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$PM_{2.5}$ and PM_{10} Hot-Spot Analyses in Project-Level Transportation Conformity Determinations for the New $PM_{2.5}$ and Existing PM_{10} National Ambient Air Quality Standards; Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 93

[EPA–HQ–OAR–2003–0049, FRL–8039–5]

RIN 2060–AN02

$PM_{2.5}$ and PM_{10} Hot-Spot Analyses in Project-Level Transportation Conformity Determinations for the New $PM_{2.5}$ and Existing PM_{10} National Ambient Air Quality Standards

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This final rule establishes the criteria for determining which transportation projects must be analyzed for local particle emissions impacts in $PM_{2.5}$ and PM_{10} nonattainment and maintenance areas. This rule establishes requirements in $PM_{2.5}$ areas and revises existing requirements in PM_{10} areas. If required, an analysis of local particle emissions impacts is done as part of a transportation project's conformity determination. EPA is requiring a local particle emissions impacts analysis for certain transportation projects to ensure that these projects do not adversely impact the national ambient air quality standards and human health. The Clean Air Act requires federally supported highway and transit projects to be consistent with ("conform to") the purpose of a state air quality implementation plan. EPA has consulted with the Department of Transportation (DOT) on the development of this final rule, and DOT concurs with its content.

DATES: The final rule is effective April 5, 2006, for good cause found as explained in this rule.

ADDRESSES: EPA has established a docket for this action under Docket ID No. EPA–HQ–OAR–2003–0049. All documents in the docket are listed on the *http://www.regulations.gov* Web site. Although listed in the index, some information may not be publicly available, *e.g.*, Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through *http://www.regulations.gov* or in hard copy at the Air Docket, EPA/DC, EPA West, Room B102, 1301 Constitution Ave., NW., Washington, DC. The 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, and the telephone number for the Air Docket is (202) 566–1742.

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SUPPLEMENTARY INFORMATION:

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I. General Information

A. Does This Action Apply to Me?

Entities potentially regulated by the transportation 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 40 CFR 93.102. 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

EPA has established an official public docket for this action under Docket ID No. EPA–HQ–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. See the **ADDRESSES** section above. 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 Web site 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 the Federal Docket Management System (FDMS), located at *http://www.regulations.gov*. You may use the FDMS 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 B.1. of this section. Once in the FDMS electronic docket system, select "Advanced Search-Docket Search," then enter the appropriate docket identification number (which is EPA–HQ–OAR–2003–0049) in the "docket ID" field and click "submit".

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 ($PM_{2.5}$ and PM_{10}),[1] carbon monoxide (CO), and nitrogen dioxide (NO_2). 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.

More recently, on July 1, 2004, EPA published a final rule (69 FR 40004) 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 $PM_{2.5}$ air quality standards;
- Incorporated existing EPA and 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 rule incorporated most of the provisions from the November 5, 2003 proposal for conformity under the new ozone and $PM_{2.5}$ standards (68 FR 62690). EPA is conducting its conformity rulemakings in the context of EPA's broader strategies for implementing the new ozone and $PM_{2.5}$ standards.

Finally, on May 6, 2005, EPA promulgated a final rule entitled, "Transportation Conformity Rule Amendments for the New $PM_{2.5}$ National Ambient Air Quality Standard: $PM_{2.5}$ Precursors" (70 FR 24280). This final rule specified the transportation-related $PM_{2.5}$ precursors and when they apply in transportation conformity determinations in $PM_{2.5}$ nonattainment and maintenance areas.

C. Why Are We Issuing This Final Rule?

In the November 2003 proposal, EPA presented two options concerning hot-spot analyses in $PM_{2.5}$ and PM_{10} nonattainment and maintenance areas. EPA received substantial comment on this portion of the November 2003 proposal. After considering these comments, EPA, in consultation with the U.S. Department of Transportation (DOT), issued a supplemental notice of proposed rulemaking on December 13, 2004 (69 FR 72140) which requested further public comment on additional options for $PM_{2.5}$ and PM_{10} hot-spot requirements and those options presented in the original November 2003 proposal. In developing today's final rule, EPA considered all of the comments received on $PM_{2.5}$ and PM_{10} hot-spot analysis requirements both in response to the original November 2003 proposal as well as the December 2004 supplemental proposal. EPA received over 5,400 sets of comments on the two proposals from state and local transportation and air quality agencies, environmental groups, transportation advocates, and the general public.

