

State of California
AIR RESOURCES BOARD

Summary of Board Meeting
February 26, 2009

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

MEMBERS PRESENT: Mary Nichols, Chairman
Dr. John Balmes
Ms. Dorene D'Adamo
Mayor Ronald Loveridge
Supervisor Ron Roberts
Professor Daniel Sperling
Dr. John Telles
Supervisor Ken Yeager

Agenda Item #

09-2-1: Health Update: Exposure to Traffic-Related Air Pollution and Indicators of Adverse Health Effects in Adults with Heart Disease

SUMMARY OF AGENDA ITEM:

Staff presented the findings of a recently published study on the potential health impacts of traffic-related air pollutants in elderly adults with heart disease.

Biological indicators (biomarkers) of systemic inflammation, platelet activation and antioxidant activity are associated with cardiovascular disease, and can be measured in the blood. Particulate matter (PM) exposure has also been associated with changes in these biomarkers. This health update summarized a study which investigated the relationship between changes in these indicators and various PM characteristics in blood obtained from a panel of elderly subjects with coronary artery disease. The results showed that changes in levels of biochemical biomarkers were most associated with the smallest sized outdoor particles from primary combustion sources. This study underscores the need for ARB to continue efforts to reduce motor vehicle emissions. This study was funded in part by ARB.

ORAL TESTIMONY: None.

FORMAL BOARD ACTION: None (Informational Item)

RESPONSIBLE DIVISION: Research Division

STAFF REPORT: No.

09-2-2:

Public Hearing to Consider Research Proposals

SUMMARY OF AGENDA ITEM:

Staff described the objective and expected results for the following research proposals:

1. "Environmental Exposures in Early Childhood Education Environments," University of California, Berkeley, \$417,496, Proposal No. 2665-263.
2. Measurement of Diesel Solid Nanoparticle Emissions Using a Catalytic Stripper for Comparison to Europe's PMP Protocol," University of California, Riverside, \$170,000, Proposal No. 2664-263.
3. "Integrated Physical, Chemical and Optical Measurements of Heavy-Duty Diesel Emissions at NASA AMES Full Scale Wind Tunnel," University of California, Davis, \$419,917, Proposal No. 2673-263.
4. "Black Carbon and the Regional Climate of California," University of California, San Diego, \$796,403, Proposal No. 2678-263.
5. "Assessment of Baseline Nitrous Oxide Emissions in California Cropping Systems," University of California, Davis, \$300,000, Proposal No. 2669-263.
6. "Nocturnal Chemistry in the Urban Boundary Layer of Los Angeles," University of California, Los Angeles, \$289,090, Proposal No. 2674-263.
7. "Characterization of Atmospheric Chemistry in the Southern San Joaquin Valley and Initial Comparison with Chemistry in the South Coast Air Basin," University of California, Berkeley, \$1,050,000, Proposal No. 2677-263.

8. "Study of In-Use Engine Deterioration in Diesel Off-Road Equipment," University of California, Riverside, \$300,000, Proposal No. 2676-263.
9. "Development of an Updated Base Case Ambient VOC Mixture for Assessing Atmospheric Reactivity," University of Texas, \$40,010, Proposal No. 2670-263.
10. "Characterization of Ambient Aerosol Sources and Processes During CalNex 2010 with Aerosol Mass Spectrometry," University of Colorado, Boulder, \$285,000, Proposal No. 2672-263.
11. "Low VOC, Stain Blocking Specialty Primer Coating," California Polytechnic University, \$249,637, Proposal No. 2675-263.

ORAL TESTIMONY: None.

FORMAL BOARD ACTION:

Board approved resolution numbers 09-08 to 09-18.

RESPONSIBLE DIVISION: Research Division

STAFF REPORT: No.

09-2-5: Public Meeting to Present to the Board the Climate Change Scoping Plan Implementation Update and Consideration of Appointment of Replacement Members to the Economic and Technology Advancement Advisory

SUMMARY OF AGENDA ITEM:

Staff provided the Board with an update of how the recommendations in the adopted Scoping Plan will be implemented, including interagency coordination and the analyses that will be performed during regulatory development. Staffs' presentation highlighted work on the Low Carbon Fuel Standard, establishment of the California Environmental Quality Act thresholds of significance for greenhouse gases, the cap-and-trade rulemaking, and economic and other analyses underway in 2009.

