

State of California  
AIR RESOURCES BOARD

Summary of Board Meeting  
November 18, 2004

Air Resources Board  
Byron Sher Auditorium, Cal EPA Building  
1001 I Street  
Sacramento, California

MEMBERS PRESENT: Hons. Alan C. Lloyd, Ph.D., Chairman  
Sandra Berg  
Mark J. DeSaulnier  
Henry Gong, M.D.  
Ronald O. Loveridge  
Barbara Patrick  
Barbara Riordan

**AGENDA ITEM #:**

**04-10-1: Health Update – Recent California Studies on Indoor and Personal Exposure to Particulate Matter**

SUMMARY OF AGENDA ITEM:

The impacts of indoor pollutant sources and outdoor air pollution on personal exposure are critical issues in assessing the health impacts of air pollution. To address these issues, the ARB and U.S. Environmental Protection Agency co-funded two studies of indoor and personal exposure to PM in California. In the first study, investigators measured the levels and composition of indoor, outdoor, and personal PM among individuals with chronic obstructive pulmonary disease (COPD), and collected information on the household activities and home characteristics of the participants. In the second study, the investigators studied healthy subjects, and added continuous measurements of PM size fractions, nitrate levels, black carbon, and home air exchange rates. All homes in both studies were nonsmoking households. The results of these studies indicate that personal PM<sub>2.5</sub> was more strongly correlated with indoor PM<sub>2.5</sub> than outdoor PM<sub>2.5</sub>, although there was notable variability among the subjects. The investigators found that certain household and neighborhood factors – cleaning and cooking activities, less window opening, the winter season, and

inland location – were significantly associated with increased personal or indoor PM2.5 exposures.

In another recent study, investigators found that indoor PM from Boston homes produced higher concentrations of inflammatory mediators in lung cells than did outdoor PM, suggesting that indoor-generated particles may be more toxic than outdoor particles. Together, the results of all three studies indicate that an individual's proximity to indoor PM sources has a substantial effect on personal exposures, and that exposure to indoor-generated PM may contribute to significant health impacts beyond those measured for outdoor PM. Further research on indoor PM toxicity and exposure are needed.

Chairman Lloyd thanked the staff and asked about the concerns over indoor air cleaners that produce ozone. The staff plans to present a Health Update on this topic in January.

ORAL TESTIMONY: None.

FORMAL BOARD ACTION: None (Informational Item)

RESPONSIBLE DIVISION: Research Division

STAFF REPORT: No

**04-10-2: Public Meeting to Consider Research Proposals**

SUMMARY OF AGENDA ITEM: Staff presented five research proposals entitled:

- "Determination of the Spatial and Temporal Variability of Size-Resolved PM2.5 Composition and Mixing State in Multiple Regions in California";
- "Effects of Ozone Exposure on Cardiovascular Responses in Healthy and Susceptible Humans";
- "Effects of Wood Smoke on Cardiopulmonary Responses in Healthy and Susceptible Humans";
- "The Role of Inhaled Particles in the Pathophysiology of Cardiovascular Disease"; and
- "Particle Phase Peroxides: Concentrations, Sources, and Behavior."

ORAL TESTIMONY: None

FORMAL BOARD ACTION: Approved Resolution Numbers 04-33 through 04-37.

RESPONSIBLE DIVISION: Research Division

STAFF REPORT: Yes

**04-10-3: Public Hearing to Consider Regulatory Amendments Extending The California Standard for Motor Vehicle Diesel Fuel to Diesel Fuel used in Harborcraft and Intrastate Locomotives**

SUMMARY OF AGENDA ITEM:

The Board approved the proposed amendments to the California (CARB) diesel fuel regulations and approved an identical airborne toxics control measure. The approved amendments extend the CARB diesel fuel requirements to diesel fuel used by: 1) harborcraft in the South Coast Air Quality Management District (SCAQMD) beginning January 1, 2006; and 2) harborcraft and intrastate locomotives statewide beginning January 1, 2007. The approved amendments also provide a compliance option to intrastate locomotive operators to participate in an Alternative Emission Control Plan (AECPP). An intrastate locomotive operator choosing to use an AECPP would need to provide equivalent or greater emission reductions and ensure adequate local and regional environmental protections are preserved.

