

State of California  
AIR RESOURCES BOARD

Summary of Board Meeting  
December 11, 2003

Air Resources Board  
Central Valley Auditorium, Cal EPA Building  
1001 I Street  
Sacramento, California

MEMBERS PRESENT: Hons. Alan C. Lloyd, Ph.D., Chairman  
Joseph C. Calhoun, P.E.  
Dorene D'Adamo  
Mark J. DeSaulnier  
C. Hugh Friedman  
William F. Friedman, M.D.  
Matthew R. McKinnon  
Barbara Patrick  
Barbara Riordan

AGENDA ITEM #

**03-9-2 Update on the Diesel Particulate Matter Control Measure for Stationary Compression-Ignition Engines**

SUMMARY OF AGENDA ITEM:

This agenda item was continued from the November 20, 2003 hearing wherein Air Resources Board staff presented a proposed airborne toxic control measure (ATCM) for stationary compression ignition engines. Per the direction of the Governor's Executive Order S-2-03, the Board took no formal action and the comment period for the measure was left open. However, the Board did receive public concerning aspects of the measure that centered on:

- Additional restrictions for emergency standby engines located near schools;
- Exemptions for remotely located engines; and
- Allowing emergency standby diesel-fueled engines to continue to participate in electricity demand response programs.

During the December hearing staff addressed the public comments heard in November. Regarding diesel engines near schools, the staff proposed concepts for Board consideration including greater operational limits for emergency standby engines located within 500 feet of a school, during school hours. For in-use engines located in remote locations the staff proposed a new provision in that would give local air districts the authority to delay the implementation of the ATCM requirements for such engines. Finally, the staff recommended no changes to the demand response program provisions presented to the Board in November. However, staff recommended clarifying that the demand response programs allowed under the proposed ATCM are only triggered if power blackouts are imminent or have already been triggered.

**ORAL TESTIMONY:**

Linus Farias, SBC  
Jay McKeeman, California Independent Oil Marketers Association  
Todd Campbell, Coalition for Clean Air  
Bonnie Holmes-Gen, American Lung Association

**FORMAL BOARD ACTION:**

Per the direction of Executive Order S-2-03, the Board took no formal action on Resolution 03-9-2 and left comment period open. Executive Order S-2-03 directed all state agencies to temporarily cease processing regulatory items, so that proposed measures and regulations adopted between 1999 and 2003 could be reviewed for their impacts on businesses.

**RESPONSIBLE DIVISION:** Stationary Source Division

**STAFF REPORT:** Yes

**03-10-1: Health Update: The Methodology used in Quantifying the Health Benefits and Economic Value of the New Proposed Diesel Particulate Matter Control Measures**

SUMMARY OF AGENDA ITEM:

The ARB staff discussed the methodology used to quantify the health benefits and economic value of diesel particulate matter (PM) control measures, and the peer review conducted to date. The methodology is based on one used by the U.S. EPA and is widely used by other agencies. In the health update, staff also presented estimates of the health benefits and economic value that would derive from attaining the new federal PM2.5 standard. Additionally, staff provided estimates of reductions in premature deaths associated with several proposed control measures for diesel PM.

ORAL TESTIMONY: None

FORMAL BOARD ACTION: None (Informational Item)

RESPONSIBLE DIVISION: Research Division

STAFF REPORT: No

**03-8-4 Public Meeting to consider Heavy-Duty Diesel Engine Software Upgrade Regulation (Chip Reflash)**

SUMMARY OF AGENDA ITEM:

Staff presented the proposed Heavy-Duty Diesel Engine Software Upgrade Regulation for consideration. Per the direction of Executive Order S-2-03, the Board took no formal action on Resolution 03-9-2 and left comment period open. Executive Order S-2-03 directed all state agencies to temporarily cease processing regulatory items, so that proposed measures and regulations adopted between 1999 and 2003 could be reviewed for their impacts on businesses.

The proposal would require owners and operators of most 1993–1998 model year heavy-duty diesel trucks, school buses and motor home engines to have new software installed in the electronic control module (ECM) of the engine, which would reduce oxides of nitrogen (NOx) emissions. Under federal Consent Decrees and state Settlement Agreements signed in 1998, the low NOx software is to be installed on applicable engines at time of rebuild and upon request. Because diesel engines are more durable than in the

past, engine rebuild is occurring much later in the life of the engine. Therefore, nearly 90,000 heavy-duty vehicles registered in California continue to emit excess NOx. The proposed regulation is constructed to require owners and operators of applicable engines to have the low NOx software installed in the engine's ECM and for dealers to install the software on request.

