

insignificance policy for all areas as described in Section XIV.B.

Under either option, a significance finding should be made only after discussions with the interagency consultation group for the PM_{2.5} nonattainment area. These discussions should include a review of the data being considered. Interagency consultation would also ensure that all of the relevant agencies are aware that such a finding is being considered and is supported by the air quality information that is available at the time. A significance finding would be made through a letter to the relevant state and local air quality and transportation agencies, MPO(s), DOT, and EPA (in the case of a State air agency finding).

EPA notes that any significance finding made prior to the SIP should not be viewed as the ultimate determination of the significance of road dust emissions in a given area. State and local agencies may find through the SIP development process that road dust emissions are significant and should be included in the PM_{2.5} SIP motor vehicle emissions budget and subsequent conformity analyses, even in the case where road dust emissions were previously considered insignificant.

As described further below, under any of the proposed options, EPA would issue guidance on how to calculate PM_{2.5} road dust emissions to reflect the true impact of re-entrained road dust on regional air quality. This guidance would be available before EPA's final PM_{2.5} nonattainment designations. See Section IX.D. for more details on EPA's ideas for such guidance.

C. Why Are We Proposing These Options?

At issue is the question of whether or not re-entrained road dust has a significant impact on air quality and should be included in conformity analyses in all PM_{2.5} areas. Existing PM₁₀ areas include re-entrained road dust in conformity because fugitive dust from roadways and other sources dominate PM₁₀ regional emissions inventories. However, the role of re-entrained road dust for PM_{2.5} air quality issues is less clear. Furthermore, there does not appear to be a direct correlation between the amount of road dust calculated for PM_{2.5} motor vehicle inventories and what is being collected on PM_{2.5} monitoring filters, as discussed further in this section.

Specifically, analysis of local air quality data indicates wide regional variation in the fractions of PM_{2.5} found on air quality monitors that consists of chemical elements associated with fugitive dust. Moreover, not all

emissions of these chemical elements are attributable to re-entrained road dust, as they can also be emitted by other sources that disturb or process minerals or metals. In some areas, especially those areas in the eastern United States, preliminary analyses indicate that fugitive dust may not have a significant impact on regional air quality.⁹ In those areas, it may be more productive prior to a PM_{2.5} SIP to focus control efforts on vehicle emissions that contribute to the PM_{2.5} air quality problem, rather than on re-entrained road dust emissions.

The first proposed option would address regional variability, and ultimately allow the SIP's analysis to determine whether or not re-entrained road dust is a significant factor in the regional PM_{2.5} problem. A more thorough air quality analysis as required for the SIP may be the best determination of the real impact of re-entrained road dust on PM_{2.5} air quality, unless there is clear evidence before the SIP that road dust emissions are significant.

Under the first proposed option, EPA is requesting comment on whether it is appropriate to require PM_{2.5} areas that are also PM₁₀ areas to include road dust in conformity analyses, unless a finding is made that road dust is not significant. Areas that are nonattainment for PM₁₀ may be more likely to have significant re-entrained road dust contributing to the PM_{2.5} problem. Due to the significant amount of road dust in existing PM₁₀ inventories, it may be appropriate to also initially presume that road dust is significant for PM_{2.5} for these limited number of PM₁₀ areas, unless the State or EPA find that road dust is not significant.

Finally, because the second option begins with the presumption that re-entrained road dust emissions is a problem, it may be more conservative in protecting PM_{2.5} air quality with respect to the impact of road dust. However, in many areas, the second proposed option might result in the diversion of resources toward road dust analyses as well as road dust control measures that might be more effectively used to understand and control other emissions sources. These areas do have the option of supporting an EPA or state finding that road dust emissions are not

significant, but this may be difficult to do prior to the completion of the SIP analysis in some areas.

D. Request for Comment on Estimating Road Dust Emissions

Under any of the proposed options, road dust SIP emissions inventories and regional emissions analyses for conformity at this time should be calculated using methods described in EPA's guidance entitled, "AP-42, Fifth Edition, Volume 1, Chapter 13, Miscellaneous Sources" (US EPA Office of Air Quality Planning and Standards; available at <http://www.epa.gov/ttn/chief/ap42/ch13/>) or locally developed estimation methods approved through the interagency consultation process. For reasons described below, under EPA's future guidance, calculated emissions would then be adjusted downward based on an analysis of the relative impact of re-entrained road dust on ambient PM_{2.5} concentrations as determined by regional air quality monitors in a given area.

Review of PM_{2.5} air quality data raises significant questions of uncertainty in the estimation methods for PM_{2.5} dust emissions. Emissions of road dust are estimated using methods that are based on data collected from particulate monitors set up close to the road edge. These methods are used to create a PM_{2.5} inventory, which is an estimation of the total amount of PM_{2.5} road dust released into the atmosphere. When used with standard air quality simulation models, the methods that are used to create the inventory may adequately estimate the dust in the air immediately adjacent to the road, but may overestimate the impact that dust has on concentrations in the larger region and in particular at the PM_{2.5} monitors that determine attainment with the PM_{2.5} NAAQS. Regional air quality is assessed by air quality monitors that are set up in a wide range of locations. These regional air quality monitors generally indicate much lower fractions of dust in the atmosphere than are predicted based on the emissions inventories. ("Reconciling Urban Fugitive Dust Emissions Inventory and Ambient Source Contribution Estimates: Summary of Current Knowledge and Needed Research", Desert Research Institute Document 6110.4F, May 2000, available at <http://www.epa.gov/ttn/chief/efdocs/fugitivedust.pdf>).

There are several likely contributing factors to explain this discrepancy. The first factor is that road dust particles are distributed more toward the high end of the PM_{2.5} size range than are exhaust particle or PM_{2.5} emissions from many other source types. The second factor is

⁹ "National Air Quality and Emissions Trends Report, 1999," EPA-454/R-01-004, U.S. EPA Office of Air Quality Planning and Standards, March 2001; also J. Szykman, D. Mintz, J. Creilson, and M. Wayland, "Impact of April 2001 Asian Dust Event on Particulate Matter Concentrations in the United States," in the "Proceedings of the Air & Waste Management Association Symposium on Air Quality Measurement Methods and Technology, San Francisco, November 13-15, 2002.