

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 93**

**[Docket No. OAR-2003-0049; FRL-7908-3]**

**RIN 2060-AN03**

**Transportation Conformity Rule Amendments for the New PM<sub>2.5</sub>**

**National Ambient Air Quality Standard: PM<sub>2.5</sub> Precursors**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Final rule.

**SUMMARY:** This final rule adds the following transportation-related PM<sub>2.5</sub> precursors to the transportation conformity regulations: nitrogen oxides (NO<sub>x</sub>), volatile organic compounds (VOCs), sulfur oxides (SO<sub>x</sub>), and ammonia (NH<sub>3</sub>). The final rule specifies when each of these precursors must be considered in conformity determinations in PM<sub>2.5</sub> nonattainment and maintenance areas before and after PM<sub>2.5</sub> state air quality implementation plans (SIPs) are submitted. Today's action also makes a technical correction to a cross-reference of the U.S. Department of Transportation's (DOT) planning regulations in the public consultation procedures of the conformity rule. The Clean Air Act requires federally supported highway and transit projects to be consistent with ("conform to") the purpose of a SIP. EPA has consulted with DOT on the development of this final rule and DOT concurs with its content.

**EFFECTIVE DATE:** [insert date 30 days from publication in the

Federal Register].

**ADDRESSES:** Materials relevant to this rulemaking are in Public Docket I.D. No. OAR-2003-0049 located at the Air Docket, Environmental Protection Agency, Mailcode: 6102T, 1200 Pennsylvania Ave., NW, Washington, DC, 20460; phone: 202-566-1742. For more information about accessing information from the docket, see Section I.B. of the SUPPLEMENTARY INFORMATION section.

**FOR FURTHER INFORMATION CONTACT:** Rudy Kapichak, State Measures and Conformity Group, Transportation and Regional Programs Division, U.S. Environmental Protection Agency, 2000 Traverwood Road, Ann Arbor, MI 48105, e-mail address: [kapichak.rudolph@epa.gov](mailto:kapichak.rudolph@epa.gov), telephone number: (734) 214-4574, fax number 734-214-4052; or Angela Spickard, State Measures and Conformity Group, Transportation and Regional Programs Division, U.S. Environmental Protection Agency, 2000 Traverwood Road, Ann Arbor, MI 48105, e-mail address: [spickard.angela@epa.gov](mailto:spickard.angela@epa.gov), telephone number: (734) 214-4283, fax number 734-214-4052.

**SUPPLEMENTARY INFORMATION:**

The contents of this preamble are listed in the following outline:

- I. General Information
- II. Background
- III. PM<sub>2.5</sub> Precursors

IV. Technical Correction to Public Consultation Procedures

V. How Does Today's Final Rule Affect Conformity SIPs?

VI. Statutory and Executive Order Reviews

I. General Information

A. Does This Action Apply to Me?

Entities potentially regulated by the conformity rule are those that adopt, approve, or fund transportation plans, programs, or projects under title 23 U.S.C. or title 49 U.S.C. Regulated categories and entities affected by today's action include:

Category	Examples of regulated entities
Local government	Local transportation and air quality agencies, including metropolitan planning organizations (MPOs).
State government	State transportation and air quality agencies.
Federal government	Department of Transportation (Federal Highway Administration (FHWA) and Federal Transit Administration (FTA)).

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be affected by this final rule. This table lists the types of

entities of which EPA is aware that potentially could be regulated by the conformity rule. Other types of entities not listed in the table could also be regulated. To determine whether your organization is regulated by this action, you should carefully examine the applicability requirements in §93.102 of the transportation conformity rule. If you have questions regarding the applicability of this action to a particular entity, consult the persons listed in the preceding FOR FURTHER INFORMATION CONTACT section.

B. How Can I Get Copies of This Document?

1. Docket. Materials relevant to this rulemaking are in Public Docket I.D. No. OAR-2003-0049. The official public docket consists of the documents specifically referenced in this action, any public comments received, and other information related to this action. Although a part of the official docket, the public docket does not include Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. The official public docket is the collection of materials that is available for public viewing at the Air Docket in the EPA Docket Center, (EPA/DC) EPA West, Room B102, 1301 Constitution Ave., NW, Washington, DC. The Docket telephone number is (202) 566-1742. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-

1744. You may have to pay a reasonable fee for copying docket materials.

2. Electronic Access. You may access this Federal Register document electronically through EPA's Transportation Conformity website at <http://www.epa.gov/otag/transp/tragconf.htm>. You may also access this document electronically under the "Federal Register" listings at <http://www.epa.gov/fedrgstr/>.

An electronic version of the public docket is available through EPA's electronic public docket and comment system, EPA Dockets. You may use EPA Dockets at <http://www.epa.gov/edocket/> to view public comments, access the index listing of the contents of the official public docket, and to access those documents in the public docket that are available electronically. Although not all docket materials may be available electronically, you may still access any of the publicly available docket materials through the docket facility identified in Section I.B.1. Once in the EPA electronic docket system, select "search," then key in the appropriate docket identification number.

## II. Background

### A. What Is Transportation Conformity?

Transportation conformity is required under Clean Air Act section 176(c) (42 U.S.C. 7506(c)) to ensure that federally supported highway and transit project activities are consistent with ("conform to") the purpose of the state air quality

implementation plan (SIP). Conformity currently applies to areas that are designated nonattainment, and those redesignated to attainment after 1990 ("maintenance areas" with plans developed under Clean Air Act section 175A) for the following transportation-related criteria pollutants: ozone, particulate matter (PM<sub>2.5</sub> and PM<sub>10</sub>),<sup>1</sup> carbon monoxide (CO), and nitrogen dioxide (NO<sub>2</sub>). Conformity to the purpose of the SIP means that transportation activities will not cause new air quality violations, worsen existing violations, or delay timely attainment of the relevant national ambient air quality standards (NAAQS or "standards").

B. What Is the History of the Transportation Conformity Rule?

EPA's transportation conformity rule establishes the criteria and procedures for determining whether transportation activities conform to the SIP. EPA first promulgated the transportation conformity rule on November 24, 1993, (58 FR 62188) and subsequently published a comprehensive set of amendments on August 15, 1997, (62 FR 43780) that clarified and streamlined language from the 1993 rule. EPA has made other smaller amendments to the rule both before and after the 1997 amendments.

On July 1, 2004, EPA published a final rule (69 FR 40004)

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<sup>1</sup>Section 93.102(b)(1) of the conformity rule defines PM<sub>2.5</sub> and PM<sub>10</sub> as particles with an aerodynamic diameter less than or equal to a nominal 2.5 and 10 micrometers, respectively.

that amended the conformity rule to accomplish three objectives.

The final rule:

- provided conformity procedures for state and local agencies under the new ozone and PM<sub>2.5</sub> air quality standards;
- incorporated existing EPA and U.S. Department of Transportation (DOT) federal guidance into the conformity rule consistent with a March 2, 1999, U.S. Court of Appeals decision; and
- streamlined and improved the conformity rule.

The July 1, 2004, final conformity rule incorporated most of the provisions from the November 5, 2003, proposal for conformity under the new ozone and PM<sub>2.5</sub> standards (68 FR 62690). EPA is conducting its conformity rulemakings for the new standards in the context of EPA's broader strategies for implementing the new ozone and PM<sub>2.5</sub> standards.

The July 2004 final rule also incorporated all of the amendments resulting from a separate June 30, 2003, proposal (68 FR 38974). This proposal addressed the March 2, 1999, court ruling by the U.S. Court of Appeals for the District of Columbia Circuit (Environmental Defense Fund v. EPA, et al., 167 F. 3d 641, D.C. Cir. 1999), and incorporated existing federal guidance consistent with the court decision.

Most recently, on December 13, 2004, EPA published in the

Federal Register a supplemental notice of proposed rulemaking to the November 5, 2003, new standards conformity proposal entitled, "Options for PM<sub>2.5</sub> and PM<sub>10</sub> Hot-Spot Analyses in the Transportation Conformity Rule Amendments for the New PM<sub>2.5</sub> and Existing PM<sub>10</sub> National Ambient Air Quality Standards" (69 FR 72140). In response to substantial comments received on the November 2003 proposal, EPA, in consultation with DOT, proposed additional options for PM<sub>2.5</sub> and PM<sub>10</sub> hot-spot requirements and requested comment on them as well as on the options presented in the November 2003 proposal. Subsequently, EPA extended the public comment period for this supplemental proposal, to January 27, 2005. EPA has not yet taken final action on the December 13, 2004 supplemental proposal. We are currently reviewing the public comments received on the supplemental proposal and will be issuing a final rule in the near future.