Engine manufacturers agreed to work with staff on a voluntary program to install the low NOx software in the eligible engines. The staff proposed to report back to the Board to either request adoption of the proposed heavy-duty diesel engine software upgrade or to propose that the Board accept the voluntary program to be negotiated between ARB and the engine manufacturers.

ORAL TESTIMONY:

Stephanie Williams, California Trucking Association  
Mike Tunnell, American Trucking Association  
Jed Mandel, Engine Manufacturers Association  
David Pieche, International Truck  
Sharon Rubalcava, Motion Picture Association of America  
Larry Robinson, California Air Pollution Control Officers Association  
Larry Sherwood, Sacramento Metropolitan Air Quality Management District  
Todd Campbell, Coalition for Clean Air  
Dean Saito, South Coast Air Quality Management District  
Dr. Judith Lamare, Cleaner Air Partnership  
Bonnie Holmes-Gen, American Lung Association of California  
Diane Bailey, National Resources Defense Council  
Jason Mark, Union of Concerned Scientists  
Kathryn Phillips, Center for Energy Efficiency and Renewable Technologies

FORMAL BOARD ACTION:

No Board action was taken. The formal record remains open.

RESPONSIBLE DIVISION: Mobile Source Control Division

STAFF REPORT: Yes

**03-10-2 Public Hearing to Consider Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRUs), TRU Generator Sets, and Facilities where TRUs Operate.**

**SUMMARY OF AGENDA ITEM:**

Staff presented a proposed airborne toxic control measure for in-use diesel-fueled transport refrigeration units (TRU), TRU generator sets, and facilities where TRUs operate. The proposed ATCM is designed to reduce public exposure to diesel PM, other toxic contaminants and air pollutants.

The proposed ATCM would require in-use TRU engines that operate in California, including out-of-state TRUs while they are operating in California, to meet specific performance standards that vary by horsepower range. The performance standards have two levels of stringency that would be phased-in over time. The first phase, beginning in 2008, is referred to as the low emission TRU standards. The second phase, beginning in 2010, is referred to as the ultra-low emission standards.

The proposed ATCM also contains two reporting provisions. Owners of TRUs operating in California would be required to submit an initial report to ARB that provides information about the TRUs they operate in California. Updates would need to be provided as TRUs are leased, purchased, sold, or brought into compliance. The second reporting provision applies to large facilities where TRUs operate. Facilities with 20 or more doors serving a refrigerated storage area would be required to submit a one-time report to ARB. Facility reporting information is needed to evaluate the overall effectiveness of the regulation in reducing diesel PM concentrations near facilities where numerous TRUs operate.

Staff proposed a registration program that uses an ARB identification (ID) numbering system. The ID numbers include codes that indicate key compliance information such as model year of engine. California-based are required to have ID numbers. For out-of-state operators, obtaining an ARB ID number would be voluntary. Obtaining an ARB ID number would significantly reduce the time needed for inspections.

ARB staff estimates that, with implementation of the ATCM, diesel PM emissions from TRU and TRU generator set engines will be reduced by approximately 3,000 tons when the emissions benefits are added up for the entire implementation period (2008 through 2020). The cost-effectiveness of the proposed ATCM ranges between \$10 to \$20 per pound of diesel PM reduced, considering only the benefits of reducing diesel PM.

ORAL TESTIMONY:

Jed Mandel, Engine Manufacturers Association  
Dean Saito, South Coast Air Quality Management District  
BJ Kirwan, Latham and Watkins  
Herman Viegas, Thermo King Corporation  
Stacey Heaton, California Trucking Association  
Mike Tunnell, American Trucking Association  
Dr. Joseph Kubsh, Manufacturers of Emission Controls Association  
Paul Smith, California Grocers' Association  
Bill Warf, California Electric Transportation Coalition  
David Modisette, California Electric Transportation Coalition  
Todd Campbell, Coalition for Clean Air  
Jay McKeeman, California Independent Oil Marketers Association  
Diane Bailey, National Resources Defense Council  
Bonnie Holmes-Gen, American Lung Association  
Don Anair, Union of Concerned Scientists

FORMAL BOARD ACTION:

As a result of the Governor's Executive Order S-2-03, the Board did not take any formal action on this measure. The record was left open, pending a Board date to be scheduled in the future.

