

**Minutes of the BAAQMD 2004 SIP Modeling Advisory Committee (MAC)
Eighth Meeting**

**The eighth meeting of the MAC was held on
Tuesday, March 25, 2003, at 1:00 p.m.
at the District office, sixth floor Board Room.**

Attendees: see sign-up listing attached

Agenda: Posted with these minutes on project web site
(www.environ.org/project.html; click on "Bay Area Air Quality Management District"; enter user name and password)

Next meeting: Tuesday, April 29, 2003 (1:00pm at BAAQMD)

Presented overhead/.ppt presentations (all are provided on project web site):

- Chris Emery's presentation on project status and schedule, and CAMx runs;
- Craig Tremback's presentation on meteorological results
- Jim Wilkinson's presentation on emissions processing status
- ARB's v3 (3/13/03) draft of ozone SIP performance regions

Handouts (all available on the project web site):

- Agenda

Discussion items:

Agenda -- Emissions status was moved up as first topic

Two additional agenda items were added:

- Steve Ziman asked that the flaring emissions procedures be documented and distributed
- CARB's v3 draft sub-domain model performance regions was added

Approval of minutes from last meeting – No comments/corrections offered by attendees to last meeting minutes.

Emissions

Jim Wilkinson presented the current status of the July-August 2000 and the June 2000 emissions inventory. Since the last MAC meeting, the ARB delivered a new round of on-road mobile source emissions estimates, which corrected the low nighttime emissions estimates and the weekday/weekend emissions estimates problems. Harold Brazil discussed remaining issues between MTC and ARB methodologies in developing VMT estimates for the Bay Area. MTC will continue to resolve these issues, but at

this point they are not expected to dramatically change county-level on-road emission estimates.

The project team conducted numerous quality assurance checks on the emissions estimates. These QA checks were summarized and presented in both graphical and tabular form to the MAC. Mr. Wilkinson also presented a brief history of problems and how (or whether) they were fixed. Mr. Wilkinson identified the following fixed problems and new problems:

- Fixed: biogenic NO emissions for the July-August 2000 episode;
- On-going: commercial marine shipping emissions estimates; and
- On-going: QA on new on-road mobile source emissions estimates for July-August 2000.

Mr. Wilkinson stated that the project team had begun to prepare the future year baseline emissions estimates.

Mr. Wilkinson stated that biogenic NO emissions had been estimated using the BEIGIS datasets from ARB for the July-August 2000 episode. Efforts were underway to prepare the July 1999 and June 2000 biogenic NO emissions estimates.

Mr. Wilkinson stated that the effort to estimate day-specific emissions for commercial marine vessels was still on-going. Bob Bornstein provided a summary of data collected from the Marine Exchange for marine activity in the Bay Area and through to Sacramento and Stockton. A summary report to the MAC is expected that delineates the District's approach for estimating shipping emissions, and possible approaches for improving those estimates if deemed warranted.

There was concern among the MAC members that refinery-related emissions, and in particular flare emissions, were not being correctly treated in the modeling. After a brief discussion about how refinery-related emissions were treated, the project team agreed to conduct an analysis of them and report back to the MAC.

Project Status Summary

Chris Emery discussed status of air quality measurement, meteorological measurement, and model input databases (emissions and meteorology) for all three modeling episodes. A new emissions inventory for July/August 2000 with revised on-road mobile sources will be available for CAMx within days. Meteorological modeling for this episode is basically completed, pending additional analyses of performance and CAMx results. Emissions processing and meteorological modeling for June 2000 has started. Emissions processing for July 1999 has started. A contract amendment to add July 1999 funding has not yet occurred.

A full (June 1 – September 30) CCOS air quality database for inorganic species plus isoprene, formaldehyde, and total methane should be available from CARB in about 1 week; another couple of weeks are needed for hydrocarbon data to be lumped into CB-IV and SAPRC99 species. Data from aircraft should also be available in about 1 week. Wind and temperature data for the July/August 2000 episode at Level “1b” should be available within days. Wind and temperature data for the June 2000 episode at Level “1a” are available now, and Level “1b” is expected in about 1 month.