C. Why Are We Issuing This Final Rule?

In the November 5, 2003, proposal, EPA proposed options for addressing PM<sub>2.5</sub> precursors in the conformity process. However, EPA did not finalize PM<sub>2.5</sub> precursor requirements in the subsequent July 1, 2004, final rule because EPA had not proposed a broader PM<sub>2.5</sub> implementation rule to seek comment on options for addressing PM<sub>2.5</sub> precursors in the New Source Review program and in SIP planning activities such as reasonable further progress plans, attainment demonstrations, reasonably available control



technology (RACT) requirements, and reasonably available control measures (RACM) analyses. At that time, EPA believed that it would have been inappropriate to select a final option for precursors in transportation conformity determinations prior to the development of the precursor options in the broader PM<sub>2.5</sub> implementation rule proposal. While EPA has not yet proposed the PM<sub>2.5</sub> implementation strategy, EPA has moved ahead with PM<sub>2.5</sub> designations and this action has caused us to re-evaluate the need to defer finalization of the PM<sub>2.5</sub> precursor requirements for transportation conformity until the implementation rule is proposed. Our re-evaluation is based on the fact that the one-year conformity grace period began on April 5, 2005, the effective date of the designations. EPA believes that it is crucial that PM<sub>2.5</sub> nonattainment areas be aware of the requirements for PM<sub>2.5</sub> precursors at the beginning of the one-year grace period in order to facilitate completion of all necessary work to determine conformity by the end of the grace period for all applicable precursors. Therefore, EPA has decided to finalize the transportation conformity requirements for PM<sub>2.5</sub> precursors in advance of proposing the PM<sub>2.5</sub> implementation rule. Although the implementation rule has not yet been proposed, ongoing consideration of issues related to precursors in the implementation rule have been coordinated with development of this final rule.

EPA's implementation strategy for the PM<sub>2.5</sub> standard will include options for addressing PM<sub>2.5</sub> precursors in other air quality planning programs (e.g., New Source Review for stationary sources). The public will have the opportunity to comment on these options during the comment period for that rulemaking once it is published in Federal Register.

In today's final rule, EPA addresses all public comments on the PM<sub>2.5</sub> precursor options included in the November 2003 conformity proposal that were received during the comment period for that rulemaking. The comment period for the November 2003 conformity proposal ended on December 22, 2003.

Today's final rule should not be interpreted as prejudging our decision on the PM<sub>2.5</sub> precursor requirements that will soon be proposed in the PM<sub>2.5</sub> implementation rulemaking. Our final rule for the implementation proposal will reflect how PM<sub>2.5</sub> precursors should best be considered in other air quality planning programs and the comments received on that proposal. While EPA's final decisions on PM<sub>2.5</sub> precursors must be legally consistent, EPA could take differing positions with respect to various precursors in other programs as appropriate to the programmatic needs, legal requirements and pollution sources relevant to the differing programs.

EPA notes, however, that if in the future we change our legal rationale for considering PM<sub>2.5</sub> precursors among the various

air quality planning programs from the positions currently under consideration as a result of comments received on the PM<sub>2.5</sub> implementation strategy proposal, such changes could necessitate a subsequent revision to the transportation conformity rule. In the case where an amendment to the conformity regulations is needed to reflect an alternative approach to considering PM<sub>2.5</sub> precursors, EPA would conduct such a revision through full public notice and comment rulemaking.

DOT is our federal partner in implementing the transportation conformity regulations. We have consulted DOT in developing this final rule and DOT concurs with its content.

D. How Does This Final Rule Affect the One-year Conformity Grace Period?

As explained in the July 1, 2004, final rule that addresses the conformity requirements for the 8-hour ozone and PM<sub>2.5</sub> standards (69 FR 40004), conformity applies one year after the effective date of EPA's initial nonattainment designation for a given pollutant and standard. On January 5, 2005 (70 FR 943), EPA designated areas as attainment and nonattainment for the PM<sub>2.5</sub> air quality standard. These designations became effective on April 5, 2005, 90 days after EPA's published action in the Federal Register. Therefore, conformity for the PM<sub>2.5</sub> standard will apply on April 5, 2006.

Today's final rule does not change the one-year conformity

grace period for any area recently designated nonattainment for the PM<sub>2.5</sub> standard. On April 5, 2006, metropolitan PM<sub>2.5</sub> nonattainment areas must have in place a transportation plan and transportation improvement program (TIP) that conforms in accordance with the PM<sub>2.5</sub> precursor requirements finalized by today's action and the requirements previously finalized by the July 1, 2004, rulemaking. See the July 1, 2004, final rule (69 FR 40008 through 40014) for more information on the implementation of the one-year conformity grace period in newly designated PM<sub>2.5</sub> nonattainment areas.

### III. PM<sub>2.5</sub> Precursors

#### A. Description of the Final Rule

Today's final rule identifies four transportation-related PM<sub>2.5</sub> precursors - nitrogen oxides (NOx), volatile organic compounds (VOCs), sulfur oxides (SOx), and ammonia (NH<sub>3</sub>) - for consideration in the conformity process in PM<sub>2.5</sub> nonattainment and maintenance areas. Once a PM<sub>2.5</sub> SIP is submitted, a regional emissions analysis would be required for a given precursor if the SIP establishes an adequate or approved budget for that particular precursor.

The November 5, 2003, notice of proposed rulemaking contained two options for addressing PM<sub>2.5</sub> precursors in conformity determinations made before a SIP is submitted and emissions budgets are found adequate or approved. EPA is

finalizing a modified version of the proposed options in this final rule. Specifically, a regional emissions analysis is required for NOx as a PM<sub>2.5</sub> precursor in all PM<sub>2.5</sub> nonattainment areas, unless the head of the state air agency and the EPA Regional Administrator make a finding that NOx is not a significant contributor to the PM<sub>2.5</sub> air quality problem in a given area. Regional emissions analyses are not required for VOC, SOx or ammonia before an adequate or approved SIP budget for such precursors is established, unless the head of the state air agency or EPA Regional Administrator makes a finding that on-road emissions of any of these precursors is a significant contributor. Prior to EPA finding the budgets from the submitted PM<sub>2.5</sub> SIP adequate or approving the PM<sub>2.5</sub> SIP, the MPO and DOT will document in their conformity determinations that a regional emissions analysis has not been conducted for NOx when EPA and the state air agency have determined NOx to be insignificant. The regulatory text for this final rule can be found in §§93.102(b)(2)(iv) and (v) and 93.119(f)(9) and (10).

A state air agency and/or EPA finding of significance or insignificance (a "significance finding") for a PM<sub>2.5</sub> precursor will be based on criteria similar to the general criteria for insignificance of motor vehicle emissions in §93.109(k) of the conformity rule. Specifically, the following criteria will be considered in making significance or insignificance findings for

PM<sub>2.5</sub> precursors: the contribution of on-road emissions of the precursor to the total 2002 baseline SIP inventory; the current state of air quality for the area; the results of speciation monitoring for the area; the likelihood that future motor vehicle control measures will be implemented for a given precursor; and projections of future on-road emissions of the precursor. Determining the significance or insignificance of motor vehicle emissions in a given area will be conducted on a case-by-case basis.

Significance and insignificance findings will be made only after discussions among the interagency consultation partners for the PM<sub>2.5</sub> nonattainment area. These discussions should include a review of the available data being considered to support the significance finding. Interagency consultation also ensures that all of the relevant agencies are aware that such a finding is being considered. It is important to provide transportation agencies with adequate notice of which, if any, precursors they may need to address in conformity analyses. A significance finding will be made through a letter from the state air agency or EPA regional office 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). An insignificance finding will be made through either letters from the state air agency and the EPA regional office or a letter co-signed by the state air

agency and the EPA regional office to the relevant state and local air quality and transportation agencies, MPO(s) and DOT.

EPA notes that any significance or insignificance finding made prior to EPA's adequacy finding for budgets in a SIP, or EPA's approval of the SIP, should not be viewed as the ultimate determination of the significance of precursor emissions in a given area. State and local agencies may find through the SIP development process that emissions of one or more precursors are significant, even if a precursor had previously been considered insignificant. In such a case, the PM<sub>2.5</sub> SIP would establish a motor vehicle emissions budget for that precursor and a regional emissions analysis for that precursor would be included in subsequent conformity determinations. Alternatively, state and local agencies may find through the SIP development process that emissions of one or more precursors are insignificant even if a precursor had previously been considered significant. In such a case, the PM<sub>2.5</sub> SIP would not establish a motor vehicle emissions budget for that precursor and a regional emissions analysis for that precursor would not be necessary in subsequent conformity determinations.

