

State of California
Air Resources Board

BOARD ITEM SUMMARY

ITEM # 07-4-1: Health Impacts of Fine Particle Components in California

STAFF RECOMMENDATION:

Informational Item

DISCUSSION:

Staff regularly updates the Board on recent research findings regarding the health effects of air pollution. This month, staff will present a recently published study of fine particle components in California.

SUMMARY OF AGENDA ITEM:

Epidemiological findings show strong associations between exposure to particles and increased respiratory illness and mortality in people with pre-existing respiratory illness. Staff will describe a recent California study examining the associations between daily mortality and 19 components of fine particulate matter (PM_{2.5}) including elemental and organic carbon, nitrates, sulfates and various metals. The toxicity of individual PM components may be relevant to establishing ambient air quality standards and more targeted control strategies. This study supports the hypothesis that pollution from motor vehicles and other sources of combustion, including residential wood burning, is of particular concern.

State of California
Air Resources Board

BOARD ITEM SUMMARY

ITEM # 07-4-3: Proposed Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products

STAFF RECOMMENDATION:

Adopt the proposed regulation with modifications to be identified by staff at the public hearing.

DISCUSSION:

“Composite wood products” is a general term for panels made from wood pieces, particles or fibers bonded together with resins which may contain urea-formaldehyde. Formaldehyde is emitted into the air from composite wood products when un-reacted formaldehyde is released from urea-formaldehyde resins. These emissions occur at manufacturing plants, fabrication facilities, home construction sites, remodeling construction, goods transport, lumberyards, and through windows, doors, and ventilation systems in homes and other buildings.

Formaldehyde has both cancer and non-cancer health effects. The International Agency for Research on Cancer concluded that formaldehyde is a known human carcinogen. Formaldehyde has been linked to the exacerbation of asthma in sensitive individuals. In 1992, the Air Resources Board identified formaldehyde as a toxic air contaminant with no safe level of exposure. Health risks from total daily average formaldehyde exposures in California are estimated from 86 to 231 excess cancer cases per million for lifetime exposures, and from 23 to 63 excess cancer cases per million for childhood exposures.

The proposed ATCM would establish new formaldehyde emission standards for hardwood plywood, particleboard and medium density fiberboard in two phases. The standards are “caps” that cannot be exceeded and would cover both domestic and imported products. These standards would apply to panel manufacturers, distributors, importers, fabricators, and retailers of hardwood plywood, particleboard, medium density fiberboard panels, and finished goods containing those products, which are sold in or supplied to California.

The proposed ATCM would set the most stringent production-based standards in the world. (Presently, the U.S. and California trail efforts in Europe, Japan and Australia to reduce formaldehyde emissions from composite wood products.) If approved by the Board, fabricators, distributors, importers and retailers must obtain compliant composite wood products and finished goods for the California market. They must be prepared to provide a written record which verifies compliance. They must also be prepared to pass certified laboratory testing to demonstrate compliance.

SUMMARY OF AGENDA ITEM:

The proposed ATCM would reduce emissions ~20 percent in Phase 1 or 180 tons of formaldehyde per year. In Phase 2, a 58 percent reduction or about 500 tons of formaldehyde emissions per year would be achieved. Because the proposed ATCM would also reduce indoor formaldehyde exposures, substantial benefits would be realized by buyers of new homes, as well as those in existing homes due to reduced emissions from remodeling projects and new furniture.

The Phase 1 standards would reduce the number of formaldehyde-related childhood exposure cancer cases by 3 to 9 per million, and lifetime exposure cancer cases by 12 to 35 per million. In Phase 2, childhood exposure cancer cases would be reduced by 9 to 26 per million, and lifetime exposure cancer cases by 35 to 97 per million.

The total combined cost to the hardwood plywood, particleboard, and medium density fiberboard industries is estimated to be about \$19 million per year for Phase 1 and about \$127 million per year for Phase 2. Staff estimates that for a 2,000 square foot home, the increased cost of construction will be about \$400. Due to markups at the retail level, the incremental increase in the price of a composite wood panel in Phase 2 could range from about \$3 to \$6.

State of California
Air Resources Board

BOARD ITEM SUMMARY

ITEM # 07-4-5: Update on the Air Resources Board's Emission Reduction Plan for Ports and Goods Movement in California

STAFF RECOMMENDATION: Not applicable.

DISCUSSION:

This is the second semi-annual update on implementation of the plan approved by the Board on April 20, 2006 to reduce the emissions and health risk associated with pollution from the ships, trucks, locomotives, harbor craft, and cargo equipment that operate at ports and move goods throughout the State. The plan includes an analysis of the health impacts from goods movement and identifies strategies to cut emissions in each sector to protect public health.

SUMMARY AND IMPACTS:

This update will cover recently adopted ARB rules for ship fuel and cargo handling equipment; development of new rules for trucks, ships, harbor craft, and locomotives; local initiatives for port trucks; goods movement in the San Diego/Mexico border area; and proposed allocation of bond funding for related freight movement infrastructure.

State of California
Air Resources Board

BOARD ITEM SUMMARY

ITEM 07-4-6: Status Report on the Progress of the 2007/08 State Implementation Plan for the South Coast Air Quality Management District

STAFF RECOMMENDATION:

Informational only.

DISCUSSION:

Federal clean air laws require areas with unhealthy levels of ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide and inhalable particulate matter to develop plans, known as State Implementation Plans (SIPs), describing how they will attain national ambient air quality standards. Plans for the 8-hour ozone standard and the fine particulate (PM_{2.5}) standard are due to the U.S. Environmental Protection Agency in June 2007 and April 2008 respectively.

Air Resources Board staff are currently developing a comprehensive strategy designed to attain federal air quality standards as quickly as possible through a combination of technologically feasible, cost-effective, and far reaching measures. Local air districts are also developing plans for pollution sources under their jurisdiction. Staff will brief the Board on the status of the development of the plan for the South Coast Air Quality Management District.

SUMMARY AND IMPACTS:

Not applicable.