

State of California  
AIR RESOURCES BOARD

Summary of Board Meeting  
December 8, 2005

Air Resources Board  
Byron Sher Auditorium, Second Floor  
1001 I Street  
Sacramento, California

MEMBERS PRESENT: Hons. Barbara Riordan, Interim Chairman  
Sandra Berg  
Dorene D'Adamo  
Mark J. DeSaulnier  
Henry Gong, Jr., MD  
Barbara Patrick  
Ron Roberts

AGENDA ITEM #

**05-12-1: Report to the Board on a Health Update – Results of a Study on the Long-Term Effects of Ambient Particulate Matter on the Risk of Fatal Coronary Heart Disease**

SUMMARY OF AGENDA ITEM:

ARB staff provides the Board with regular updates on research findings on the health effects of air pollution. This month, staff presented the results of a recent study by investigators at Loma Linda University that identifies a relationship between risk of fatal coronary heart disease and particle pollution. Participants were members of the Adventist Health Study on the effects of Smog or AHSMOG. These participants were free of cardiovascular disease at the beginning of the study and most were non-smoking individuals who also abstained from alcohol. A long-term history of exposure to particle pollution was determined for each participant based on residential history.

Substantial epidemiologic and experimental evidence supports the association of ambient particle pollution with death and diseases of the heart (cardiovascular disease). This study was the first to show a gender-specific effect between fatal coronary heart disease and particle pollution. The effects were seen for all measures of particle pollution, including coarse PM. In two-pollutant models with ozone,

the effects were more pronounced. No effects were identified in men. Further studies will be needed to verify these gender-specific effects.

Dr. Henry Gong stated that although this study only examined the risk of fatal coronary heart disease and thus looks only at the risk of death from air pollution exposure, it is well documented that the effects of particle pollution can be manifested much earlier and can result in considerable disease burden, among both men and women

ORAL TESTIMONY: None

FORMAL BOARD ACTION: None (Informational Item)

RESPONSIBLE DIVISION: Research Division

STAFF REPORT: No

**05-12-2: Public Hearing to Consider 8 Research Proposals**

SUMMARY OF AGENDA ITEM: The Board considered the following eight research proposals.

1. "Economic Value of Reducing Cardiovascular Disease Associated with Air Pollution", \$349,632, California State University, San Diego, Proposal No. 2599-250.
2. "Fine-Scale Spatial and Temporal Variability of Particle Number Concentrations within Communities and in the Vicinity of Freeway Sound Walls", University of Southern California, \$461,334, Proposal No. 2600-250.
3. "Physicochemical and Toxicological Assessment of the Semi-Volatile and Non-Volatile Fractions of PM from Heavy- and Light-Duty Vehicles Operating with and without Emissions Control Technologies", University of Southern California, \$677,950, Proposal No. 2592-250.
4. "Ultrafine Particle Concentrations in Schoolrooms and Homes", University of California, Berkeley, \$300,000, Proposal No. 2597-250.
5. "Augmentation to Ventilation and Indoor Air Quality in New Homes", Indoor Environmental Engineering, \$96,861, Proposal No. 2607-250.

6. "Light-duty Gasoline PM: Characterization of High Emitters and Valuation of Repairs for Emission Reduction", University of California, Riverside, \$249,827, Proposal No. 2603-250.
7. "CO<sub>2</sub> Emission Quantification from Vehicle Air Conditioning Operation in California-Specific Conditions", California State University, Northridge, \$400,000, Proposal No. 2604-250.
8. "Improving the Carbon Dioxide Emission Estimates from the Combustion of Fossil Fuels in California", University of California, Berkeley, \$75,000, Proposal No. 2594-250.

ORAL TESTIMONY: None

FORMAL BOARD ACTION: The Board Approved Resolution Numbers 05-69 through 05-76.