To calculate emission factors for PM<sub>2.5</sub> precursors, areas must use the latest EPA-approved motor vehicle emissions factor model (currently MOBILE6.2 for all states except California). PM<sub>2.5</sub> nonattainment and maintenance areas in California must use

EMFAC2002 or a more recently EPA-approved model. It should be noted that EMFAC2002 does not calculate emissions factors for ammonia. However, EPA understands that California is developing a methodology for estimating ammonia emissions from on-road vehicles. It is anticipated that this methodology will be completed prior to the end of the one-year conformity grace period. However, as a practical matter, conformity for ammonia would not be required in California until there is an acceptable method for estimating such emissions, because a method would be needed to estimate current or future ammonia emissions for either a significance finding or SIP motor vehicle emissions budget.

#### B. Rationale for This Final Rule

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 requiring that transportation conformity determinations consider  $PM_{2.5}$  precursors if they are significant contributors to an area's  $PM_{2.5}$  air quality problem.

Today's final rule incorporates  $NO_x$ , VOCs,  $SO_x$ , and ammonia as possible transportation-related  $PM_{2.5}$  precursors because all of these precursors are emitted from on-road motor vehicles. Based on data collected from monitoring sites in the national



speciation trends network,<sup>2</sup> 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., NOx, VOC, SOx and ammonia) in their SIPs and in conformity.

The final rule allows for the consideration of the four precursors in conformity prior to PM<sub>2.5</sub> SIPs when such precursors are significant: NOx is considered significant in the absence of a finding; VOCs, SOx and ammonia must be found significant to be included. In finalizing this rule EPA attempted to strike a balance between: 1) expeditiously addressing transportation-related emissions that could exacerbate the PM<sub>2.5</sub> air quality problem before a SIP is established, and 2) targeting conformity requirements in PM<sub>2.5</sub> areas in an efficient and reasonable manner.

EPA based its decision on a number of factors. For example, EPA considered the environmentally conservative nature of requiring conformity determinations for all four precursors prior to the submission of a SIP unless a finding is made that on-road emissions of a precursor or precursors is insignificant, rather than only for NOx. Requiring that all four precursors be

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<sup>2</sup>The speciation trends network consists of over 50 monitoring sites in urban areas and provides nationally consistent data on PM<sub>2.5</sub> constituents by type (i.e., "speciated") including nitrates, elemental carbon, organic carbon and sulfates.

addressed in conformity prior to the submission of a SIP may be a more environmentally protective approach to meeting the Clean Air Act's conformity requirements because any significant precursors would automatically be addressed without the need for a significance finding to be made by the state air agency or the EPA regional office. On the other hand, requiring significance findings for the precursors VOCs, SO<sub>x</sub> and ammonia better accounts for regional variability in air quality and better targets resources to the precursors that are most important in an individual area. Also, requiring significance findings for these three precursors could help areas avoid adopting on-road control measures to address a particular precursor before a SIP is submitted that ultimately prove to be unnecessary after a SIP is developed, if emissions of the targeted precursor are ultimately found to be insignificant. In addition, EPA also considered with respect to each precursor the chemistry of secondary particle formation, the results of speciated air quality monitoring and on-road emissions inventory data. In addition to the information provided below, the November 2003 notice of proposed rulemaking contains a more detailed discussion of speciated air quality data and on-road emissions data (68 FR 62706 through 62708). Please refer to the notice of proposed rulemaking for additional details.

*Sulfur dioxide.* While speciated air quality data show that

sulfate is a relatively significant component (e.g. ranging from nine to 40 percent) of PM<sub>2.5</sub> mass in all regions of the country, emissions inventory data and projections show that on-road emissions of SOx constitute a "de minimis" (i.e., extremely small) portion of total SOx emissions. Emissions inventory data for 1999 for the 372 potential PM<sub>2.5</sub> nonattainment counties for PM<sub>2.5</sub> (based on 1999-2001 air quality data) show that on-road sources were responsible for only two percent of total SOx emissions. By comparison, fuel combustion sources (e.g., electric utility and industrial combustion of coal and oil) contributed approximately 88 percent of the SOx emissions in 1999 in these same counties.

Furthermore, EPA has already adopted two regulations that will greatly reduce emissions of SOx from on-road sources by the time such regulations are both in full effect in 2009. First, in 2004 the low sulfur gasoline program began to be phased in and will be fully effective in 2007 (February 10, 2000, 65 FR 6697). This regulation will reduce the sulfur content of gasoline by approximately 90 percent when fully effective.<sup>3</sup> Second, in 2006 the low sulfur diesel program will begin to be phased in and will be fully effective by 2009 (January 18, 2001, 66 FR 5001). This

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<sup>3</sup>In addition, California has adopted its own rule which addresses the sulfur content of gasoline in that state. California's regulation is similar in stringency to the federal regulation.

regulation will reduce the sulfur content of diesel fuel by approximately 97 percent nationally when fully effective.

Projections of on-road emissions of SO<sub>2</sub> in 2020 indicate that on-road sources will be responsible for less than one percent of the total SO<sub>2</sub> emissions in 2020 in the 372 potential PM<sub>2.5</sub> nonattainment counties (based on 1999-2001 air quality data).<sup>4</sup> These projections confirm that the implementation of the fuel regulations discussed above will ensure that as a general matter SO<sub>2</sub> emissions from on-road sources remain at insignificant levels in all areas. Therefore, states are not required to include SOx in conformity determinations prior to submission of a SIP unless the state air agency or EPA regional office makes a finding that on-road emissions of SOx are a significant contributor to an area's PM<sub>2.5</sub> problem. If a state determines through its SIP development process that on-road emissions of SOx are significant and the SIP includes an adequate or approved emissions budget for SOx, then future conformity determinations will be required to include a regional emissions analysis for SOx.

*Nitrogen oxides.* Based on a review of speciated monitoring data analyses, nitrate concentrations vary significantly across

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<sup>4</sup>EPA 420-R-00-020, October 2002, "Procedures for Developing Base Year and Future Year Mass and Modeling Inventories for the Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel (HDD) Rulemaking."

the country. For example, in some southeastern locations, annual average nitrate levels range from six to eight percent of total  $PM_{2.5}$  mass, whereas nitrate comprises 40 percent or more of  $PM_{2.5}$  mass in certain California locations. Nitrate formation is favored by the availability of ammonia, low temperatures, and high relative humidity. Nitrate formation also depends upon the amount of nearby  $SO_2$  emissions because ammonia reacts preferentially with  $SO_2$  over  $NO_x$  (i.e., ammonia first reacts to form ammonium sulfate and then reacts to form ammonium nitrate).

The sources of  $NO_x$  are numerous and widespread, including motor vehicles, power plants, and many other combustion activities. We believe these source categories and the potential for significant impacts on air quality exist in many nonattainment areas. The analysis of speciated air quality data and the discussion of emission inventory data in the November 2003 transportation conformity notice of proposed rulemaking provide an appropriate basis for deciding that states must include  $NO_x$  in conformity determinations made before SIPs are submitted and emissions budgets are found adequate or approved, unless the state air agency and the EPA regional office find that on-road emissions of  $NO_x$  are not a significant contributor to the area's  $PM_{2.5}$  problem.

EPA believes that requiring both the state air agency and the EPA regional office make an insignificance finding for  $NO_x$  is

warranted because in this rulemaking EPA has initially determined that NOx is a significant precursor for all PM<sub>2.5</sub> nonattainment areas. Additionally, all other insignificance findings require both state air agency and EPA regional office action because they are made through either a motor vehicle emission budget adequacy finding or a SIP approval as required by §93.109(k) of the conformity regulation. Therefore, based on the reasons stated above, EPA believes that it is necessary that both the state air agency and the EPA regional office make a finding that on-road emissions of NOx are an insignificant contributor to an area's PM<sub>2.5</sub> air quality problem prior to the submission of a SIP. A finding made by both agencies provides assurance that on-road emissions of NOx are in fact insignificant contributors to an area's PM<sub>2.5</sub> air quality problem and therefore may be omitted from conformity determinations prior to the submission of a SIP for the area. After a PM<sub>2.5</sub> SIP is submitted, conformity determinations will be required for on-road emissions of NOx if the SIP includes emissions budgets that are found adequate or are approved.

