

Bay Area Air Quality Management District  
939 Ellis Street  
San Francisco, California 94109

APPROVED MINUTES

Advisory Council Regular Meeting  
10:00 a.m., Wednesday, March 12, 2003

1. **Call to Order – Roll Call.** 10:05 a.m. Quorum Present: William Hanna, Chairperson, Sam Altshuler, P.E., Elinor Blake, Harold M. Brazil, Irvin Dawid, Fred Glueck, Rob Harley, Ph.D., Stan Hayes, John Holtzclaw, Ph.D., Kraig Kurucz, Norman A. Lapera, Jr., William A. Nack, Robert F. Sawyer, Ph.D., P.E., Kevin Shanahan, Linda Weiner, Brian Zamora. Absent: Patrick Congdon, P.E., Ignatius Ding, Jane Kelly.

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

3. **Approval of Minutes of January 8, 2003.** Mr. Altshuler requested “brief” be changed to “briefed” on page nine and moved approval of the minutes; seconded by Ms. Blake; carried unanimously.

4. **Reports of Standing Committees**

(A) **Public Health Committee Meetings of February 10 and March 10, 2003.** Mr. Zamora stated the Committee continues to monitor the progress of the adoption of the model wood-smoke ordinance. It also received two presentations on the optical remote sensing equipment at the ConocoPhillips refinery in Rodeo. The first was from the company that installed the equipment. The second was from the Contra Costa County Health Services department which is developing a website for posting the monitoring data that will soon be operational. The Committee will devote another meeting to receive input from community groups and District staff regarding their impressions of this equipment and the data that it generates.

(B) **Technical Committee Meeting of February 4, 2003.** Dr. Harley stated that the Committee:

- developed a list of intermittent ozone control strategies for the summer Spare the Air Program.
- reviewed a proposal from the Sonoma County Climate Protection Campaign (SCCPC) that the District allocate \$25,000 to support development of a regional greenhouse gas emission inventory. While it supports local initiative it felt the proposal was inadequately linked to air quality management and was not coordinated with the state’s climate protection registry.
- reviewed the Air Quality Planning Committee (AQPC) recommendations on improving the enhanced vehicle inspection and maintenance (I&M) program. It felt that special program features such as remote sensing Smart Signs should be located upwind of Livermore and focus on hydrocarbon (HC) emissions. High emitting vehicles would receive a letter from the District encouraging repair. The data generated would help to accurately characterize the vehicle emissions across the fleet. The state’s Emission Factor (EMFAC) model should not be used to evaluate the I&M program because it merely outputs its own built-in I&M assumptions.

- reviewed the Public Health Committee's recommendations on the abatement of particulate matter (PM). It endorsed the inclusion in the model woodsmoke ordinance of the provision on fireplace change-out upon change of home ownership. It opposes lowering the trigger for the wintertime Don't Light Tonight (DLT) program as this would cause the issuance of too many advisories. On PM emission credit trading, it noted that PM toxicity differs among sources. It did not adopt a formal position on retrofitting PM traps on heavy-duty diesel engines.

**(C) Air Quality Planning Committee Meeting of February 25, 2003.** Mr. Kurucz stated the Committee:

- added to the Technical Committee's list of intermittent ozone control strategies. It believes it would be more effective to provide the general public with free transit on Spare the Air (STA) days rather than only the STA employer network participants. The District should ascertain if legislation is required to increase bridge tolls and impose a parking surcharge on STA days to compensate for fare box revenue losses. Owners of cars manufactured prior to 1981 should not drive them but instead take the free transit. Freeway signage should also advertise a special (i.e., lower) STA speed limit. Telecommuting should be encouraged on STA days and any new advances in telecommuting technology identified and researched.
- concluded that the SCCPC duplicates the state climate protection registry and is already well-funded with \$67,000 in city and county funding. It has not described how the District's funds would be used, as its inventory work will be completed with existing funds. The District would also set a precedent on a county-by-county basis if it allocated the requested \$25,000. Staff can also identify where some of the \$4 million from the Transportation Fund for Clean Air received by Sonoma County could be used as seed money to leverage other funds for the Campaign.
- completed its development of recommendations on improving the enhanced vehicle I&M.
- was apprised that another air district has adopted a land-use measure that takes into account employer trip generation. This will be an item for future Committee discussion.

