MWAQC Technical Advisory Committee
Meeting Summary
March 13, 2012 10:00 to 12:00
COG Board Room, 3rd Floor

Present:
Tad Aburn, Maryland Dept. of the Environment (phone)
Tom Ballou, Virginia Department of Environmental Quality
Cecily Beall, District Department of the Environment
Randy Carroll, Maryland Department of the Environment
Austina Casey, District Department of Transportation
Jessica Daniels, District Department of the Environment
Diane Franks, Maryland Department of the Environment
Andrew Gayne, Marine Base Quantico
Barbara Hardy, Fairfax County Department of Health (phone)
Brian Hug, Maryland Department of the Environment
Maurice Keys, District Department of Transportation
Calvin Lam, Fairfax County
Sonya Lewis-Cheatham, Virginia Department of Environmental Quality
Doris McLeod, Virginia Department of Environmental Quality
Jim Ponticello, Virginia Department of Transportation
Ana Prados, Fairfax County Federation of Citizen's Associations
Howard Simons, Maryland Department of Transportation
Bill Skrabak, City of Alexandria
Ram Tangirala, District Department of the Environment
Khoa Tran, City of Alexandria
Christopher Voigt, Virginia Department of Transportation (teleconference)

Staff:
Amanda Campbell COG/DEP
Anant Choudhary, COG/DTP
Elena Constantine, COG/DTP
Yu Gao, COG/DTP
Eulalie Lucas, COG/DTP
Ron Kirby, COG/DTP
Sunil Kumar, COG/DEP
Jane Posey, COG/DTP
Joan Rohlfs, COG/DEP
Daivamani Sivasailam, CPG/DTP
Dusan Vuksan, COG/DTP

Others:
Sara Tomlinson, Baltimore Metropolitan Council (phone)

1. Call to Order and Review of Meeting Summary (February 16, 2012)
The February 16, 2012 Meeting Summary was approved with no changes.

2. Motor Vehicle Emission Budgets and Safety Margins
Tad Aburn, MDE, presented MDE's view in opposition to the inclusion of a safety margin above projected motor vehicle emissions budgets for 2040. Several monitoring stations are exceeding ozone limits in the mid-Atlantic region, and one of the most problematic monitoring stations is located in Edgewood, MD near the Chesapeake Bay. According to University of Maryland meteorological studies, the Edgewood, MD monitor fails largely due to mobile sources originating in the Washington region and Baltimore, MD, with the Washington region responsible for about two times as much mobile emissions as Baltimore. Mr. Aburn said a separate state of the art modeling study showed that further NO_x reductions from a variety of sources including a combination of strict federal and local controls will be needed to achieve the 75 ppb ozone standard at regional monitors by 2015 – 2018; the TPB Margin of Safety proposal would not result in enough emissions reductions.

Mr. Aburn recommended lowering the NO_x emissions limit by 10% to create a buffer against impending tightening of standards and modeling and policy uncertainties. He recommends re-opening the SIP to amend the budgets. In response to a question, Mr. Aburn said that emissions from the DC region cannot be tagged and linked to specific sources.

3. $PM_{2.5}$ Redesignation Request and Maintenance Plan
Elena Constantine, COG/DTP, explained that states are requesting redesignation to attainment status, with a Maintenance Plan showing compliance for all sources of emissions (Point, Area, Non-Road, On-Road) for the milestone years 2002, 2007, 2017, 2025. Emissions projections for the 2040 Constrained Long Range Transportation Plan (CLRP) were also calculated to gauge future attainment status. Emissions are projected using TPB travel demand forecasting model, 2011 CLRP, and the new MOVES (2010a) emissions model.

Mobile source emissions inventories and model projections for $PM_{2.5}$ and Precursor NO_x reveal a declining trend (NO_x emissions declining by 70% and $PM_{2.5}$ emissions declining by 62%) between milestone intervals except 2040, which exhibits a slight emissions uptick. Models show that motor vehicle emissions decline much faster than any other source type between 2007 (Maintenance Level) and 2025.

Transportation conformity regulations allow states to set a motor vehicle emissions budget higher than the projected inventory levels, referred to as a 'safety margin', if there are compelling reasons, and if overall maintenance requirements are met. A 10% or 15% safety margin added to 2017 and 2025 Mobile Emissions Inventories would ensure a continued declining trend. Once motor vehicle emissions for precursor NO_x and primary $PM_{2.5}$ are defined in the Maintenance Plan and approved by the EPA, in order to demonstrate conformity, TPB will be required to demonstrate that total projected emissions from motor vehicles are less than or equal to the budgets set for years 2017 and 2025. During a conformity lapse period, no new transit or highway projects could move forward.