*Volatile Organic Compounds.* In 2003, EPA estimates that on-road motor vehicles accounted for 28 percent of total VOCs nationwide. Carbonaceous particles, which result, in part, from reactions involving VOCs, account for 25-70% of constructed fine particle mass measured at specific Speciation Trends Network

sites. The highest percentages of carbonaceous particles tend to be in the western United States, while the lowest percentages tend to be in the eastern United States.

Although research clearly indicates that VOCs can contribute to the formation of carbonaceous secondary PM<sub>2.5</sub> compounds, the current science is still incomplete in its understanding of the fraction of particulate organic compounds that began as VOCs. A major reason for this existing deficiency is the varying degrees of volatility of organic compounds, as well as our inability to model collectively the reactivity of these different groups of compounds. For example, there are highly reactive volatile compounds with six or fewer carbon atoms that indirectly contribute to PM formation through reaction with oxidizing compounds such as the hydroxyl radical and ozone. There are also semi-volatile compounds with between seven and 24 carbon atoms that can exist in particle form and can readily be oxidized to form other low volatility compounds. Finally, high molecular weight organic compounds (with 25 carbon atoms or more and low vapor pressure) are emitted directly as primary organic particles and exist primarily in the condensed phase at ambient temperatures. For this reason, these high molecular weight organic compounds are generally considered to be primary particles and not VOCs. The relative importance of each of these groups of organic compounds in the formation of organic particles

varies from area to area. In addition, the contribution of on-road source emissions to each of these three groups of organic compounds may also vary from area to area.

Current scientific and technical information clearly shows that carbonaceous material is a significant fraction of total  $PM_{2.5}$  mass in most areas, and that certain aromatic VOC emissions such as toluene, xylene, and trimethyl-benzene are precursors to the formation of secondary  $PM_{2.5}$  (secondary organic aerosols). However, while significant progress has been made in understanding the role of gaseous organic material in the formation of organic PM, this relationship is complex and requires further research and technical tools to determine the extent of the contribution of specific VOC compounds to organic PM mass, prior to EPA being able to determine the extent of the contribution of VOCs to nonattainment problems in all  $PM_{2.5}$  areas.

Additional research is also needed to determine the sources of VOC emissions that contribute most to  $PM_{2.5}$  air quality issues. For example, analysis of air quality samples collected in Pittsburgh, Pennsylvania from 1998 through 2003 indicate that approximately half of the secondary organic aerosol in Pittsburgh may be attributable to biogenic sources (e.g., trees) as opposed to anthropogenic sources (i.e., man-made sources such as power plants and motor vehicles). Similarly, analysis of air quality samples collected in Atlanta, Georgia from 1998 through 2003



indicate that as much as 80 percent of the secondary organic aerosol may be attributable to biogenic sources. These data<sup>5</sup> are significant because biogenic emissions cannot be controlled. In addition, EPA believes that in some PM<sub>2.5</sub> nonattainment areas, particularly during seasons with high photochemical activity, a significant amount of the secondary organic aerosol may be due to biogenic emissions as opposed to anthropogenic emissions of VOCs, as evidenced by the data from Pittsburgh and Atlanta.

EPA acknowledges that analytical tools are evolving to enable areas to adequately model the contribution of VOCs to PM<sub>2.5</sub> formation. Researchers in the field anticipate that within the next five years the ability of models to simulate various components of PM<sub>2.5</sub> will improve greatly, as will their ability to estimate the effectiveness of various control measures. These model improvements are particularly significant for secondary organic aerosols and biogenic and anthropogenic emissions of VOCs. However, until such model improvements are made and our understanding of VOC secondary particle formation improves, EPA believes it is not appropriate to require regional conformity analyses for VOCs in PM<sub>2.5</sub> nonattainment areas prior to the

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<sup>5</sup>Data from the PM Supersites Program documented in a September 2004 summary response entitled, "Policy Relevant Science Questions Regarding PM - Precursors," Prepared by Spyros Pandis, CMU; David Allen, University of Texas at Austin; Armistead (Ted) Russell, Georgia Institute of Technology; and Paul A. Solomon, US EPA, ORD. This document can be found in the docket for today's rulemaking.

submission of a  $PM_{2.5}$  SIP and emissions budgets for VOCs being found adequate or approved, unless the state air agency or EPA regional office finds that VOCs are a significant contributor to an area's  $PM_{2.5}$  problem. If a state determines through its SIP development process that on-road emissions of VOCs are significant and the SIP includes an adequate or approved emissions budget for VOCs, then future conformity determinations will be required to include a regional emissions analysis for VOCs.

*Ammonia.* We believe a case-by-case approach is also appropriate for ammonia because there is sufficient uncertainty about emissions inventories and about the potential efficacy of control measures from location to location. Reductions of ammonia may be effective primarily in areas where nitric acid is in abundance and ammonia is the limiting factor to ammonium nitrate formation (ammonium nitrate is a type of particulate matter). Although ammonia reductions may be appropriate in selected locations, in other locations such reductions may lead to increased atmospheric acidity, exacerbating acidic deposition problems. In other words, states should evaluate the benefits of including ammonia in conformity determinations prior to the submission of SIPs and emissions budgets being found adequate or approved. Therefore, states are not required to include ammonia in conformity determinations prior to submission of a SIP unless the state air

agency or EPA regional office makes a finding that on-road emissions of ammonia are a significant contributor to an area's PM<sub>2.5</sub> problem. If a state determines through its SIP development process that on-road emissions of ammonia are significant and the SIP includes an adequate or approved emissions budget for ammonia, then future conformity determinations will be required to include a regional emissions analysis for ammonia.

### C. Response to Comments

#### 1. Required Precursors

Two comments received on the November 5, 2003, proposed rulemaking indicated support for identifying NO<sub>x</sub>, VOCs, SO<sub>x</sub> and ammonia as potential transportation-related PM<sub>2.5</sub> precursors. No commenters were opposed to identifying all of these as potential precursors.

EPA received a number of comments on the proposed options for addressing precursors during the period before PM<sub>2.5</sub> SIPs are submitted and emissions budgets are found adequate or approved. The majority of commenters supported option 2 included in the November 2003 proposal. Option 2 would have required significance findings for any of the four precursors to be analyzed in conformity determinations prior to EPA finding emissions budgets in a PM<sub>2.5</sub> SIP adequate or EPA's approval of that SIP. Some commenters that supported option 2 believed that limited resources would be best used by determining which

precursors contribute significantly to an area's air quality problem before conformity for those precursors was required. A number of commenters also supported the proposed option 1. Option 1 would have required NOx and VOCs to be analyzed in conformity determinations prior to the submission of PM<sub>2.5</sub> SIPs unless one or both precursors was determined to be insignificant. This option also would not have required SOx or ammonia to be analyzed for conformity prior to a submitted SIP unless one or both precursors was found significant. Two supporters of option 1 believed sufficient air quality data exists for their areas to support requiring analysis of NOx and VOCs in conformity determinations prior to the submission of a PM<sub>2.5</sub> SIP.

One commenter recommended that to properly implement the Clean Air Act in all PM<sub>2.5</sub> areas, conformity determinations should be required for all four precursors prior to the submission of a PM<sub>2.5</sub> SIP unless a precursor was found to be insignificant. This commenter believed that it would be unreasonable to allow an area to opt out of conducting an analysis by default for a precursor that could be responsible for a large portion of PM<sub>2.5</sub>. Additionally, two commenters indicated that SOx should be addressed in conformity determinations prior to submission of a PM<sub>2.5</sub> SIP unless it is found to be insignificant. One commenter stated that ammonia should be included in conformity determinations as soon as modeling and analysis tools are

available. Another commenter opined that the only pollutant that should require a significance finding prior to the submission of a PM<sub>2.5</sub> SIP is ammonia.

EPA considered all of these comments along with a number of other factors including, speciated air quality data, emissions inventory information, and the state of the scientific understanding of the formation of secondary particles. We based today's decision on all of these factors as described above in section III. B.

Several commenters believed that SIP budgets for one or more of the PM<sub>2.5</sub> precursors should be established before conformity is required for those precursors. Specifically, two commenters believed that SO<sub>x</sub> and ammonia should be evaluated for significance and have SIP budgets before conformity is required. Three other commenters believed that conformity determinations should not be required for any PM<sub>2.5</sub> precursors prior to the submission of a SIP and emissions budgets being found adequate or approved. One of these commenters stated that §§93.102(b)(2)(iii)-(v) and 93.102(b)(3) should refer to budgets because conformity should only be required if there is an explicit motor vehicle emissions budget that is intended to be a ceiling on future emissions.

