Initial Statement of Reasons for Proposed Rulemaking: Adoption of the Proposed Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products" (Initial Statement of Reasons) which provides estimates of current formaldehyde emissions and potential cancer risk due to airborne concentrations of formaldehyde, including those from composite wood products, identifies best available control technology, and discusses potential cost impacts from the proposed ATCM on the affected industry, local air districts, the State, and local government;

WHEREAS, the Initial Statement of Reasons constitutes the report on the need and appropriate degree of regulation for formaldehyde emissions from hardwood plywood, particleboard, medium density fiberboard panels, and finished goods containing these materials, as required by Health and Safety Code section 39665;

WHEREAS, in accordance with Health and Safety Code section 39665(c), the report and any relevant comments received during public consultation with the air districts, affected sources, and the public were made available for public review and comment at least 45 days prior to the public hearing to consider the proposed ATCM;

WHEREAS, the report discusses, to the extent data could reasonably be made available, the factors specified in Health and Safety Code section 39665(b);

WHEREAS, the proposed ATCM would further reduce formaldehyde emissions from hardwood plywood, particleboard, medium density fiberboard, and finished goods containing these materials;

WHEREAS, the proposed ATCM would require manufacturers that sell or supply hardwood plywood, particleboard, or medium density fiberboard panels to work with third party certifiers to implement quality control and emission testing programs in order to demonstrate ongoing compliance with the applicable emission standards;

WHEREAS, the proposed ATCM would require all manufacturers that supply products for sale or use in California to label these products in a manner that clearly identifies their third party certifier, the name of their company, product lot number or batch produced, and a marking to denote that the product meets the applicable Phase 1 or Phase 2 emission standard;

WHEREAS, the proposed ATCM would require that distributors, importers, fabricators, and retailers keep records showing the date of purchase and supplier of the composite wood products, and document the precautions taken to ensure that these products comply with the applicable emissions standards;

WHEREAS, in accordance with Health and Safety Code section 39666(c), the proposed ATCM has been designed, in consideration of the factors specified in Health and Safety Code section 39665(b), to reduce emissions of formaldehyde to the lowest levels achievable through application of best available control technology in consideration of risk and cost;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project which may have significant adverse environmental impacts be adopted as originally proposed if feasible alternatives or mitigation measures are available to reduce or eliminate such impacts;

WHEREAS, based on comments received during the 45-day comment period prior to the public hearing, staff has proposed modifications to the original proposal; these modifications are set forth in Attachment B to this resolution;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of chapter 3.5 (commencing with section 11340), part 1, division 3, title 2 of the Government Code;

WHEREAS, the proposed ATCM was made available to the public for review and comment, and concepts and drafts of the proposed ATCM were discussed at numerous meetings as well as public workshops held on May 2, 2006, June 20, 2006, October 23, 2006, and March 20, 2007;

WHEREAS, in consideration of the staff report, written comments, and public testimony it has received, the Board finds that:

Existing federal, State, and local regulations do not sufficiently protect the public's health from formaldehyde emissions from hardwood plywood, particleboard, medium density fiberboard, and finished goods containing these materials;

Hardwood plywood, particleboard, medium density fiberboard, and finished goods containing these materials emit potentially harmful airborne concentrations

of formaldehyde, which pose a significant health risk to exposed members of the public;

The proposed ATCM would reduce formaldehyde emissions from hardwood plywood, particleboard, medium density fiberboard, and finished goods containing these materials, consistent with the principle of pollution prevention;

The proposed ATCM complies with the requirements of State law for control of sources of toxic air contaminants identified by the Board;

The proposed ATCM requires best available control technology for hardwood plywood, particleboard, and medium density fiberboard sold or supplied to California, as required by Health and Safety Code section 39666(c);

The economic impacts of the proposed ATCM have been analyzed as required by California law, and the conclusions and supporting documentation for this analysis are set forth in the Initial Statement of Reasons;

The benefits to human health, public safety, public welfare, or the environment justify the costs of the regulatory requirements;

No reasonable alternative considered or that has otherwise been identified and brought to the attention of the ARB would be more effective in carrying out the purpose for which the ATCM is proposed, or be as effective to affected private persons and businesses than the proposed ATCM;

The proposed ATCM will reduce exposures to formaldehyde emissions in all communities where hardwood plywood, particleboard, medium density fiberboard, and finished goods containing these materials are used;

The proposed ATCM is consistent with ARB's environmental justice policy of reducing health risks in all communities where hardwood plywood, particleboard, or medium density fiberboard is manufactured, imported, distributed, sold, or used to fabricate finished goods;

The proposed ATCM is necessary in order to protect public health by reducing formaldehyde exposure from hardwood plywood, particleboard, medium density fiberboard, and finished goods containing these materials;

WHEREAS, the Board further finds, in accordance with the Health and Safety Code, section 39650(e), that:

While absolute and undisputed scientific evidence may not be available to determine the exact extent of the risk from emissions of formaldehyde from hardwood plywood, particleboard, medium density fiberboard, and finished goods

containing these materials, it is necessary to take action to protect public health; and

WHEREAS, pursuant to the requirements of the California Environmental Quality Act and the Board's regulations, the Board further finds that no significant adverse environmental impacts will occur from the proposed ATCM.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves the proposed adoption of sections 93120 to 93120.12, title 17, California Code of Regulations, as set forth in Attachment A hereto, with the modifications set forth in Attachment B hereto.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to take final action to adopt the ATCM set forth in Attachment A, with the modifications set forth in Attachment B and such other conforming modifications as may be appropriate, after making the modified regulatory language and any additional supporting documents and information available to the public for a period of 15 days, provided that the Executive Officer shall consider such written comments as may be submitted during this period, shall make modifications as appropriate in light of the comments received, and shall present the regulations to the Board for further consideration if she determines that this is warranted after review of the comments.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to report to the Board by May 2008, and annually thereafter until 2012, on the status of the ATCM testing and enforcement program.

BE IT FURTHER RESOLVED that the Board directs ARB staff to send the adopted ATCM to the air districts for implementation and enforcement and provide assistance to the air districts in implementing and enforcing the ATCM.

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RESOURCES AGENCY OF CALIFORNIA

I hereby certify that the above is a true and correct copy of Resolution 07-14, as adopted by the Air Resources Board.

Lori Andreoni

Lori Andreoni, Clerk of the Board

Resolution 07-14

April 26, 2007

Identification of Attachments to the Board Resolution

Attachment A: Proposed Regulation Order: Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products (sections 93120 to 93120.12, title 17, California Code of Regulations), as set forth in Appendix A to the Initial Statement of Reasons, released March 9, 2007.

Attachment B: Staff's Suggested Modifications to the Original Proposal (Distributed at the Board hearing on April 26, 2007).

State of California
Environmental Protection Agency
AIR RESOURCES BOARD

Notice of Decision and Response to Significant Environmental Issues

Item:	ATCM to Reduce Formaldehyde Emissions from Composite Wood Products
Approved By:	Resolution 07-14
Adopted by:	Executive Order R-08-001
Agenda Item:	07-4-3
Public Hearing Date:	April 26, 2007
Issuing Authority:	Air Resources Board
Comment:	No comments were received identifying any significant environmental issues pertaining to this item. The Staff Report identified no adverse environmental effects.
Response:	N/A
Certified:	Amy J. Whiting, Regulations Coordinator
Date:	February 19, 2008

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