MOVES Task Force Meeting

November 17, 2009, 10:00 AM – 12:00 PM
Meeting Summary

Present:
Diane Franks, MDE – Co-Chair
Jim Ponticello, VDOT - Co-Chair
Randy Carroll, MDE
Jessica Daniels, DDOE
Mohamed Khan, MDE
Sonya Lewis-Cheatham, VDEQ
Bob Owolabi, Fairfax County DOT
Howard Simons, MDOT
Kanti Srikanth, VDOT
Chris Voigt, VDOT
Austina Casey, DDOT
Sara Tomlinson, BMC (phone)

Staff:
Mike Clifford, Daivamani (Siva) Sivasailam, Eulalie Lucas, Jane Posey, Daniel Son, Jinchul (JC) Park, Yu Gao, Erin Morrow, Joan Rohlfs, Jeff King, Sunil Kumar

Agenda items are being presented below in order they were discussed in the meeting.

Item 1: Call to Order/Introductions
The meeting of the Task Force was called to order by co-chair Jim Ponticello, which was followed by introductions of members and staff including participants who joined the meeting by phone.

Item 2: Review of October 13th Meeting Highlights
The highlights for the October 13, 2009 meeting of the Task Force were approved with one change. In the fifth paragraph under Item 3, Chris Voigt requested to add the following "Chris responded that was understood but the question had to do with registration data, but in any case we will need to wait for EPA guidance and the final version of the model to assess the options" after the sentence "Eulalie commented that the function to create emissions rates is not available in the draft version of MOVES".

Item 3: Review of EPA MOVES Technical and Policy Guidance
Siva said that EPA did not publish either its MOVES technical or policy guidance document, both of which were expected at the end of October. Sunil informed the group that the Ozone Transport Commission (OTC) had conveyed its concerns to EPA regarding the delay in the publication of these two documents and its impact on the OTC photochemical modeling process. In absence of these two documents, the group decided to move this agenda item to its upcoming January 19th meeting.

Item 5: MOVES Model Inputs (Vehicle Population and Age Distribution, VMT and VMT Mix Percentages)

Daivamani (Siva) Sivasailam presented a detailed memorandum on the methodologies to develop the MOVES inputs for vehicle population, age distribution, total VMT, and VMT mix. Jim Ponticello commented that at some time in the future, the group will need to move away from the procedure of converting Mobile6.2 age distribution to that of MOVES and instead develop this input in the MOVES format. MOVES switches between requiring data for 6 and 13 vehicle types depending on the input parameter. Sunil had asked Gary Dolce of EPA regarding this issue previously. Gary assumed that states would use HPMS data (available for 6 vehicle types) for some parameters. Jim Ponticello commented that the VIN decoder should help convert 28 Mobile6 vehicle types to 6 HPMS and 13 MOVES types.

Item 6: Discussion on Truck Apportionment

Erin Morrow presented a memorandum detailing a comparison of the MOVES default and local truck data for the District of Columbia, Maryland, and Virginia. These data were based on a report titled "Vehicle Inventory and Use Survey" (VIUS) published by the US Census Bureau as part of the 2002 Economic Census. The VIUS is a survey of 136,000 private and commercial trucks out of nearly 89 million trucks registered in US as of July 1, 2002 to study the characteristics of those trucks. She presented detailed data based on an average trip length (miles) on the local trucks registered in the above three jurisdictions for 2002. She also presented data on the trash trucks for 2002 registered in Maryland and Virginia. Kanti asked Erin about the relationship between the MOVES vehicle types and the vehicle types in Table 1-A of her memorandum. Erin referred to Table D-1 (refers to different MOVES vehicle types) of Siva's memorandum and talked about the relationship between the two.

Item 4: Review of MOVES Model Results to Date

Eulalie Lucas presented a memorandum describing the six different MOVES runs and one Mobile6.2 run (total seven runs or scenarios) she undertook to evaluate and compare the impact of MOVES default and local inputs on MOVES emissions estimation and to compare these results with Mobile6.2 VOC and NOx emissions. These runs were performed for the year 2005 for average ozone season day for the District of Columbia and Montgomery and Fairfax counties.

Austina Casey asked why the emissions estimation using MOVES default inputs described in Table 3 of the memorandum were higher compared to other five scenarios. Eulalie explained the high emissions result by saying that the default EPA values for different parameters represent national average values and are much higher compared to local estimates. Sunil noticed that a consistent trend did not exist either in VOC or NOx emissions for the seven scenarios between the three jurisdictions. Eulalie agreed with this finding.

Mike Clifford explained the different charts in the memorandum showing VOC and NOx emissions for different scenarios for the three jurisdictions. He said that these runs took a

lot of time to complete and similar sensitivity runs could be undertaken for the inputs provided by state air agencies such as, meteorology, fuel programs, and I/M programs. Sunil said that the current draft MOVES user guide only allowed the local data to be used for fuel and I/M programs for SIP and conformity analyses and did not provide any options to use MOVES defaults. On a MARAMA conference call, Gary Dolce of EPA OTAQ said the input formats and the impact on emissions for these two parameters were currently undergoing significant changes, which would significantly change emissions estimation. Sunil said that due to the non-availability of MOVES technical and policy guidance documents, no methodologies were currently available for preparing the meteorology inputs. For these reasons, he suggested waiting for changes to be made in the input formats for the fuel and I/M programs and the guidance documents to be published before undertaking any sensitivity tests. However, he said that the hourly meteorology data are available for IAD and DCA weather stations for all twelve months and the top ten 8-hour maximum ozone concentration days during the period 2002 through 2004 and therefore could be reformatted easily once the technical guidance for preparing the meteorology inputs is published.

Jim Ponticello asked if staff compared the temperatures between MOVES default and those currently used for SIP and conformity purposes. Sunil said that the temperatures look different as the default data are 30-year average while the data used in the SIP are for the period 2002 through 2004, which is closer to the base year for the SIP and conformity analyses. However, he said that the current draft MOVES user guide specified that the local meteorological data be used because the MOVES default data is not appropriate for the SIP and conformity analyses.

Eulalie asked Mohamed Khan and Sonya about their experience with the execution times for MOVES runs. Mohamed said that execution times vary with the RAM and the processor of the computers. The networking done to run the model on multiple computers can not make the runs faster if one of the computers used in the network is slower than the others. Sonya had the same experience as Mohamed.

Item 7: Status of the FHWA's MOVES-related Research Projects
Cecilia Ho was not able to attend the meeting and this agenda item will be moved to the January 19th meeting.

Item 8: Other Business (Establish Task Force Membership List)
The group will use the MOVES Task Force list for future meeting notices.

Item 9: Next Meeting/Agenda Items
The next meeting will take place on January 19, 2009, 10-12 PM. Agenda items include any review of EPA's policy or technical guidance that is expected to be released by the year end and updated analyses related to MOVES inputs based on those guidance documents.

The meeting ended at 12 PM.