EPA disagrees with these commenters. Clean Air Act section 176(c)(6) requires that conformity apply in new nonattainment

areas one year after the effective date of the nonattainment designation, even prior to the submission of SIPs establishing budgets for a particular pollutant or precursor. Clean Air Act section 176(c)(4) provides EPA with the authority to establish conformity tests that will ensure that transportation plans, TIPS and projects do not result in new violations of an air quality standard, increase the frequency or severity of an existing violation, or delay timely attainment of a standard during the period before a SIP is submitted. While the contribution of mobile sources to PM<sub>2.5</sub> nonattainment problems is likely to vary from area to area, on-road emissions of at least NOx, and perhaps other precursors, are likely to make a significant contribution to PM<sub>2.5</sub> problems in most areas. Therefore, EPA believes it is both required by the Clean Air Act and necessary to protect public health for PM<sub>2.5</sub> areas to begin considering the role of on-road emissions of PM<sub>2.5</sub> precursors in their PM<sub>2.5</sub> air quality problems, and to demonstrate conformity for those precursors that make a significant contribution to their air quality problems once conformity applies for PM<sub>2.5</sub>. Before adequate or approved SIP budgets are established, PM<sub>2.5</sub> areas must use one of the interim emissions tests in §93.119 to fulfill this statutory requirement.

One commenter opined that requiring conformity for additional precursors results in additional burden. The

commenter stated that any additional pollutant or precursor that has to be included in a conformity determination leads to additional modeling runs, additional documentation of results, additional explanation to the public and regional decision makers and an additional opportunity for a conformity lapse. This commenter believed that EPA should not minimize these resource requirements or use this argument to support the inclusion of PM<sub>2.5</sub> precursors in conformity determinations prior to a SIP submission.

EPA understands the commenter's concerns and has attempted to structure requirements for PM<sub>2.5</sub> precursors so that human health and air quality are protected while targeting regional emissions analyses to only those precursors whose on-road emissions make a significant contribution to an area's PM<sub>2.5</sub> air quality problem. However, EPA continues to believe as stated in the November 2003 proposal that including PM<sub>2.5</sub> precursors in PM<sub>2.5</sub> regional emissions analyses prior to the submission of a SIP should not result in any additional transportation or emissions modeling because PM<sub>2.5</sub> areas will already be producing VMT and emissions estimates for direct PM<sub>2.5</sub> (68 FR 62706). The same VMT estimates would be used in calculating emissions of any and all precursors. Additionally, emission factors for the relevant precursors would generally be produced in the same model runs as the emission factors for direct PM<sub>2.5</sub>. EPA recognizes that there

would be some small increase in burden in documenting these results and in discussing these precursors with regional decision makers and the public, but we believe this small increase is merited if a precursor is a significant contributor to an area's air quality problem.

EPA also recognizes that it is possible that an area could lapse because it may not be able to demonstrate conformity for one or more of the PM<sub>2.5</sub> precursors. EPA and DOT always attempt to work with areas that are experiencing problems demonstrating conformity in order to resolve problems before a lapse occurs. However, the Clean Air Act's conformity requirements are intended to ensure that the use of federal transportation funds does not cause new air quality problems, make existing problems worse, or delay meeting a Clean Air Act requirement such as attainment. Therefore, if one or more precursors is a significant contributor to an area's air quality problem, the inability to demonstrate conformity for such precursors would be consistent with the Clean Air Act's intended purpose of the conformity process. In other words, if conformity cannot be demonstrated for a significant precursor, federal transportation funds could not be spent on transportation activities that potentially would cause a new air quality problem, worsen an existing problem, or delay attainment or other emission reduction milestone. The inability to demonstrate conformity would indicate that further action is



needed before federal transportation funding and approvals can occur so that ultimately both transportation and air quality goals are achieved.

## 2. Significance Findings

A number of commenters expressed support for significance findings to be made by either the state air agency or the EPA regional office before a PM<sub>2.5</sub> SIP is submitted. However, commenters also suggested different options for making significance findings. Thirteen commenters stated that both the state air agency and the EPA regional office should make the finding, while two commenters stated that the finding should be made through an area's interagency consultation process. Another commenter recommended that only the state should have the ability to make significance findings.

EPA is making one change with regard to insignificance findings. EPA has determined that insignificance findings for NOx should be made by both the state air agency and the EPA regional office. EPA believes that requiring both the state air agency and the EPA regional office to make an insignificance finding for NOx is appropriate because, as stated above in this rulemaking, EPA has initially determined that NOx is a significant precursor for all PM<sub>2.5</sub> nonattainment areas. Additionally, all other insignificance findings made within the transportation conformity and SIP processes require both state

air agency and EPA regional office action because they are made through either a motor vehicle emission budget adequacy finding or a SIP approval as required by §93.109(k) of the conformity regulation. Therefore, EPA believes that it is necessary that both the state air agency and the EPA regional office make a finding that on-road emissions of NOx are an insignificant contributor to an area's PM<sub>2.5</sub> air quality problem prior to the submission of a SIP. A finding made by both agencies provides assurance that on-road emissions of NOx are in fact insignificant contributors to an area's PM<sub>2.5</sub> air quality problem and therefore may be omitted from conformity determinations prior to the submission of a SIP for the area.

Finally, EPA believes that an insignificance finding for NOx should be made by both the state air agency and the EPA regional office because NOx is the only pollutant/precursor for which a regional analysis is not required if a finding is made. That is, the conformity rule allows NOx to be found insignificant before a SIP is submitted and therefore not be included in subsequent conformity determinations. For all other PM<sub>2.5</sub> and PM<sub>10</sub> pollutants/precursors covered by the conformity rule (i.e., VOCs, SOx and ammonia as PM<sub>2.5</sub> precursors; NOx and VOCs as PM<sub>10</sub> precursors and road dust as a contributor to PM<sub>2.5</sub> air quality problems) either the state air agency or the EPA regional office can decide if emissions are significant and therefore should be

included in conformity determinations prior to the submission of a SIP and emissions budgets being found adequate or approved. However, a finding for NOx (in this case, a finding of insignificance) would lead to a less environmentally conservative result where NOx would no longer be considered in conformity determinations.

In contrast, consistent with the rule's requirements for significance findings for other precursor emissions and the November 5, 2003, proposal, today's action specifies that significance findings for VOCs, SOx and ammonia as PM<sub>2.5</sub> precursors can be made by either the state air agency or the EPA regional office. We believe that changes to the procedures for finding VOCs, SOx and ammonia precursor emissions significant in response to comments are unnecessary because such findings would result in the inclusion of one or more precursors in conformity which would be more environmentally protective. Furthermore, allowing significance findings for VOCs, SOx and ammonia to be made by either the state air agency or the EPA regional office acknowledges the state's authority as well as EPA's role in ensuring national consistency in such decisions. The language used in the final rule for these three PM<sub>2.5</sub> precursors is consistent with how such findings have been made for PM<sub>10</sub> precursors, since the original 1993 conformity rule. Today's final rule for these three precursors is also consistent with how

such findings are to be made for PM<sub>2.5</sub> road dust. The road dust requirements were finalized in the July 1, 2004, final rule. EPA believes that maintaining consistency in cases where precursors are determined to be significant will facilitate implementation of the conformity rules with no adverse impacts, in light of the role interagency consultation will play as explained above.

One commenter, who favored including all precursors in conformity determinations prior to the submission of a SIP, stated that a precursor could be found to be insignificant if current on-road emissions are less than five percent of total PM<sub>2.5</sub> and no increases are expected on a percentage basis during the period covered by the SIP or the conformity determination for the area. EPA disagrees with this suggested approach. Merely using a percentage level as a basis for a significance or insignificance finding ignores many other aspects of an area's nonattainment problem. Rather, EPA believes that a combination of the criteria for insignificance findings contained in §93.109(k) of the conformity rule and the discussion of insignificance and significance findings as they apply to PM<sub>2.5</sub> precursors contained in this notice provide the appropriate basis for deciding whether or not a PM<sub>2.5</sub> precursor is significant or insignificant in a given area. Discussion of EPA's rationale for establishing criteria for significance and insignificance findings can be found in the preamble to the July 1, 2004, final

rule (69 FR 40061 through 40063). Therefore, EPA is not adopting the criteria suggested by the commenter.

