

Metropolitan Washington Air Quality Committee

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TECHNICAL ADVISORY COMMITTEE

Date: September 10, 2004

Time: **10:00 p.m. – 12:00 NOON**

Lunch will be served at 12:00 pm

Place: **COG Board Room, 3rd Floor**

MWCOG, 777 North Capitol St., NE, #300

Washington, DC 20002

Agenda

- 10:00 1. Call to Order and Review of Meeting Summary (July 16, 2004)**
Chairman Dana Kauffman, Fairfax County
- 10:15 2. Ozone Season Update**
Jennifer Desimone, COG/DEP
Sunil Kumar, COG/DEP
- 10:25 3. Mid Course Review: Status Report**
Sunil Kumar, COG/DEP
- 10:35 4. Attainment Modeling: Status Report**
Joan Rohlf, COG/DEP
Sunil Kumar, COG/DEP
- 10:45 5. TPB Conformity Schedule: Update**
Mike Clifford, COG/DTP
- 10:55 6. PM 2.5 Health Effects and Sources**
Jennifer Desimone, COG/DEP
- 11:10 7. EPA Guidance for Renewables and Energy Efficiency Measures**
Jeff King, COG/DEP
- 11:20 8. Voluntary Program/Gasoline Containers**
Jeff King, COG/DEP
- 11:30 9. State Air Agency Report**
- 11:45 10. Other Business**
- 12:00 11. Set Date for Next Meeting and Adjourn: October 8, 2004**

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MWAQC Technical Advisory Committee Meeting Summary July 16, 2004 10:00 am – 12:00 pm COG Board Room

Present:

Kambiz Agazi, Fairfax County
Rick Canizales, Prince William County
Randy Carroll, Maryland Department of Environment
Diane Franks, Maryland Department of Environment
Jeff Harn, Arlington County DES
Matthew Jalali, District of Columbia Department of Transportation
Alex Hekimian, Montgomery County M-NCPPC
Hon. Dana Kauffman, Fairfax County
Maurice Keys, District of Columbia Department of Transportation
Chris Meoli, Virginia Department of Environmental Quality
Jim Ponticello, Virginia Department of Environmental Quality
Mary Richmond, Montgomery County
Julie Ruszczuk, Virginia Department of Transportation
Bill Skrabak, City of Alexandria
Kanti Srikanth, Virginia Department of Transportation
Jim Sydnor, Virginia Department of Environmental Quality
Ram Tangirala, District of Columbia Department of Health

Staff:

Mike Clifford, COG/DTP
Jennifer Desimone, COG/DEP
Stuart Freudberg, COG/DEP
Sunil Kumar, COG/DEP
Beth Lowe, COG/DEP
Eulalie Lucas, COG/DTP
Joan Rohlf, COG/DEP

Observers:

Charlie Baummer, Metropolitan Washington Airports Authority
Tom Biesiadny, Fairfax County Department of Transportation
Julie Crenshaw, Air Quality Public Advisory Committee, Chair
Jeff King, ICF Consulting
Krute Singa, WMATA
Tim Nutter, Northern Virginia Transportation Alliance

1. Call to Order

Chairman Kauffman called the meeting to order at 10:05 a.m. The minutes of the May 14 meeting were approved as amended.

2. Ozone Season Update

Jennifer Desimone reported on the ozone season to date. The region has experienced exceedances of the 1-hour ozone standard on two days this summer, and exceedances of the 8-hour standard on four days. The 1-hour exceedances occurred on July 2 at the Mt. Vernon, Franconia and Alexandria monitors, and on July 3 at the Lewinsville and Ashburn monitors. The 8-hour exceedances occurred on May 11 (six monitors), June 9 (three monitors), July 2 (12 monitors) and July 3 (14 monitors).