RESPONSIBLE DIVISION: Stationary Source Division

STAFF REPORT: Yes

03-10-3

**Public Hearing to Consider Amendments to the Diesel Emission Control Strategy Verification Procedure**

SUMMARY OF AGENDA ITEM:

In May 2002, the Board adopted a procedure to verify the level of emission reductions achieved by diesel emission control strategies, including warranty and in-use compliance requirements. Through ongoing dialogue with stakeholders, staff determined that changes should be made to improve the verification procedure and better enable ARB to meet the goals of its diesel risk reduction plan.

***The following amendments to the Procedure were proposed by staff for the Board's consideration:***

Warranty requirements: Staff proposed that the warranty coverage for damage to the vehicle or equipment caused by a diesel emission control strategy be removed from the required warranty,

but that such coverage be retained for the engine. This change would encourage more participation in the California market by manufacturers that currently view the warranty as imposing excessive liability, and retains a level of consumer protection beyond that in other related warranties. The potential for a verified emission control strategy to cause non-engine related damage is minimal.

NO<sub>2</sub> Limit: Staff proposed that the effective date for the nitrogen dioxide (NO<sub>2</sub>) emission limit be changed from January 1, 2004 to January 1, 2007. The three-year delay would give manufacturers more time for product development aimed at reducing NO<sub>2</sub> emissions, and give staff time to gather additional data and develop a better understanding of the questions surrounding the complex NO<sub>2</sub> issue. The delay would end before widespread implementation of strategies is expected to occur, and therefore would prevent potentially negative health effects.

Testing Protocol: Staff proposed that an applicant demonstrate that its product relies on sound principles of science and engineering to achieve emission reductions. This amendment would provide the Procedure with a formal process for handling those control systems that appear to rely on principles not generally understood or accepted by the scientific world.

Harmonization of Durability Requirements: Staff proposed that the applicant be allowed to request that the Executive Officer consider the testing of two identical units, one that has been pre-conditioned and another that has completed the service accumulation period. This change would further harmonize the procedure with the U.S. Environmental Protection Agency's verification program and offer more flexibility to applicants.

The proposed amendments do not alter the purely voluntary nature of the Procedure. Only companies that find it financially advantageous to participate in the verification process will do so.

Because the record remains open on this item, the Board directed staff to continue working with stakeholders to resolve outstanding warranty-related issues. The Board also directed staff to continue with its efforts to understand the health impacts of near-field NO<sub>2</sub> emissions and develop an appropriate manner for regulating NO<sub>2</sub>.

#### ORAL TESTIMONY:

Stephanie Williams, California Trucking Association  
Jay McKeeman, California Independent Oil Marketers Association  
Dr. Joseph Kubsh, Manufacturers of Emission Controls Association

Albert McWilliams, Engelhard Corporation  
Julian Imes, Donaldson Company, Inc.  
Marty Lassen, Johnson Matthey  
Brad Edgar, Cleaire  
Dean Saito, South Coast Air Quality Management District  
Diane Bailey, Natural Resources Defense Council  
Kathryn Phillips, Center for Energy Efficiency and Renewable  
Technologies  
Gretchen Knudsen, International Truck and Engine Corporation  
Tim McRae, Planning and Conservation League

**FORMAL BOARD ACTION:**

The Board took no formal, final action. However, it directed staff to temporarily suspend the implementation of the NO<sub>2</sub> emissions limit until the Board considers and acts upon the proposed amendments at a future public hearing.

**RESPONSIBLE DIVISION:** Mobile Source Control Division

**STAFF REPORT:** Yes

**03-10-4 Public Meeting to Consider a Status Report on the Implementation of the California Phase 3 Reformulated Gasoline (CaRFG3) Regulation**

**SUMMARY OF AGENDA ITEM:**

In December 1999 the Board adopted regulations prohibiting the addition of methyl tertiary butyl ether (MTBE) to California gasoline beginning December 31, 2002. However, due to supply concerns, the Board amended the CaRFG3 regulation in July 2002 to extend the timetable for removing MTBE to December 31, 2003.