One commenter believed that if all precursors were considered in conformity prior to a SIP submission it could be presumed that these precursors will ultimately be included in the SIP for the area. In such a case, the commenter believed it would be difficult to justify not including the precursors in the SIP for the area if the state presumptively includes all of them in the first conformity determination. As previously stated, under today's final rule any significance finding made prior to EPA's adequacy finding for budgets in a SIP, or EPA's approval of the SIP, should not be viewed as the ultimate determination of the significance of precursor emissions in a given area. State and local agencies may find through the SIP development process that emissions of one or more precursors are significant, even if a precursor had previously been considered insignificant. In such a case, the PM<sub>2.5</sub> SIP would establish a motor vehicle emissions budget for that precursor and a regional emissions analysis for that precursor would be included in subsequent conformity determinations. Similarly, state and local agencies may find that a precursor is insignificant when preparing the SIP, even if previously found significant prior to the SIP's preparation.

One commenter stated that the insignificance policy should

be applied to precursor emissions in PM<sub>2.5</sub> nonattainment and maintenance areas for a variety of reasons such as the need for additional information on the nature and cause of an area's PM<sub>2.5</sub> problem, speciation of PM<sub>2.5</sub> and availability of PM<sub>2.5</sub> control measures. EPA agrees with this commenter. Today's final rule allows nonattainment areas to make findings on the significance of each of the four precursors to their PM<sub>2.5</sub> air quality problem during the period before a SIP is submitted and budgets are found adequate as described above. The insignificance policy also generally applies after a SIP is submitted, via the decisions about precursors that are determined in the SIP.

One commenter requested additional guidance on significance and insignificance findings. EPA does not believe that additional guidance on significance and insignificance findings is necessary at this time. EPA has described the criteria to be considered and the process to be used in making these findings in §93.109(k) of the conformity rule and in today's preamble. Additional discussion and details on insignificance findings can be found in the preamble to the July 1, 2004, final rule (69 FR 40061 through 40063).

### 3. Precursors in SIPs

One commenter stated that after PM<sub>2.5</sub> SIPs are submitted, areas should consider all four precursors in conformity determinations unless the SIP clearly states that one or more

precursors are insignificant. EPA is not making any changes in response to this comment. EPA does not believe that it is necessary for a SIP to explicitly state that a precursor is insignificant. Instead, EPA believes that states will consider the on-road contribution of all four precursors to the PM<sub>2.5</sub> problem as they develop their SIPs. If through the SIP process a state concludes that on-road emissions of one or more precursors needs to be addressed in order to attain the PM<sub>2.5</sub> standard as expeditiously as practicable, then EPA expects that the state will include an emissions budget in the SIP for each of the relevant precursors. A conformity determination will then be required for each precursor for which there is a budget, after the emissions budgets are found adequate or approved. In making a decision about each precursor, states should consider the insignificance criteria contained in §93.109(k) of the conformity rule and the current state of the science concerning the precursor's role in the formation of PM<sub>2.5</sub>. Once SIPs are submitted and found adequate or approved the conformity rule requires that conformity be assessed against the budgets in the applicable SIP. Conformity determinations must then address all precursors for which the SIP establishes a budget, and need not address any possible precursor for which the state has not established a budget because the emissions of that precursor are insignificant.

EPA notes that, if inventory and modeling analyses demonstrating reasonable further progress, attainment or maintenance indicate a level of emissions of a precursor that must be maintained to demonstrate compliance with the applicable requirement, then that level of emissions should be clearly identified in the SIP as a motor vehicle emissions budget for transportation conformity purposes consistent with §93.118(e) even if the SIP does not establish particular controls for the given precursor. If the state fails to identify such a level of emissions as a motor vehicle emissions budget, EPA will find the submitted SIP budgets inadequate because the SIP fails to clearly identify the motor vehicle emissions budget as required by conformity rule §93.118(e)(4)(iii).

Several commenters raised concerns about SIP development and regional emissions analyses in areas that are nonattainment for both 8-hour ozone and PM<sub>2.5</sub>. One of these commenters asked if NOx and VOC conformity analyses would be the same for both pollutants in these areas. Another commenter asked if NOx and VOC budgets would be the same for 8-hour ozone and PM<sub>2.5</sub> SIPs in these areas.

EPA does not expect that either regional emissions analyses or budgets for NOx and VOCs will be the same for 8-hour ozone and PM<sub>2.5</sub> standards in areas that are nonattainment for both pollutants, for several reasons. First, it is likely that most areas will have different attainment dates for each of the two



pollutants, which means that it is likely that analyses and budgets will be required for different years. Second, it is possible that in many cases the boundaries of the nonattainment area for each pollutant may be different. For example, the 8-hour ozone nonattainment area may contain more counties than the PM<sub>2.5</sub> nonattainment area or vice versa. Finally, VOC and NOx regional emissions analyses and budgets for 8-hour ozone and PM<sub>2.5</sub> areas will most likely be developed using different meteorological conditions and, in some areas, different travel patterns. For example, because in most areas, ozone is a summertime pollutant, NOx and VOC regional emissions and budgets in 8-hour ozone areas would be calculated using meteorological and travel data for a "typical" summer day. In contrast, NOx and VOC regional emissions and budgets for PM<sub>2.5</sub> areas may be established using annual averages for meteorological and traffic conditions, rather than conditions for only a particular season, because most PM<sub>2.5</sub> nonattainment areas are violating the annual PM<sub>2.5</sub> standard instead of the 24-hour standard.

One commenter stated that there was an error in the proposed option 1 language in §93.102(b)(iv) of the November 2003 rulemaking. Specifically, the commenter suggested that the proposed language appeared to require conformity determinations for NOx and VOCs if a submitted SIP does not contain emissions budgets for NOx and VOCs. EPA disagrees; the language as

proposed for NOx and VOCs is correct and we are retaining that language for NOx in today's final rule. We believe that the commenter misunderstood the proposal. The language in §93.102(b)(iv) that is finalized today requires that conformity determinations be made for NOx unless: 1) during the period before a SIP is submitted and budgets are found adequate or approved the state air agency and EPA regional office make a finding that on-road emissions of NOx are not significant contributors to an area's air quality problem; and/or 2) the area's SIP does not establish an emissions budget for on-road emissions of NOx. In other words, if the SIP includes an adequate or approved emissions budget for NOx, then NOx must be analyzed in conformity determinations in PM<sub>2.5</sub> nonattainment areas. In contrast, if the SIP does not contain a budget for NOx and instead concludes that emissions of NOx could rise to any reasonably foreseeable level without impairing reasonable further progress or attainment, EPA would make an insignificance finding, either through a motor vehicle emissions budget adequacy finding or through a SIP approval, and NOx would not have to be considered for conformity purposes.

#### 4. Modeling Concerns

Several commenters expressed concerns about generating estimates for PM<sub>2.5</sub> precursors. One commenter stated that few areas have experience using MOBILE6 to evaluate PM<sub>2.5</sub> emissions

and that unexpected issues and problems will arise from the use of MOBILE6. The commenter believed that difficulties will come from both model shortcomings and inexperience of the users. Another commenter had concerns about relying on a future release of MOBILE6.2 or other future guidance for estimating precursor emissions. A third commenter stated that there is a need for guidance on analysis techniques for ammonia and SOx.

Since the conformity proposal was published in November 2003, EPA has released MOBILE6.2. MOBILE6.2 is based on the latest available information concerning vehicle emissions and is therefore the best available tool at this time for calculating on-road emissions of PM<sub>2.5</sub> precursors (in all states except California). The Federal Register notice announcing the release of the model was published on May 19, 2004 (69 FR 28830). EPA released SIP and conformity policy guidance on the use of MOBILE6.2 on February 24, 2004, entitled, "Policy Guidance on the Use of MOBILE6.2 and the December 2003 AP-42 Method for Re-Entrained Road Dust for SIP Development and Transportation Conformity." EPA released technical guidance on the use of the MOBILE6.2 model in August 2004. Information on training in the use of MOBILE6.2, related policy memoranda and the technical guidance in the use of the model are available on EPA's MOBILE website at <http://www.epa.gov/otaq/m6.htm>.

EPA understands the concerns that these commenters have

expressed about estimating precursors. However, we believe there is adequate time for new areas to gain MOBILE experience and conduct conformity analyses for the  $PM_{2.5}$  standard before the end of the one-year conformity grace period. We believe that the material described above contains sufficient information for the states that use MOBILE to conduct modeling of on-road emissions of ammonia and  $SO_x$ . Therefore, we believe that additional guidance or analytical techniques for estimating these precursors is unnecessary. EPA recognizes, however, that California needs to complete the development of a methodology for estimating on-road emissions of ammonia before ammonia would be included in conformity determinations in California, as discussed above in Section III. A.