RESPONSIBLE DIVISION: Research Division

STAFF REPORT: Yes

**05-12-3: Public Meeting to Consider the Approval Grants under the Innovative Clean Air Technologies (ICAT) Program**

SUMMARY OF AGENDA ITEM: The Board considered the following four Innovative Clean Air Technology (ICAT) proposals:

- "Orbital Scythe Prototype Development and Testing," submitted by O-Sage Power Equipment, \$47,000, Proposal No. 05b-23.
- "Freedom Air Commercial Field Demonstration Project with Long Beach Transit," submitted by Rotec Design, Ltd., \$225,000, Proposal No. 05b-25.
- "Cost-Effective NO<sub>x</sub> Control for Stationary Engines," submitted by Catalytica Energy Systems, Inc., \$300,000, Proposal No. 05b-36.
- "Integrated CHP Using Low-NO<sub>x</sub> Supplemental Firing," submitted by the Gas Technology Institute (GTI), \$249,274, Proposal No. 05b-07.

ORAL TESTIMONY: None

FORMAL BOARD ACTION: Approved Resolution Nos. 05-65 through 05-68 by unanimous vote.

RESPONSIBLE DIVISION: Research Division

STAFF REPORT: Yes

**05-12-8: Report to the Board on the Goods Movement Action Plan**

SUMMARY OF AGENDA ITEM:

ARB Executive Officer Catherine Witherspoon updated the Board on the joint Goods Movement Action Plan of the Business Transportation & Housing Agency and the California Environmental Protection Agency. Ms. Witherspoon characterized the common themes emerging from the joint agency work with stakeholders, including the need to deal with congestion, anticipate future growth, and protect public health. She also described where the debate is headed on funding California's infrastructure and mitigation needs for goods movement, via infrastructure bonds, federal support, and lease agreements at the ports.

Ms. Witherspoon then focused on the draft ARB Emission Reduction Plan for Ports and International Goods Movement released on December 1, 2005. The plan quantifies the statewide health impacts from these sources, which contributed to 750 premature deaths in 2005. She summarized the ability of the new strategies proposed in the plan to reduce emissions and health impacts by about 60 percent by 2020, with an estimated \$4-8 in cost savings for each \$1 spent on controls. Finally, she laid out the schedule for public comment in early 2006 and consideration by the Board in April 2006.

The Board heard testimony from one witness representing local government who focused on ARB's draft Emission Reduction Plan. He raised concerns about the health impacts that would remain after implementation of the plan's strategies. He suggested that ARB consider increasing the cost of the plan to achieve a 75 percent reduction in the health risk attributable to diesel particulate matter emissions from goods movement.

ORAL TESTIMONY:

Todd Campbell, City of Burbank

FORMAL BOARD ACTION: None, Informational Item.

RESPONSIBLE DIVISION: Executive Office and Planning and the Technical Support Division

STAFF REPORT: No.

**05-12-4: Public Hearing to Consider the Adoption of a Proposed Regulation for Mobile Cargo Handling Equipment at Ports and Intermodal Rail Yards**

SUMMARY OF AGENDA ITEM:

In September 2000, ARB adopted a comprehensive Diesel Risk Reduction Plan (Plan), establishing a goal of reducing diesel particulate matter (PM) emissions and the associated health risk by 85 percent in 2020. The proposed regulation for mobile cargo handling equipment engines is a step toward achieving the goals of the Plan. In addition to diesel PM reductions, the proposed regulation would reduce ozone precursor emissions and would improve the air quality in neighborhoods near ports and intermodal rail yards.

The proposed regulation establishes best available control technology (BACT) for cargo handling equipment. The proposed regulation requires yard trucks that operate at a port or intermodal rail yard in California to meet in-use performance standards through accelerated turnover of older yard trucks to ones equipped with cleaner, on-road engines. Non yard truck equipment would also be required to meet BACT, which, for them, could include retrofits and/or replacement to cleaner on-road or off-road engines.

Owners or operators would be required to maintain records of their equipment, compliance method, and compliance dates, as well as report their compliance plans and a demonstration of compliance to ARB.

Several parties suggested changes to the proposed regulation. The Board approved the staff's proposal with modifications that will be made available for a supplemental 15-day comment period prior to final action by the Executive Officer. The modifications include revising the Alternative Compliance Plan (ACP) provision of the regulation to allow for public comment on any applications for the ACP, and addressing concerns regarding Department of Defense

facilities that are subject to the requirements of the regulation. Prior to approval, the Board heard testimony from 14 parties encouraging the Board's adoption of this regulation. The parties included one local air quality management district, eight environmental organizations, the California Air Pollution Control Officer's Association, the Senate Environmental Quality Commission, and other industry representatives and interested parties. The South Coast Air Quality Management District, the Port of Long Beach, and the Department of Defense provided neutral oral testimony. No party provided oral testimony in opposition to the proposed regulation.