Sunil Kumar presented a meteorological analysis of the July 2 and July 3 ozone event. On July 2, little cloud cover and light winds helped build high ozone levels. That ozone remained stagnant. On July 3 the stationary front continued, with conditions similar to July 2. High ozone concentrations were left over from the day before, and limited vertical mixing further contributed to high ozone levels. Back trajectories from July 2 show that the ozone formation was a localized phenomenon. Trajectories from July 3 show winds coming from the New York/Delaware area. Those areas had very low ozone levels that day, further indicating that the phenomenon was local.

Jim Sydnor asked if it would be possible to analyze which power plants were in the back trajectory and whether they have installed emissions controls. NO_x emissions from those plants could have been transported into the region, contributing to local ozone formation. Mr. Kumar indicated that he would try to perform such an analysis. He said the high ozone levels could also have been caused by high vehicle traffic on the holiday weekend.

3. Sketch Planning for 8-Hour Reasonable Further Progress Plan

Joan Rohlf's explained that as part of planning for the 8-hour standard, staff has started a preliminary sketch analysis to determine what the region will need to do in order to meet the 8-hour standard by 2010. Planning requirements for moderate areas are still uncertain pending publication of EPA's Phase II guidance for implementing the 8-hour standard. Significant work will also be required to develop SIP-quality inventories, including obtaining final revisions to the 2002 Periodic Emissions Inventory, obtaining state input for revision of stationary source projection inventories and running mobile source inventories for 2008 and 2010.

Ms. Lowe discussed the results of the sketch planning. Published EPA guidance states that 1-hour nonattainment areas without approved 1-hour attainment demonstrations must submit one of three things by June 15, 2005: an approvable 1-hour attainment demonstration, an early 5% "increment of progress" plan, or an early 8-hour attainment demonstration ensuring that the first RFP will be achieved early. Because the Washington region does not have an approved 1-hour attainment demonstration, it must meet one of these criteria. Preliminary EPA guidance indicates that the complete Severe Area SIPs submitted by the District and Virginia fulfill the first of the three options, so these states have no additional obligations under this requirement. Maryland must either submit a Section 185 fee regulation, thus completing its SIP submittal, or develop and submit a 5% plan. Because attainment modeling is not projected to be complete by June 2005, submittal of an early attainment demonstration is unlikely.

A 5% plan could be VOC-only or could allow substitution of NOx reductions for some or all of the VOC reductions. Control measures included in a 5% plan cannot be national or regional measures and cannot have been included in a SIP as of June 15, 2004. Control measures in a 5% plan would need to be fully implemented by June 15, 2007 and could be used to meet future RFP requirements. Based on the 2002 PEI, a 5% plan for the Maryland would require 9.6 tpd of VOC or 15.2 tpd NOx.

After an approvable 1-hour attainment demonstration or acceptable substitute has been submitted, the region must prepare a reasonable further progress (RFP) demonstration. Because EPA has more latitude in determining the requirements for RFP as opposed to ROP, which is required for serious and above areas, the requirements for an RFP plan have not yet been finalized. However, Chris Cripps of Region III has indicated that a 15% VOC-only reduction plan would almost certainly satisfy an RFP requirement. RFP reductions would need to occur between January 1, 2003 and December 31, 2008, and could include national and regional measures, as well as measures appearing in the region's recently submitted Severe Area SIP. It is possible that forthcoming RFP guidance could allow regions to substitute NOx reductions for some of the required VOC reductions and could require an earlier milestone date, such as December 31, 2007.

To determine whether it would be possible for the region to demonstrate rate of progress with reductions included in existing SIPs, COG staff compiled sketch planning inventories to estimate future year emission reductions. The inventories were not reviewed by state air agencies and are not SIP-quality, but serve as a basis for a ballpark estimate of control measure needs. Significant refinements are needed in order to develop SIP-quality inventories. Namely, the stationary source inventories must be reviewed by the states, the area source inventories must be updated with the Round 6.4 cooperative forecasts, the nonroad inventory must incorporate additional emissions and reductions from portable fuel containers, and the mobile inventories must be run using MOBILE 6.2 emission factors and the updated Travel Demand Model.