#### 5. State of the Science

Two commenters expressed concern about the current understanding of the formation of secondary particles. One commenter stated that the role of ammonia needs to be evaluated quickly so that states can have all information possible while they plan to attain the  $PM_{2.5}$  standard. The other commenter stated that there is a lack of understanding about the formation of secondary particles. This commenter believed that unnecessary analysis of potential  $PM_{2.5}$  precursors would be time consuming and overly burdensome without producing substantial air quality benefits.

EPA acknowledges that our understanding of the formation of secondary particles is not complete. However, EPA believes that this final rule strikes an appropriate balance between preserving limited state and local resources and environmental protection. Our incomplete understanding of the role of VOCs and ammonia in the formation of secondary particles is one of the reasons that we determined that PM<sub>2.5</sub> nonattainment areas should not be required to address those precursors in conformity determinations before SIP budgets are available unless a significance finding is made. On the other hand, EPA believes that there is clear evidence and a substantial understanding of the role of NOx and SOx in the formation of secondary particles. Additional information on the role of each of the precursors can be found in the US EPA Criteria Document,<sup>6</sup> and in the NARSTO Fine Particle Assessment.<sup>7</sup>

EPA agrees that further research is needed on the role of ammonia in particle formation and the benefits of ammonia control

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<sup>6</sup>USEPA, 2003. Air Quality Criteria for Particulate Matter (Fourth External Review Draft). EPA/600/P-99/002aD and bD. U.S. Environmental Protection Agency, Office of Research and Development, National Center For Environmental Assessment, Research Triangle Park Office, Research Triangle Park, NC. June 2003. Available electronically at <http://cfpub.epa.gov/ncea/cfm/partmatt.cfm>.

<sup>7</sup> North American Research Strategy for Tropospheric Ozone (NARSTO) and Particulate Matter, Particulate Matter Science for Policy Makers - A NARSTO Assessment, Parts 1 and 2. NARSTO Management Office (Envair), Pasco, Washington. February 2003.

measures. Ongoing research is expected to greatly improve our understanding of ammonia control measures as well as our understanding of the role of ammonia in aerosol formation. However, as states and EPA develop a greater understanding over the coming years about the air quality effects of reducing ammonia emissions in specific nonattainment areas, it may be appropriate for ammonia reduction strategies to be included in future SIPs and it may be appropriate to include ammonia in future conformity determinations.

#### 6. Comment Period

One commenter requested an additional comment period for PM<sub>2.5</sub>-related requirements. As stated in the July 1, 2004, Federal Register notice, EPA determined that it is not necessary to reopen the comment period on the proposed options for addressing PM<sub>2.5</sub> precursors in conformity determinations (69 FR 40032). EPA published a supplemental proposal on PM<sub>2.5</sub> hot-spot analyses on December 13, 2004. Providing the public with an opportunity to comment the proposed options for hot-spot analyses. Additionally, when EPA publishes the proposed PM<sub>2.5</sub> implementation strategy the public will have the opportunity to comment on that proposal as well. EPA concludes that the comment periods for these rulemakings has provided the public with adequate time to comment on additional issues related to PM<sub>2.5</sub>.

#### IV. Technical Correction to Public Consultation Procedures

In this action, we are correcting a cross-reference to a provision of DOT's transportation planning regulations that is cited under the public consultation procedure requirements in §93.105(e) of the conformity rule. This cross-reference to the transportation planning regulations is intended to specify the provision of DOT's regulations that contains the fee schedule for public inspection and copying of transportation planning and conformity documents. Prior to today's action the cross-reference was listed as 49 CFR 7.95; this final rule changes the cross-reference to 49 CFR 7.43.

EPA is making this technical correction to §93.105(e) as a result of DOT's July 16, 1998, final rule that changed the citation of the transportation planning fee schedule provision (63 FR 38331). We did not issue a proposal or provide an opportunity for public comment for this minor correction to the rule. We believe such actions are unnecessary because this minor revision in no way changes the substantive public consultation procedures described in §93.105(e) of the conformity rule. This revision merely updates a cross reference in the conformity rule to be consistent with the recodification of DOT's regulations so that implementers can more easily locate the correct corresponding DOT regulation.

V. How Does Today's Final Rule Affect Conformity SIPs?

Today's final rule does not affect conformity SIP

requirements. In all nonattainment and maintenance areas with and without approved conformity SIPs, the final rule requirements for PM<sub>2.5</sub> precursors will apply immediately upon the effective date of today's action because no prior conformity rules (or approved conformity SIPs) address precursors for PM<sub>2.5</sub>. The technical correction to §93.105(e) included in this rulemaking will apply immediately upon the effective date in all areas except those that have an approved conformity SIP containing this provision. For these areas, the §93.105(e) correction will not be reflected in their SIPs until the state includes the correction in a SIP revision and EPA approves that revision. EPA has no authority to disregard this statutory requirement for this portion of today's final rule. EPA does not believe, however, that the conformity SIP requirement will preclude areas with approved SIPs from appropriately implementing §93.105(e), as today's action merely corrects a cross-reference to DOT's transportation planning regulations. We believe that areas can interpret their approved conformity SIPs consistent with today's change to reflect the new correct citation. We believe this interpretation would be reasonable, given that this change to DOT's fee schedule rules is merely one of reorganizing and not one of substance. EPA will work with states as appropriate to approve revisions to their conformity SIPs as expeditiously as possible through flexible administrative techniques such as



parallel processing and direct final rulemaking. EPA released guidance on conformity SIPs on November 18, 2004, entitled, "Conformity SIP Guidance." This guidance is primarily intended to assist areas with approved conformity SIPs determine which provisions of the July 1, 2004, conformity rule amendments apply immediately and which provisions cannot apply until their conformity SIPs are revised.

By way of background, Clean Air Act section 176(c)(4)(C) currently requires states to submit revisions to their SIPs to reflect the criteria and procedures for determining conformity. States can choose to develop conformity SIPs as a memorandum of understanding (MOU), memorandum of agreement (MOA), or state rule. However, a state must have and use its authority to make an MOU or MOA enforceable as a matter of state law, if such mechanisms are used. Section 51.390(b) of the conformity rule specifies that after EPA approves a conformity SIP revision, the federal conformity rule no longer governs conformity determinations (for the parts of the rule that are covered by the approved conformity SIP). In accordance with §51.390, states must submit a revision to their conformity SIP to reflect the provisions of this final rule within 12 months of the publication date.

## VI. Statutory and Executive Order Reviews

### A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866, (58 FR 51735; October 4, 1993) the Agency must determine whether the regulatory action is "significant" and therefore subject to OMB review and the requirements of the Executive Order. The Order defines "significant regulatory action" as one that is likely to result in a rule that may:

(1) have an annual effect on the economy of \$100 million or more, or otherwise adversely affect in a material way the economy; a sector of the economy; productivity; competition; jobs; the environment; public health or safety; or state, local, or tribal governments or communities;

(2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof;

(4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

It has been determined that this final rule is not a "significant regulatory action" under the terms of Executive Order and therefore not subject to OMB.

B. Paperwork Reduction Act

The Office of Management and Budget (OMB) has approved the information collection requirements contained in this rule under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. And has assigned OMB control number 2060-0561.

Transportation conformity determinations are required under Clean Air Act section 176(c) (42 U.S.C. 7506(c)) to ensure that federally supported highway and transit project activities are consistent with ("conform to") the purpose of the SIP. Conformity to the purpose of the SIP means that transportation activities will not cause or contribute to new air quality violations, worsen existing violations, or delay timely attainment of the relevant air quality standards. Transportation conformity applies under EPA's conformity regulations at 40 CFR parts 51.390 and 93 to areas that are designated nonattainment and those redesignated to attainment after 1990 ("maintenance areas" with SIPs developed under Clean Air Act section 175A) for transportation-source criteria pollutants. The Clean Air Act gives EPA the statutory authority to establish the criteria and procedures for determining whether transportation activities conform to the SIP.

