

## **Ozone Working Group - October 28, 2003 Comments and Staff Responses**

1. **Not satisfied with response to question #2 (from August 5 OWG comments and responses). Intent was to get names of private industry clients.**

Response: Air District staff provided the available information to the commenter.

2. **What is the website address for EPA's proposal to find the Bay Area in attainment of the national 1-hour ozone standard?**

Response: [www.epa.gov/region09/air/sfbayoz](http://www.epa.gov/region09/air/sfbayoz)

3. **Given EPA's proposed finding of attainment, what will be included in the Federal and State Plans?**

Response: For the national 1-hour ozone standard, staff will begin preparing a redesignation request, including a maintenance plan. A redesignation request includes: (1) monitoring data demonstrating attainment, (2) a demonstration that air quality improvement is due to permanent, enforceable emission reductions, (3) submittal of a maintenance plan demonstrating the ability to maintain the standard for 10 years, (4) new transportation conformity budgets, and (5) contingency measures. In addition to review and approval of these submittals, EPA must also have granted full approval of previous State Implementation Plan (SIP) submittals, and find that all existing SIP commitments are being implemented.

For the California 1-hour ozone standard staff is preparing an update to the 2000 Clean Air Plan. The update will include (1) an evaluation of our progress toward attaining the California ozone standard, including ozone trends and implementation of control measures, (2) emission inventory projections for ozone precursors, and (3) a control strategy, including all feasible control measures and an implementation schedule. The plan update also will include a discussion of pollutant transport to downwind regions and the Bay Area District's actions to mitigate transport impacts.

Recently, EPA notified the Governor that EPA expects to designate the Bay Area as a nonattainment area for the national 8-hour ozone standard based on monitoring data from 2001, 2002, and 2003. EPA will make final designations in April 2004 and that will trigger additional ozone planning. Much of the work we are doing now will be useful to the 8-hour ozone planning process.

4. **Will there be an attainment demonstration in the State Plan? Commenter believes that an attainment demonstration is necessary for the State Plan.**

Response: No, an attainment demonstration is not a required element in the Clean Air Plan (CAP) for the California 1-hour ozone standard. The CAP is required to include control measures to achieve 5% per year reductions in ozone precursor emissions, or if that is not possible, to adopt and implement all feasible measures on an expeditious schedule.

5. **A number of non-profit groups are trying to get a better understanding of the modeling. It would be helpful to have document that discussed the sensitivity analyses and diagnostic tests. A large number of tests are listed in the modeling protocol – can the District make a commitment that all the sensitivity analyses and diagnostic tests will be carried out and clearly explained? Representatives from non-profits have good technical understanding and could make good use of a user-friendly document explaining the analyses.**

Response: The BAAQMD modeling staff and Environ have been working over the past 6 months to improve the performance of the photochemical model. Peak ozone is currently underestimated. Once we have improved the model performance, we plan to conduct all sensitivity and diagnostic simulations listed in the modeling protocol, and document the results. We have in-house staff capabilities to carry out the simulations. We welcome comments from nonprofit groups and encourage their continued participation in the BAAQMD modeling advisory committee meetings.

6. **Where should one address requests regarding specific sensitivity analyses?**

Response: Requests for the Air District to conduct specific sensitivity analyses in conjunction with the photochemical modeling process should be directed to Saffet Tanrikulu, Research and Modeling Manager, BAAQMD, 939 Ellis Street, San Francisco, CA 94109, [stanrikulu@baaqmd.gov](mailto:stanrikulu@baaqmd.gov), or 415-749-4787.

7. **Commenter would like to acknowledge the outreach efforts that the agencies have been conducted related to the ozone planning process. The community meetings have been very successful.**

Response: Staff concur that the community meetings are an important part of the planning process. Additional community meetings will be held when we have a draft plan for review and comment.

8. **Is BART extension to San Jose considered a TCM? Very concerned about Santa Clara Measure A funds going into something Sierra Club is opposed to.**

Response: BART to San Jose has not been proposed as a TCM by MTC or any group to date. The implementation timeframe would not be consistent with the attainment dates in the federal planning process.

9. Response to question #17 (from the August 5 OWG comments and responses) was not adequately addressed. Would like numerical data on the quantity of pollutants created by each airport. Would like to see thorough, current evaluation of pollutants discharged by airports. How can one get information on toxic pollutants?

Response: Air District staff provided the available information to the commenter.

10. Port of Oakland/Oakland Airport has updated inventory of emissions from airport and information is publicly available (Jim McGrath, Environmental Manager, Port of Oakland).