**(D) ACTION ITEMS.**

- 1. The Sonoma County Climate Protection Campaign proposal that the District allocate \$25,000 to support the Campaign.** Mr. Kurucz moved adoption of the AQPC's recommendation of February 25, 2003, as follows: (a) that District staff work with the Campaign to identify TFCA projects containing funding that could be used as seed money to leverage further contributions to the Campaign; (b) the Campaign should coordinate with the state Registry and thereby improve its efficiency; and (c) that the District not allocate the requested \$25,000 but instead provide staff assistance; seconded by Dr. Harley.

Ms. Blake offered a friendly amendment to delete Item (b) and instead ask staff to send a letter to the Campaign advising it of the Council's action and urging its coordination with the Registry; seconded by Ms. Weiner; the amendment carried unanimously by acclamation.

In discussion, Mr. Dawid opined that the District as a regional agency should support a sub-regional effort and match the \$4,000 given by the Sonoma County cities. He explained he would vote against the original motion on this basis. The original motion as amended carried by acclamation, with one no vote by Mr. Dawid.

2. **Lists of Suggested Intermittent Ozone Control Measures proposed by the Technical and Air Quality Planning Committees at their February meetings.** Dr. Harley moved adoption of the list of intermittent control measures, Items A-K on pp. 15-17 of the packet, for forwarding to staff; seconded by Dr. Holtzclaw. Mr. Kurucz offered a friendly amendment to include the AQPC suggestions, set forth on pp. 22-23, seconded by Ms. Blake; the amendment carried unanimously by acclamation. Chairperson Hanna called for the question on the original motion as amended, and the motion carried unanimously by acclamation.
3. **Advisory Council Public Health Committee recommendations entitled “Particulate Matter Abatement,” dated January 8, 2003.** Mr. Zamora stated that on January 8 the Council referred these recommendations to the Technical Committee, which has opined that lowering the threshold for the DLT program will initiate too many advisories. This is a matter of program delivery rather than of public health. The recommendation is flexible and merely asks staff to develop a multi-year plan for future evaluation by the Council.

The Technical Committee supports the inclusion of fireplace change-out upon change of home ownership, and when the model ordinance is revised this can be included. While the Technical Committee notes PM emissions vary in toxicity, the Public Health Committee was chiefly concerned about particle size. Ms. Blake added that federal and state regulations on PM emissions trading do not recognize distinctions in PM type based on toxicity.

The Technical Committee has stated that further work needs to be conducted on PM trap emissions, and therefore Item No. 10 may be deleted from the report. Mr. Zamora moved adoption of Item Nos. 1-9; seconded by Ms. Blake. In discussion, Ms. Weiner noted that the CARB resolution on school buses has been passed, and so the text regarding support for its adoption should be deleted. Mr. Hayes added that in setting the threshold for short-term PM health effects, the Environmental Protection Agency (EPA) factored in the annual PM standard of  $15 \mu\text{g}/\text{m}^3$  with the 24-hour standard of  $65 \mu\text{g}/\text{m}^3$  and arrived at  $40 \mu\text{g}/\text{m}^3$ . This is the average between the annual and 24-hour standards and as such is an administrative convenience. He added that lowering the standard to a level at which so many alerts will be issued will cause the effect of the DLT program to be diminished or lost. Changing behavior of the public on days with high particulate levels is the goal of the DLT program.

Mr. Hayes offered a friendly amendment to the language of Item No. 1: insert “strongly consider” after “the District”; replace “develop and implement” with “development and implementation of”; correct the typograph on line “4 of 40 u/m3” to “ $40 \mu\text{g}/\text{m}^3$ ”; and after the last sentence add the following: “We request that District staff report back to the Council within a reasonable period.” Mr. Altshuler seconded the motion, and stated that a recent California Trucking Association meeting it was indicated that there are major statistical errors in health-based analysis for PM, leading to the reporting of PM health effects at twice the level at which they are now estimated.

Dr. Sawyer inquired if the District must also meet the state PM standard of  $25 \mu\text{g}/\text{m}^3$ . Mr. Hess replied that presently there are no planning requirements for the state PM standard. Ms. Blake requested the motion maker and seconder to modify the final sentence of Mr. Hayes’ language by replacing “a reasonable period” with “six months.” Messrs. Hayes and Altshuler agreed with this suggestion. Chairperson Hanna called for the question on the friendly amendment as modified, and it carried unanimously by acclamation.