In response to a provision in the resolution adopting the Scoping Plan, staff identified the status of the 44 Early Action measures that the Board approved in October 2007. All 9 Discrete Early Actions were recommended in the Scoping Plan and most of the Early Actions were also recommended, with the exception of those that

were found to not provide substantial greenhouse gas (GHG) reductions but are being pursued for other air quality reasons. The Board adopted 13 Early Actions to date and staff plans to bring 11 Early Actions to the Board in the remainder of 2009.

Finally, staff recommended six candidates for appointment to the Economic and Technology Advancement Advisory Committee; five of the six individuals are replacements for vacated seats, and the sixth results from the suggested creation of a new seat for labor.

ORAL TESTIMONY:

Hank Ryan, Small Business California

FORMAL BOARD ACTION:

The Board voted unanimously to appoint the six recommended candidates to the Economic and Technology Advancement Advisory Committee by passing resolution 09-20.

RESPONSIBLE DIVISION: Office of Climate Change

STAFF REPORT: No.

09-2-3: Public Hearing to Consider the Adoption of a Proposed Regulation to Reduce Greenhouse Gas Emissions from California Semiconductor Operations

SUMMARY OF AGENDA ITEM:

In December 2008, ARB approved the Scoping Plan (Plan) to implement a climate change program. The Plan identified sources of high global warming potential (GWP) gases as a significant sector requiring mitigation. The proposed regulation to reduce high GWP gas emissions from semiconductor operations is one of the discrete early action measures approved in the Plan. The proposed regulation applies to all semiconductor operations using high GWP gases in chemical vapor deposition chamber cleaning and etching processes.

The proposed regulation includes performance standards, reporting and recordkeeping requirements. Performance standards are included for large, medium, and small operations with the stringency decreasing with the size of the operation. Compliance with the performance standards is required by January 1, 2012, for most operations. Operations emitting 800 metric tons or less of

carbon dioxide (CO₂) equivalent per year are not subject to the performance standards, but are required to report and keep records of emissions. The proposed regulation will reduce emissions by 56 percent or 0.18 million metric tons of CO₂ equivalent per year.

The proposed regulation was developed through workgroup meetings and four public workshops involving semiconductor operators, process tool manufacturers, gas providers, and air districts.

ORAL TESTIMONY:

Two witnesses testified on this Board item; one in opposition of the proposed regulation, and the other in favor with recommended modifications. A representative of NEC Electronics testified in opposition, contending that the performance standards are too stringent and are not cost-effective.

The South Coast Air Quality Management District (SCAQMD) staff cited the high GWP of nitrogen trifluoride (NF₃) and its generation of hydrogen fluoride (HF), a toxic compound, as reasons to modify the regulation. SCAQMD staff recommended that the Board prohibit the new use, and phase-out the existing use, of NF₃ in semiconductor operations.

Gus Ballis, NEC Electronics
Jill Whynot, South Coast Air Quality Management District

FORMAL BOARD ACTION:

The Board unanimously approved resolution 09-22, which adopted the staff proposal.

RESPONSIBLE DIVISION: Stationary Source Division

STAFF REPORT: Yes.

09-2-4: Public Hearing to Consider Adopting a Regulation to Reduce Sulfur Hexafluoride Emissions in Non-Semiconductor and Non-Utility Applications

SUMMARY OF AGENDA ITEM:

This proposed measure was identified as a discrete early action greenhouse gas reduction measure per the California Global Warming Solutions Act of 2006 (AB 32). This measure will reduce

emissions of GHG by 100,000 metric tons of carbon dioxide equivalent per year. Sulfur hexafluoride has the highest GWP identified by the Intergovernmental Panel on Climate Change. The uses covered by this regulation either have alternatives readily available or in development.