Response: See Port of Oakland's Supplemental Environmental Impact Report for the Oakland International Airport Development Plan (2003).

11. Despite growing VMT in future years, each BAAQMD Clean Air Plan (CAP) and Ozone Attainment Plan (OAP) shows a strong downward emission trend, based on CARB's EMFAC model which predicts decreases in emissions per mile as a result of anticipated fleet turnover and I&M effectiveness.

But the inventory in each new plan shows that fleet turnover and I/M have not resulted in reductions in emissions as anticipated. For instance, the 1991 CAP predicts the on-road motor vehicle ROG emissions to be down to about 0 in 2001. But the 2001 OAP estimates them to still be 227 T/day in 2001.

The bold numbers in the table below are the "current year" emissions from each Plan (the 1991 emission is interpolated from the 1987 and 1994 emissions since no estimate was given for 1991). Note that the current year emissions don't vary much during the 10 years of Plans: 236, 217, 211, 246 and 227. The "trend lines" in the graph below suggest eternal optimism on CARB's part that isn't justified by real world current year estimates.

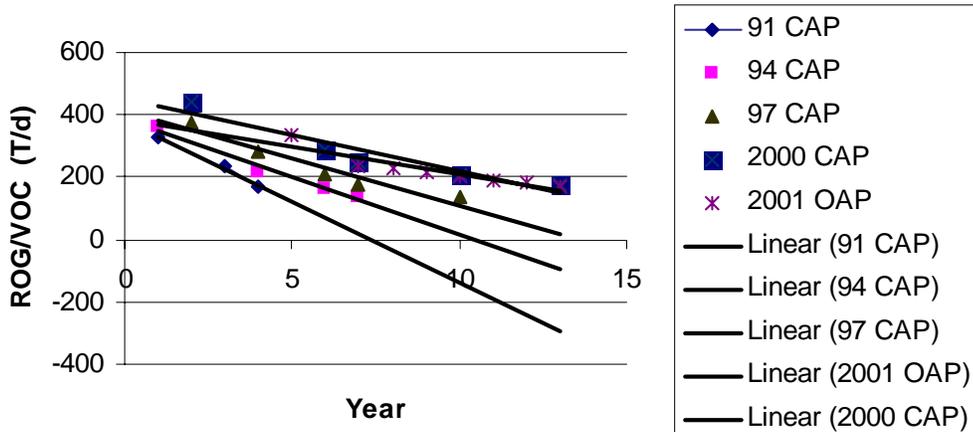
The three regional agencies should address this eternal optimism in EMFAC, and justify why this version of EMFAC will prove more accurate than all the previous versions. Or, if that isn't possible, how will we obtain the needed emission decreases when on-road motor vehicle emissions remain over 200 T/day in 2010 and beyond. (email elaborating on comment made at the October OWG meeting).

### Estimated & Predicted ROG Emissions from On-Road Mobile Sources

Date	91 CAP	94 CAP	97 CAP	2000 CAP	2001 OAP
1987	327	359			
1990			372	440	
1991*	<b>236</b>				
1994	167	<b>217</b>	281		
1995					334
1997		162	<b>211</b>	288	
2000		138	173	<b>246</b>	238
2001					<b>227</b>
2002					214
2003			134	212	202
2004					191
2005					180
2006				178	169

\* 1991 value interpolated from '87 & '94

### Estimated & Predicted ROG Emissions from On-Road Mobile Sources



Response: Each time the regional agencies prepare an ozone plan, we use the most recent inventory of emission sources. For on-road motor vehicle emissions, we use the California Air Resources Board's most up-to-date emissions model (called EMFAC) to estimate future (forecast) and past (backcast) emissions from cars, trucks, buses and all other types of on-road vehicles. The EMFAC model uses motor vehicle activity data from the Metropolitan Transportation Commission and emission factors that result from ARB's research on vehicle types, vehicle conditions, vehicle operating cycles, fuels, etc. As ARB learns more about these factors, they change EMFAC to reflect their better understanding of the factors that influence emission rates.

The commenter compares “current year” ROG emission estimates (bold in table above) from a series of Bay Area ozone plans and concludes that emissions have not declined over the past ten years. The more appropriate comparison is to compare the estimates of emissions for the same year across plans. For instance, if you read across the row for the year 2000 in the table above, the estimates of ROG emissions are 110 tpd\*\*, 138 tpd, 173 tpd, 246 tpd, and 238 tpd, in the 1991 CAP, 1994 CAP, 1997 CAP, 2000 CAP, and 2001 OAP, respectively. What this tells us is that the EMFAC model underpredicted ROG emissions in the 1990s. While the model may still be underpredicting emissions, it reflects the level of emissions better than it did in the past.

