

State of California
AIR RESOURCES BOARD

Summary of Board Meeting
January 25, 2007

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

MEMBERS PRESENT: Robert F. Sawyer, Ph.D., Chairman
Sandra Berg
Dorene D'Adamo
Henry Gong, Jr., M.D.
Lydia Kennard
Barbara Riordan
Ronald Roberts

Agenda Item #

07-1-1: Air Resources Board's Action Plan for 2007

SUMMARY OF AGENDA ITEM:

ARB Executive Officer Catherine Witherspoon briefed the Board on major initiatives, rulemakings, and other activities scheduled for 2007. She highlighted the additional resources in the Governor's proposed budget that would be available to ARB for work on climate change, zero emission vehicles, school buses and other initiatives. She discussed Administration proposals on climate change, a new low carbon fuel standard, freight movement, and bond expenditures as they affect ARB.

Ms. Witherspoon described the major rulemakings on ARB's calendar for this year. These include measures to reduce diesel risk from construction and mining equipment, private truck fleets, port trucks and commercial harbor craft. The Board will begin its work regarding the Governor's Global Climate initiative. A greenhouse gas emission inventory will be developed, emission targets will be set and the Board will consider a mandatory reporting regulation. Early actions will be considered by the Board this spring and two new advisory committees will be established to

assist with the Board's new responsibilities involving climate change.

The Board will consider several rules to cut emissions from ships, passenger vehicles, aboveground gasoline storage tanks, consumer products, architectural coatings and air purifiers. The Board will also consider revising the existing State air quality standard for nitrogen dioxide. Air toxic regulations on the calendar affect dry cleaning and formaldehyde used in composite wood products.

Ms. Witherspoon described the work underway to develop the next round of State Implementation Plans for ozone, which the Board will consider this spring. The statewide strategy relies upon measures to accelerate turnover of the existing fleet and includes emission reductions from goods movement categories.

Ms. Witherspoon described other major activities for the year. The Carl Moyer Guidelines will be updated to include possible new project categories and revised criteria. She described several environmental justice projects that are studying air quality impacts on local communities. She also noted staff's effort to update the relationship between ambient levels of particulate pollution and premature death. Finally, she described a number of federal actions scheduled for this year.

The Board heard oral testimony from one member of the public on the upcoming zero-emission vehicle technology review; he asked the Board to support widespread use of plug-in hybrid electric vehicles charged with solar power.

ORAL TESTIMONY:

Mr. Doug Korthof

FORMAL BOARD ACTION: None (Informational Item)

RESPONSIBLE DIVISION: Planning and Technical Support Division

STAFF REPORT: No

07-1-2:

The State of the State's Air Quality

SUMMARY OF AGENDA ITEM:

Staff presented a status report on the State of the State's Air Quality. The presentation focused on ozone and particulate matter, which represent our most challenging air quality problems. Over the last 15 years, California has made dramatic progress in reducing public exposure to unhealthy ozone and particulate matter levels. Population exposure to ozone concentrations above the level of the federal 8-hour ozone standard has decreased 75 percent in the South Coast and 50 percent in the San Joaquin Valley since 1990. In addition, annual average PM_{2.5} concentrations have decreased 25 percent in these two regions during the last five years.

Currently, there are 15 ozone nonattainment areas that span many different parts of the State – from coastal regions and inland valleys, to desert and mountain areas. The coastal areas are very close to, or currently do meet, the federal 8-hour ozone standard. In contrast, the inland valleys of the South Coast, San Joaquin Valley, and Sacramento regions have a more severe ozone air quality problem. Although ozone concentrations have decreased significantly over the last decade, the inland valleys are still far from attainment. The South Coast's federal design value is 50 percent above the level of the standard, and the San Joaquin Valley's value is 35 percent above the standard. Even further inland, the federal ozone nonattainment areas in the Sierra foothills and southern California deserts represent a diversity of geography and are all impacted by transport from upwind areas. Therefore, their attainment is linked primarily to emissions reduction in the upwind valleys and coastal areas.