**ORAL TESTIMONY:**

Alan Gordon, Senator Simitian, Senate Environmental Quality Commission  
Barry Wallerstein, South Coast Air Quality Management District  
T.L. Garrett, Pacific Merchant Shipping Association  
Thomas Jelenic, Port of Long Beach  
Evangelina Ramirez, Long Beach Alliance Children with Asthma  
Elina Green, Long Beach Alliance Children with Asthma  
Todd Campbell, Clean Energy  
Candice Kim, Coalition for Clean Air  
Diane Bailey, National Resource Defense Council  
Joe Kurbsh, Manufacturers of Emission Controls Association  
Michael Eaves, California Natural Gas Vehicle Coalition  
Don Anair, Union of Concerned Scientists  
Major Jeremy Jungreis, Department of Defense, Region IX  
Bonnie Holmes-Gen, American Lung Association  
Tom Addison, Bay Area Air Quality Management District  
Joe Lyou, California Environmental Rights Alliance  
Barbara Lee, California Air Pollution Control Officers Association

**FORMAL BOARD ACTION:** The Board approved Resolution 05-62, with proposed modifications, by a unanimous vote.

**RESPONSIBLE DIVISION:** Stationary Source Division

**STAFF REPORT:** Yes

**05-12-5: Public Hearing to Consider the Adoption of Proposed Regulations to Reduce Emissions from Auxiliary Diesel Engines and Diesel-Electric Engines Operated on Ocean-Going Vessels within California Waters and 24 Nautical Miles of the California Baseline**

## SUMMARY OF AGENDA ITEM:

Staff presented a regulation to reduce the emissions from auxiliary engines used on ocean-going vessels within 24 nautical miles (nm) of the California coastline. The proposed regulation would result in significant and immediate reductions of diesel particulate matter (PM), nitrogen oxides (NOx), and sulfur oxides (SOx). The reductions in diesel PM would significantly reduce the risk of cancer, premature death, asthma attacks, and other health impacts to citizens living near California's ports. The reductions in NOx and SOx would help to improve regional air quality in California's coastal air basins, supporting progress toward the goals of the State Implementation Plan (SIP) for ozone and PM.

The measure was developed through workshops and individual meetings with representatives of the shipping industry, passenger cruise lines, ports, environmental organizations, community groups, the U.S. Coast Guard, air pollution control agencies, and other interested parties.

The measure would require operators of auxiliary engines on ocean-going vessels to meet an emission limit based on the use of cleaner-burning distillate fuels. Ship operators could meet this emission limit, scheduled to become effective on January 1, 2007, by using marine gas oil, marine diesel oil at or below 0.5 percent sulfur, or through alternative emission control strategies that achieve equivalent emission reductions. On January 1, 2010, the emission limit would be based on the use of even cleaner 0.1 percent sulfur marine gas oil. Under certain limited circumstances, vessel operators can pay a fee in lieu of compliance. The funds collected from these noncompliance fees would be used for projects to reduce emissions at California ports.

As a result of comments received, the staff presented several modifications to the original proposal released on October 11, 2005. The modifications are as follows:

- Safety Exemption

A safety exemption that would provide the master of the vessel with a temporary exemption from the emission limits for extraordinary reasons beyond his/her reasonable control, such as extreme weather conditions, if he/she believes that compliance with the emission limits presents an immediate danger to the vessel, crew, or passengers.

- Clarification of the Over-water Zones within the 24 Nautical Mile (nm) Boundary

There are three traditional jurisdictional zones within the 24 nm boundary under which ship emissions will be regulated in this proposal: the 3 nm zone, the 12 nm, Territorial Sea, and the 24 nm Contiguous Zone. The modification clarifies that the proposed regulation applies to ship emissions within each of these zones.

- Clarification of a Violation

The definition of a violation would be clarified such that each hour of noncompliant operation at dockside or otherwise anchored at a port, roadstead, or terminal facility, and each mile traveled within the Regulated California Waters while in noncompliance, represents a separate violation.