Mr. Nack inquired if Item No. 6 accurately states that the model ordinance only addresses new sources of woodsmoke. Teresa Lee, Director of Public Information, stated the ordinance includes a new housing provision and renovation provision. Some localities in adopting the ordinance have included both, depending on the growth projection for the locality and whether new housing or renovation predominates. Mr. Nack requested the report be corrected to reflect that the model ordinance is not limited to new sources. Mr. Zamora and Ms. Blake agreed to modify the phraseology accordingly. Mr. Altshuler moved the addition of “non-EPA woodstove and fireplace insert” after “fireplace” on line one; seconded by Mr. Dawid; carried unanimously by acclamation.

Mr. Nack inquired as to the rationale in Item No. 9 for not using PM emission reduction credits. Ms. Blake replied that PM is a local rather than a regional program, and to conduct PM emissions trading regionally offers only a potential harm to a local community. Mr. Altshuler replied that PM<sub>2.5</sub> may be more of a basin-wide rather than a localized issue. By contrast, larger size fractions such as PM<sub>10</sub> may be more localized than basin-wide. He added that at a recent trucking conference on Monterey, the issue of diesel truck idling at major terminals was raised, and perhaps the report could reference truck idling at major port terminals. Mr. Norton replied that the recently passed Lowenthal bill, which the District will implement, restricts truck idling at ports in the state. Mr. Shanahan stated that it is unclear how truck idling time limits are to be enforced. Transport refrigeration units are also sources of emissions that could be included in the recommendations.

Mr. Altshuler noted that the role of emissions from lubricating oil in reciprocating engine is an issue that is acquiring increasing importance. He moved that the Advisory Council urge staff to follow this issue; seconded by Dr. Holtzclaw; carried unanimously by acclamation.

Ms. Weiner moved that the previously deleted Item No. 10 be retained so that the Council may further investigate the trade-off between PM and NO<sub>2</sub> emissions in heavy-duty diesel retrofits; seconded by Mr. Shanahan. Mr. Zamora suggested that the PM trap issue be reviewed separately rather than tied to the report. Ms. Weiner and Mr. Shanahan agreed and withdrew the motion. Mr. Brazil added that the Metropolitan Transportation Commission (MTC) is the funding agency for transit agencies in this region and that Bay Area transit authorities submit their applications for funds for PM trap retrofits to MTC. This process is part of a state-mandated program to retrofit heavy-duty diesel units with PM traps.

Mr. Kurucz opined that Item No. 9 fails to establish a correlation between the problem and solution. The report states PM is a seasonal problem. Also, emissions from woodsmoke, cooking, and mobile sources are not involved in emission credit trading. Further data is needed. He moved the deletion of Item No. 9 from the report; seconded by Mr. Nack.

Mr. Dawid stated he would oppose the motion because the District should not reduce its emission reduction options. Mr. Shanahan replied that there is significant potential for trading mobile source emissions against stationary source emissions, through retrofitting heavy-duty over the road trucks that operate in an area near a given stationary source. Mr. Hayes opined that PM emission credit trading could be reconsidered with regard to its net effect on public health. For example, a project that produces fine PM could offer to reduce diesel exhaust PM elsewhere. This is a beneficial result. Health-based guidelines could also be developed regarding the relative PM toxicities that would help to identify those circumstances in which PM emission credit trading could be conducted safely.

Mr. Zamora stated the motion simply asks staff to reconsider emission trading and report back to the Council. Dr. Harley added that emission trading requires further evaluation because the admixture of point and area sources (motor vehicle exhaust, woodsmoke, and NOx conversion from secondary particles) create local and regional scale PM issues. Mr. Nack opined that further discussions on emissions trading should take place at the Council level before any recommendations are adopted and forwarded to the staff or Board.

Chairperson Hanna called for a vote on the motion to strike No. 9. It failed on roll call:

Ayes: Altshuler, Kurucz, Nack.

Noes: Blake, Brazil, Dawid, Glueck, Harley, Hayes, Holtzclaw, Lapera, Sawyer, Shanahan, Weiner, Zamora, Hanna.

Mr. Hayes offered a friendly amendment to add at the end of Item No. 9 “so as to ensure that a net improvement in public health occurs through such emission trades, and that we further refer this issue back to the relevant Advisory Council committees for further consideration.”; seconded by Mr. Altshuler. Ms. Blake stated that “net improvement in public health” is somewhat vague. Mr. Hayes offered substitute language “to adequately account for public health issues by the public”; to which the seconder agreed. The friendly amendment carried unanimously by acclamation. Chairperson Hanna called for the question on the original motion to adopt the “Particulate Matter Abatement” recommendations, with all amendments, and it carried unanimously by acclamation.