Key considerations include uncertainties stemming from future vehicle fleet mix projections, new versions of MOVES models, and the limited ability of Transportation Emissions Reductions Measures (TERMS) to reduce mobile emissions. The TPB recommends setting a safety margin for NO_x and $PM_{2.5}$ of 20% in 2017, and 30% in 2025, accounting for about 2% of the total emissions budgets from all sources. In response to inquiries, Ms. Constantine explained that the slight rise in projected emissions is caused by a combination of factors, including brake wear, tire wear, and natural growth based on the cooperative land use forecast.

Ms. Constantine clarified that Moves model 2010b is still in the vetting stage, and differences between 2010b and 2010a are unknown, except that it has shorter run times. Committee members expressed concern about the ability to maintain conformity in light of potential model changes and tighter ozone

standards. Ms. Constantine responded that TPB's work aims to remain consistent with tools and inventories as they currently stand in order to expeditiously move the maintenance plan forward.

During discussion, one member requested that model emission reductions be allocated by state in COG staff's presented charts.

Ram Tangirala from the District Department of the Environment (DDOE) presented DDOE's safety margin compromise proposal to increase the $PM_{2.5}$ budget by a smaller margin (1.25%) in exchange for a proportionate decrease in the NO_x budget (1.25%) (see memo to DDOT in documents). DDOE was also open to discussing the possibility of a $PM_{2.5}$ margin of safety in the 2017 budget by using the same approach described above if any conformity issue comes to the fore for analysis years 2018 thru 2024.

Jim Ponticello said that VDOT does not support DDOE's proposal. He elaborated that federal regulations are cost effective compared to TERMS, and that VDOT supports further reductions. VDOT is not opposed to a safety margin that would guard against future uncertainties that are not under the state's control.

Doris McLeod, VA DEQ, recommended closely analyzing the most cost-effective means of utilizing taxpayer funds and meeting the standards while considering measures' health benefits. Ms. McLeod noted the issue of timing, that a new mobile emissions update might not be feasible to produce in 24 months.

Maurice Keys said that DDOT is not opposed to a safety margin, but that the costs could be inefficient, and amending the SIP would be time-consuming.

Members agreed on the need to move the maintenance plan forward and not jeopardize transportation project funding, but disagreed on the direction and amount of a margin of safety. Several members emphasized the uncertainties involved in the implementation of TERMS, since many of the most cost-effective measures have already been utilized. One member suggested that since the models have ranges of uncertainty beyond what is represented by the numbers in the output, the 10% safety margin should be set up in a +/- format so that it can be applied regardless of the model.

Howard Simons explained that MDOT is spending 50% of funds on maintenance and transit rather than on new highways. Opening the SIP would be extremely time consuming and threaten the ability of job-creating projects to move forward with federal funds.

Ron Kirby, COG/DTP, clarified in response to questions that the TPB recommended margin of safety was modified from 10% to 20% following sensitivity tests on vehicle fleet aging. He said that if EPA changes the model, they typically have several years to update the SIP, but small changes would not lead to an update. Mr. Kirby expressed the hope that fleet changes and other minor issues could be accommodated through a safety margin. Telecommuting has increased, and transit investments have made a significant impact, but these are not separated out by state. The PM redesignation plan reflects an attainment victory, and is ready for immediate advancement. The next step is to begin work on the Ozone SIP. This committee should act within the current regulatory process rather than concern itself with future uncertainties.

Tom Ballou listed the four proposals with varying margins of safety: 1) MoS of 20% & 30%, TPB; 2) MoS 10%, Alexandria; 3) MDE: no MoS; 4) small MoS with trading, DDOE. Mr. Ballou said the ozone problem cannot be solved without the Cross State Air Pollution Rule (CSAPR) or Tier and low sulfur fuel regulations, over which the region and MWAQC have no control. DEQ supports the margin of safety. He suggested that it may be necessary to involve the Interstate Air Quality Council (IAQC) if needed.

Joan Rohlfs advised the committee that MDOT, MDE, VDOT, DDOE, VDEQ and DDOT should work together at the staff level to resolve the issue quickly. If the IAQC is formed, it will also need the technical expertise of state staff to assist in decision-making.

4. Ozone NAAQS Planning
Discussion postponed.

5. Other Business
None.

6. State and Local Updates
None.

7. Set Date for Next Meeting, Future Agenda Items, Adjourn
Due to time limitations, Agenda Items 4, 5, and 6 were postponed until the next meeting.

Next TAC Meeting: Tuesday May 8, 2012