

Bay Area Air Quality Management District  
939 Ellis Street  
San Francisco, CA 94109  
(415) 749-5000

## **APPROVED MINUTES**

Advisory Council Regular Meeting  
9:00 a.m., Thursday, May 15, 2008

### **Call To Order**

Opening Comment: Chairperson Bedsworth called the meeting to order at 9:07 a.m.

Roll Call: Louise Bedsworth, Ph.D., Chairperson, Harold Brazil, Ken Blonski, Robert Bornstein, Ph.D., Jeffrey Bramlett, Irvin Dawid, Emily Drennen, MPA, Fred Glueck, William Hanna, John Holtzclaw, Ph.D., Robert T.P. Huang, Ph.D., Kendal Oku, Linda Weiner and Brian Zamora.

Absent: Cassandra Adams, Sam Altshuler, Steven T. Kmucha, Kraig Kurucz and Karen Licavoli-Farnkopf.

**Public Comment Period** – There were no public comments.

### **Consent Calendar**

1. Approval of Minutes of March 12, 2008

Council Member Dawid requested the following amendment:

- Page 9, last paragraph, amendment to the first sentence; “Mr. Dawid commented that, out of 1.2 million wood burning devices, 1.1 million are fireplaces, and...”

**Committee Action:** Council Member Holtzclaw moved to approve the Minutes of March 12, 2008, as amended; seconded by Council Member Zamora; carried unanimously without objection.

### **Committee Reports**

2. Technical Committee Meeting of April 7, 2008

Chair Bedsworth reported that the Technical Committee received a presentation at its April 7, 2008 meeting on the consequences of changes in temperature, inflow boundary conditions, and local emissions on air quality in Central California by Dr. Rob Harley. She said Dr. Harley spoke on what future emissions will look like considering population growth, advancing technologies and climate change, discussed the EPA’s Community Multi-scale Air Quality Model (CMAQ)

used to predict ozone and other concentrations, the Regional Climate Model which provides detailed information about California's temperature change, global warming information, range of regime, saturation of topography and future emissions and their factors. He further reviewed a summary of ozone effects in the Fresno, Sacramento and Bay Areas and projections into the year 2050, pointed out that California has committed to reducing greenhouse gas emissions to 80% below 1990 levels by the year 2050, and spoke of mitigation progress.

Council Member Bornstein said at Dr. Harley's presentation, when he pointed out the work done and he tried to reconcile Dr. Harley's results, Dr. Harley acknowledged that he used daily average temperatures which show warming, but since the ozone is sensitive to maximum temperatures which have been cooling, he acknowledged the work must be redone with a variation. And, results showing upward projections based on warming do not match what has been happening in the Bay Area.

### 3. Public Health Committee Meeting of April 9, 2008

Council Member Brian Zamora stated that the Committee had reviewed and discussed the Final Draft Strategy for Asthma as it Relates to Indoor Air Quality, which he said would be delayed until July 9, 2008 due to final incorporation of information. He reported that District staff gave an overview of the CARE Program, the West Oakland Health Risk Assessment, the CARE Mitigation Action Plan, and voiced the need to increase representation on the CARE Task Force. At the next Committee meeting on June 4, he hoped to see the revised text of the regulations for wood smoke in order for the Committee to make a recommendation to the Council and Board, and he confirmed with Council Member Dawid and Chair Bedsworth that the issue of the alternative resolution on wood smoke as a bio-fuel could be discussed for review at the Committee level.

### 4. Air Quality Planning Committee Meeting of April 10, 2008

Council Member Emily Drennen stated the Committee received two presentations; Lisa Klein from MTC presented information on MTC's High Occupancy Toll Lanes Study and an overview of road pricing strategies currently used and proposed for the Bay Area, and their policy implications were presented by Tilly Chang of the San Francisco Transportation Authority. She said the Committee did not adjourn to a date certain next month; however, she believed the next meeting would occur on the third Monday of the month if this was amenable to Council Members' schedules.

### 5. Presentation on Multi-scale and Multi-pollutant Modeling Research and Its Applications to Address Human Health and Ecosystem Issues. *Dr. Rao, Director, Atmospheric Modeling Division, National Exposure Research Laboratory, U.S. Environmental Protection Agency, provided an overview of the Community Multi-scale Air Quality (CMAQ) modeling system and discussed its applications with regard to the effects of climate change on air quality and the relationships between air quality and human/ecosystem health.*

Dr. Rao first introduced Dr. Sten who serves as Chair of the Scientific Committee on Air Pollution Modeling.

