

Metropolitan Washington Air Quality Committee

Suite 300, 777 North Capitol Street, N.E. . Washington, D.C. 20002-4239 . 202-962-3358 . Fax: 202-962-3203

TECHNICAL ADVISORY COMMITTEE

Date: April 14, 2006

Time: 10 am to 12 pm

Place: Conference Call (or DEP Conference Room, 3rd Floor)

Call-In Number: 888-898-8635

Passcode: 774715

DRAFT Agenda

- 10:00 1. Call to Order and Review of Meeting Summary (March 10, 2006)**
Chairman Jim Sydnor, Virginia Department of Environmental Quality
- 10:10 2. Attainment Modeling Subcommittee: Update**
Tom Ballou, VDEQ, will report on attainment modeling.
- 10:25 3. Control Workgroup: Report on Strategy for Attainment**
Jeff King, COG/DEP, will discuss control strategy information sent to the Attainment Subcommittee.
- 10:35 4. Emissions Inventory: Update**
Brian Hug, MDE, will discuss the agreed-to emission inventory items and the items that are outstanding for the 2008 and 2009 inventories.
- 10:45 5. Healthy Air Act & MD Clean Power Rule**
Tad Aburn, MDE, will report on the final actions of the Maryland Legislature and the effect of MD Clean Power Rule.
- 11:00 6. Conformity Subcommittee**
Stan Tracey, Chair, will discuss the Conformity Subcommittee call on April 11 and the states' final decisions on mobile inputs to the SIP inventories for 2008 and 2009.
- 11:15 7. Preliminary Reasonable Further Progresss (RFP) Calculations**
Sunil Kumar will present preliminary RFP calculations for 2008 as agreed by the states.
- 11:30 8. Local Government Initiatives Subcommittee: Update**
Mary Richmond, Montgomery County, will provide an update on the activities of the Local Government Initiatives Subcommittee.
- 11:40 9. State and Local Air Agency Report**
- 11:50 10. Set Date for Next Meeting, Future Agenda Items, Adjourn:**
Next TAC Meeting: May 12, 2006

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**MWAQC Technical Advisory Committee
Meeting Summary
March 10, 2006 10am to 2pm
COG Board Room**

Present:

Tad Aburn, Maryland Department of Environment
Tom Ballou, Virginia Department of Environmental Quality
Randy Carroll, Maryland Department of Environment
Deirdre Elvis-Peterson, District of Columbia Department of Health
Jeff Harn, Arlington County Department of Environmental Services
Maurice Keys, District of Columbia Department of Transportation
Mike Kiss, Virginia Department of Environmental Quality
Sonya Lewis-Cheatham, Virginia Department of Environmental Quality
Bruce McGranahan, Loudoun County Department of Planning
Doris McLeod, Virginia Department of Environmental Quality
Jim Ponticello, Virginia Department of Transportation (by teleconference)
Mary Richmond, Montgomery County Department of Environmental Protection
Howard Simons, Maryland Department of Transportation
Bill Skrabak, City of Alexandria
Joanne Sorenson, Virginia Department of Transportation
Kanti Srikanth, Virginia Department of Transportation
Jim Sydnor, Virginia Department of Environmental Quality
Ram Tangirala, District of Columbia Department of Health
Julie Thomas, National Park Service (by teleconference)
Didian Tsongwain, Prince George's County Department of Environmental Resources
Stanley Tracey, District of Columbia Department of Health
Flint Webb, Fairfax County Federation of Citizen's Associations
Carl Winstead, Fairfax County Department of Transportation

Staff:

Mike Clifford, COG/DTP
Jeff King, COG/DEP
Sunil Kumar, COG/DEP
Eulalie Lucas, COG/DTP
George Nichols, COG/DEP
Joan Rohlfs, COG/DEP

Observers:

Charley Baummer, Metropolitan Washington Airports Authority
Julie Crenshaw, AQPAC
Debra Jacobson, George Washington University
Gary Koerber, Department of Defense REC Region III
Bill Orleans, Prince George's County ACT
Walt Seedlock, Metropolitan Washington Airports Authority
Sara Tomlinson, Baltimore Metropolitan Council

1. Call to Order and Review of Meeting Summary (February 10, 2006). Mr. Sydnor called the meeting to order at 10:07. The minutes of the February 10, 2006 meeting were approved with no changes. In the meeting summary it was noted that Jim Sydnor said that the new vehicle 4-year I/M exemption would begin in July 2006. Subsequently, Virginia has changed the date. The exemption will become effective when EPA approves the 8-hour ozone SIP.