EPA has consulted with DOT, our Federal partner in implementing the transportation conformity regulation, in developing the final rule, and DOT concurs with its content. Please see Sections III. and IV. for more information regarding how this final rule impacts project-level conformity determinations in $PM_{2.5}$ and PM_{10} areas, including those for projects that are currently under development.

III. $PM_{2.5}$ Hot-spot Analyses

A. Background

1. What Is a Hot-spot Analysis?

A hot-spot analysis is defined in 40 CFR 93.101 as an estimation of likely future localized pollutant concentrations resulting from a new transportation project and a comparison of those concentrations to the relevant air quality standard. A hot-spot analysis assesses the air quality impacts on a scale smaller than an entire nonattainment or maintenance area, including, for example, congested roadway intersections and highways or transit terminals. Such an analysis is a means of demonstrating that a transportation project meets Clean Air Act conformity requirements to support state and local air quality goals with respect to potential localized air quality impacts.

Prior to today's final rule, the conformity rule required some type of hot-spot analysis for all FHWA and FTA funded or approved non-exempt transportation projects in CO and PM_{10} nonattainment and maintenance areas (40 CFR 93.116 and 93.123). This requirement applied for all project-level conformity determinations that occur both before and after a SIP is submitted for the CO or PM_{10} air quality standards.

EPA established the type of hot-spot analysis—either quantitative or qualitative—based on the potential impact of a given project or project location on the air quality standards, so that more rigorous quantitative analyses are only required when necessary to meet statutory requirements. Since the original November 24, 1993 conformity rule, EPA has required quantitative analyses for projects that have the highest potential to impact the CO air quality standards (*i.e.*, "projects of air quality concern"). The conformity rule also has detailed projects that have the highest potential to impact the PM_{10} standards, including new or expanded bus and rail terminals or transfer points involving diesel vehicles. These projects of air quality concern would be subject to quantitative hot-spot analyses once the tools and EPA's future modeling guidance are available. In contrast, more streamlined, qualitative hot-spot analyses have been required for all other projects.

Such a tiered approach was intended to utilize state and local resources in an efficient manner while meeting statutory requirements. Quantitative hot-spot analyses use dispersion modeling to determine the potential air quality impact of motor vehicle emissions associated with a highway or

[1] Section 93.102(b)(1) of the conformity rule defines $PM_{2.5}$ and PM_{10} as particles with an aerodynamic diameter less than or equal to a nominal 2.5 and 10 micrometers, respectively.

transit project. Qualitative hot-spot analyses involve more streamlined reviews of local factors such as local monitoring data near a proposed project.

EPA notes, however, that quantitative PM_{10} hot-spot analyses have not yet been required for projects of air quality concern due to a lack of EPA modeling guidance and appropriate methods. Section 93.123(b)(4) of the conformity rule states that the requirements for quantitative PM_{10} hot-spot analyses will not take effect until EPA releases modeling guidance and announces in the **Federal Register** that these requirements are in effect, which EPA has not yet done.

Today's final rule does not impact the existing CO hot-spot requirements; however, the final rule revises the PM_{10} hot-spot requirements as discussed in Sections IV. and V.

2. Proposed Options

EPA proposed several options for how $PM_{2.5}$ hot-spot requirements would apply for project-level conformity determinations in $PM_{2.5}$ nonattainment and maintenance areas. In general, these options were proposed to apply during the time periods before and after a $PM_{2.5}$ SIP is submitted. EPA is repeating in today's action the descriptions of the previously proposed options to assist in discussing the final rule and responses to comments. EPA noted in its proposals that hot-spot analyses would be based only on directly emitted $PM_{2.5}$ attributable to an individual transportation project, since secondary particles formed through $PM_{2.5}$ precursors take several hours to form in the atmosphere, giving emissions time to disperse beyond the immediate area of concern for localized analyses.