The approved amendments define harborcraft as marine vessels, such as tugboats, ferries, fishing and recreational boats, that operate primarily within California coastal waters. An intrastate locomotive is defined as a diesel-electric locomotive that operates principally in California, where at least 90 percent of a locomotive's fuel consumption, hours of operation, or annual rail miles traveled occur within the boundaries of the state of California.

The Board heard testimony from nine witnesses. Eight testified in support of the staff's proposed regulations. One witness discussed California's request for a waiver from the oxygen requirements of the federal reformulated gasoline program, which was not part of this agenda item.

Some of the witnesses offered suggestions and comments on specific components of the proposed amendments. The SCAQMD's and the California Air Pollution Control Officers

Association (CAPCOA) representatives suggested that the Board consider implementing the proposed regulation statewide one year earlier - beginning on January 1, 2006 - rather than statewide beginning on January 1, 2007. Also, these representatives suggested that the Board consider extending the applicability of the CARB diesel fuel requirements beyond intrastate locomotives to include interstate locomotives. Written comments received and discussed during the hearing included: 1) a request from the United States Navy for an exemption from the CARB diesel fuel requirements for military marine vessels in the interests of national security and operational fuel flexibility worldwide, and 2) the Western States Petroleum Association (WSPA) regarding a concern with staff's consistency in calculating cost-effectiveness for different pollutants.

The Board approved the proposed amendments to the California diesel fuel regulations with the modifications proposed by staff. The proposed modification to the approved amendments is to exempt military marine vessels from the definition of harborcraft. The Board also directed staff to return in January 2005 with a status report on future emission reduction strategies for locomotives and marine vessels.

The modifications presented by Air Resources Board staff at the hearing will be made available for public review and comment for a 15-day period in a Notice of Public Availability of Modified Text.

#### ORAL TESTIMONY:

David Smith, British Petroleum (ARCO)  
Joseph Kubsh, Ph.D., Manufacturers of Emission Controls (MECA)  
Paul Wuebben, South Coast Air Quality Management District (SCAQMD)  
Kirk Markwald, American Association of Railroads (AAR) and California Environmental Associates (CEA)  
Diane Bailey, Natural Resources Defense Council (NRDC)  
Don Anair, Union of Concerned Scientists  
Bonnie Holmes-Gen, American Lung Association (ALA)  
Thomas Christofk, California Air Pollution Control Officers Association (CAPCOA)  
Charlie Peters, Clean Air Performance Professionals

#### FORMAL BOARD ACTION:

The Board approved Resolution 04-38 by 9-0 vote.

RESPONSIBLE DIVISION: Stationary Source Division

STAFF REPORT: Yes

**04-10-4: Public Meeting to Consider Proposed 2004 Amendments Refining the California Phase 3 Reformulated Gasoline Regulations**

SUMMARY OF AGENDA ITEM:

Staff presented an update of progress towards implementation of the California Phase 3 Reformulated Gasoline (CaRFG3) regulations, followed by the proposed amendments to the regulations.

Staff reported that refiners were able to comply with the CaRFG3 regulations by January 1, 2004. As a result, today all California gasoline is MTBE free. The ARB enforcement data from refineries show CaRFG3 sulfur content is about 9 parts per million by weight, less than half of the CaRFG2 level.

Staff also reported the results of a recently completed ethanol permeation study co-sponsored by the Coordinating Research Council and the Air Resources Board. The results confirm findings from other studies that the use of ethanol in gasoline will significantly increase evaporative emissions from motor vehicles.