2. Attainment Modeling: Report

Tom Ballou presented preliminary attainment modeling results using the EPA -approved CMAQ model. The goal of attainment modeling is to evaluate strategies that may enable the region to attain the 8-hour ozone standard. Weight of evidence will also be required as part of the attainment demonstration.

The OTC has completed its 2009 future base case model runs. In addition, Virginia DEQ has completed 2 adjusted future base case scenarios. OTC is modeling the entire ozone season. The Virginia DEQ runs were for June 6 to August 16 to shorten run times. The DEQ time period does capture all of the major meteorological conditions affecting pollution episodes.

The OTC 2009 base case runs were based in part on the EPA Integrated Planning Model (IPM) projections. These OTC runs did not capture all of the EGU controls known or expected in Northern Virginia. The runs also didn't capture the OTC VOC model rules for Northern Virginia.

The Virginia DEQ adjusted case #1 assumed no new EGU controls. Emissions for 2009 were derived by applying a growth rate to 2002 emissions. The results of this scenario can be compared to the OTC 2009 base case results to assess the range of benefits of the anticipated EGU controls under CAIR. The Virginia DEQ adjusted case #2 assumed new EGU controls as a result of phase II of the NOx SIP call, the Maryland Clean Power Rule, and the D.C. and Virginia CAIR rules. Emissions in adjusted case #2 were higher than emissions in the OTC future base case because the EPA projections of EGU controls were less conservative than the state-level assessment.

Ram Tangirala asked Tom Ballou to check the VOC reduction estimates for the OTC VOC rules in Northern Virginia because the 6 ton value currently applied by DEQ for modeling purposes may be too low. Tom Ballou confirmed that the reductions for the District and Maryland were included in the future base case runs.

Mike Kiss presented the modeling results in terms of impact on Design Values for the monitors in the region. He presented results for the OTC future base case and the Virginia DEQ adjusted case runs. A comparison of results for the full season and the June 6 to August 16 runs indicates that the shortened runs provide results that are comparable to the full season. All of the 2009 future case runs indicate that most of the monitors in the region will have Design Values below the 85 ppb threshold, but that there will still be several monitors with modeled exceedances of the NAAQS (e.g., Arlington, Fairfax, and Prince George's Equestrian Center monitors). Future control case scenarios need to be developed and may have to be evaluated several times as part of an iterative process to identify the most effective control strategy.

Mike Kiss presented results of several sensitivity analyses conducted as part of the ASIP process. Results suggest that significant additional reductions of emissions from low-level NO_x sources may have the greatest impact on reducing ozone concentrations in the region. Air quality benefits are further enhanced if a larger region adopts such a low-level NO_x emission reduction strategy. The scenario with the greatest influence on reducing the modeled Design Values assumed a 30 percent reduction in low-level NO_x off the 2009 ASIP future base case scenario. In this case, the greatest impact on modeled Design Values was approximately -4 ppb at the Arlington monitor. By comparison, a 30 percent decrease in low-level VOC sources resulted in reductions of the modeled Design Value at the Arlington monitor of approximately -1 ppb.

ASIP has also modeled Design Values for the Washington region for PM_{2.5}. Preliminary results suggest that the On-the-Books and On-the-Way (OTB/OTW) measures may enable the region to attain the standard by 2010.

Mike Kiss and Jim Sydnor said that the Attainment Modeling Subcommittee will need to consider developing an approach for handling weight of evidence. EPA may place more emphasis on weight of evidence in the 8-hour ozone SIP. The OTC is developing recommendations that should be considered.

In response to a question from Flint Webb, Mike Kiss said that the final modeling runs will cover the full ozone season. In response to a question from Kanti Srikanth, Mike Kiss said that the current modeling results suggest that the region may not be able to demonstrate attainment in 2009 with existing OTB/OTW measures. The region may have to adopt new measures or use weight of evidence. Tad Aburn said that the results are positive and show that the existing controls will be effective at moving the region closer to attainment. The remaining reductions may be more difficult to achieve.