The following five options were proposed for $PM_{2.5}$ hot-spot requirements for individual projects in $PM_{2.5}$ areas prior to the submission of a $PM_{2.5}$ SIP (December 13, 2004, 69 FR 72144):

- *Options 1 and 2:* Do not apply any $PM_{2.5}$ hot-spot analysis requirements for any $PM_{2.5}$ area before the submission of the $PM_{2.5}$ SIP [2];
- *Option 3:* Apply the existing conformity rule's PM_{10} hot-spot analysis requirements with respect to $PM_{2.5}$ in all $PM_{2.5}$ areas;
- *Option 4:* Apply the existing conformity rule's PM_{10} hot-spot analysis requirements with respect to $PM_{2.5}$, unless the EPA Regional Administrator or state air agency finds that localized $PM_{2.5}$ violations are not a concern for a given $PM_{2.5}$ area; or
- *Option 5:* Apply the existing conformity rule's PM_{10} hot-spot analysis requirements with respect to $PM_{2.5}$, only if the EPA Regional Administrator or state air agency finds that localized $PM_{2.5}$ violations are a concern for a given $PM_{2.5}$ area.

EPA proposed that an EPA or state air agency finding under Options 4 and 5 that $PM_{2.5}$ localized violations are or are not a concern prior to $PM_{2.5}$ SIP submission would be based on a case-by-case review of local factors for a given $PM_{2.5}$ area. EPA requested information from commenters about whether sufficient local information was available to make such findings.

EPA also proposed three options for project-level conformity determinations after the submission of a $PM_{2.5}$ SIP (December 13, 2004, 69 FR 72145):

- *Option A:* Do not apply any $PM_{2.5}$ hot-spot analysis requirements for any $PM_{2.5}$ area (*i.e.*, Option 1 from the November 2003 proposal);
- *Option B:* Only require quantitative $PM_{2.5}$ hot-spot analyses for projects at those types of locations that the $PM_{2.5}$ SIP identifies as a localized $PM_{2.5}$ air quality concern for a given area (*i.e.*, Option 2 from the November 2003 proposal). No quantitative or qualitative analyses would be required for any projects in other types of locations, or in $PM_{2.5}$ areas where the SIP does not identify types of locations as a localized $PM_{2.5}$ air quality concern; or
- *Option C:* Apply the existing conformity rule's PM_{10} hot-spot analysis requirements with respect to $PM_{2.5}$ for all projects in $PM_{2.5}$ areas, with a minor addition.

Under Option C, EPA proposed to add a new criterion that would require that quantitative analyses also be performed at those types of project locations that the $PM_{2.5}$ SIP identifies as a $PM_{2.5}$ hot-spot concern. See the November 5, 2003 proposal (68 FR 62712–62713) and the December 13, 2004 supplemental proposal (69 FR 72144–72149) for further information on all of the proposed options.

For options involving hot-spot analyses, EPA proposed to not require quantitative $PM_{2.5}$ hot-spot analyses until EPA releases its future modeling guidance, consistent with the existing provision for PM_{10} analyses in § 93.123(b)(4). EPA also proposed to extend to $PM_{2.5}$ areas the existing conformity rule's flexibility in § 93.123(b)(3) for DOT to make categorical hot-spot findings to further streamline analysis requirements when modeling shows that additional analyses are not necessary to meet Clean Air Act requirements for a given project.

Last, EPA requested comments on all of the proposed options, and invited commenters to submit any data or other information about the proposed options, including whether state and local agencies would have information available for implementation. In developing this final rule, EPA considered all of the comments and information submitted for the November 2003 and December 2004 proposals. The December 2004 supplemental proposal also included proposed regulatory text that combined various $PM_{2.5}$ and PM_{10} hot-spot options as illustrative examples, and EPA noted that any combination of the proposed $PM_{2.5}$ or PM_{10} hot-spot options could be included in the final rule.

