



Minutes for the STMPR Advisory Group Meeting Tuesday, April 11, 2006

1. Welcome and Introductions

Mr. Joe Cassmassi, Planning & Rules Manager, Planning, Rule Development and Area Sources, called the meeting to order at 9:00 a.m.

2. 2007 AQMP Socioeconomic Analysis

Dr. Sue Lieu, Program Supervisor, presented an overview of the socioeconomic analysis and an update on the socioeconomic baseline data. Dr. Lieu provided the following information: 1) the socioeconomic analysis covers four counties that are subdivided into 19 sub-county areas; 2) the analysis includes control measures for point sources, area sources, and mobile sources; 3) 2002-2003 emissions inventory is used; 4) SIC codes are replaced with NAICS codes for industry classifications; 5) the analysis allocates control costs to each of the 19 sub-county areas; 6) costs for the unquantified control measures are estimated based on the average costs of similar quantified control measures; and 7) the analysis includes benefits such as congestion relief, crop yields, health, and visibility. Dr. Lieu described the basis of the REMI model used to estimate the baseline and impact of the AQMP to our economy, and indicated that adjustments to the baseline would be made to obtain similar growth rates at major industry levels for key benchmark years to the SCAG forecast data. For the socioeconomic database, Dr. Lieu indicated that the process of converting SIC codes to NAICS codes was completed, and presented ethnic distribution of the workforce by industry and occupation using Census Bureau Public Use Microdata Sample (PUMS) data.

Ms. Patricia Kwon presented an overview of the health benefit assessment. The health benefit assessment includes the use of 1) concentration-response functions to measure occurrences of health effects; 2) willingness to pay and/or cost of illness for the value of avoiding a health effect; 3) analysis by 5-kilometer grid cell and aggregation of benefits from the grid cell level to the 19 sub-county areas in the Basin. Ms. Kwon indicated that 1) risk factors associated with PM10, PM2.5 and ozone have been quantified in the research literature; 2) population profiles will be developed using the 2000 Census Bureau data and projections from the REMI model; 3) State standards will be used as the basis of comparison to assess concentration changes and the associated monetary benefits. For the 2007 AQMP, staff would examine health benefits for PM2.5, long-term vs. short-term pollutant exposure impacts, interpollutant impacts, all-cause vs. specific mortality risk factors, results from pollutant sensitivity analyses, and the statistical significance of ozone mortality risk factors.

A follow-up question was asked on how population expansion in Southern California was forecasted. Dr. Frank Wen of SCAG explained that SCAG forecasts regional-county growth and population distribution using data on labor force, unemployment rates, and land use provided by local jurisdictions. The discussion was joined by several attendees suggesting that staff should: 1) include a sensitivity analysis to determine the costs associated with the "unquantified" measures, 2) determine cost-effectiveness in terms of concentration rather than mass emission reductions to reduce VOC with high reactivity first, and 3) consider state-wide or nation-wide socioeconomic analysis.

3. Statistical Evaluation of Aerospace Corporation's MM5

Mr. Mike McAtee of Aerospace Corporation gave a presentation on the performance of the MM5 forecast model for the two 2005 mid-summer ozone episodes. The objectives of his study were to assess the fit of various configurations of MM5, identify critical performance areas of MM5, and assess the accuracy of the model use in ozone prediction. Mr. McAtee indicated that the unique characteristic of the MM5/3DVAR model was its capability to utilize real-time data from satellite (e.g. temperature, pressure, wind and humidity), to assimilate both outer (15-km grid) and inner (5-km grid) domains, and to perform short-range forecast. Observation data (e.g. wind, temperature) from various sources, including observations from AQMD monitoring stations, were used to verify and adjust the forecast. Five cases with different model configurations (e.g. PBL schemes, land surface model, soil model) were conducted. The results showed that the MM5 generally over-predicted hourly surface temperatures, maximum daily temperatures,

maximum night-time temperatures, maximum wind speeds with slight time delay; generated west-to-east wind directions, and provided better forecast for non-cloudy days. Future work would include evaluating the performance of MM5 for Santa Clarita Valley, completing the analysis of low-level flow patterns, and completing the vertical profile data verification.

4. Regional Modeling Issues

Mr. Cassmassi provided a brief summary of modeling issues, including episode ranking and evaluation, and emission sensitivity analysis. Mr. Cassmassi provided the following information 1) the biogenic inventory would be doubled based on preliminary analysis, 2) staff would begin to grid the 1997, 2002, 2004 inventory with transportation data provided by SCAG, 3) the ratio of VOC/NOx was about 1 based on draft 2002 inventory, 4) SCAG would provide transportation information for 2010, 2015, 2020 and other years in a near future, 5) draft modeling protocol was already submitted to CARB for review, and 6) CCERT agreed to provide boundary conditions from the WRAP global model effort to test different surface and upper level initial conditions. In addition, Mr. Cassmassi provided the initial ranking of the meteorological episodes selected for modeling. The ranking used the regression analysis from the 2003 AQMP since past analyses have indicated that there was little difference in the meteorological profiles characterizing 1-hour versus 8-hour ozone episodes.

5. Public Comment Period

No public comments were received.

6. Adjourn

Mr. Cassmassi adjourned the meeting at approximately 12:00 p.m.

Attendance
STMPR Advisory Group Meeting
Tuesday, April 11, 2006

MEMBERS PRESENT

Carol Bohnenkamp, U.S. EPA
John DaMassa, CARB
Reza Mahdavi, CARB
Steve Levy, Center for Continuing Study of the California
George Treyz, Regional Economic Models, Inc.
Rob Farber, SCE
Ralph Morris, ENVIRON International
Rory MacArthur, WSPA
Frank Wen, SCAG

MEMBERS ABSENT

Deng Bang Lee, SCAG
Shep Burton, Consultant
Jane Hall, CSUF
Fred Lurmann, Sonoma Technology, Inc.
Paul Ong, UCLA School of Public Policy & Social Research
Karen R. Polenske, MIT Department of Urban Studies & Planning

OTHERS

Jonathan Nadler, SCAG
Christopher Patton, City of LA

AQMD STAFF

Joe Cassmassi, Planning & Rules Manager
Edward Eckerle, Program Supervisor
Minh Pham, Air Quality Specialist
Sue Lieu, Program Supervisor
Patricia Kwon, Air Quality Specialist
Shah Debrian, Air Quality Specialist
Bong-Mann Kim, Air Quality Specialist
Xinqi Zhang, Air Quality Specialist
Mark Bassett, Air Quality Specialist
Tracy Goss, Program Supervisor