

implementation plan (SIP) and transportation conformity requirements.

B. What Versions of EMFAC Are Currently in Use in California?

Most SIPs in California were developed using the vehicle emission models EMFAC7F (released by CARB September 1993) or EMFAC7G (released by CARB July 1997). EPA approved use of EMFAC7F in May 1994 and then EMFAC7G in April 1998. EMFAC7G was considered a minor update to EMFAC (similar to MOBILE5b as a minor update to MOBILE5a), thus areas with SIP motor vehicle emissions budgets developed using EMFAC7F were allowed to continue to use EMFAC7F for conformity. EMFAC7G included updated data on control measures (e.g. inspection and maintenance and truck standards), updated vehicle information (e.g. vehicle population and starts/vehicle/day) and vehicle activity data (e.g. vehicle miles per day and vehicle miles per speed distribution). Areas with SIP budgets developed using EMFAC7G were required to use EMFAC7G for regional conformity analyses.

Since the release of EMFAC7G, CARB has made several interim updates to EMFAC, EMFAC2000 and EMFAC2001. Of these models, only EMFAC2000 was submitted to EPA for approval and used in development of a SIP. Like EMFAC7G, EMFAC2000 included updated data on control measures (e.g., cleaner fuels, new vehicle standards for motorcycles, buses, and heavy-duty trucks), updated vehicle information (e.g., vehicle population, starts/vehicle/day) and updated vehicle activity data (e.g., vehicle miles per day, vehicle miles per speed distribution, and mileage accrual rates). In January 2002, EPA approved EMFAC2000 (67 FR 1464, January 11, 2002) for use only in the San Francisco Bay Area (Bay Area), for estimation of ozone precursor emission factors. EPA's approval of EMFAC2000 was limited because: (1) EMFAC2000 was an improvement on existing available models despite certain technical limitations; and (2) CARB has committed to revise the Bay Area ozone attainment SIP's motor vehicle emissions budgets with EMFAC2001 or a successor model as part of its mid-course review SIP revision in April 2004.

C. Why Have Transportation Agencies Stopped Using EMFAC7F and EMFAC7G for Regional Conformity Emissions Analyses?

On May 2, 2002, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) sent a

letter to CARB indicating that, after December 31, 2002, they would not continue to make conformity determinations that require a new regional emissions analysis, unless the analysis incorporates more recent vehicle data. The letter indicated that vehicle data embedded in the EMFAC7F and EMFAC7G versions of the EMFAC emission factor model were about ten years old. Consistent with the U.S. DOT/EPA January 18, 2001, guidance on latest planning assumptions, new vehicle registration data must be used when it is available for conformity purposes. Since newer vehicle data was available but was not included in the older versions of EMFAC, EMFAC7F and EMFAC7G have not been used in any new regional emissions analyses since December 31, 2002.

D. Why Is EPA Announcing Its Approval of the EMFAC Model?

CAA section 172(c)(3) and 40 CFR 51.112(a)(1) require that SIP inventories be based on the most current and applicable models that are available at the time the SIP is developed. CAA section 176(c)(1) requires that the latest emissions estimates be used in conformity analyses. EPA approves models that fulfill these requirements.

Under 40 CFR 93.111(a), EPA must approve new versions of EMFAC for SIP purposes before they can be used in conformity analyses. In a December 20, 2002 letter, CARB requested that EPA approve EMFAC2002 for use in developing SIPs and in determining conformity of transportation plans in California. EMFAC2002 is a significant change from previous EMFAC models and is capable of calculating motor vehicle emissions for all California areas. EMFAC2002 is being approved as the latest emissions model for statewide use in SIP development (rather than as an interim update to the EMFAC model as EMFAC7G was an interim update to EMFAC7F). Since the EMFAC model is only used in California, EPA's statewide approval of the model does not affect MOBILE emissions factor model users in other states.

II. EPA Action

A. What Version of EMFAC Is EPA Approving?

In this notice, EPA is approving and announcing that EMFAC2002 is available to use in statewide California SIP development. EMFAC2002 was developed by CARB and transmitted for approval to EPA on December 20, 2002.

On January 28, 2003, CARB also transmitted a methodology to adjust vehicle activity data used by

EMFAC2002 when updated data is available. Since the transportation conformity rule (40 CFR 93.110) requires areas to use the latest information for estimating vehicle activity, we are also approving the CARB methodology for updating vehicle activity data in EMFAC2002.

CARB's methodology, "Recommended Methods for Use of EMFAC2002 to Develop Motor Vehicle Emission Budgets and Assess Conformity," explains how vehicle activity data should be updated. The methodology explains how each parameter associated with vehicle activity was originally developed in EMFAC, how each parameter is related, and how each can be updated when new data becomes available. These relationships are important when adjusting vehicle trips or VMT. For example, VMT in EMFAC2002 is directly related to vehicle population¹ and mileage accrual rate. Similarly, start and evaporative vehicle emissions are also related to vehicle population levels. If new VMT data is available, CARB suggests modifying the input vehicle population levels, instead of directly inputting new VMT data so that start and evaporative emissions are revised appropriately. Updated vehicle activity data (vehicle miles traveled) can also be input to EMFAC using the WIS interface. As CARB states, local circumstances may alternatively support adjustment of mileage accrual rates, subject to the interagency consultation process. In addition, CARB intends to periodically update vehicle population information, including vehicle classes by model year, in EMFAC2002.

B. What Pollutants Can EMFAC2002 Estimate?

EPA is approving the model to estimate regional emissions of hydrocarbons (HC), carbon monoxide (CO), nitrogen oxides (NO_x), particulate matter (PM), lead, sulfur oxides and carbon dioxide. However, EMFAC2002 will only be used in transportation conformity for pollutants and precursors that affect transportation emissions and are identified in air quality plans as significant. Transportation-related pollutants and precursors that are currently covered by the conformity rule are HC, NO_x, CO, and PM-10. EPA is also approving EMFAC2002 to estimate hotspot emissions for carbon monoxide.

¹ Vehicle population includes vehicle type (class) and age distribution.