Several oil companies proceeded with an early transition, resulting in about 70 percent of California's gasoline this past year being MTBE-free. The remaining four refineries – one in Southern California and three in Northern California – have completed all the remaining necessary modifications and have begun the transition to CaRFG3. Likewise, with the exception of one terminal in Eureka, all terminals have completed the necessary modifications. The Eureka terminal will receive complying non-oxygenated CaRFG3 until the modifications are completed in the spring of 2004.

Kinder Morgan, the state's largest common carrier, has been receiving, storing, and blending ethanol into CaRFG3 since December 1, 2003.



As ethanol is the only option to replace MTBE, California is predicted to consume about 900 million gallons of ethanol in 2004. In the near-term ethanol supply to the state should be sufficient though ethanol demand from other states, especially the Northeastern states that will ban MTBE use by January 1, 2004, has put an upward pressure on ethanol price. To provide flexibility to refiners on the use of ethanol, Governor Schwarzenegger has requested an exemption for California from the federal minimum oxygen requirement.

ORAL TESTIMONY: None

FORMAL BOARD ACTION: None (Informational Item)

RESPONSIBLE DIVISION: Stationary Source Division

STAFF REPORT: No

**03-10-5      Public Meeting to Consider Research Proposals**

SUMMARY OF AGENDA ITEM:

Staff recommended approval of the following contracts:

1. Proposal No. 2538-232, entitled "Identification and Atmospheric Reactions of Polar Products of Selected Aromatic Hydrocarbons," submitted by the University of California, Riverside, for a total amount not to exceed \$49,999.
2. Proposal No. 2542-232, entitled, "Updated Chemical Mechanisms for Airshed Model Applications," submitted by the University of California, Riverside, for a total amount not to exceed \$166,132.
3. Proposal No. 2543-232, entitled, "The Use of Multi-Isotope Ratio Measurements and a New and Unique Technique To Resolve NO Transformation, Transport and Nitrate Deposition in the Lake Tahoe Basin," submitted by the University of California, San Diego, for a total amount not to exceed \$75,000.
4. Proposal No. 2540-232, entitled, "Traffic Pollution and Children's Health: Refining Estimates of Exposure for the East Bay Children's Respiratory Health Study," submitted by the Office of Environmental Health Hazard Assessment, for a total amount not to exceed \$243,854.

5. Proposal No. 2539-232, entitled, "Polycyclic Aromatic Hydrocarbons (PAHS); Sources of Ambient Quinones," submitted by the University of California, Riverside, for a total amount not to exceed \$120,000.
6. Proposal No. 2538-232, entitled "Gas-Phase Formation Rates of Nitric Acid and its Isomers under Urban Conditions," submitted the California Institute of Technology/NASA/Jet Propulsion Laboratory, for a total amount not to exceed \$180,000.

ORAL TESTIMONY: None

FORMAL BOARD ACTION:

The Board approved resolutions 03-31 through 03-36 by a unanimous vote.

RESPONSIBLE DIVISION: Research Division

STAFF REPORT: No

**03-10-6 Public Meeting to Provide the Board with a Status Report on the San Joaquin Valley Particulate Matter Plan Role of Ammonia**

**SUMMARY OF AGENDA ITEM:**

Staff presented a status report on the role of ammonia in the formation of particulate matter in the San Joaquin Valley. The staff presentation provided an overview of the California Regional Particulate Matter Study and how the results of this Study will be used to refine control strategies for reducing particulate matter concentrations in the San Joaquin Valley and throughout Central California. The first phase of the Study has already been completed and the initial results incorporated into the recently adopted PM10 State Implementation Plan for the San Joaquin Valley. Additional information from the second phase of the Study will be completed in mid-2005 to refine particulate matter control strategies for the PM10 State Implementation Plan update due in March 2006. These ongoing Study efforts include analysis of ambient data, emissions inventory improvements, and air quality modeling. Research from other national efforts is also being evaluated and used where appropriate.

**ORAL TESTIMONY:** None

**FORMAL BOARD ACTION:** None (Informational Item)

**RESPONSIBLE DIVISION:** Planning Technical Support Division

**STAFF REPORT:** No