- Innocent Passage

The definition of “innocent passage” would be modified either to align it with the definition used in international law, or to eliminate the term and incorporate the concept of innocent passage into the original proposal’s exemption provisions.

- Modification of Military Exemption

The exemption for military vessels would be expanded to include government vessels used for noncommercial purposes.

- Alternative Compliance Plan (ACP) Equity

The ACP provision in the original proposal would be modified to ensure that utilization of this compliance option does not disproportionately impact portside communities.

- Pollutants Covered Under Port Projects Funded by Noncompliance Fees

A modification would ensure that the port projects funded by noncompliance fees reduce the same pollutants generated from auxiliary engines on ocean-going vessels.

#### ORAL TESTIMONY:

Alan Gordon, Representing Senator Simitian  
T.L. Garrett, Pacific Merchant Shipping Association  
Frank Holmes, Western States Petroleum Association  
Bob Wyman, Maritime Goods Movement Coalition  
Dave Smith, British Petroleum  
Elina Green, Long Beach Alliance for Children with Asthma  
Evangelina Ramirez, Long Beach Alliance for Children with Asthma  
Bradley Rose, International Shipping Coalition  
Joe Angelo, Intertanko  
Bryan Vogel, United States Maritime Administration  
Bob Hoffman, Dock Watts, LLC  
Barbara Lee, California Air Pollution Control Officers Association  
Tom Addison, Bay Area Air Quality Management District  
Paul Wuebben, South Coast Air Quality Management District  
Candice Kim, Coalition for Clean Air  
Martin Schlageter, Coalition for Clean Air  
Diane Bailey, Natural Resources Defense Council  
Bonnie Holmes-Gen, American Lung Association  
Teri Shore, Bluewater Network  
Randal Friedman, United States Navy  
Todd Campbell, Clean Energy  
Don Anair, Union of Concerned Scientists  
Dr. Ralph Appy, Port of Los Angeles  
Bill McGavern, Sierra Club

#### FORMAL BOARD ACTION:

The Board unanimously approved Resolution 05-63 adopting the proposed regulation to Reduce Emissions from Auxiliary Diesel Engines and Diesel-Electric Engines Operated on Ocean-Going Vessels within California Waters and 24 Nautical Miles of the California Baseline, with the modifications presented by staff. The modifications will be made available for a 15-day supplemental comment period before final action by the Executive Officer.

The Board Resolution also directs staff to: (1) meet with representatives of the Department of Fish and Game/Office of Spill Prevention and Response, and the San Francisco Harbor Safety Committee to address the safety concerns they have raised; (2) investigate the request by Bryan Vogel with the U.S. Maritime Administration (MARAD) to expand the military exemption to cover MARAD vessels; (3) incorporate modifications in the Alternative Compliance Plan (ACP) provision to ensure that applications for the ACP will be addressed in a process that is open to the public; and

(4) report back to the Board in mid-2007 with updates on the following items:

- Efforts to address safety concerns such as fuel switching
- Implementation of the Alternative Compliance Plan
- Implementation of the Noncompliance Fee Provision
- Progress in enforcing the regulation and potential coordination with the U.S. Coast Guard
- Use of cold-ironing by vessels
- The sulfur content of fuels used to comply with the regulation

RESPONSIBLE DIVISION: Stationary Source Division

STAFF REPORT: Yes

**05-12-6: Public Hearing to Consider the Adoption of a Diesel Particulate Matter Control Measure for On-Road Heavy-Duty Diesel-Fueled Vehicles Owned or Operated by Public Agencies and Utilities**

**SUMMARY OF AGENDA ITEM:**

In September 2000, ARB adopted the Diesel Risk Reduction Plan (Plan). The Plan identified a number of air toxic control measures to reduce public exposure to diesel PM emissions, including the use of emission control devices or strategies on in-use engines. The goals of the Plan are to reduce diesel PM emissions by 75 percent in California by 2010 and 85 percent by 2020 from the 2000 baseline. This regulation is needed to ensure diesel PM emission reductions and the resultant decrease in the health risk attributable to diesel PM emissions are realized from in-use heavy-duty diesel vehicles operated by public agencies and utilities.