The sketch planning analysis shows that the region would be close to demonstrating a 15% VOC reduction from the 2002 baseline in 2007 or 2008 using existing controls. The more NOx that can be substituted for VOC, the more likely the region can demonstrate a 15% reduction using existing control measures.

Kanti Srikanth asked when an RFP plan would be due. Ms. Lowe said EPA indicated it would be due in 2007 along with the attainment demonstration. Mr. Srikanth said that significant work must be done to create SIP-quality mobile inventories, including development of 2008 and 2010 networks. He noted that transportation staff is now busy with the 1-hour conformity demonstration scheduled to be completed in October. It may be late spring before 2008 and 2010 inventories can be completed. He also noted that the region is scheduled to update its vehicle registration data with July 2005 information.

Dana Kauffman said that a 5% reduction would be very difficult to achieve. Diane Franks agreed, noting that the region has largely exhausted available local measures. She said that MDE is waiting for the September implementation guidance to confirm the requirements for 1-hour nonattainment areas. MDE is also continuing to look for opportunities to pass a Section 185 regulation. Mr. Kauffman asked if the region can wait for the September guidance, given a

possible need to submit a plan in June 2005. Ms. Franks said she does not know what the penalty would be if the region fails to meet one of the three requirements for 1-hour nonattainment areas by the June 2005 deadline. She said that EPA has historically regarded Washington as a one-budget region for conformity purposes, but the recent 8-hour guidance allows the region to remove Stafford County from the budget. For that reason, it is possible that EPA would separate the Maryland portion of the Washington region from the mobile budget, and any sanctions for failure to submit could apply only to Maryland.

Alex Hekemian asked how power plants are treated in the inventories. Ms. Lowe replied that as per EPA guidance, plants are assumed to emit at NO_x SIP Call compliant levels, regardless of allowance trading behavior. Ms. Franks clarified that the 2002 base year inventory is an actual emissions inventory reflecting actual emissions. Projection inventories assume NO_x SIP Call levels. Mary Richmond asked what controls have been installed by plants in the Washington region. Ms. Franks replied that while plants in the Baltimore region have installed SCRs, plants in the Maryland portion of the Washington region have not. Mr. Sydnor said that the Possum Point plant in Virginia has significantly reduced its emissions by converting to natural gas. Enforcement action is being taken against the Potomac River plant in Alexandria, which is violating its state operating permit. Mr. Sydnor expressed concern that power plant reductions are not occurring where they are needed. He suggested that the region begin to review the list of possible control measures to determine what is available and possible to implement in the necessary time frame.

Julie Crenshaw suggested that COG staff investigate the effects of not allowing emission trading. Ms. Rohlfs said EPA views emission trading as an integral part of efforts to control regional transport. She said that COG does not have the resources to do that type of analysis, though staff could obtain EPA analysis. She said staff could obtain information on which power plants have installed SCRs and map where the plants are located. She said that information on emissions trading might be available also. Bill Skrabak said that the states should have information on plants within their borders. Ms. Richmond suggested that the region look at multipollutant legislation similar to that passed in North Carolina.

4. Mid-Course Review Requirements

Ms. Rohlfs explained that the Severe Area SIP contained a requirement to conduct a Mid-Course Review (MCR) of progress toward attainment. That review was originally required by the end of 2003, but was delayed because of the litigation. It must be submitted by December 31, 2004. Pennsylvania has done a review that will serve as a good template for the Washington region. Ms. Rohlfs said that the work will not be difficult, especially because staff is currently updating the Air Quality Trends report. Additional data on ozone transport can be obtained from the Ozone Transport Commission and the University of Maryland. Because a weight of evidence demonstration was done in the region's SIP, it is probably not necessary to include one in the MCR. A weight of evidence demonstration would only be necessary if the region cannot meet the 1-hour standard by 2005. Ms. Rohlfs plans to form a working group to address the MCR tasks. The draft MCR should be reviewed by the TAC in October and by MWAQC in November before the states submit it to EPA in December.