In response to questions about the status of point, non-road, and mobile source inventories, Tom Ballou said that the modeling inventories will need to be reconciled with the local inventory numbers before the final modeling runs.

Tom Ballou said that the OTC and adjusted case scenario provide a range of possible EGU benefits, not simply the best case control scenario. The current results do not include consideration of any potential new OTC measures.

He said that the modeling does not assume trading of EGU emission allowances. He said that the EPA modeling results based on the Integrated Planning Model (IPM) have some problems that may need to be addressed. For instance, the EPA projections did not reflect controls known to have been installed on certain Virginia EGUs.

Ram Tangirala presented a preliminary draft Relative Reduction Factor analysis that could potentially be used to help identify control strategies. The results suggest that an additional 40 to 86 tons of NO_x reductions or 11 to 24 tons of VOC reductions may be needed to demonstrate attainment.

Flint Webb said that the modeling suggests that NO_x reductions may have more influence on ozone reductions, but that most of the proposed new priority measures provide VOC reductions.

Tad Aburn provided a brief update on the modeling efforts being handled by the University of Maryland (UMD). He said that UMD completed MM5 meteorological modeling for the summer of 2002 and developed a new near-surface modeling scheme which proved itself with greatly improved simulations of winds and temperatures. UMD also completed preliminary 2002 base case and 2009 OTB/OTW CAIR base case modeling, and prepared preliminary plots of the ozone modeling results.

Tad Aburn said that the MANE-VU annual PM_{2.5} modeling effort is being completed by regional modeling centers: UMD (MD), ORC (NJ), NYSDEC, VADEQ, and NESCAUM. UMD completed the 2002 and 2009 annual PM_{2.5} simulation periods. UMD also prepared preliminary plots for each of the following compounds: PM_{2.5}, elemental carbon, sulfate, nitrate, crustal material, organic carbon, and ammonium. UMD completed modeling of three scenarios using a mid-August 2002 ozone and PM_{2.5} episode in support of the Clean Power Rule (CPR). In the future, UMD will handle CMAQ runs for the attainment SIP and will continue to coordinate with other modeling centers. UMD will develop techniques to use speciated changes to determine annual impacts. PM_{2.5} is composed of many different chemical compounds. In the present case, states have simply used the changes in mass concentrations. In the future, states may determine the changes by individual compounds and apply those to similar measurements to better determine the annual impact of these emissions reductions.

3. Emissions Inventory: Update

Sunil Kumar discussed the status of emissions inventories for the 8-hour ozone SIP. He said that emission inventories for 2002, 2008, and 2009 are still being finalized. Outstanding issues include updating vehicle registration data, addressing the NO_x rebuild effect input, obtaining controlled emissions for power plants, developing nonroad emissions using EPA's new Nonroad model, and updating area source estimates for specific SCCs.

In response to a questions, Sunil Kumar said that the 2002 values for point sources are based on actual emissions. The 2002 mobile sector emissions will be based on 2002 vehicle registration data. He said that 2009 values are not final and will change based on 2005 vehicle registration data and other inputs agreed to by the states. He confirmed that the point source estimates for 2002 will be based on actual emissions. Point sources emission estimates for 2009 currently presented are based on the impact of the NO_x SIP call only and do not reflect potential reductions anticipated from CAIR. Howard Simons, Ram Tangirala, and Jim Sydnor asked that the currently presented 2009 values be checked to determine if and how the NO_x SIP call impacts were modeled for each state. Doris McLeod said that for Virginia, staff were able to accurately assess the controls that have been installed on units as a results of the NO_x SIP call. She said that no SCRs were installed on Maryland units in the DC nonattainment area under the NO_x SIP call. Maryland 2009 point source emission estimates were based on applying a growth rate to the 2002 values with no controls from the Clean Power Rule or CAIR.