Similar to ozone, the most severe PM_{2.5} air quality problems are found in the inland valleys. The South Coast and San Joaquin Valley are currently the only two areas that are nonattainment for the federal PM_{2.5} standards. In the last five years, 24-hour average PM_{2.5} concentrations decreased 15 percent in the South Coast and 35 percent in the San Joaquin Valley, and these two areas now meet the 24-hour standard. During the same timeframe, annual average concentrations decreased 25 percent in both areas. However, the South Coast remains 50 percent above the annual standard, and the San Joaquin Valley 25 percent above.

ORAL TESTIMONY: None

FORMAL BOARD ACTION: No action. This was an informational item only.

RESPONSIBLE DIVISION: Planning and Technical Support Division

STAFF REPORT: No

07-1-3: Report to the Board on a Health Update: The Health Impacts of Coarse Particulate Matter

SUMMARY OF AGENDA ITEM:

The ARB staff provides the Board with regular updates on recent research findings on the health effects of air pollution. This month, staff presented the findings of research recently published on the effects of coarse particulate matter on heart rate variability in older adults in the Coachella Valley (Lipsett MJ, Tsai FC, Roger L, Woo M, & Ostro BD. Coarse Particles and Heart Rate Variability among Older Adults with Coronary Artery Disease in the Coachella Valley, California. Environmental Health Perspectives, 114 (8), 1215-1220, August 2006).

Earlier results from the few previous studies specifically examining coarse particulate air pollution were discussed. These studies indicate coarse particulate matter may be associated with increased disease and death, particularly following short-term exposures. The current study, which examined 19 older adults with coronary heart disease residing in the Coachella Valley, provides further evidence of a coarse particle effect on health. Like most arid regions, particulate matter in the Coachella Valley is dominated by coarse particulate matter. Lipsett and colleagues found that exposure to coarse particulate matter was associated with significant changes in the heart's ability to modify its rhythm (heart rate variability). Six hour average pollutant concentrations prior to heart rate measurements were associated with the strongest decreases in heart rate variability, while no effects were observed when using 24 hour averaging times. Heart rate variability changes are a known risk factor for death from cardiovascular disease. The findings from this study indicate the importance of considering coarse particulate matter in future research, public health and regulatory efforts.

Board Member Dr. Henry Gong commented that the four percent decreases observed may or may not be clinically significant since not enough is known about the clinical implications of heart rate

variability decreases. He also mentioned that the United States Environmental Protection Agency has issued a request for applications (RFA) to examine coarse particles.

The four percent decrease in heart rate variability was standardized for 10 micrograms per cubic meter increase in coarse particulate matter. Considering that the range of coarse particle levels in this desert area was well over 200 micrograms per cubic meter, the overall decreases in heart rate variability have been considerable among this vulnerable population.

ORAL TESTIMONY: None

FORMAL BOARD ACTION: None (Informational Item)

RESPONSIBLE DIVISION: Research Division

STAFF REPORT: No

07-1-4: Public Meeting to Consider Research Proposals

SUMMARY OF AGENDA ITEM:

Staff described the objective and expected results for the following five research proposals.

1. "Inventory of Direct and Indirect GHG Emissions from Stationary Air Conditioning and Refrigeration Sources, with Special Emphasis on Retail Food Refrigeration and Unitary Air Conditioning," ARMINES, \$225,060, Proposal No. 2622-254.
2. "Spatiotemporal Analysis of Air Pollution and Mortality in California Based on the American Cancer Society Cohort," University of California, Berkeley, \$749,706, Proposal No. 2624-254.
3. Contract Augmentation "Extended Analyses of Air Pollution and Cardiopulmonary Disease in the California Teachers Study Cohort," Department of Health Services, \$284,652, Contract No. 03-313.
4. "Emissions of HFC-134a from Auto Dismantling and Recycling," Foundation for California Community Colleges, \$159,578, Proposal No. 2623-254.

