

However, EPA understands that California is working on a revision to EMFAC that should enable the model to calculate emissions factors for NH₃. A schedule for completing the necessary revisions has not been established. As a practical matter, conformity for NH₃ would not be required in California until there is an acceptable method for estimating such emissions, since a method would be needed to estimate current or future NH₃ emissions for either a significance finding or SIP motor vehicle emissions budget.

Including any precursors in regional emissions analyses prior to the submission of a SIP should not result in any additional transportation or emissions modeling work since the nonattainment areas will already be estimating vehicle miles traveled (VMT) from transportation activities for the direct PM_{2.5} regional emissions analysis. In addition, EPA's upcoming MOBILE6.2 and California's EMFAC2002 are designed to generate emissions factors for direct PM_{2.5} and PM_{2.5} precursors in the same modeling run. Therefore, if any area is already generating PM_{2.5} emissions factors, precursor estimates would be available without any additional effort, with the possible exception of NH₃ estimates in California, as indicated above.

B. Why Are We Proposing These Options?

Section 176(c)(1)(B) of the Clean Air Act requires that federal funding and approval be given only to transportation activities that are consistent with state and local air quality goals. To fulfill this requirement with respect to PM_{2.5}, EPA is proposing that transportation conformity determinations consider PM_{2.5} and its precursors if they are significant contributors to an area's PM_{2.5} air quality problem.

EPA anticipates that in most nonattainment and maintenance areas direct PM_{2.5} emissions would be an important contributor to the PM_{2.5} air quality problem, and therefore, we are proposing that direct PM_{2.5} emissions from motor vehicles be included in all conformity analyses. In addition, EPA's proposal to require conformity to all relevant budgets established in the PM_{2.5} SIP is consistent with the Clean Air Act in that transportation activities must conform to the air quality goals established and estimates of future emissions in the SIP for a given area.

EPA has proposed NO_x, VOCs, SO_x, and NH₃ as potential transportation-related PM_{2.5} precursors since all of these precursors are emitted from on-road motor vehicles. Based on data collected from monitoring sites in the

national speciation trends network,⁴ secondary particles from precursors commonly account for over half of the total fine particle mass from all emissions sources measured at these sites. Therefore, we expect that areas may need to address on-road emissions of relevant precursors (*i.e.*, NO_x, VOC, SO_x and NH₃) in their SIPs and in conformity.

EPA believes that the two proposed options would allow for the consideration of the four potential precursors in conformity prior to PM_{2.5} SIPs when such precursors are significant. However, they differ in terms of whether a NO_x or VOC precursor is presumed to be significant and considered in conformity from the start, or whether a finding of significance is necessary before a precursor is addressed. The proposed options attempt to strike a balance between: (1) Expediently addressing transportation-related emissions that could exacerbate the PM_{2.5} air quality problem before a SIP is established, and (2) targeting conformity requirements in PM_{2.5} areas in an efficient and reasonable manner. As described above, the proposed options would only require SO_x and NH₃ analyses if either precursor was found to be significant before a PM_{2.5} SIP.

For example, the first proposed option is more environmentally conservative by requiring that NO_x and VOC conformity analyses be included in all areas initially. If EPA finds that in most areas motor vehicle emissions of these precursors are significant contributors to PM_{2.5} air quality problems, it may warrant the first option's more straightforward approach to meeting Clean Air Act requirements. In other words, areas would begin addressing NO_x and VOC emissions upon designation under the first option, without having a separate state or EPA finding of significance. This option is similar to the current rule's requirement that ozone areas must address NO_x and VOC precursors.

On the other hand, the second proposed option is consistent with the current rule's approach for PM₁₀ precursors, where NO_x and VOC conformity analyses are only conducted prior to PM₁₀ SIPs if the State or EPA finds either precursor significant (40 CFR 93.102(b)(2)(iii)). EPA finalized this approach in the November 24, 1993 conformity rule because at that time secondary formation appeared to be less

important for the PM₁₀ NAAQS in general, although some PM₁₀ areas have since established NO_x and/or VOC SIP budgets.

The second proposed option would account for regional variability and target conformity analyses where EPA or the state determine NO_x and VOC precursors to be significant to an area's PM_{2.5} problem. Although we know that NO_x and VOC precursors generally play a more important role in PM_{2.5} formation, we continue to gather more specific information on the significance of these precursors in different parts of the country. One could argue that it may be more appropriate to focus scarce state and local efforts on NO_x and VOC precursors only when they are determined to be significant, especially if adopting control measures early in conformity may prove not to be necessary in the PM_{2.5} SIPs.

The following paragraphs present information on current speciated air quality data and on-road emissions of the precursors that contribute to the formation of secondary particles. The information is intended to illustrate what we know about PM_{2.5} precursor emissions and air quality. This type of information is relevant to deciding whether or not to initially require that a precursor be considered in conformity before a more thorough evaluation is conducted through the SIP development process. The emission inventory data used in the following discussion is for 372 potential nonattainment counties based on 1999–2001 ambient data.⁵ Summaries of the air quality and emissions inventory data discussed below are available in the docket for this rulemaking. More detailed air quality emission inventory data is available on the EPA Web site at <http://www.emissionsonline.org/nei99v3/index.htm>. The public is welcome to submit additional data on the importance of including PM_{2.5} precursors in conformity before SIPs are established.

NO_x precursor emissions. On-road sources accounted for approximately 40% of total NO_x emissions in 1999 in the 372 potential nonattainment counties. Based on data collected from monitoring sites in the national speciation trends network, nitrates—which result from reactions involving NO_x—make up between 5 and 40% of the total PM_{2.5} constructed mass. The areas with the highest percentages of nitrates are in California and parts of the

⁴ The speciation trends network consists of over 50 monitoring sites in urban areas and provides nationally consistent data on PM_{2.5} constituents including nitrates, elemental carbon, organic carbon and sulfates.

⁵ Through this data, we identified 129 counties that have violating monitors for PM_{2.5}. EPA is currently reviewing 2000–2002 ambient data which may affect the numbers discussed in today's proposal.