B. Description of Final Rule

In summary, EPA is finalizing a hybrid of some of the proposed options by:

Being generally consistent with Options 3 (for the period before a SIP is submitted) and C (for the period after a SIP is submitted) for projects of localized air quality concern, and

- Providing the flexibility from other proposed options to eliminate qualitative hot-spot analyses for all projects not of air quality concern.

The final rule requires quantitative $PM_{2.5}$ hot-spot analyses only for projects of air quality concern, and qualitative hot-spot analyses would be done for these projects before EPA releases its future modeling guidance and announces that quantitative $PM_{2.5}$ hot-spot analyses are required under § 93.123(b)(4). EPA specifies in § 93.123(b)(1) that projects of air quality concern are highway and transit projects that involve significant levels of diesel vehicle traffic, or any other project that is identified in the $PM_{2.5}$ SIP as a localized concern.

EPA considered several factors in focusing on projects involving significant numbers of diesel vehicles in developing today's final rule. For example, $PM_{2.5}$ and PM_{10} diesel emission factors are significantly higher than gasoline vehicles on a per-vehicle basis. In addition, studies in proximity of vehicular traffic tend to show that elevated $PM_{2.5}$ concentrations occur near diesel vehicle operations, but show less consistent evidence near locations with high gasoline vehicle operations. See Section V. for more information regarding how and why EPA defined projects of air quality concern in the final rule.

[2] Options 1 and 2 were originally proposed in the November 5, 2003 notice as well (68 FR 62712). Option 1 would have not required any $PM_{2.5}$ hot-spot requirement at any time before or after a $PM_{2.5}$ SIP is submitted. Option 2 also would not require $PM_{2.5}$ hot-spot analyses prior to a $PM_{2.5}$ SIP submission, and then only if the SIP identified types of projects or locations of air quality concern for a given area.

Today's final rule does not require any hot-spot analysis—qualitative or quantitative—for projects that are not listed in § 93.123(b)(1) as an air quality concern. These projects are presumed to meet Clean Air Act requirements and 40 CFR 93.116 without any explicit hot-spot analysis for the reasons explained in full below. State and local project sponsors should briefly document in their conformity documentation for such projects that an explicit $PM_{2.5}$ hot-spot analysis was not completed because Clean Air Act and 40 CFR 93.116 requirements were met without an explicit $PM_{2.5}$ hot-spot analysis.

This final rule requires $PM_{2.5}$ hot-spot analyses for projects of air quality concern in $PM_{2.5}$ nonattainment and maintenance areas at all times—both before and after a $PM_{2.5}$ SIP is submitted. EPA had distinguished its proposed options for the time periods before and after $PM_{2.5}$ SIPs are submitted, but for reasons discussed further below, this type of specificity is no longer necessary. Projects of air quality concern are anticipated to have the potential to increase local $PM_{2.5}$ concentrations, and as a result, $PM_{2.5}$ hot-spot analyses are needed for such projects to ensure that the local air quality impacts of such projects are considered prior to receiving federal funding or approval. EPA is finalizing specific criteria about the types of projects that require such analyses, based on our November 2003 and December 2004 proposals and comments received. See Section V. of this notice for further details regarding the regulatory criteria for projects of air quality concern and more information on the general requirements for performing hot-spot analyses.

In addition, the final rule allows DOT, in consultation with EPA, to make categorical hot-spot findings that would further streamline quantitative hot-spot analysis requirements in appropriate cases in $PM_{2.5}$ areas, as the existing conformity rule already allows in PM_{10} areas for some projects. A categorical hot-spot finding would be made if there is appropriate modeling that shows that a particular category of highway or transit projects of air quality concern meet statutory requirements without additional quantitative hot-spot modeling for such types of projects individually. See Section VII. for further details regarding categorical hot-spot findings.