EPA provided two opportunities for public comment on the incremental burden estimates for transportation conformity

determinations under the new 8-hour ozone and PM<sub>2.5</sub> standards. EPA received comments on both the initial burden estimates provided in the November 5, 2003, proposal (68 FR 62720) and on the revised estimates in the January 5, 2004, ICR (69 FR 336). EPA responded to all of these comments in the ICR that has been approved by OMB. This ICR addresses all aspects of the conformity rulemaking effort for the new air quality standards. EPA estimated burden in this ICR is based on implementing the most intensive options proposed for all aspects of the conformity rules, including PM<sub>2.5</sub> precursors. The options selected in today's final action are consistent with the burden estimated in the ICR.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a federal agency. This includes the time needed to review instructions; develop, acquire, install and utilize technology and systems for the purposes of collecting, validating, and verifying information; process and maintain information; and disclose and provide information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information.

An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations in 40 CFR are listed in 40 CFR part 9. In addition, EPA has amended the table in 40 CFR part 9 of currently approved OMB control numbers for various regulations to list the regulatory citations for the information requirements contained in this final rule.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act, as amended by the Small Business Regulatory Enforcement Fairness Act of 1996, requires the Agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small not-for-profit organizations and small governmental jurisdictions.

For purposes of assessing the impacts of today's final rule on small entities, small entity is defined as: (1) a small business as defined by the Small Business Administration's (SBA) regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than

50,000; and (3) a small organization that is any not-for-profit enterprise that is independently owned and operated and is not dominant in its field.

After considering the economic impacts of today's final rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. This regulation directly affects federal agencies, state departments of transportation and metropolitan planning organizations that, by definition, are designated under federal transportation laws only for metropolitan areas with a population of at least 50,000. These organizations do not constitute small entities within the meaning of the Regulatory Flexibility Act.

D. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for federal agencies to assess the effects of their regulatory actions on state, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "federal mandates" that may result in expenditures to state, local, and tribal governments, in the aggregate, or to the private sector, of \$100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally

requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

EPA has determined that this final rule itself does not contain a federal mandate that may result in expenditures of \$100 million or more for state, local, and tribal governments, in the aggregate, or the private sector in any one year. The primary purpose of this rulemaking is to incorporate into the conformity

regulations the PM<sub>2.5</sub> precursors that must be considered in conformity determinations in PM<sub>2.5</sub> nonattainment and maintenance areas. Clean Air Act section 176(c)(5) requires the applicability of conformity to such areas as a matter of law one year after nonattainment designations. Therefore, this final rule merely implements already established law that imposes conformity requirements and does not itself impose requirements that may result in expenditures of \$100 million or more in any year. As a result, today's action is not subject to the requirements of sections 202 and 205 of the UMRA and EPA has not prepared a statement with respect to budgetary impacts.

E. Executive Order 13132: Federalism

Executive Order 13132, entitled "Federalism" (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure "meaningful and timely input by state and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" is defined in the Executive Order to include regulations that have "substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government."

This final rule does not have federalism implications. It will not have substantial direct effects on the states, on the



relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. The Clean Air Act requires conformity to apply in certain nonattainment and maintenance areas as a matter of law, and this final rule merely establishes and revises procedures for transportation planning entities in subject areas to follow in meeting their existing statutory obligations. Thus, Executive Order 13132 does not apply to this rule.

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

Executive Order 13175: "Consultation and Coordination with Indian Tribal Governments" (65 FR 67249, November 6, 2000), requires EPA to develop an accountable process to ensure "meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications." "Policies that have tribal implications" is defined in the Executive Order to include regulations that have "substantial direct effects on one or more Indian tribes, on the relationship between the federal government and the Indian tribes, or on the distribution of power and responsibilities between the federal government and Indian tribes."

Today's amendments to the conformity rule do not significantly or uniquely affect the communities of Indian tribal

governments, as the Clean Air Act already requires transportation conformity to apply as a matter of law in any area that is designated nonattainment or maintenance. This final rule incorporates into the conformity rule provisions addressing newly designated PM<sub>2.5</sub> nonattainment and maintenance areas subject to conformity requirements as a matter of law under the Act that would not themselves have substantial direct effects on tribal governments, on the relationship between the federal government and Indian tribes, or on the distribution of power and responsibilities between the federal government and Indian tribes, as specified in Executive Order 13175. Accordingly, the requirements of Executive Order 13175 are not applicable to this final rule.

G. Executive Order 13045: Protection of Children from Environmental Health and Safety Risks

Executive Order 13045: "Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997), applies to any rule that: (1) is determined to be "economically significant" as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned

regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

This final rule is not subject to Executive Order 13045 because it is not economically significant within the meaning of Executive Order 12866 and does not involve the consideration of relative environmental health or safety risks on children.

H. Executive Order 13211: Actions That Significantly Affect Energy Supply, Distribution or Use

This final rule is not subject to Executive Order 13211, "Action Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use" (66 FR 28355; May 22, 2001), because it will not have a significant adverse effect on the supply, distribution, or use of energy.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 ("NTTAA"), Public Law 104-113, section 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. "Voluntary consensus standards" are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not

to use available and applicable voluntary consensus standards.

This rulemaking does not involve technical standards. Therefore, the use of voluntary consensus standards does not apply to this final rule.

J. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 et seq., as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. The EPA will submit this final rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the final rule in the Federal Register. This rule is not a "major rule" as defined by 5 U.S.C. 804(2). This rule will be effective on [insert date 30 days from publication in the Federal Register].

K. Petitions for Judicial Review

Under section 307(b)(1) of the Clean Air Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by [insert date 60 days from publication in the Federal Register]. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this rule for the purposes

of judicial review, nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such a rule or action. This action may not be challenged later in proceeding to enforce its requirements. (See section 307(b)(2) of the Administrative Procedures Act.)

List of Subjects in 40 CFR Part 93

Ammonia, Environmental protection, Administrative practice and procedure, Air pollution control, Intergovernmental relations, Nitrogen dioxide, Particulate matter, Transportation, Volatile organic compounds.

Dated: May 2, 2005

Stephen L. Johnson,  
Administrator.

For the reasons set out in the preamble, 40 CFR part 93 is amended as follows:

PART 93-- [AMENDED]

1. The authority citation for part 93 continues to read as follows:

Authority: 42 U.S.C. 7401-7671q.

2. Section 93.102 is amended by:

a. removing the word "and" at the end of paragraph

(b) (2) (ii);

b. removing the period at the end of paragraph (b) (2) (iii) and replacing it with a semicolon; and

c. adding paragraphs (b) (2) (iv) and (v).

The revisions and additions read as follows:

§93.102 Applicability.

\* \* \* \* \*

(b) \* \* \*

(2) \* \* \*

(iv) NOx in PM<sub>2.5</sub> areas, unless both the EPA Regional Administrator and the director of the state air agency have made a finding that transportation-related emissions of NOx within the nonattainment area are not a significant contributor to the PM<sub>2.5</sub> nonattainment problem and has so notified the MPO and DOT, or the applicable implementation plan (or implementation plan submission) does not establish an approved (or adequate) budget for such emissions as part of the reasonable further progress, attainment or maintenance strategy; and

(v) VOC, sulfur oxides (SOx) and/or ammonia (NH<sub>3</sub>) in PM<sub>2.5</sub> areas either if the EPA Regional Administrator or the director of the state air agency has made a finding that transportation-related emissions of any of these precursors within the nonattainment area are a significant contributor to the PM<sub>2.5</sub>

nonattainment problem and has so notified the MPO and DOT, or if the applicable implementation plan (or implementation plan submission) establishes an approved (or adequate) budget for such emissions as part of the reasonable further progress, attainment or maintenance strategy.

\* \* \* \* \*

3. Section 93.105(e) is amended by revising the reference "49 CFR 7.95" to read "49 CFR 7.43."

4. Section 93.119 is amended by:

a. removing the word "and" at the end of paragraph (f)(7);

b. removing the period at the end of paragraph (f)(8) and replacing it with a semicolon; and

c. adding new paragraphs (f)(9) and (f)(10).

The revisions and additions read as follows:

§93.119 Criteria and procedures: Interim emissions in areas without motor vehicle emissions budgets.

\* \* \* \* \*

(f) \* \* \*

(9) NOx in PM<sub>2.5</sub> areas, unless the EPA Regional Administrator and the director of the State air agency have made a finding that emissions of NOx from within the area are not a significant contributor to the PM<sub>2.5</sub> nonattainment problem and has so notified

the MPO and DOT; and

(10) VOC, SOx and/or ammonia in PM<sub>2.5</sub> areas if the EPA Regional Administrator or the director of the State air agency has made a finding that any of such precursor emissions from within the area are a significant contributor to the PM<sub>2.5</sub> nonattainment problem and has so notified the MPO and DOT.

\* \* \* \* \*