The project schedule continues to be compressed since emissions processing, meteorological modeling, and CCOS data acquisition continue to be delayed. Extension of the project end date may be necessary.

A quick discussion was held regarding CARB’s version 3 draft definition of sub-regions for air quality (and possibly meteorological) performance evaluation. The latest draft adequately reflects inputs from all Districts to align along topographic and county/district boundaries as much as possible. A suggestion was made to include some limited topographic information on the map to help evaluate basin definitions. In the Bay Area, sub-zones for near-bay, and north/south/east bay areas have been defined by ENVIRON.

Meteorological Modeling

Craig Tremback discussed the status of meteorological modeling and summarized results from the last RAMS run for the July/August episode, which included a very high resolution grid (1 km) over the immediate Bay Area. Performance is quite good and considered at this point to be acceptable for air quality modeling. Effects of grid resolution on wind, temperature, and humidity were discussed. Preliminary runs for the June 2000 episode have begun and look promising. Issues continue to include proper definition of soil moisture because of the unknown distribution of specific irrigated areas, drought status, etc.

Preliminary CAMx Results

Chris Emery presented results from ozone modeling using the latest meteorology from ATMET. Emissions remained the same as the previous runs (no updates were available in time for modeling before this meeting), so the latest run just reflects the effects of new meteorology. The model was run for the 12 and 4 km grids, and also for the 1 km grid using the high resolution meteorology; emissions from the 4-km grid were internally interpolated to the CAMx 1 km grid. The inclusion of the 1-km grid leads to dramatically higher ozone (very large over predictions) in the eastern Bay Area than on the 4-km grid alone. Particularly high ozone was simulated on August 1 and 2, which does not agree with observations. Issues associated with point sources, flaring emissions, and on-road emissions were revealed and discussed. Additional work will carry forth to investigate the possible causes of these ozone over predictions.

--- END ---

Sign-up Sheet
Bay Area Modeling Advisory Committee 3/25/03

Name	Organization	email
Pete Hess	BAAQMD	phess@baaqmd.gov
Chris Emery	ENVIRON	cemery@environcorp.com
Steve Ziman	Chevron Texaco/WSPA	sdzi@chevrontexaco.com
Dave Souten	ENVIRON	dsouten@environcorp.com
David Fairley	BAAQMD	dfairley@baaqmd.gov
Harold Brazil	MTC	hbrazil@mtc.ca.gov
James G. Wilkinson	ENVIRON/Alpine Geophysics	jwilkins@themis.ce.gatech.edu
Amir Fanai	BAAQMD	afanai@baaqmd.gov
Bob Bornstein	ENVIRON/SJSU	pblmodel@hotmail.com
Phil Martien	BAAQMD	pmartien@baaqmd.gov
Steve Soong	BAAQMD	ssoong@baaqmd.gov
Craig Tremback	ATMET	tremback@atmet.com
Glen Long	BAAQMD	glong@baaqmd.gov
Ajith Kaduwela	CARB	akaduwel@arb.ca.gov
By Conference Call:		
John DaMassa	CARB	jdamassa@arb.ca.gov
Vernon Hughes	CARB	vhughes@arb.ca.gov
Bob Nunes	MBUAPCD	bnunes@mbuapcd.org
Bruce Katayama	SMAQMD	bkatayama@airquality.org
Sam Altshuler	PGE/BAAQMD AC	Sam.Altshuler@pge.com
Saffet Tanrikulu	CARB	stanriku@arb.ca.gov
John Holtzclaw	Sierra Club	john.holtzclaw@sierraclub.org
Don Hunsacker	SJVAPCD	
Jean Roggenkamp	BAAQMD	jroggenkamp@baaqmd.gov
Evan Shipp	SJVAPCD	evan.shipp@valleyair.gov