This final rule requires a qualitative $PM_{2.5}$ hot-spot analysis to be completed for project-level conformity determinations for projects of air quality concern completed in $PM_{2.5}$ nonattainment areas on or after April 5, 2006, when $PM_{2.5}$ conformity requirements apply.[3] Quantitative analyses are not required for these projects at this time since EPA is not requiring quantitative $PM_{2.5}$ hot-spot analyses under § 93.123(b)(4) since quantitative hot-spot modeling techniques and associated EPA modeling guidance still do not exist. Qualitative $PM_{2.5}$ hot-spot analyses should be completed according to joint EPA and DOT guidance. This guidance was developed in consultation with DOT, and the guidance will be posted on the Web site provided in Section I.B.2. of today's notice. See Section VI. of this final rule for more information regarding the timing of EPA's future quantitative hot-spot modeling guidance and subsequent application of quantitative requirements.

Finally, EPA notes that its future quantitative hot-spot modeling guidance will also address how the current 24-hour and annual $PM_{2.5}$ air quality standards are to be considered in quantitative hot-spot analyses. The Clean Air Act and conformity rule require that conformity be met for both the 24-hour and annual $PM_{2.5}$ air quality standards in all $PM_{2.5}$ nonattainment and maintenance areas. However, transportation plan and transportation improvement program (TIP) conformity determinations and regional emissions analyses could address only one $PM_{2.5}$ standard if meeting conformity for the controlling standard would ensure that Clean Air Act requirements are met for both standards. EPA will address how $PM_{2.5}$ hot-spot analyses should consider both applicable $PM_{2.5}$ standards in our future quantitative hot-spot modeling guidance. This future guidance will be consistent with how potential impacts on the $PM_{2.5}$ standards are being considered in EPA's rulemaking for the $PM_{2.5}$ implementation strategy, which EPA proposed on November 1, 2005 (70 FR 66040). Quantitative hot-spot analyses for conformity purposes would consider how projects of air quality concern are predicted to impact air quality at existing and potential $PM_{2.5}$ monitor locations which are appropriate to allow the comparison of predicted $PM_{2.5}$ concentrations to the current $PM_{2.5}$ standards, based on $PM_{2.5}$ monitor siting requirements (40 CFR part 58). EPA developed these monitor siting requirements to determine the level of protection of community public health provided by the current $PM_{2.5}$ standards.

[3] On January 5, 2005 (70 FR 943), EPA designated areas as attainment and nonattainment for the $PM_{2.5}$ standards. These designations became effective on April 5, 2005. As a result, conformity for the $PM_{2.5}$ standards will apply to newly designated nonattainment areas on April 5, 2006.

C. Rationale

In its December 2004 supplemental proposal, EPA stated that several factors needed to be considered for establishing a $PM_{2.5}$ hot-spot requirement. Those factors are as follows:

- The Clean Air Act conformity requirements for individual transportation projects;
- The current scientific understanding of $PM_{2.5}$ hot-spots and public health effects;
- The feasibility of implementing a $PM_{2.5}$ hot-spot requirement; and
- The impact on state and local resources.

The following paragraphs outline how EPA considered these factors in the final rule.

Clean Air Act legal requirements: EPA believes that the final rule allows all federally funded and approved transportation projects in $PM_{2.5}$ areas to meet applicable statutory requirements. Clean Air Act section 176(c)(1)(B) is the statutory criterion that must be met by all projects in nonattainment and maintenance areas that are subject to transportation conformity. Section 176(c)(1)(B) states that federally-supported transportation projects must not "cause or contribute to any new violation of any standard in any area; increase the frequency or severity of any existing violation of any standard in any area; or delay timely attainment of any standard or any required interim emission reductions or other milestones in any area." The Clean Air Act requires that these provisions be met for all FHWA or FTA funded or approved projects, except traffic signal synchronization projects; it does not distinguish that these requirements apply based on whether or not a SIP has been submitted. Through previous rulemaking, EPA has determined that the exempt projects listed in 40 CFR 93.126 have met section 176(c)(1)(B) without further hot-spot analyses. Through today's action, EPA is determining that projects not identified in the rule as projects of air quality concern have also met section 176(c)(1)(B) without further hot-spot analyses. The final rule requires that all projects of air quality concern be analyzed for localized impacts, regardless of whether or not the $PM_{2.5}$ SIP is submitted.