Staff proposed amendments to the CaRFG3 regulations. The amendments will (1) provide flexibility to suppliers of California reformulated gasoline blendstock for oxygenate blending (CARBOB) and denatured ethanol; (2) clarify the requirements on gasoline produced in Northern California, but used in Southern California; (3) make corrections to the "California Procedures for Evaluating Alternative Specifications for Phase 3 Reformulated Gasoline Using the Predictive Model" to be more consistent with the regulations; and (4) make other miscellaneous changes which would improve compliance enforceability.

The testimony at the hearing was supportive of the proposed amendments.

ORAL TESTIMONY:

James Uihlien, Western States Petroleum Association  
Harold Haskew, Harold Haskew & Associates, Inc.  
Tom Koehler, California Renewable Fuels Partnership  
Charlie Peters, Clean Air Performance Professionals

FORMAL BOARD ACTION:

The Board approved Resolution 04-39 by a unanimous vote.

RESPONSIBLE DIVISION: Stationary Source Division

STAFF REPORT: Yes

**04-10-9: Public Meeting to Consider Delegation of Authority to the Executive Officer to Consider an Emergency Regulatory Amendment Delaying the January 1, 2005, Implementation Date for the Lubricity Standard for Diesel for Diesel Fuel**

SUMMARY OF AGENDA ITEM:

Staff presented an update on industry's ability to comply with the January 1, 2005, lubricity standard for diesel fuel, followed by a recommendation that the Air Resources Board delegate authority to the Executive Officer to conduct a hearing to consider an emergency amendment to the regulation.

Staff reported that on January 1, 2005, California refiners must meet a new ARB diesel fuel lubricity standard as specified in California Code of Regulations (CCR), title 13, section 2284(a)(1). The standard will likely result in an increase in the use of lubricity additives in diesel fuel. Industry has evaluated the logistics of transporting diesel fuel containing lubricity additives in the common carrier pipeline. Late in October 2004, industry found that possible jet fuel contamination due to sharing the common carrier pipeline with diesel fuel containing lubricity additives has become a more significant concern than previously realized. If a pipeline shipment of diesel fuel additized with lubricity additive is immediately followed by a shipment of jet fuel, the jet fuel could become contaminated to the extent that the jet fuel fails its respective fuel specifications. This can present a potential safety concern when the fuel is used in aircraft engines.

With this increased level of concern in industry, on October 26, 2004, the operator of the common carrier pipeline in California announced an immediate prohibition of the use of diesel lubricity additives in the pipeline to prevent possible contamination of jet fuel. Since much of California diesel fuel currently is additized with lubricity improvers prior to leaving the refinery, the prohibition had the potential to cause serious disruptions in the supply of diesel fuel in the state.

California refiners have used lubricity additives in much of the state's diesel fuel for at least the last ten years. Diesel fuel containing lubricity additives has been distributed through the common carrier pipeline. During this time, only two instances of contamination have been reported that can be associated with this practice. In these two instances, jet fuel immediately followed low sulfur diesel fuel that was additized with lubricity improvers. This contamination was detected and the fuel was diverted.

Following discussions between the common carrier pipeline operator, California refiners, and state agencies that explored possible remedies, on November 5, 2004, the pipeline operator revised his position to allow shipments of diesel fuel with lubricity additives for a limited time, so long as historical practices regarding the use of lubricity additives are maintained. Additionally, the pipeline operator will sequence product shipments to minimize the possibility of jet fuel contamination.

Implementation of the ARB's diesel fuel lubricity standard scheduled for January 1, 2005, will require at least some refiners to increase the percentage of diesel fuel that is additized and the treatrate for the lubricity additive. The pipeline operator's policy does not permit shipments of diesel fuel containing increased additive levels. The pipeline operator and California refiners have accordingly requested that the ARB postpone the implementation date of the diesel fuel lubricity standard to allow the installation of additive injection equipment at loading terminals located at the terminus of the common carrier pipeline. This would enable industry to fully comply with the lubricity standard without the risk of jet fuel contamination in the common carrier pipeline.

A 120-day delay in the implementation of this standard will allow diesel fuel additized at historical levels to be shipped in multi-use pipelines until fuel additization blending equipment can be installed at the terminals.