Fleet turnover and the I&M program reduce emissions, and thus the emissions trend is downward. Numerous remote sensing, tunnel studies and fuel-based studies have shown that the on-road motor vehicle fleet, particularly the gasoline fleet, is becoming cleaner and staying cleaner longer. In addition, measurements of ambient ROG concentrations at Bay Area monitoring sites show year-by-year percentage decreases almost identical to the decreases shown in the ROG inventories.

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\*\*The 1991 CAP did not project ROG emissions to be 0 tpd in 2000. The 1991 CAP estimate for Year 2000 ROG emissions was 110 tpd (Table 1, page 3 of the 1991 CAP).

**12. Does the graph of emission rates by speed (from TCM Workshop) reflect an urban driving profile?**

Response: Yes. The emission rates are shown by speed. The speed is an average speed for a trip. For example, the graph shows a nitrogen oxide (NOx) emission rate of approximately 1 gram/mile at 35 miles per hour. The emission rate represents a trip with an average speed of 35 miles per hour, including some idling, some travel at speeds slower than 35 m/hr and some travel at speeds higher than 35 m/hr.

**13. Can you provide separate graphs for NOx emission rates by speed for diesel vehicles and for gasoline vehicles?**

Response: We will investigate this request and provide it at the next meeting if possible.

**Comments/Questions on Transportation, Land Use and Air Quality**

**14. Why not list local taxes under Increased Gas Tax?**

Response: It is possible for individual counties to attempt to pass a local gas tax increase (which would require a 2/3 vote). From a practical standpoint, there is still considerable opposition in the Bay Area to raising what some people already consider

as too high gas prices (this is evident in polling), and there is the revenue diversion problem, where residents would likely attempt to buy gas in a neighboring county because it would be cheaper. This latter type of problem would largely, but not entirely, be avoided with a regional gas tax.

**15. Will new strategy regarding Resolution 3434 be retroactive?**

Response: If the commenter is referring to the conditioning of funds for transit expansion based on local jurisdictions having supportive land use plans, as proposed in MTC's Transportation/Land Use Policy Platform, the policy would apply to future expansion projects where MTC would be allocating new funding.

**16. Please visit MTC website to answer questions regarding spending preferences for MTC funds.**

Response: Comment noted.

**17. MTC is doing excellent job of reaching out to communities.**

Response: Comment noted.

**18. HOT lane (high occupancy toll lane) as TCM. (HOT lane not currently TCM for either State or Federal plan)**

Response: HOT lanes are being evaluated as a potential control strategy, and the emission benefit results will be presented in the upcoming TCM evaluation report and discussed with the Ozone Working Group.

### **Control Measure Evaluation Discussion**

**19. Since Aug 5 mtg – Governor has signed bill that would allow toll increase, and related bicycle and pedestrian improvements (Safe Routes to Transit). Should seek a TCM on transit station access that includes bicyclist and pedestrian safety.**

Response: MTC has an existing TCM that applies to bicycle improvements in general. Emission benefit estimates for The Safe Routes to Transit concept will be presented in the upcoming TCM evaluation report and discussed with the Ozone Working Group.

**20. TCM's that require funding or legislative authority can be included in the State Plan.**

Response: The criteria for inclusion in the State Clean Air Plan is all feasible measures, so that a judgment call would need to be made on how feasible certain legislative

strategies would be. Generally, we would consider the history of the proposal and the receptivity of the public and Legislature to some of the ideas proposed.

**21. Conditioning MTC funding has been proposed as a tool in past. (in matrix of TCM's, page 2 of 12). Would like to see re-evaluated.**

Response: MTC will supply a more detailed response as part of the larger set of products related to evaluation of TCMs and TCM-like strategies.

**22. Government agencies contract for or buy off-road and on-road equipment. MTC funding to local jurisdictions should be contingent on the agencies' use of clean diesel heavy-duty vehicles and equipment, including after-market changes, retrofit, fuels and replacement.**

Response: These conditions would normally be established by the project sponsor who contracts for the work. Emission standards for off road construction equipment are established by the California Air Resources Board. Because most of the equipment is diesel powered, the emissions that would be reduced would be those of NOx. The Bay Area continues to need further VOC controls in order to reduce ozone in the most expeditious manner.