4. Ozone Transport Commission: Update

Tad Aburn, MDE, discussed recent actions by the OTC. The OTC has recently taken action on their priorities for regional measures. The OTC is advancing Phase II rules affecting consumer products and architectural and industrial maintenance coatings. Rules covering these sectors were promulgated by Maryland, DC and Virginia as part of the 1-hour ozone SIP. CARB has recently added new categories to their rules for these sectors that may be feasible to implement

in the OTR. The OTC is also supporting an initiative to reprogram or reflash emission control defeat devices in certain heavy duty trucks. The OTC generally supports diesel emission reduction efforts through the Mid-Atlantic Diesel Collaborative. The OTC has listed another 15 or so measures where further work is required before model rules can be developed.

Tad Aburn said that the OTC is also still considering a regional program to control emissions from power plants that would have requirements that are more stringent than CAIR. The initiative is no longer being called CAIR Plus, now it is called the multipollutant straw proposal. He said the OTC is also considering a broader regional fuels strategy. Tad Aburn said that the OTC is also now working with the midwest states as part of a State Collaborative. The goal is to work to develop super-regional strategies to reduce emissions and improve air quality.

Regarding the impact that the preliminary better-than-expected modeling results may have on interest in adopting new measures such as ICI boiler standards and CAIR plus, Tad Aburn said that the process will involve adopting the easiest to implement measures first and then moving to the harder options. ICI boilers may be hard to regulate. A regional fuels program and a multi-pollutant initiative also may be challenging programs to adopt.

Regarding the potential limited air quality benefits of upwind VOC reduction strategies, Tad Aburn said that this may not always be the case, especially considering the potential for the Low Level Jet to transport ozone precursors.

5. Control Measures

Jeff King discussed control measures development, including reasonably available control measures (RACM) and priority measures for the 8-hour ozone SIP.

Jeff King provided an update on the process to evaluate RACM for the region. A RACM determination is not the same as deciding which measure to implement as part of the SIP and attainment strategy. The goal of RACM is to ensure that the region is adopting measures as expeditiously as possible and to assess whether there are additional measures that could be adopted to advance the attainment date. The workgroup developed criteria to screen all of the measures on the master list to determine whether any could be considered RACM. Using the criteria and the master list, the control measures workgroup is meeting on a weekly basis to agree to the evaluation for each measure. The workgroup has met 4 times and has completed the first cut at the evaluation for stationary, area, and nonroad sectors, and has completed one third of the mobile list. The next call to advance the work for the mobile sector is scheduled for March 16.

Jeff King also discussed potential priority measures for the DC region. He provided three lists: the priority list developed in 2005, the associated innovative measures bundle, and a summary of recent OTC actions. He quickly reviewed the OTC actions from the recent meeting, as outlined by Tad Aburn under Item 4. Jeff King said that one goal for the meeting today is to review the priority list for the region, and considering the preliminary attainment modeling results and the OTC position, attempt to reach a decision on how to proceed in selecting measures for further development.

Ram Tangirala asked if the benefits of the home heating oil standards measure could be modeled. Tom Ballou said that additional information would be needed. He also said that

decisions are needed on whether to model the impact of measures in the DC nonattainment area only or to also include reductions across the OTR.

Doris McLeod suggested that post-2009 emission reduction benefits from the nonroad sector be examined in case the region decides to request an extension of the attainment date. Ram Tangirala suggested that it may be inappropriate to investigate such an option at this time. It would be prudent to apply weight of evidence rather than request an extension. Jim Sydnor said that it is just an option to be considered. Flint Webb said that from a citizen's perspective, actual modeling would be better than a weight of evidence approach in demonstrating attainment. The public may also push back if the region decided to request an extension. Howard Simons said that he would need to evaluate several factors including overall compliance costs before making a decision to request an extension. Flint Webb said that evaluating the benefits of measures in 2010 could also help with a weight of evidence analysis.

Mary Richmond asked why there was a 40 tpd difference between the OTC and local emission estimates for power plants. Doris McLeod said that it is because the OTC assumed more controls on Maryland power plants than are predicted by MDE. The OTC also assumed that the Possum Point would reduce emissions from 19 tpd to 0.3 tpd and that the Potomac River Power Plant would shut down two units. Ram Tangirala said that while there may be some inconsistencies between the emission inventories, the model is working well. Doris McLeod said that it will be important to resolve the issues with the EPA IPM projections as part of the attainment modeling efforts.