Noting that there are public health studies that reach different conclusions from those cited at the recent trucking conference, Ms. Weiner suggested the Public Health Committee collect and review them. Dr. Sawyer added that with regard to the studies earlier cited by Mr. Altshuler, there was an error in the software used to calculate health effects. The corrected result reduced the potency for mortality for PM2.5 by half. The exposure level remains significant, and the EPA has not indicated it will modify its standards as a result.

4. **Air Quality Planning Committee recommendations entitled “Improvements to Enhanced Inspection and Maintenance Program,” dated February 25, 2003.** Mr. Kurucz moved adoption of the AQPC’s recommendations on pp. 27-33; seconded by Mr. Dawid. Dr. Harley offered a friendly amendment to add the Technical Committee recommendations from pp. 17-18, and allow the AQPC Chair to insert them in the text; seconded by Mr. Hayes; carried unanimously by acclamation. Chairperson Hanna called for the question on the original motion as amended. The motion carried unanimously by acclamation.

**(E) Executive Committee Meeting of March 12, 2003.** Chairperson Hanna stated the Committee met earlier today and discussed the presentation of action items at this meeting, as well as the status of the advertisements underway for applications for the “Organized Labor” and “Architect” categories. The “Organized Labor” category will become vacant at the end of today’s meeting with the resignation of member William Nack from the Advisory Council. He read into the record Resolution No. 87, “In the Matter of Expressing Esteem and Appreciation to William A. Nack for his Outstanding Service on the Advisory Council from October of 1994 to March of 2003.” Mr. Nack reviewed the issues that were addressed during his years of service. He thanked the Council members for their commitment to air quality and the District staff for their dedication.

Chairperson Hanna took Items 6 and 8 out of order:

6. **Report of Executive Officer/APCO.** William C. Norton stated the Annual Air & Waste Management Association Conference will convene in June, and six Council members are budgeted to attend. Chairperson Hanna added that priority will be given to those who have not previously attended.
8. **Council Members Comments/Other Business.** Ms. Weiner suggested that in the screening of new Advisory Council members, attention be paid to ethnic and gender diversity. Messrs. Hayes, Holtzclaw and Glueck thanked Mr. Nack for his tremendous contribution to the Advisory Council over the years. Mr. Glueck added that today's agenda packet was thorough and self-contained. Dr. Holtzclaw requested that future packets reference any action items by agenda item number. He added that a computerized tool for evaluating urban land-use characteristics and densities is on the website of the San Francisco League of Conservation Voters at [www.sflcv.org/density](http://www.sflcv.org/density).

## 5. The 2004 Ozone Plan

**(A) Status Report on Modeling.** David Souten, Principal, ENVIRON International Corporation, stated that Alpine Geophysics LLC, ATMET LLC, and Dr. Robert Bornstein of San Jose State University are working with ENVIRON on the photochemical modeling to support the 2004 Bay Area Ozone State Implementation Plan (SIP) submittal. The model infrastructure will contain meteorological, emissions and photochemical models, which will provide the basis for the subsequent analysis of emissions reductions and control measures. Three separate ozone episodes are now being selected and evaluated for modeling. With input from the Modeling Advisory Committee, a modeling protocol has been recently developed. It addresses episode selection, mathematical modeling and other components for three different models within the project. It also addresses model domain size and grid size, emissions, meteorology, and base-year performance, and future year attainment projections.

Chris Emery, Senior Consultant, ENVIRON International Corporation, stated the modeling protocol is posted on the ENVIRON website at [www.environ.org/basip2004](http://www.environ.org/basip2004) (user: basip2004, password: goldengate). The episode selection process ascertains whether an episode is representative of the broader population of episodes over recent years with regard to peak ozone levels, their number, distribution and timing, meteorological conditions such as wind/temperature patterns and mixing heights, and the regional transport potential of each. Three episodes were chosen: July 31 - August 2, 2000, June 14-15, 2000 (from the Central California Ozone Study (CCOS)); and July 11-15, 1999 (which was a widespread ozone episode in the Bay Area and throughout northern California).

Mr. Emery displayed a map of the domain, indicating 12 kilometer (km) grids in the outer boundaries, 4 km grids in the center and 1 km grids over the Bay Area. The broad domain covers most of the state and will account for contributing sources and regional transport. Meteorology and chemistry will be balanced over the larger domain with the more intense efficiencies within the smaller grids and nested sub-domains in the areas of primary focus.

Federal criteria for model selection require industry-accepted algorithms, demonstration of established performance with past and current SIP applications, and staff familiarity with the selected photochemical and meteorological platforms. These include the "Emissions Processing System 95" (EMS-95) which takes state estimates of county level daily emissions of criteria pollutants and generates speciated, gridded, and hourly data specific to modeling on the three grids.

