AGENDA

Bay Area Air Quality Management District
Modeling Advisory Committee
For
Development of 2004 Ozone SIP Revision

Date:	October 21, 2003
Time:	1:00 p.m. – 4:00 p.m.
Location:	BAAQMD Offices; 939 Ellis Street; San Francisco; 415-771-6000
	Note: meeting will take place in the 4th floor conference room
Chairman:	Saffet Tanrikulu

The District has set up a conference call-in number for those participants who cannot attend in person:

1-877-807-5706 passcode: 422619

To date we have simulated two ozone episodes. For both episodes we are underestimating ozone. During this MAC meeting we would like to change the format from those previous and initiate a focused discussion on reevaluating modeling inputs to address known and suspected problems that may be contributing to poor model performance. Attached to this agenda are a number of questions intended to help guide our discussion.

1. Welcome

2. Introductions – All

3. Brief Status Report (1:10 – 1:30) – Chris Emery, Saffet Tanrikulu

4. CCAQS Database Corrections and Improvements (1:30 – 2:20) – Saffet Tanrikulu

5. Emissions Inventory (2:20 – 3:30) – Chris Emery, Saffet Tanrikulu

6. Meteorological Inputs (3:30 – 3:55) – Chris Emery, Saffet Tanrikulu

7. Next meeting date and time – (3:55 – 4:00) All

Note: This agenda and other information for the MAC meeting and the project, can be found at the Project Web Site at http://www.environ.org/basip2004; user name: basip2004; password: goldengate.

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Discussion Points and Questions

CCAQS Database Corrections and Improvements – Saffet Tanrikulu

- Problems Identified (Greg O'Brien)
  - What problems have been identified and what is the current status?
- Future Improvements (Greg O'Brien, Vern Hughes)
  - How can we track versions of and updates to the database?
  - What is the status of DRI's QA/QC project?
  - How can we work together more effectively on QA/QC?

Emissions Inventory – Chris Emery, Saffet Tanrikulu

- Biogenics (Jim Wilkinson, Klaus Scott, Vern Hughes)
  - How were Photosynthetically Active Radiation (PAR) estimates generated?
  - How was temperature estimated and how was it applied?
  - Isoprene emission factors may be in error by 50% or more (Geron et. al. [2001] "Isoprene emission capacity for US tree species." AE 35(19):3341-3352). How can current estimates be verified or corrected?
  - How are other biogenic VOC (OVOC) emissions estimated and what is their impact on the overall biogenic inventory?
  - Can an estimate be made of the magnitude of the resulting emissions uncertainty for biogenic NO (BNO), isoprene, monoterpenes, and OVOC?
  - What affect may this have on the ozone prediction results (compared to the remainder of the inventory)?
- On-road Mobile (Jim Wilkinson, Vern Hughes)
  - How are DTIM and EMFAC used to estimate the on-road mobile source emissions for CCOS?
  - How are temperature and RH estimated/processed (from data to gridded to county-level), and what is the impact of using county-wide average temperatures and RH on emissions (and hence air quality) predictions?
  - What about the lack of known traffic congestion during peak periods? What impact do the different peak travel periods across the networks have on air quality predictions?
  - How are weekend/weekday effects accounted for?
  - What is the uncertainty in the seasonal activity of heavy-duty diesel vehicles (HDDV)? What is the uncertainty in emissions of on-road HDDV in general?
  - What are others (such as SJV technical staff) doing to address this issue? How can Dr. Harley's fuel-based inventory estimates be used?
- Non-road Mobile and Area (Jim Wilkinson, Vern Hughes)
  - Was OFF-ROAD used to estimate CA non-road emissions? If so, was a micro-inventory analysis preformed for the SJV (other areas?) to develop

data to drive the model, or were NON-ROAD defaults used? What are the implications of using defaults?
    - How were temperature effects included in NON-ROAD if at all?
    - Is there insufficient non-road/area NOx in the Central Valley, e.g., what about non-road stationary source emissions such as irrigation diesels?
    - Is there general agreement between average summer day area emissions and CCOS area emissions?
- Point Sources (Jim Wilkinson, Vern Hughes, Cheryl Taylor)
    - Did the database start with SARMAP points?
    - How much improved is CCOS over SARMAP?
    - Do we know how many major sources have no original stack info (i.e., they were inferred based on industry type, etc.)?
    - Of those, how much confidence can be placed in their emission rates?
    - How were day-specific emissions included? As replacement emissions or as additional emissions above and beyond the average seasonal day emissions estimates?
    - Is there agreement between average summer day point emissions and CCOS point emissions?
- Fire (Cheryl Taylor, Cyndi Loomis, Chris Emery, Vern Hughes)
    - How can we handle future-year fire emissions? How is WRAP handling this issue?

Meteorological Inputs – Chris Emery, Saffet Tanrikulu

- MM5/CALMET (Bruce Jackson, Vern Hughes)
    - BAAQMD/Environ are still refining meteorological inputs for the July-August 2000 episode. What can we learn from the CARB's MM5/CALMET hybrid approach? Are we comfortable with this approach?