EPA continues to believe it has discretion to establish the level and form of $PM_{2.5}$ analysis that is necessary to meet Clean Air Act section 176(c) statutory requirements. Therefore, EPA is finalizing criteria for when $PM_{2.5}$ hot-spot analyses are required based on scientific information available on $PM_{2.5}$

hot-spots and emissions from diesel vehicles, and the Agency's experience in implementing CO and PM_{10} hot-spot requirements since 1993 for what level of analysis is appropriate and worthwhile. The final rule's criteria for what projects require hot-spot analyses will ensure that all projects that have the potential to impact the air quality standards will be analyzed using appropriate methods before they receive Federal funding or approval. The final rule includes criteria for what projects of air quality concern require quantitative $PM_{2.5}$ analyses based on existing scientific information and comments received, as discussed further in this section and in Section V.

Furthermore, EPA is changing its precedent to date in no longer requiring qualitative hot-spot analyses for projects that are not of localized air quality concern. As stated previously, since the original 1993 conformity rule, some type of hot-spot analysis has been required to meet statutory requirements for all non-exempt FHWA and FTA projects in PM_{10} nonattainment and maintenance areas. However, based on the history of implementation of this provision over the past ten plus years, as explained in more detail below, EPA now believes that these projects which do not represent a localized air quality concern can be presumed to meet Clean Air Act requirements and 40 CFR 93.116 without any explicit hot-spot analysis.

Requiring qualitative hot-spot analyses for projects that are not an air quality concern is also not a beneficial use of Federal, state, or local resources. EPA is basing this conclusion in part on a recent review by EPA and DOT field offices of project-level conformity determinations involving historical qualitative hot-spot analyses in PM_{10} areas. This review did not find any qualitative hot-spot analysis in a PM_{10} nonattainment or maintenance area where it was determined that Clean Air Act requirements were not met. In other words, qualitative hot-spot analyses for projects that are not an air quality concern in PM_{10} areas did not result in any predicted new or worsened air quality violations.

In addition, EPA and DOT offices evaluated whether any mitigation measures had been added to a project in response to a PM_{10} qualitative hot-spot analyses. Mitigation measures are sometimes used to reduce project emissions and any impact on local air quality, so that a project can demonstrate conformity. Whatever the case, the EPA and DOT field offices did not identify any cases where any mitigation measures were added to reduce emissions from implemented projects to meet statutory conformity requirements. EPA found in its review of previous qualitative PM_{10} hot-spot analyses that mitigation measures were added in some cases to reduce fugitive dust emissions during project construction (e.g., slope covering, street sweeping, use of water, quarry spalls). However, these measures were added for other mitigation purposes during the construction phase of a project, rather than to meet conformity requirements for the time period when construction is completed and a project is open to traffic. EPA has included a summary of its review in the docket for this rulemaking.

For all of these reasons and since EPA does not expect these projects to ever impact the $PM_{2.5}$ standards, EPA has not finalized any hot-spot analysis requirement for projects that are not an air quality concern. EPA concludes that since no such projects will have localized air quality impacts of concern, all such projects can meet statutory conformity requirements without an explicit hot-spot analysis.

However, as noted elsewhere in today's action, EPA is finalizing a qualitative $PM_{2.5}$ hot-spot requirement for projects of air quality concern prior to quantitative guidance and models being available. EPA believes that there is value in federal, state, and local agencies and the general public discussing the localized air quality impacts of a project of air quality concern, even if such reviews can only be qualitative in nature at this time. This aspect of the final rule is intended to be an environmentally conservative approach to meeting Clean Air Act requirements in the time period before quantitative hot-spot modeling techniques and future guidance is available for projects of localized air quality concern.

Scientific understanding of potential for transportation-related $PM_{2.5}$ hot-spots: Another critical factor for developing the final rule is whether or not transportation projects have the potential to affect the $PM_{2.5}$ standards in local areas. Understanding whether or not an individual transportation project can result in a $PM_{2.5}$ hot-spot and if so, under what circumstances, provides a basis for considering whether explicit hot-spot analyses must be required for conformity purposes, and if so for which types of projects or potential project locations.

