

Projected motor vehicle emissions must be held at or below the level of the ceiling. Offset measures implemented earlier than required and sufficient to prevent an emissions upturn, will be viewed as a temporary reduction in emissions to a level below the ceiling required by this provision. In this case, the forecasted motor vehicle emissions could increase from 1 year to the next, as long as forecasted motor emissions never exceed the ceiling.

Under the staged submittal approach, the second element, which requires the VMT offset SIP to be consistent with the 15 percent ROP reduction requirements of the Act, was due on November 15, 1993 which is the same date on which the 15 percent ROP SIP was due under section 182(b)(1) of the Act. USEPA believes that it is reasonable to extend the deadline of this element to the date on which the entire 15 percent periodic reduction SIP was due under section 182(b)(1)(A) of the Act, since this allows States to develop a more comprehensive strategy to address the ROP requirement and assure that the TCM elements of that strategy required under section 182(d)(1)(A) are consistent with the remainder of the ROP demonstration.

The third element requires the VMT offset SIP to comply with the post-1996 RFP and attainment requirements of the Act and to identify and adopt specific enforceable transportation control strategies and TCMs. The due date for submittal of this element is extended to November 15, 1994 under the staged submittal approach. USEPA believes that the deadline for this element can be reasonably extended to November 15, 1994 because the broader post-1996 RFP and attainment SIP demonstrations are not due until that date. This extension will enable the State to ensure that the TCM elements of the broader submittals are consistent with the States' overall post-1996 RFP and attainment strategies. Indeed, it is arguably impossible for a State to make the showing for the third element until the broader demonstrations have been developed by the State, and extending the submittal date will result in a better program for reducing emissions in the long term.

III. Summary of State Submittal

The State of Wisconsin has submitted a SIP revision implementing the first two required elements contained in section 182(d)(1)(A) of the Act.

Mobile source emissions are a function of many specific factors including vehicle fleet, age and mix, the Reid Vapor Pressure (RVP) fuel volatility, and temperature. The magnitude of mobile source emissions is

particularly a function of vehicle speeds and the amount of VMT. To obtain mobile source emissions, the usual process is to multiply VMT by an appropriate emission factor to derive an estimate of total motor vehicle emissions.

The State has met the requirement of the first element of section 182(d)(1)(A) by forecasting VMT from the year 1990 to the year 2007, and then estimating mobile source emissions by applying USEPA's required mobile source emissions factor model MOBILE5a to generate the appropriate emissions factors for the analysis. This analysis shows a continued decrease in emissions throughout the analysis period without the implementation of additional TCMs.

In developing the VMT offset program, WDNR modeled a mobile source control program for the offset analysis which included: the Federal Motor Vehicle Control Program, Phase II RVP controls, Reformulated gasoline, VMT reductions due to the implementation of the ECO program, a Enhanced Inspection/Maintenance (I/M) program, and an Anti-Tampering Program (ATP). WDNR generated Emissions Factors (EF) for the analysis using the USEPA mobile source emissions factor model MOBILE5a.

The first step in the analysis of projected mobile source emissions was to project the area's VMT from the 1990 levels to 2007. The 1990 level of VMT (estimated to be 37,988,300 miles per day) was developed for the 1990 base year inventory, and was submitted to USEPA on July 16, 1993 was prepared by the Southeastern Wisconsin Regional Planning Commission (SEWRPC), the Metropolitan Planning Organization for the severe ozone nonattainment area. The aggregate 1990 VMT level was then projected to year 2007 level by using a 2.0 percent growth rate. This growth rate corresponds to the growth rate used in the ROP plan. The 2.0 percent per year increase in VMT will result in a total VMT growth of 40 percent for the analysis period.

The aggregate VMT was adjusted for the implementation of the ECO program. In years 1996 and 1997 the ECO program was assumed at two-thirds effectiveness, yielding a 2-percent reduction of VMT. In years 1998 through 2007 the ECO program was assumed at full effectiveness, yielding a 3-percent reduction of VMT.

The next step in the analysis was to develop an aggregate EF for each analysis year. Four speeds were modeled to obtain EFs for the analysis: 15 mph, 25 mph, 40 mph, and 62 mph. These speeds were used to represent the

varied operating conditions which exist for the severe ozone nonattainment area roadway system. The percentages of aggregate VMT for the speeds of 15 mph, 25 mph, 40 mph, and 62 mph, were 10 percent, 30 percent, 39 percent, and 21 percent, respectively. These VMT percentages can be directly translated into EF percentages, i.e., $EF_{15\text{ mph}} = 0.10 EF_{\text{total}}$, $EF_{25\text{ mph}} = 0.30 EF_{\text{total}}$, $EF_{40\text{ mph}} = 0.39 EF_{\text{total}}$, $EF_{62\text{ mph}} = 0.21 EF_{\text{total}}$. Each of the generated emissions factors were multiplied by the appropriate EF percentage and then added to yield an aggregate emissions factor. The percentage of breakdown in VMT as a percentage of total VMT is based on the information included in the 1990 base year inventory.

The aggregate average was multiplied by an inventory adjustment factor of 1.0207 yielding a Final Emissions Factor (FEF). This inventory adjustment was performed so that the 1990 level of total emissions in the VMT offset analysis was consistent with 1990 base year inventory (a total of 147.2 tons/day for the six severe ozone nonattainment counties). Finally, the amount of VOC emissions per year was calculated by multiplying the FEF and the aggregate VMT adjusted for ECO implementation.

The State of Wisconsin's submittal predicts that the growth in VMT in the Milwaukee severe ozone area will not result in a mobile source emissions upturn. This prediction of a continued decline in mobile source emissions beyond the attainment year demonstrates satisfaction of the first element.

Wisconsin submitted a 15-percent ROP SIP for Milwaukee severe ozone to the USEPA in November 1993, but the submittal was found incomplete in a letter dated January 21, 1994. Although the ROP SIP contained feasible measure that could add up to the required 15 percent reduction in emissions, the SIP submittal was found incomplete because it lacked enforceable regulations. In the submittal, the State indicated it would attain its 15 percent reduction in VOCs by 1996 without relying on TCMs. Consequently, Wisconsin has shown that it does not plan to submit specific enforceable TCMs for the second VMT offset SIP element.

The State is in the process of developing fully enforceable regulations that achieve a 15-percent reduction in VOCs. The USEPA is proposing approval of the second VMT offset SIP element, but will not take final action on this element until the State has submitted a complete 15 percent ROP plan and the USEPA is certain that it