The proposed regulation applies to magnesium casting, tracer gas testing, medical uses, military applications and other applications including use in products. This regulation would achieve GHG emission reductions by requiring a phase-out of sulfur hexafluoride in non-utility and non-semiconductor manufacturing applications. In addition to reducing current emission levels, the regulation serves as a barrier to potential new uses of sulfur hexafluoride. The regulation includes an exemption process for:

1. Uses of sulfur hexafluoride that result in reduced greenhouse gas emissions, and
2. Uses of sulfur hexafluoride with no alternatives.

Distributors must register with ARB, keep records, and provide annual reports to ARB. Purchasers must keep records of purchase and use of sulfur hexafluoride. These requirements allow ARB enforcement staff to verify compliance with the regulation.

The Board heard oral testimony from five organizations, including the University of California Office of the President, the Department of Defense, the California Metals Coalition, Lawrence Livermore National Laboratory, and 3M. The University of California was neutral, 3M was in favor, and the rest of the organizations were opposed to the regulation.

ORAL TESTIMONY:

Larry Wong, University of California Office of the President
Randal Friedman, Department of Defense
James Simonelli, California Metals Coalition
David Armstrong, Lawrence Livermore National Laboratory
Kurt Werner, 3M

FORMAL BOARD ACTION:

The Board unanimously approved Resolution 09-23 with direction for staff to add an exemption for military tracer gas use and research.

RESPONSIBLE DIVISION: Research Division

STAFF REPORT: Yes.

09-2-6: Public Meeting to Report to the Board on Staff's Nonattainment Area Recommendations for the Revised Federal 8-Hour Ozone Standard

SUMMARY OF AGENDA ITEM:

Staff presented a summary of recommended area designations for the 2008 revision to the federal 8-hour ozone standard. The standard was lowered from 0.08 parts per million (ppm) to 0.075 ppm. Under the Clean Air Act, ARB is required to submit recommendations to the U.S. Environmental Protection Agency (U.S. EPA) by March 12, 2009. Based on data for the years 2006 through 2008, staff recommended six new or expanded nonattainment areas:

- Tuscan Buttes (portion of Tehama County)
- Pinnacles National Monument (portion of San Benito County)
- Eastern San Luis Obispo County
- Southern Inyo County
- Northeast San Bernardino County
- Eastern Kern County (expand to include Indian Wells Valley)

In addition to these new areas, areas that were nonattainment for the previous 8-hour standard will continue to be nonattainment for the revised standard. Staff will prepare a package describing the recommendations and submit it to U.S. EPA by the March 12, 2009, deadline.

ORAL TESTIMONY: None.

FORMAL BOARD ACTION: None.

RESPONSIBLE DIVISION: Planning and Technical Support Division

STAFF REPORT: Yes.

09-2-7: Public Meeting to Consider the Approval of New Grants under the Innovative Clean Air Technologies Program

SUMMARY OF AGENDA ITEM:

Staff's presentation included the following: described the Innovative Clean Air Technologies Program, recommended not to incorporate a payback/royalty provision in the program, and recommended three projects for funding this year.

ORAL TESTIMONY: None.

FORMAL BOARD ACTION:

The Board approved the recommended grants, as described in resolutions 09-21, 09-24 and 09-26, on a unanimous vote.

RESPONSIBLE DIVISION: Research Division

STAFF REPORT: No.

09-2-8: Public Meeting to Present "Beyond the Press Release: How a Comprehensive Outreach Campaign Can Help Drive Policy"

SUMMARY OF AGENDA ITEM:

The Communications Office supports the Board by publicizing and responding to media and public calls on ARB activities and programs. The office reaches out to the general public using a variety of tools, including press releases, media events, editorial boards, videos and web postings. Organizational priorities for the coming year include bringing uniformity to ARB outreach efforts, using the Web site as more of a communications tool and continuing to strengthen relationships with local air district public affairs offices. Programmatic priorities include diesel regulations and the separate measures that make up AB 32.

Chairman Nichols stated her support of the Communications' Office work in building and maintaining support for ARB activities.

ORAL TESTIMONY: None.

FORMAL BOARD ACTION: None (Informational Item).

RESPONSIBLE DIVISION: Office of the Chairman

STAFF REPORT: No.