As discussed above, EPA believes that highway and transit projects that involve significant levels of diesel vehicle emissions have the potential to increase local $PM_{2.5}$ concentrations. As a result, $PM_{2.5}$ hot-spot analyses are needed to ensure that the local air quality impacts of such projects are considered prior to receiving Federal funding or approval. This finding is based on EPA's thorough review of existing scientific papers as well as additional technical and anecdotal information that was submitted by state and local agencies during the rulemaking process. All of this information is contained in the docket for this rulemaking.

In developing the final rule, EPA completed a thorough review of more than 70 studies representing a cross-section of available studies looking at particle concentrations near roadways. Some of these studies were considered for our previous proposals; others were newly considered for the final rule. Some of these studies are discussed in today's action; all studies are included in the docket for this final rule.

EPA believes that these studies provide strong evidence of elevated $PM_{2.5}$ concentrations along roadways on a consistent basis from certain types of projects. Based on EPA's review of all studies, studies identified elevated $PM_{2.5}$ concentrations of 8% to 60% for high-traffic roadways to 285% for major truck stops, compared to background concentrations. Variables identified in the studies as key predictors of $PM_{2.5}$ concentrations include: Total traffic volume; volume of heavy-duty trucks; traffic congestion; and proximity to major facilities (within approximately 150 meters). Most studies showed elevation in $PM_{2.5}$, black carbon, or other components[4] associated with major facilities (e.g., truck routes, intermodal or bus terminals). Several showed no elevation in $PM_{2.5}$ per se, but did show elevation in black carbon, particle number, or some other component of $PM_{2.5}$. Only one study showed no elevation in any component of $PM_{2.5}$ close to roadways.

Overall, major conclusions from these studies are:

- Black/elemental carbon (BC or EC) mass concentrations and particle number (e.g., "ultrafines") concentrations are consistently associated with proximity to traffic (generally within 150 meters).
- $PM_{2.5}$ is associated with proximity to traffic in most, but not all cases.
- Both regional background and local sources contribute to site-specific $PM_{2.5}$ concentrations.
- The "near-roadway increment" of $PM_{2.5}$ tends to be comprised of approximately 50–80% black or

[4] Examples of other components that are considered $PM_{2.5}$ include organic carbon and particle-phase polycyclic aromatic hydrocarbons.

elemental carbon (indicating mobile sources are a key source).

Some examples of the types of studies we examined include Lena *et al.* (2002), where investigators from Columbia University conducted a community-based study in a neighborhood of the South Bronx, NY, with heavy freight traffic. Vehicle counts and EC concentrations were monitored over a 10–12 hour period at several sites along designated truck routes and other neighborhood sites. Within the neighborhood, EC was 20–28% of ambient $PM_{2.5}$ along truck routes, but only 13–16% at non-trucks sites. Trucks were estimated to contribute between 5.0–14.2 μg/m³ $PM_{2.5}$, depending on the level of truck traffic.

In a study by Indale (2004), investigators from the University of Tennessee-Knoxville and Oak Ridge National Laboratory conducted air quality monitoring and modeling at a large truck stop along a freight corridor outside Knoxville, TN. Continuous $PM_{2.5}$ and NO_X monitoring took place between December 2003 and September 2004. Monthly-averaged $PM_{2.5}$ ranged from 27–40 μg/m³ within the truck stop, with the 98th percentile of daily values exceeding 65 μg/m³. Regional background $PM_{2.5}$ during the same interval was only 14 μg/m³. $PM_{2.5}$ and NO_X concentration within the truck stop tracked the number of idling trucks within the truck stop closely, which was highest at night. Hourly $PM_{2.5}$ concentrations within the truck stop averaged 10 μg/m³ greater than along the interstate highway 200 meters distant. EPA notes that the findings of this study are more relevant to how $PM_{2.5}$ air quality would be affected by freight or bus terminals, as opposed to highway facilities servicing truck routes.