Mr. Hekimian asked what impact the recent 1-hour exceedances would have on the MCR. Ms. Rohlfs said she was unsure, as the 2004 ozone season is not yet complete and staff therefore does not have all the data needed for the analysis. Sunil Kumar added that an actual emissions

inventory will not be needed to complete the MCR. It will be acceptable to interpolate between the 2002 and 2005 inventories submitted in the Severe Area SIP.

5. Mobile Emissions Update

EPA has released a new version of the MOBILE model, MOBILE 6.2. This new model will be used for the upcoming conformity determination. Mr. Kumar discussed the differences in emission rates generated by MOBILE 6 and MOBILE 6.2. NO_x and VOC emissions from the two versions are the same, but CO emission rates are lower with MOBILE 6.2. Mike Clifford noted that when this information was presented at the TPB Technical Committee meeting, members asked why emission rates decreased. An EPA Q&A document says EPA testing found that new cars showed additional, unexpected CO reductions. The results of those new tests are reflected in MOBILE 6.2.

Mr. Clifford discussed TPB's schedule for completing this year's conformity determination. Staff is performing parallel analyses to account for uncertainty regarding the Inter-County Connector (ICC). The planning directors are scheduled to finalize revised post-2005 land use forecasts today, and those forecasts will be used in the modeling process. No draft modeling results are available at this point. They are expected in September. Mr. Skrabak asked if inputs are locked in. Mr. Clifford indicated that they are.

6. Briefing on EPA Response to PM 2.5 Designation Recommendations

Ms. Lowe briefed the committee on EPA's process and timeline for designating areas in nonattainment for the fine particulate standard. In February 2004 states submitted recommendations for PM 2.5 nonattainment areas. In the Washington region, the states recommended that counties with monitors showing nonattainment be designated nonattainment for the new standard. EPA also requested detailed information, including population, emission, traffic and commuting patterns and growth data, for each county in the Washington MSA. In June EPA responded to the state recommendations, indicating that it believes the entire Washington 8-hour nonattainment area except for Calvert County should be designated nonattainment for PM 2.5. The states have 120 days to discuss this response with EPA. Final nonattainment designations are expected in November 2004. A SIP must be submitted in 2008 for a 2010 attainment date. This coordinates fairly well with the planning timeline for the 8-hour standard, which is useful because some of the same pollutants contribute to nonattainment of both standards.

Jim Ponticello asked if areas would be given classifications under the PM 2.5 standard. Ms. Lowe said EPA has indicated that it will classify all areas under Subpart 1, the portion of the Clean Air Act used to classify "Basic" nonattainment areas under the 8-hour standard. Areas designated nonattainment under Subpart 1 do not receive typical classifications such as marginal, moderate, serious or severe, and the requirements for Subpart 1 nonattainment areas are less prescriptive.

Alex Hekimian asked if PM levels can be forecasted. Ms. Lowe replied that PM levels are forecast daily as part of the summer ozone forecasting effort. Ram Tangirala added that the Washington PM forecast is coordinated through COG in the summer and through MARAMA during the rest of the year.

Mr. Kauffman asked whether the list of PM 2.5 control measures overlaps with the list of ozone

controls. Ms. Rohlf said that many of the measures submitted for the Severe Area SIP will also address PM levels. Mr. Skrabak suggested that staff also gather data on power plant emissions contributing to fine particle levels. Mr. Sydnor noted that the problem for fine particles is the annual standard. The region has never exceeded the maximum 24-hour average. He said that 80% of the PM fine problem is carbon generated by combustion sources. Whether that carbon is produced locally or transported is unclear. All plants in the area have good particulate controls.

Kambiz Agazi asked if use of ultra-low sulfur diesel (ULSD) would reduce PM. Mr. Sydnor said it would, but it would not be reducing part of the 80%. He said the carbon will be more difficult to develop control strategies for. Ms. Franks said that she has seen data for the mid-Atlantic indicating that sulfates are 40% of the problem, and carbon is not a big factor. Carbon, however, may have more severe health impacts. Ms. Rohlf said that she has a presentation that discusses the components of PM fine pollution in the area.