**23. Issue of assessing community health impacts is problematic for this planning process. Making objective assessment of neighborhood impacts is ARB responsibility. Should not be part of ozone planning.**

Response: Air District staff believe that part of the evaluation process for regional ozone control measures can include qualitative assessment of the local benefits of controls intended to reduce regional ozone concentrations.

**24. Epidemiological evidence indicates harmful air quality impacts on communities.**

Response: Federal and state agencies sponsor rigorous studies of the health impacts of air pollution. Ambient air quality standards set at the national and state levels are based on careful consideration of the study results. Clearly, air pollution causes public health impacts, and the air pollution control programs throughout the nation are intended to reduce those health impacts. Some communities experience more significant health impacts from air pollution due to the proximity of people (especially children, the elderly, and people with heart or lung diseases) to industrial or commercial sources of air pollution as well as busy highways or other sources of significant vehicle emissions.

**25. Page 5 of 12, suggestion #8 also addresses Commuter Choice and parking cashout programs.**

Response: A number of Bay Area employers do maintain incentive programs for their employees, but do so on a voluntary basis. In general, public agencies cannot require employers to implement trip reduction programs under current state law.

**26. Suggestion #6 – does not include residential Ecopass. Would like to suggest residential Ecopass in exchange for lower parking requirements. (District has funded pilot program for Ecopass in past).**

Response: Parking requirements are set locally. MTC is aware of a larger interest in developing guidance on alternative parking requirements and is considering ways to address this interest.

**27. Require residential Ecopass as a condition of new housing.**

Response: This is a local decision typically related to the need to mitigate impacts that arise through the environmental review process.

**28. Would be helpful to have manual for local agencies to assist them in implementing transit-oriented development.**

Response: Extensive reference material already exists on this topic.

**29. Unlinking purchase of housing from parking. Examples in San Francisco.**

Response: Further information is needed on how such a concept would be implemented, particularly in relation to financial requirements that lenders would normally have for a project.

**30. How to model reduction in emissions resulting from parking cashout programs? (Included in MTC travel model).**

Response: Parking cash out is typically modeled as a fee on parking space. MTC has conducted numerous travel model demand forecasts with assumptions of different parking charges at work sites.

**31. State is projecting large increases in VMT. See a huge need in TCM's that will reduce the growth in VMT. Would like to see a section that addresses this in the State Plan.**

Response: Estimates of future mobile source emissions consistently show declining ozone precursor emissions from mobile sources, even with projected growth in VMT. For example, as shown in the material used at the September 30, 2003 TCM workshop, VMT is projected to increase 16.5% between the 2000 base year and 2010, whereas VOCs from mobile sources are projected to decline by 47%. These estimates are without the Smart Growth land use assumptions. The need to further address particulate matter related issues related to VMT will depend on air quality monitoring

data and the planning requirements that flow from the Bay Area designations, and include a review of all available control strategies.

**32. State legislation would be another way of decoupling parking from housing development.**

Response: Comment noted.

**33. Need a comprehensive TCM plan outlines benefits of long-term measures.**

Response: The State Clean Air Plan is intended to be comprehensive in terms of control strategies addressed. The measures in any plan are intended to help achieve the applicable health standards as expeditiously as possible.

**34. two approaches have been submitted: Reducing trips for residents, encouraging smarter growth for region**

Response: There are many different ways to achieve these outcomes, and many of them are addressed in the evaluation of new control measures and that continuing regional agency work on Smart Growth. Regional planning processes from this point forward will be based on ABAG's adopted Smart Growth projections. Additional implementation ideas for achieving the Smart Growth land use changes continue to be discussed in other technical working groups and committee forums, such as the Regional Agency Coordinating Committee.

**35. increase cost-effective transit for the region**

Response: Comment noted. Cost effectiveness is one of many considerations that go into planning and providing new transit services, including the need to address the mobility needs of those with limited transportation options, local economic benefits, local financial contributions to a project, etc.

**36. BART should charge for transportation, not parking. Bicyclists and pedestrians should receive a reduction in cost to ride.**

Response: The fare policies of individual operators are determined by their Boards. The cost of providing transit service is not decreasing, whereas revenues are. Thus the potential to offer further fare discounts is problematic, at least in the near term.

**37. Owners of housing and commercial developments should have more modest facilities to make room for bicycles.**

Response: Comment noted.

NEXT meeting at 9 am on January 6, 2004, Metrocenter.