In order to adopt the emergency amendment, the Executive Officer or her designee must make a finding that the amendment “is necessary for the immediate preservation of the public health and safety or general welfare.”

Staff proposed that the Air Resources Board grant authority to the Executive Officer to conduct a hearing to consider an emergency regulatory amendment delaying the January 1, 2005, implementation date of the diesel fuel lubricity standard for up to 120 days.

ORAL TESTIMONY: None

FORMAL BOARD ACTION: Delegation Authority to the Executive Officer was approved by unanimous vote.

RESPONSIBLE DIVISION: Stationary Source Division

STAFF REPORT: No

**04-10-5: Public Hearing to Consider Proposed Amendments to the Nonvehicular Source, Consumer Products, and Architectural Coatings Fee Regulations**

SUMMARY OF AGENDA ITEM:

Staff presented the proposed amendments to the Nonvehicular Source, Consumer Products, and Architectural Coatings Fee Regulations. The amendments provide for the collection of supplemental fees for fiscal year (FY) 2004-2005 and subsequent fiscal years.

For FY 2003-2004, the Legislature authorized the Air Resources Board (ARB) to collect \$17.4 million in fees from nonvehicular sources (facilities) and manufacturers of consumer products and architectural coatings. In July 2003, the Board approved regulations to collect these fees, which are authorized by sections 39612 and 39613 of the Health and Safety Code. The regulations assess uniform fees (on a dollar per ton basis) on large facilities and large manufacturers of consumer products and architectural coatings. For FY 2004-2005, the Legislature authorized the ARB to collect an additional \$2.6 million, for a total of \$20 million in fees.

The amendments provide for the assessment of fees in excess of \$17.4 million to be collected solely from facilities beginning in FY 2004-2005. The intent of the proposal is to avoid fee “nexus” problems regarding consumer products and architectural coatings manufacturers. Amounts up to \$17.4 million would continue to be collected on a uniform fee basis as specified in the existing regulations.

The cost per ton of emissions for the supplemental fees for FY 2004-2005 is expected to be about twenty-three dollars per ton, which is in addition to the approximately ninety dollars per ton that will be assessed under the existing regulations.

ORAL TESTIMONY:

Cory Nickchen, Guardian Industries Group

FORMAL BOARD ACTION: The Board voted 6 – 1 to approve Resolution 4-40 adopting the proposed amendments to the nonvehicular source, consumer products, and architectural coatings fee regulations.

RESPONSIBLE DIVISION: Planning and Technical Support Division

STAFF REPORT: Yes

**04-10-6: Public Hearing to Consider Proposed Amendments to the Effective and Operative Dates for Enhanced Vapor Recovery Standards in the Regulation for Certification of Vapor Recovery Systems of Gasoline Dispensing Facilities (Service Stations)**

SUMMARY OF AGENDA ITEM:

Staff presented proposed amendments to the Enhanced Vapor Recovery (EVR) implementation schedule contained in the certification procedure for vapor recovery systems used at service stations. The existing EVR schedule did not provide enough time for approximately 3500 service stations to upgrade their vapor recovery systems to be compatible with fueling vehicles with onboard refueling vapor recovery (ORVR) by April 1, 2005. Station operators have been waiting for certification of systems either meeting all the EVR standards (expected January 2005) or anticipated to be compatible with future requirements in order to

avoid costs associated with two equipment upgrades. Additional EVR standards must be met by 2009.

The amendments provide a phase-in schedule that allows up to eleven additional months to comply with the ORVR compatibility standard, depending on service station gasoline throughput. The amendments also modify the EVR deadlines to reflect the delay in certifying a full EVR Phase II system.

The ORVR compatibility phase-in schedule was a modification of the staff's original proposal and will be made available for an additional 15-day comment period.