5. "Toxicity of Source-Oriented Ambient Aerosol" University of California, Davis, \$838,934, Proposal No. 2617-253.

ORAL TESTIMONY: None.

FORMAL BOARD ACTION: The Board approved resolution numbers 07-1 through 07-4 and 07-7.

RESPONSIBLE DIVISION: Research Division

STAFF REPORT: No

07-1-5: Public Hearing to Consider Amendments to the Airborne Toxic Control Measure for Perchloroethylene Dry Cleaning Operations

SUMMARY OF AGENDA ITEM:

At the January 25, 2007, Board hearing, staff presented the proposed Amendments to the Airborne Toxic Control Measure for Emissions of Perchloroethylene from Dry Cleaning Operations (Dry Cleaning ATCM). The Board heard testimony from many interested parties, including the affected industries, industry associations, environmental groups, local air pollution control districts, and other interested individuals. Although much of the testimony was supportive of ARB staff's proposal, some commenters wanted to see a more health protective measure. Many wanted to see an earlier phase out, a requirement of a 300 foot buffer zone from sensitive receptors, and a prohibition of new hydrocarbon machines. Other commenters were concerned that the proposal will have a significant economic impact to small dry cleaners.

In 1991, the Board identified perchloroethylene (Perc) as a toxic air contaminant (TAC) under California's Toxic Air Contaminant Identification and Control Program (Health and Safety Code section 39650 et seq.). As a result, the Board adopted a number of regulations to reduce exposures to Perc. On October 14, 1993, the Board adopted the Dry Cleaning ATCM. The Dry Cleaning ATCM sets forth the equipment, operations and maintenance, recordkeeping, and reporting requirements for dry cleaning operations.

In 2005, staff completed an evaluation of the effectiveness of the Dry Cleaning ATCM. Although the evaluation showed that Perc emissions from dry cleaning decreased by about 70 percent, there

remained residual health risks associated with Perc dry cleaners, the best available control technology has improved, and alternative technologies are available and viable. As a result of this evaluation, the staff developed proposed amendments to the Dry Cleaning ATCM which the Board heard on May 25, 2006. After a thorough discussion with staff, and by a unanimous vote, the Board directed staff to return to them with a proposal for their consideration to phase-out Perc from dry cleaning operations. The Board also directed staff to consider the cost impacts of the proposal and evaluate ways to minimize these through possible financial assistance programs.

As the Board directed, staff updated the assessment of the dry cleaning industry, evaluated cost impacts and revised the proposed amendments to phase out the use of Perc in dry cleaning operations. The newly proposed amendments to the Dry Cleaning ATCM would prohibit new Perc machines beginning January 1, 2008; eliminate the use of existing Perc machines at co-residential facilities by July 1, 2010; require removal converted machines and machines that are 15 years or older by July 1, 2010; and after July 1, 2010, require the removal remaining machines when they become 15 years old. The result of this action will be the complete removal of all Perc dry cleaning machines by January 1, 2023. In addition, requirements for Perc distributors and manufacturers were added to improve the implementation of Assembly Bill 998.

Staff presented its proposal to the Board at the January 25, 2007 hearing. In response to public comment, the staff also included a revision to remove the specific penalty provisions from the proposed amendments to the ATCM. After considering the staff's proposal and hearing the public testimony, the Board entertained and rejected a motion to accelerate the phase out of Perc machines. It then unanimously voted to approve staff's proposal as presented with staff's suggested 15-day modifications. These modifications will be made available for public review and comment for 15 days in a Notice of Public Availability of Modified Text. The Executive Officer will consider any comments received during this period prior to adopting the ATCM amendments.