The group discussed the OTC schedule, recognizing that the MWAQC process may be 3-6 months ahead of the OTC process. Tad Aburn said that the attainment plan is not necessarily directly linked to the OTC efforts. Ram Tangirala said that commitments will be needed. Jim Sydnor said that to have an approvable attainment plan, the region must have adopted regulations and the sources must have time to comply. Tad Aburn said that not all of the OTC measures may be needed for this region, but that it may be important for the DC region to adopt measures to help downwind states comply. Flint Webb said that the preliminary modeling results suggest that the region may not be able to attain by adopting only local measures. Tad Aburn said that by implementing only the OTB/OTW measures, the region will nearly attain. JoAnne Sorenson said that it may be very difficult to achieve the remaining reductions in ozone concentrations needed to attain. Kanti Srikanth said that it will be important to relay to MWAQC that the TAC still believes that additional control measures will need to be adopted for the region to attain the standard.

In terms of next steps, the group agreed that it may be important to model the benefits of all of the current priority measures. Jim Sydnor asked that the control measures workgroup meet to decide which measures are feasible and then advance that information to the Attainment Modeling Subcommittee.

6. Comments on Draft TPB Work Scope for Conformity

Ram Tangirala presented a draft comment letter on TPB's draft conformity scope of work and schedule. The Conformity Subcommittee met on March 7, 2006 to review a draft letter. The letter supports the proposed TPB scope of work for the 2006 CLRP and 2007-2012 TIP. The letter was approved by the subcommittee for recommendation to TAC. The subcommittee also

agreed to hold a standing monthly call on the Tuesday following the TPB Technical Committee meeting. The letter was approved for recommendation to MWAQC.

7. MWAQC FY07 Work Program and Budget

Joan Rohlfs presented the MWAQC budget for 2007 for recommendation to MWAQC. She summarized the proposed work tasks, including SIP development, emission inventory development, attainment modeling coordination, local measures support, transportation conformity, public participation, and committee support. The scope also proposes a study of non-road equipment inventories. She reviewed the proposed budget for each of the tasks as well as the allocation of contributions from state and local governments.

In response to questions, Joan Rohlfs said that the state DOT contribution is provided through the TPB UPWP so is not billed directly to the state DOT. Regarding the state contribution, she said that the change in the state air agency contributions results from a change in population. Howard Simons asked why the local budget is higher. Joan Rohlfs said it is because of the proposed survey of nonroad construction equipment, which will be funded by COG DTP. Jim Sydnor asked about PM deliverables. Joan Rohlfs said that the work program does not propose to complete the PM SIP. The major deliverable will be the PM emission inventory. Ram Tangirala said that the work program reflects changes in participating jurisdictions given Stafford County is no longer part of the nonattainment area.

The proposed scope of work and budget were approved for recommendation to MWAQC.

8. Draft SIP Schedule

Joan Rohlfs discussed the draft SIP schedule. She said that emission inventory development is taking longer than expected so the schedule needs to be revised. Jim Sydnor said that the final 2009 inventories and estimates of emission reduction requirements should be completed by May. Mike Kiss said that modeling of future control scenarios should proceed through early summer. Joan Rohlfs said that work on developing weight of evidence will continue through August. Jim Sydnor and Ram Tangirala said that the draft SIP will not be available in June. Joan Rohlfs said that the SIP should go to MWAQC in October, with a public comment period in October/November, and approval for submittal to IAQC in December/January. Joan Rohlfs said that the region should know if state legislatures will need to delegate new authority by September. New mobile budgets should be developed by June through August.

9. Local Government Initiatives Subcommittee: Update

Mary Richmond provided an update on the activities of the Local Government Initiatives Subcommittee. She said that committee held its first call. Local jurisdictions will begin to collect and provide information on air quality programs, including information on costs and whether any associated contract mechanisms can be bridged. The states agreed to help develop methodologies to estimate potential SIP credits for local programs.

10. State and Local Air Agency Report

There were no reports from the state or local air agencies.

11. Set Date for Next Meeting, Future Agenda Items, Adjourn: Next TAC Meeting: April 14, 2006.