ORAL TESTIMONY:

Jennifer Talbert, G&M Oil Company  
Larry Greene, California Air Pollution Control Officers Association  
Jim Cross, Cross Petroleum  
Steven Arita, Western States Petroleum Association

FORMAL BOARD ACTION:

The Board voted unanimously to approve the proposed Resolution 04-41, which amends the vapor recovery certification procedure with the proposed 15-day changes.

RESPONSIBLE DIVISION: Monitoring and Laboratory Division

STAFF REPORT: Yes

**04-10-7: Public Meeting to Provide the Board with an Overview of Particulate Matter (PM) in California**

SUMMARY OF AGENDA ITEM:

Staff presented a primer on particulate matter (PM) terminology, a summary of health effects, and an assessment of the current knowledge of the nature and severity of PM problems in air basins throughout California. In the first half of the presentation, staff noted that epidemiological studies have found strong associations between higher PM exposures and increased rates of death and disease. Exposure to PM appears to account for the majority of adverse health effects caused by ambient air pollution, and attaining the State annual-average PM standards would prevent thousands of deaths and hospitalizations for respiratory and

cardiovascular causes. Current research includes better measures of the PM sources that contribute to human exposure and an understanding of the relative toxicity of different PM sources.

In the second part of the presentation, staff described the regional and seasonal variations in PM concentrations and contributing sources, the progress made to date in attaining State and national standards, and on-going control programs that will provide further emission reductions. Members of the Board commented on the severity of PM exposure and its adverse health effects and how important it is to bring this information to the public.

ORAL TESTIMONY: None

FORMAL BOARD ACTION: None

RESPONSIBLE DIVISION: Planning and Technical Support  
Division / Research Division

STAFF REPORT: No

**04-10-8: Public Hearing to Consider Approval of a Proposed List of Measures to Reduce Particulate Matter – PM10 and PM2.5 (Implementation of Senate Bill 656, Sher 2003)**

SUMMARY OF AGENDA ITEM:

Staff presented a proposed list of the most readily available, feasible, and cost-effective control measures that could be employed by air districts to reduce PM10 and PM2.5 (collectively referred to as PM). This list was developed in response to Senate Bill 656 (SB 656, Sher, 2003) to reduce public exposure to PM. The proposed list of air district control measures was based on rules, regulations, and programs existing in California as of January 1, 2004, for stationary, area-wide, and mobile sources. As required by SB 656, the list was developed in consultation with the air districts, as well as interested stakeholders from the environmental, industry, and agricultural sectors. For information purposes, staff also presented a summary of measures already adopted by ARB, as well as a summary of measures that ARB is considering for development as part of our State Implementation Plan obligation and our Diesel Risk Reduction Program.

Based on further discussions with air districts, ARB staff also proposed three additional measures for consideration as part of the

air district list. These included measures to further address NOx from petroleum boilers and heaters, PM10 from storage and handling of coke, coal, and sulfur, and SOx from petroleum coke calcining operations.

Air districts must adopt implementation schedules for selected measures from the list by July 31, 2005. The implementation schedules will identify the appropriate subset of measures, and the dates for final adoption, implementation, and the sequencing of selected control measures. In developing the implementation schedules, each air district will prioritize measures based on the nature and severity of the PM problem in their area and cost-effectiveness. Consideration is also given to ongoing programs such as measures being adopted to meet national air quality standards or the State ozone planning process.

The Board heard testimony opposing the proposed list from a representative of Duraflame manufactured logs, and testimony supporting the proposed list from the American Lung Association and the California Council for Environmental and Economic Balance.

The Board approved the proposed list of air district measures with the three additional measures presented by staff at the meeting.

**ORAL TESTIMONY:**

Robert Cline, Cline & Duplissea (representing Duraflame)  
John Crouch, Hearth Products Association  
Bonnie Holmes-Gen, American Lung Association  
Cindy Tuck, California Council for Environmental and Economic Balance

**FORMAL BOARD ACTION:**

The Board approved Resolution Number 04-42 by a unanimous vote.

**RESPONSIBLE DIVISION:** Planning and Technical Support Division

**STAFF REPORT:** Yes