ORAL TESTIMONY:

Luis Cabrales, Coalition for Clean Air
Bonnie Holmes-Gen, American Lung Association
Sara Sharpe, Coalition for Clean Air
Dr. David Lighthall
Tom DePippo

Tariq Mohammad
Nily Stoler, Talyn Cleaners
Zion Orpaz, Megs. Enviro. Tech Solutions
Jack Alquist, Guild Cleaners, Inc.
Peter Sinsheimer, Urban & Enviro. Policy Institute
Gordon Shaw, Hangers Cleaners
Daniel Jussicha, Ontario Cleaners
Hans Kim, Natures Best Cleaners
Sung Park, Natures Best Cleaners
Peter Jung, Plaza Cleaners
Steve Swanson, Swanson Cleaners
Steve Risotto, Halogenated Solvent Industry Alliance, Inc.
David Dawson, Textile Care Allied Trades Association
Lynnette Watterson, Crystal Cleaning Center
John Horst, Margaret's Cleaners
Ed Krantz, Broadway Cleaners
Robert Blackburn, California Cleaners Association
Barry Gershenson, International Fabricare Institute
Jon Meijer, International Fabricare Institute
Sandra Giarde, California Cleaners Association
James Lyons, Korean Dry Cleaners Association Northern CA
Doug Shinn, Korean Dry Cleaners Association Northern CA
David Yi
Lawrence Lim, Korean Dry Cleaners Association Northern CA
Paul Choe, Korean Dry Cleaners & Laundry Association
James Lee, Korean Dry Cleaners Association Northern CA
Jae Bons Oh
John Park
Harry Pruyn, Dry Cleaner Owner
James Camilleri, Camilleri Mechanical
Robert Smerling, Brentwood Royal Cleaners, Inc.
Jose Carmona, CEERT
Tim Carmichael, Coalition for Clean Air
Jill Whynot, South Coast Air Quality Management District
Jack Broadbent, Bay Area AQMD

FORMAL BOARD ACTION:

The Board approved Resolution 07-5 by a unanimous vote.

RESPONSIBLE DIVISION: Stationary Source Division

STAFF REPORT: Yes

07-1-6:

Appointment of the Environmental Justice Advisory Committee and the Economic and Technology Advancement Advisory Committee under AB 32, the California Global Warming Solutions Act of 2006

SUMMARY OF AGENDA ITEM:

Staff outlined the statutory directives regarding the formation and purpose of the Environmental Justice Advisory Committee and the Economic and Technology Advancement Advisory Committee. Staff noted that the proposed membership of the Environmental Justice Advisory Committee reflected a consensus set of nominees put forward by environmental justice and community groups, and also included representation from the Bay Area, the Central Valley, and Southern California. The proposed membership of the Economic and Technology Advancement Advisory Committee was drawn from nominees submitted by interested parties, and represented a broad mix of stakeholder groups and technology and economic experts.

Dr. Sawyer noted that the Secretary of the Resources Agency had requested that someone with resources or forestry expertise be added to the Economic and Technology Advancement Advisory Committee. Board members also commented that the proposed membership of that committee was largely northern California based and did not include representation from Southern California.

ORAL TESTIMONY: None

FORMAL BOARD ACTION: The Board adopted Resolution 07-1-6 by a unanimous vote, approving the staff recommended nominees to each Committee and directing staff to add two additional members to the Economic and Technology Advancement Advisory Committee – one with expertise in resources and forestry issues, and one based in Southern California.

