

## **MOVES2010 MODEL TESTING WORK PROGRAM**

### **I. Test Model using Default Values: 2005 and 2030**

- Apply MOVES2010 at 'county' level using national default data
- Execute the model for 3 jurisdictions (District of Columbia, Montgomery, and Fairfax) to obtain:
  - Daily: VOC, NO<sub>x</sub> for ozone season, CO for winter season
  - Annual: PM 2.5, precursor NO<sub>x</sub>, CO<sub>2</sub>
- Comparison charts with Mobile 6.2 and MOVES 2009 and document results  
(Work to be completed by mid-February)

### **II. Develop Local Inputs as follows using revised EPA 'importers' where necessary**

#### **A. County Level**

##### DEP Staff

- Fuel characteristics: To be prepared by Air Agency staff.
- Met data: To be developed by DEP staff based on guidance from MOVES Task force.
- I/M programs: Pending development by Air Agency staff

##### DTP Staff

- Vehicle age distribution 0-30 years: 2005 and 2030 data available for use
- Vehicle population by MOVES vehicle types: 2005 and 2030 data available for use.
- VMT by HPMS vehicle types: Annual VMT 2005 and 2030 data available for use;  
Conversion factors from annual to daily under preparation.
- VMT fractions by vehicle type by MOVES road types: 2005 and 2030 data available for use.
- Vehicle hours of travel by 16 speed bins by vehicle type and facility type – data under development.  
(Work to be completed by February end)

#### **B. Custom Domain**

Using inputs listed above  
(work to be completed by mid-March)

### **III. Test Model using Local Data**

#### **A. County Level for years 2005 and 2030**

- Execute MOVES2010 apply County Data Manager (CDM) option using local inputs for all jurisdictions for ozone day
- Execute MOVES2010 apply County Data Manager (CDM) option using local inputs for all jurisdictions for Annual PM<sub>2.5</sub>, NO<sub>x</sub>, and CO<sub>2</sub>

- Execute MOVES2010 apply County Data Manager (CDM) option using local inputs for all jurisdictions for Winter CO
- Document and present results to MOVES Task Force

#### B. Using Custom Domain

Same as above

(Work to be completed by May end)

### **IV. Analysis of MOVES Emissions Approach vs. MOVES Emissions Rate and Post-Processor Approach**

- Staff will execute the MOVES model and develop rates for the jurisdictions in each of the non-attainment areas, and using the rates and VMT from the jurisdictions to calculate emissions inventories for ozone season and annual for criteria pollutants.
- Staff will execute the MOVES and develop emissions inventories for the same analysis years and for the same pollutants using the built in processor within MOVES.
- The two inventories will be compared for consistency.  
(Work to be completed by mid-july)

### **V. Finalize Model**

Finalize modeling approach and inputs and prepare Mobile Source inventories on a production basis first for the 2010 CLRP and FY 2011-2016 TIP as a test case for the above years 2005 and 2030, and for model years 2002 and 2009 (if needed for SIP development).

(Recommendations by October end)

#### **Note:**

- 1) Coordinate with DEP to obtain local fuel, meteorology, and I&M program inputs in line with the proposed schedule for 2005 and 2030.
- 2) See attached time line for proposed schedule.

ITEM #5  
APRIL 20, 2010

## MOVES 2010 Model Testing Work Program

| Task Name                                                   | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <u>I. Test Model Using Defaults</u>                         |     |     |     |     |     |     |     |     |     |     |     |     |
| <u>II. Develop Local Inputs&amp;Finalize Model Approach</u> |     |     |     |     |     |     |     |     |     |     |     |     |
| A. County Level                                             |     |     |     |     |     |     |     |     |     |     |     |     |
| B. Custom Domain Level                                      |     |     |     |     |     |     |     |     |     |     |     |     |
| <u>III. Test Model Using Local Data (2005 &amp; 2030)</u>   |     |     |     |     |     |     |     |     |     |     |     |     |
| A. County Level                                             |     |     |     |     |     |     |     |     |     |     |     |     |
| B. Custom Domain Level                                      |     |     |     |     |     |     |     |     |     |     |     |     |
| <u>IV. Emission Rate Approach&amp;Inventory Approach</u>    |     |     |     |     |     |     |     |     |     |     |     |     |
| <u>V. Final Recommendations</u>                             |     |     |     |     |     |     |     |     |     |     |     |     |

\* Fuel, Methodology, and I/M data will be developed by DEP staff