The regulation requires municipal and utility vehicle owners reduce diesel PM emissions from their affected vehicles. This will be achieved through the application of Best Available Control Technology or BACT on these vehicles by specified implementation dates. Implementation is phased-in by engine model year groups beginning in 2006 and ending in 2011. Vehicle owners must maintain records for these vehicles to demonstrate compliance with the rule. The rule offers various options for municipal and utility owners to meet the compliance requirements as well as extensions and exemptions for special circumstances. A separate compliance schedule and other special provisions are proposed for municipalities and utilities located in specified low population counties.

The Board approved the control measure for on-road medium- and heavy-duty diesel vehicles operated by public agencies and utilities. The Board heard testimony from 29 witnesses, 18 of whom indicated support for the regulations, seven who took a neutral position, and four who opposed the rule. In the staff's presentation to the Board several suggestions were made to address issues which were raised during the 45-day comment period. To address these issues, staff recommended delaying by one year the implementation of Group 2 (1988-2002 model year) engines from 2006 to 2007, providing additional early compliance options, allowing fleets to apply for "low population county" status and making some minor recordkeeping and applicability revisions. These modifications will be made available for public review and comment for a 15-day period in a Notice of Public Availability of Modified Text prior final action by the Executive Officer.

ORAL TESTIMONY:

David Wilson, City of Los Angeles  
Rick Sikes, City of Santa Monica  
Rick Teebay, Pasadena, California  
Mary Pitto, Regional Council of Rural Counties  
Ernest Perry, County of Del Norte  
Peter Rei, County of Tuolumne  
Douglas Fini, County of Humboldt  
Bob Johnson, Glenn County  
Dennis Gage, Placer County  
Lawrence Odle, North Coast Unified Air Quality Management District  
Barbara Lee, Northern Sonoma County Air Pollution Control District and County of Sonoma  
Tom Addison, Bay Area Air Quality Management District  
Randal Friedman, U.S. Navy  
Major Jeremy Jungreis, Department of Defense, Region IX  
Gary Bigelow, U.S. Postal Service  
Frank Caponio, Los Angeles Sanitation District  
Howard Gollay, Southern California Edison  
Deanna Haines, Southern California Gas Company and San Diego Gas and Electric  
Sven Thesen, Pacific Gas and Electric Company  
Bob Lucas, CCEEB  
Todd Campbell, Clean Energy  
Joseph Kubsh, Manufacturers of Emission Controls Association  
Tim Taylor, Cleaire Advanced Emission Controls  
Martin Schlanger, Coalition for Clean Air  
Diane Bailey, Natural Resources Defense Council

Bonnie Holmes-Gen, American Lung Association of California  
Don Anair, Union of Concern Scientist  
Bill Magavern, Sierra Club of California

FORMAL BOARD ACTION: The Board unanimously approved Resolution 05-64.

RESPONSIBLE DIVISION: Mobile Source Control Division

STAFF REPORT: Yes

**05-12-7: Report to the Board on the Final Modifications to the 2005 Revisions to the Carl Moyer Program Guidelines**

SUMMARY OF AGENDA ITEM:

Staff provided a brief report on the final modifications to the 2005 program guidelines and on the formation of a Carl Moyer program advisory group.

Guideline modifications included revisions to the language related to the conditions by which districts would pay back funds, and staff provided an additional opportunity for districts to demonstrate the timely expenditure of funds. These changes, as well as any necessary technical modifications, will be incorporated in the final document which will be published in January 2006.

Staff is currently working on convening a Moyer program advisory group to address three issues: the definition of surplus emission reductions, fuel neutrality, and district administrative fees. Staff intends to report back to the Board on the results of the advisory group's work in the first half of next year.

ORAL TESTIMONY:

Barbara Lee, CAPCOA  
Dennis Gage, Placer County  
Barry Wallerstein, SCAQMD  
Tom Addison, BAAQMD  
Larry Greene, Sacramento AQMD  
Todd Campbell, Clean Energy  
Martin Schlageter, Coalition for Clean Air  
Richard Teebay, Pasadena  
Bob Johnson, Glenn County/Northern Counties Road Supts.

FORMAL BOARD ACTION: No Board action was taken.

RESPONSIBLE DIVISION: Mobile Source Control Division

STAFF REPORT: No