Dr. Sten reported he was in town perusing available facilities to hold an Air Conference this time next year in San Francisco; that scientists from NATO countries from all over the world would

come and present information on air pollution modeling, its application to the region, air pollution and health, as well as a special session on the California 2000 Field Study. They are delighted to be holding the conference in San Francisco and anticipate its success.

Dr. Rao thanked Council Member Bornstein and others for their coordination in scheduling the presentation. He discussed health impacts of poor air quality, stating that the EPA estimates that in the year 2010, meeting air quality standards would:

- Prevent 23,000 Americans from dying prematurely;
- Avert over 1,700,000 incidences of asthma attacks and aggravation of chronic asthma;
- 67,000 incidences of chronic and acute bronchitis;
- 91,000 occurrences of shortness of breath;
- 4,100,000 lost work days, and 31,000,000 days in which Americans would have had to restrict activity due to air pollution related illness; and
- 22,000 respiratory-related hospital admissions would be averted, as well as 42,000 cardiovascular hospital admissions and 4,800 emergency room visits for asthma.

Dr. Rao said additional impacts of poor air quality result in visibility impairment, acidic deposition, eutrophication of coastal areas, crop damage, and air toxics such as mercury which is estimated to reduce the U.S.'s productivity of fish by \$8.7 billion per year.

He discussed the Clean Air Interstate Rule (CAIR) and its effect on NOx emissions, future air quality management challenges, the Atmospheric Modeling Division's (AMD) strategy to meet user needs, linking emission sources to ecosystem and human exposure, and sound science for environmental decisions. He stated managing air quality requires modeling tools that connect among various scales and he presented global, regional, local and personal examples.

Dr. Rao discussed air quality research framework in understanding atmospheric processes and predicting changes in air quality through observation and modeling, to transitioning research to applications, making scientific-based air quality management decisions, refining decisions and strategies and then evaluating program effectiveness. He presented the CMAQ "One-Atmosphere" modeling system and framework, CMAQ users world-wide, the application of evaluating the interactions of climate change and air quality, future climate simulations which suggest extension of the ozone season, and the influence of aerosols on the radiative balance of the Earth-Atmosphere system. He said in most of the eastern United States, ozone is a summertime problem in September, but this problem would be extended based on projections.

Dr. Rao said they are developing an WRF-CMAQ Coupled Modeling System which allows interactions between met and chemistry, said nitrogen deposition is an important contributor to coastal eutrophication, and discussed said the CMAQ applications linking airsheds and watersheds for ecosystem analysis.

Regarding regional air quality, the NOx SIP call has dramatically reduced emissions in the eastern United States. He presented graphs of CMAQ sensitivity to emissions and meteorological changes, HYSPLIT back-trajectories during the 1998 ozone season and reductions in daily max 8-hour ozone to wind trajectories from the Ohio River Valley, and impact of NOx SIP call, stating emissions have been reduced and greater improvement in air quality has been simulated

and demonstrated. However, more study is needed to understand how exposures change, their connection and how they lead to hospital admissions. He described sources and partnerships for better characterizing air quality such as the EPA for monitoring, NOAA for modeling, NASA for satellite and the Department of Agriculture for wildfires.

Dr. Rao discussed characteristics and uses for Environmental Public Health Tracking (EPHT) data which detects unusual trends, populations at risk, develops information for better clinical care and individual health action and facilitates policy development. He further discussed the PHASE Project's objective and scope as developing and evaluating alternative air quality characterization methods for EPHT, with an overall goal of producing information that can be routinely used to track potential relationships between public health and air quality. Multiple scales are important in linking urban air quality to exposure and he discussed modeling tools available and a case study in New Haven, Connecticut relating to locations of emission sources, roads and census block group centroids. He presented modeled annual average benzene concentrations, micro-scale hot spots like roadways and said new findings on roadway pollution which indicates that about 60 million people live within 200 meters from roadways.

In summary, air quality in the United States has improved since the inception of the Clean Air Act; however, the NAAQS for 8-hour ozone and fine particles continues to exceed in some parts of the country. A better understanding of the interactions of climate change and air quality is needed, and improved air quality models are needed to address near-roadway pollution and population exposure to harmful levels of toxic air contaminants.