7. Briefing on EPA's 8-Hour Conformity Guidance

Ms. Lowe briefed the committee on the timeline and tests for complying with the new 8-hour conformity requirements. Between June 15, 2004 and June 15, 2005, the region must maintain conformity for the 1-hour standard and have the first 8-hour conformity approved by FHWA/FTA. The interim test for the Washington region will be some form of the 1-hour budget. The region can either demonstrate conformity for the entire 1-hour nonattainment area using the existing 1-hour budget or change the budget to reflect the 8-hour nonattainment area. If the region chooses the latter, it would remove Stafford County's emissions from the 1-hour budget and demonstrate conformity for the 8-hour nonattainment area only. The region is in the midst of an interagency consultation process to determine which option is most appropriate. The interim test will be used until the region establishes an 8-hour budget. A budget could be established as part of a 5% "Early Reduction" SIP, a 2008 RFP SIP and/or a 2010 Attainment SIP.

The first PM 2.5 conformity determination must be completed by February 2006. The region can choose between two tests: build/no build and less-than-baseline. Additional guidance on PM 2.5 conformity will be published later.

Mr. Sydnor asked Mr. Clifford if he has a preference regarding the budget used for the 8-hour interim test. Mr. Clifford indicated that he prefers to use the existing 1-hour budget and evaluation area because adjusting the evaluation area will require additional staff work. Mr. Srikanth noted that using the 1-hour budget may actually be more stringent, because Stafford County is one of the fastest growing counties in the region.

8. Status Report on Implementation of Voluntary Measures

Ms. Lowe said that MDOT completed very successful gas can and lawnmower exchange programs in early June. Virginia jurisdictions have been meeting by telephone to coordinate details of their exchange programs, including procurement and disposal. Cans purchased for county and city employees in Virginia must meet CARB, OSHA and NFPA 30 requirements. Only one can has been identified so far as meeting all three. Staff is currently investigating whether all fuel containers sold in Virginia must meet NFPA 30 requirements. Mary Richmond said that in Maryland, only commercial cans must be NFPA 30 compliant. Mr. Sydnor said that he is also very concerned about reports from Fairfax County that safety testing of Scepter cans has resulted in deformity and expulsion of gasoline. He is concerned about the public safety impacts of promoting a gas can exchange. Ms. Richmond said that she has received no

complaints about the Blitz cans her agency has distributed.

9. State Air Agency Report

Ms. Franks reported for Maryland. Maryland is continuing to work on its comments on the CAIR rule supplemental rulemaking and is changing its ozone standard regulations to reflect the new 8-hour standard.

Mr. Tangirala reported for the District. He said that Ted Gordon has left the Department of Health, and he expects a replacement to be identified soon.

Mr. Sydnor reported for Virginia. He said the state realized about \$11 million from its sale of NSR allowances. The AIM rule is under attack, with a lawsuit pending in the District Court in Richmond. The paint association has petitioned OMB about the legality of approving the rule as submitted in the SIP. It is unclear what consequences that may have.

10. Other Business

Mr. Srikanth introduced Julie Ruszczuk, a new transportation planner with VDOT. Ms. Lowe will be leaving COG next week to attend graduate school.

Ms. Rohlfs noted that EPA notified states of its completeness and incompleteness determinations on the Severe Area SIPs in May and has started to approve parts of the SIPs. Approvals of a few state regulations have been published.

On July 19, Sierra Club filed a motion to direct EPA to comply with a court injunction to act on the Phase II SIPs that the states have withdrawn. Sierra Club is also petitioning the EPA Administrator to reconsider the Phase I 8-Hour Implementation Rulemaking, arguing that the rule does not provide enough protection against backsliding.

11. Set Date for Next Meeting and Adjourn

The TAC will meet next on September 10, 2004 from 10 a.m. to 12 p.m. There being no further business, the meeting was adjourned at 11:55 p.m.