The “Regional Atmospheric Modeling System” (RAMS) is used to develop meteorological fields to accurately characterize episode history. The “Comprehensive Air Quality Model with extensions” (CAMx) is a widely accepted model for ozone and PM photochemistry. The Carbon Bond IV chemical mechanism will be used first, followed by the chemistry more recently developed by the Statewide Air Pollution Research Center (SAPRC) at UC Riverside.

Mr. Emery displayed the following items:

- A gridded map of NO<sub>x</sub> emissions in the state, identifying high concentrations along offshore shipping lanes, major freeways, and urban areas; as well as point source emissions.
- The emission inventory of criteria pollutants in tons per day from electrical generating units, point and area sources, and on- and off-road sources.
- A map showing various sensitivities of the meteorological model in domain grid resolutions of 4 km and 1 km.
- A comparison of qualitative and statistical evaluations of the model for wind speeds, temperatures and humidity, to ascertain if projections match observational data.
- Preliminary photochemical model results for July 31, 2000 showing that daily maximum ozone levels occurred in Contra Costa and Alameda counties where District monitors also registered the highest ozone levels. Statistical outputs are compared with monitoring data to develop the base case, which will be used for projections to the attainment year of 2006. These projections are based on expected growth and controls presently in force. This process will be conducted for all three episodes. Cost-effectiveness will be included in control strategy evaluation.
- Diurnal profiles of both observational data and modeling projections for San Jose, Fairfield, Pittsburg and Livermore on July 31, 2000. The initial results are promising, except for the latter, where actual levels registered at 126 ppb while the model predicted 100ppb. Given this underestimation, some meteorological and/or emission adjustments to the model will likely be necessary.
- Identification of statistical ranges of uncertainty, to meet state and federal criteria. Uncertainty exists in monitoring, model assumptions, grid cells, emissions estimates and other inputs.

The technical analyses are scheduled for completion by September 2003. Some delays have occurred in receipt of data from different agencies. The model base case will be developed by early summer, and future year analyses will take place during this spring and summer.

Mr. Emery added that all sources in modeling domain must be modeled. The model will be run several times to check the NO<sub>x</sub>/VOC sensitivity. EMFAC 2002 will be used for mobile source projections for the 2006 attainment year. If the model does not achieve adequate base case performance in replicating the historical episode, technical efforts must be employed to remedy the disparity or the episode must be dismissed. This is why multiple episodes are chosen. Greater grid resolution may help to reduce under prediction to some extent. Episodes with a very high, localized ozone reading are somewhat difficult for mathematical models to replicate.

Although Carbon Bond IV is somewhat dated, it has been used in the preliminary modeling runs because it runs faster than SAPRC. However, SAPRAC will be used in the final modeling runs because it is more robust and is also consistent with CARB modeling protocols.

**(B) Update on Development of the Plan.** Jean Roggenkamp, Manager, Transportation Section, presented a memorandum entitled “Ozone Strategy Development – Draft Schedule” setting forth the planning process through April 2004. It includes technical analysis, ozone modeling, control measure review, public outreach, California Environmental Quality Act (CEQA) review, ozone working group activity, and public hearings at the regional and state level. Staff can provide updates to the Council on this process upon request. The 2004 Plan will use data from CCOS and will initiate increased and early public outreach. The District has committed to complete the plan for federal review by April of 2004. The modeling will provide an estimate of the emission reductions needed to attain the national standard and thus guidance for the type of and scope of any additional control measures. By the fall, a draft ozone strategy will be developed. Mr. Hess added that this model will enable the District to examine interactions of emission reductions in the Bay Area on downwind districts. The model will be turned over to the District for future use in a wide variety of state and federal planning efforts.

Mr. Hess thanked Messrs. Altshuler, Brazil and Holtzclaw for their participation on the Modeling Advisory Committee, and he invited the Council members to contribute their suggestions to this process and also to assist with the public outreach. Ms. Blake encouraged staff to include local health department directors in its public outreach on the ozone plan.

7. **Report of Advisory Council Chairperson.** Chairperson Hanna requested that members wish-ing to attend the AWMA meeting promptly submit their requests to him or the Deputy Clerk.
9. **Time and Place of Next Meeting.** 10:00 a.m., Wednesday, May 14, 2003, 939 Ellis Street, San Francisco, California 94109.
10. **Adjournment.** 12:35 p.m.

James N. Corazza  
Deputy Clerk of the Boards