Council Member Weiner referred to the PM 25 standards in 2020 and he confirmed with Dr. Rao that this takes into account federal rules but not control policies from SIPS, but aggressive programs would be undertaken at the State level.

Council Member Weiner further confirmed that Dr. Rao's reference to the influence of air cells and cooling effect takes into account government climate change results; however, aerosol interactions have not gone into the models because of the way the model is used. Current conditions are modeled and then the impact is reviewed as to whether or not the change in emissions is sufficient. If it is, this is the strategy that gets put in the SIBs. Dr. Rao said it may not be the same year round, so it is arguable that a multi- or decade-type situation is needed to better understand these interactions and have confidence in pollution policy plans.

Council Member Bornstein referred to mercury and questioned if the EPA has determined that local power plants in the east are the source, or was it more of a regional problem. Dr. Rao said studies were done in terms of quantifying the internal transport which is substantial and clearly the power plant location will have nearby impacts, but the overall source was a global problem. He believed the problem would most likely be handled differently under the new Administration.

Council Member Glueck questioned whether there is a way to gauge increases and monitor levels of emissions based on percentages of populations for land use planning purposes in order to balance higher densities. Dr. Rao believed that often times the future is based upon estimates; designing a policy today to be implemented in the next 10 years would better serve as a baseline

from which to track emissions and determine whether increase or decrease is due to population change economic activities, VMP or other reasons.

Council Member Blonski referred to worldwide model users, believed there is a fair amount of modeling in China and Asian, and questioned to what degree the scientific community was working together between the United States and China. Dr. Rao said while communications could be better, he acknowledged China and India's exponential growth, said there are many who visit the United States from China and vice versa each year where discussion and interaction occurs, and there are some US/China bilateral agreements in place; however, China is unwilling to share some of their data and they do not have the same rigor in terms of modeling and collection of observation as does the United States.

Council Member Huang requested Dr. Rao discuss the intercontinental transport and its impact in California. Dr. Rao said transport was recognized as a problem 10 years ago. Data has shown that controls are working towards reducing emissions, but that growth is unable to be offset. He said there is a multi-national working group and LRTAP is bringing together modeling tools to simulate transport and in 2010. A study will take place in California that specifically will look at what the influx of pollutants will be and this is why worldwide models are needed.

Council Member Holtzclaw questioned the control of emissions in China and India, and Dr. Rao said there is an EPA Central Control Board in India, some of the more significant changes are being dictated by the courts and not by the Pollution Control Board, and air quality has improved significant from 10 years ago. He discussed India's use of lead free gasoline, three-wheeler conversions to CNG, and agreed the population is concerned.

Chair Bedsworth confirmed India was starting to move in the direction of planning for integrating models. The National Academy of Sciences came out with a report asking their agency to start imposing multi-strategies, but how one puts together a SIP is an issue.

David Mobley said EPA is trying to implement the policies and are moving toward multi-pollutant and multi-media control.

Jean Roggenkamp, Deputy Air Pollution Control Officer, asked if there has been a pilot program of analytical tools for a control strategy in assessing the benefits of a multi-strategy for pollutants. Dr. Rao said the state of New York is trying to investigate how one would implement this and they are anxious to learn about it. Ms. Roggenkamp was pleased to hear of the interest at the national level, and believed both the analytical tools and policy instruments used are important to serve the public.

Chair Bedsworth, on behalf of the Advisory Council, thanked Dr. Rao for his presentation and presented him with Air District momentums.

### **Air District Overview**

#### 6. Report of the Executive Officer/APCO

Acting on behalf of the Executive Officer/APCO, Jeffrey McKay, Deputy APCO, said the Budget and Finance Committee reviewed and recommended the Air District's Budget to the full Board of Directors. While significant grant funding has been received to date, he said the Budget maintains prudence with no increases in staffing, except for the addition of a contract Health Officer.

He further reported community meetings had been completed on the Wood Smoke Rule and full adoption should occur in July by the Board of Directors.

Regarding climate protection, Mr. McKay said the Executive Officer is moderating a panel at the Climate Action Registry Conference in San Diego, California. The Air District is pursuing work with local governments to assist them in their inventory requirements, and next Wednesday the Board will be considering adoption of a new fee rule which includes a greenhouse gases fee.

Mr. McKay reported the CARE program is moving ahead and seeks to identify health risks in six communities. The West Oakland Health Risk Assessment is relevant to the topic, it is hard to overstate the importance of the on-road truck rules and the effects of diesel, and the Air District targets dollars in these areas. He said the Green Ports Initiatives are also moving forward. The Executive Officer met with the Port of Oakland yesterday, the Air District is hoping to meet their plan goals and is assisting the Planning Commission in creating their inventory.