RESPONSIBLE DIVISION: Executive Office

STAFF REPORT: No

07-1-7:

Recent Scientific Findings from Climate Change Studies

SUMMARY OF AGENDA ITEM:

This item is the first of a series of twice yearly updates of the Board on recent, significant findings from climate change research. Recent climate change studies support the fact that man-made emissions of heat-trapping gases are responsible for observed changes throughout the planet. A recently published study significantly strengthens earlier work linking recent ocean warming to human activities. It focuses on the complex vertical structure of ocean warming, and shows that computer models capture this structure if they include changes in man-made climate forcings and natural variability. There has been unexpectedly severe loss of ice throughout the world. Two recent satellite studies show loss of ice from Greenland's ice sheets. Atmospheric scientists have warned that emissions and atmospheric levels of carbon dioxide are increasing more rapidly, despite international efforts to curb the use of fossil fuels. Projected impacts of a warmer climate on California make clear the importance of meeting the 2050 targets for reductions in greenhouse gas emissions. Economic studies indicate that the cost of inaction with respect to climate change is greater than the cost of taking action and that delaying actions will result in a need for greater reductions. In July, staff will update the Board on findings from the fourth assessment from the Intergovernmental Panel on Climate Change.

The Board also asked staff to comment on research results that appear to support a skeptical view of climate change. Staff responded that because climate is extremely complex, different studies may appear to support different conclusions. It is important that results are based on a long-term trend.

ORAL TESTIMONY: None

FORMAL BOARD ACTION: None, informational item

RESPONSIBLE DIVISION: Research Division

STAFF REPORT: No

07-1-8:

Report to the Board on the Harbor Communities Monitoring Projects

SUMMARY OF AGENDA ITEM:

In this informational item staff described the current monitoring efforts being conducted in the Harbor Communities of Southern California. These include the communities of Wilmington, West Long Beach, South Carson, and San Pedro. The overall goal of the Harbor Communities Monitoring Studies is to develop improved technical tools for assessing exposure in California communities, as traditional fixed site monitoring stations are widely spaced and not suitable for finding pollution hot spots. We also hope to separate the influence of local and regional emission sources in the area. Three monitoring studies being conducted in the Harbor Communities area were described. These studies included “saturation” monitoring with passive samplers, an ultrafine particle network, and a mobile monitoring platform.

A basic overview of the three studies was presented with emphasis on the mobile platform. Goals and objectives of the three studies were discussed and locations of sampling sites for the passive monitoring and ultrafine particle network studies were presented. Preliminary results from the mobile monitoring platform pilot study were also presented in addition to information regarding the mobile platform study design.

Preliminary results for the mobile platform included results for black carbon, a good indicator for diesel exhaust. Black carbon concentrations were shown to be increased in the morning hours compared to the afternoon. Differences in black carbon concentrations were also observed between residential locations. Higher black carbon concentrations were often found in areas with close proximity to freeways and surface streets heavily impacted by heavy-duty diesel trucks. However, these concentrations varied not only within a single sampling day, but also varied between sampling days. These data indicate more sampling days are required to establish patterns that exist in the Wilmington area.

Overall, the results from the mobile platform indicate there are several potential “hot spots” in the Harbor Communities area that are not being adequately characterized by fixed site monitoring stations. Continued sampling during the winter, spring, summer, and fall seasons will help to characterize pollution concentrations and “hot spots” and also help determine the importance of various sources in the area.

The Board asked about making measurements of PM2.5. Staff explained PM2.5 measurements would be taken on board the mobile platform. The Board also asked about the significance of black carbon. Staff described black carbon as a useful indicator of diesel exhaust (when in the proximity of diesel trucks).

The Board asked why West Long Beach was not covered by the mobile platform. Staff answered that a main driver of the study was the impact and growth of the port and Wilmington is most impacted by these activities. Staff also explained that West Long Beach was being covered to some extent on other sampling routes.

ORAL TESTIMONY: None.

FORMAL BOARD ACTION: None (Informational Item).

RESPONSIBLE DIVISION: Research Division.

STAFF REPORT: No.

07-1-9: Public Meeting to Consider an Update on the Implementation of the ARB/Railroad Statewide Agreement

SUMMARY OF AGENDA ITEM:

The staff presented to the Board an update on the implementation of the statewide railroad pollution reduction agreement (Agreement) with Union Pacific Railroad and BNSF Railway. The Agreement has been in effect since June 24, 2005, and all of the required milestones to date have been met.