Council Member Holtzclaw thanked the Air District for bringing forth a Spare the Air Day along with a Bike to Work Day, and congratulated staff for working on an agreement relating to insurance and bicycle safety, a model of which may be replicated around the region. Mr. McKay acknowledged concerns relating to infrastructure for employees to utilize bicycles to work and credited the Human Resources Manager for moving forward on addressing the issue.

Council Member Dawid questioned why the Air District held a Spare the Air Day prior to the ozone season's start and questioned the historical background of Spare the Air Day. Ms. Roggenkamp reported that due to unpredictable weather, Spare the Air Day has been held outside of that period and due to higher standards, it could get to the point where there are unhealthy days for everyone. In such cases, the Air District makes that announcement.

Chair Bedsworth referred to the one free transit day in June and questioned whether this came forth as a result of a budget decision. Ms. Roggenkamp replied there are limited dollars for any kind of transit incentive program due to reductions in TFCA dollars and other grant funding. The decision was made to have two days this summer. However, as the standards changed, they modified the program to address the situation and the decision was made to have one free day of transit which may or may not be held on a Spare the Air Day. She said the Air District will use money set aside for additional incentives and education, focusing on the climate and sparing the air.

Council Member Dawid questioned whether the episodic focus of the Day had been abandoned as a result and Ms. Roggenkamp responded, stating the free transit will not be associated with an episode. The Air District realized there is not enough money to provide free transit on Spare the

Air Days but hopes the actions taken by the public will continue to contribute toward reducing pollutant loads.

Council Member Hanna referred to a newspaper article relating to gas prices which has increased transit ridership. He believed BART was already at their parking and ridership limits, questioned whether those impacts would reduce users on Spare the Air Days and suggested coordination be made with other transit agencies to increase their collection of the concentrated ridership. Ms. Roggenkamp said the Air District has a dialogue with transit operators. She agreed the increase is a challenge; however, people in the Bay Area are motivated and the Air District can assist in helping agencies talk to each other about ways of accommodating given increased ridership.

Council Member Weiner requested a brief update on the Green Points Initiative, and Ms. Roggenkamp said the Port of Oakland, ARB and the Air District have worked on an inventory of emissions and activities, there are other ports in the region that have not gone through that activity and the Air District is working with those agencies, which included Benicia, San Francisco, Redwood City and Richmond.

Council Member Holtzclaw said he was on the Advisory Public Media Group when Spare the Air day began and the thought behind it was to get people used to identifying other ways of using transportation and trying those alternatives on Spare the Air Days. He believes the Air District is making positive steps forward in asking people to find alternative ways to get to work and while it is not another free transit ride, it is a logical step forward.

Council Member Brazil questioned whether the outreach also focuses on land use decisions in addition to transportation. Ms. Roggenkamp said the Air District focuses its awareness campaign about the correlation between air quality, health and changing behaviors, acknowledged the importance of land use decision-making, and believed the area could be explored in moving forward.

Council Member Weiner said she thought the most effective public message which will have an impact are those derived from the intended audiences or users, and she asked that the Air District look at this more closely when formulating social marketing campaigns.

### **Air District Overview:**

6. **Report of the Executive Officer/APCO:** None

### **Other Business:**

7. **Council Member Comments/Other Business**

Council Member Drennen announced that the California Supreme Court had just ruled in favor of same-sex marriage, on a vote of 4-3.

Council Member Dawid announced the Board of Directors would hold a public hearing on May 21, 2008 to consider adoption of proposed amendments to District Regulation 3: Fees and

approval of filing of a Notice of Exemption from the CEQA. He believed this would be one of the most important regulations of the Air District.

Council Member Weiner thanked Air District staff for providing her with media exposure in the San Francisco Chronicle and San Francisco Examiner, who both covered Spare the Air Day activities.

Council Member Holtzclaw thanked staff for providing the PowerPoint presentation in color, stating it was much easier to follow.

- 8. Time and Place of Next Meeting:** Council Members will be polled for the next meeting date, to be held at 939 Ellis Street, San Francisco, CA 94109.
- 9. Adjournment:** The meeting adjourned at 10:44 a.m.

*/s/ Lisa Harper*  
Lisa Harper  
Clerk of the Boards