Both railroads are ahead of schedule to meet the requirement to install idle reduction devices on 70 percent of the unequipped intrastate locomotives by June 30, 2007. Including the installations made prior to the agreement, idle reduction devices have now been installed in over 66 percent of the nearly 440 intrastate locomotives operating in California, more than twice the rate for the rest of country. Both railroads have complied with the CARB diesel fuel regulation for intrastate locomotives by January 1, 2007. In addition, both railroads are fueling interstate locomotives at volumes greater than the minimum 80 percent requirement specified in the Agreement.

In the Fall of 2006, staff completed a second round of enforcement inspections at the designated and covered rail yards in California. Staff observed about 650 locomotives to determine their compliance with the anti-idling provisions of the Agreement and nine locomotives were cited for excessive idling and none for excessive smoke. This means about 98 percent of the locomotives observed were in compliance. To support this effort, over 70 ARB and local air district enforcement staff were trained in 2006.

Staff issued guidelines for preparing rail yard emission inventories and conducting health risk assessments in September 2006. Both railroads were on schedule to deliver the first nine draft health risk assessments by the agreed upon accelerated schedule of December 31, 2006. However, ARB staff made a significant request last August for a change in emission inventory methodology to ensure that the best and most current data were included in the rail yard health risk assessments. With these changes, ARB staff now anticipates the completion of the first nine draft health risk assessments by about March 2007. The second group of draft risk assessments is still scheduled to be completed by the end of 2007.

Following the staff presentation, the Board received public testimony from seven individuals. Two representatives from the South Coast Air Quality Management District commented on issues related to ARB enforcement of the Agreement, current litigation status between the railroads and SCAQMD, and the need to push for more stringent locomotive emission controls. Four representatives from the railroad industry testified in support of the Agreement and indicated that they were committed to continuous compliance with the Agreement provisions. One representative from the general public commented that the railroads should be doing more to mitigate impacts to air quality.

To date, staff estimates that compliance with the Agreement has resulted in better than a 15 percent reduction in diesel particulate matter emissions near rail yards. The Board directed staff to return with the next update on the implementation of the Agreement in six months.

ORAL TESTIMONY:

Barry Wallerstein, SCAQMD
Mike Harris, SCAQMD
Mark Stehly, BNSF Railway
Lanny Schmid, Union Pacific Railroad

Lupe Valdez, Union Pacific Railroad
Kirk Marckwald, Association of American Railroads
Doug Korthof, General Public

FORMAL BOARD ACTION: None; informational Item

RESPONSIBLE DIVISION: Stationary Source Division

STAFF REPORT: Yes

07-1-10: Public Meeting to Receive an Update on the Carl Moyer Air Quality Standards Attainment Program

SUMMARY OF AGENDA ITEM:

On January 25, 2007, the staff provided an update on the Carl Moyer Air Quality Standards Attainment Program. The staff presented an overview of the Carl Moyer Program, details of funding, the current status of projects, along with progress in air quality benefits and Environmental Justice requirements. The presentation included a breakdown and trends of funding according to source categories, a detailed description of each source category, and trends in oxides of nitrogen cost effectiveness over the first six years. Staff outlined audits by ARB, Department of Finance and the Bureau of State Audits. Staff concluded with a description of future activities along with plans for the 2007 Guidelines update.

The Board asked staff to work with rural districts to provide them with a better understanding of the new rural district assistance program provided by ARB through the California Air Pollution Control Officers Association.

ORAL TESTIMONY:

Barry Wallerstein, South Coast Air Quality Management District
Jack Broadbent, Bay Area Air Quality Management District
Doug Quetin, Monterey Bay Unified Air Pollution Control District

FORMAL BOARD ACTION: Informational Item.

RESPONSIBLE DIVISION: Mobile Source Control Division

STAFF REPORT: Yes