Finally, in Brauer *et al.* (2003), investigators obtained "annualized" average $PM_{2.5}$ and black carbon at 40–42 locations in each of three locations: The Netherlands (nationwide), Stockholm County (Sweden), and Munich, Germany. Monitoring consisted of samples taken 15 minutes of every hour over 4 two-week periods throughout a 17-month period, normalized to a central monitor. Locations consisted of "traffic" sites (>3,000 vehicles/day within a 50 m radius), "urban background" sites, and rural sites. $PM_{2.5}$ was 8–35% higher, and black carbon was 43–84% higher at "traffic" sites than at "urban background" sites. Using regression within each area of study, traffic intensity on roads within 250 meters explained 30–40% of the variability in $PM_{2.5}$, and 54–70% of variability in black carbon. Traffic was the strongest explanatory variable in all statistical models.

EPA notes that its understanding of the potential for $PM_{2.5}$ hot-spots from transportation projects has evolved over the past three years. In the November 2003 proposal (68 FR 62713), EPA proposed options that would have required no $PM_{2.5}$ hot-spot analyses, or only analyses in limited cases—which reflected its understanding at that time of the limited potential for transportation-related $PM_{2.5}$ hot-spots. Most of the research studies that had been reviewed by late 2003 indicated that concentrations of some components of $PM_{2.5}$ increased near heavily traveled roadways. EPA considered at that time that many of these studies did not measure $PM_{2.5}$ directly, but rather, considered concentrations of some components of $PM_{2.5}$, such as BC and ultrafine particles.

In proposing additional options in the December 2004 supplemental proposal after receiving public comment, EPA considered additional studies and reconsidered some of its previous statements from the November 2003 proposal. For example, EPA now believes that the information considered in the November 2003 proposal as well as the most recent information available does indicate a potential for higher localized emissions and $PM_{2.5}$ concentrations near certain transportation facilities. Since November 2003, EPA has considered how information underlying previous statements was developed, including how localized emissions increases and existing background concentrations relate to the potential for localized violations of the $PM_{2.5}$ standards.

Furthermore, EPA had stated in the November 2003 proposal that $PM_{2.5}$ monitoring data available at that time indicated that $PM_{2.5}$ air quality problems were similar to ozone in that they are both primarily regional in nature, which the Agency now believes was an incomplete assessment of the broader $PM_{2.5}$ air quality problem. EPA now believes that $PM_{2.5}$ is both a regional and a localized air quality concern in certain circumstances. While it is true that secondary formation from $PM_{2.5}$ precursors is a critical component to the regional $PM_{2.5}$ air quality problem, directly emitted $PM_{2.5}$ from certain local sources has the potential to cause or contribute to elevated localized $PM_{2.5}$ concentrations. Such elevated concentrations which exceed applicable standards can have an effect on local communities and populations that the $PM_{2.5}$ standards were designed to protect.

In the December 2004 supplemental proposal, EPA considered additional scientific studies and requested public comment on our assessments of such studies. For example, EPA highlighted a new study, Burr, *et al.*, (2004), which examined changes in traffic patterns associated with a single transportation project that can result in statistically significant differences in $PM_{2.5}$ mass concentrations measured along affected roadways. The results of this study highlight changes in $PM_{2.5}$ concentrations along roadways resulting from changes in local traffic patterns, rather than changes in regional $PM_{2.5}$ emissions.

While originally believed to be a predominantly regional pollutant, subsequent analyses of EPA's $PM_{2.5}$ monitoring data reveal the influence of both regional and local sources. Pinto *et al.* (2004) reviewed monitoring data from 1999 to 2001 from 27 urban areas nationally. This study showed that differences in annual means between monitors within a city often reached 5 μg/m³ or higher, reflecting the possible influence of local sources in many areas, in addition to variations in meteorology and terrain. Although this study does not specifically address transportation sources, the study highlights the importance of subregional sources that impact local $PM_{2.5}$ air quality.

Finally, EPA has considered all of the information that commenters have provided in response to the November 2003 and December 2004 proposals. EPA received a range of information from commenters, such as:

- Broad observations for targeting $PM_{2.5}$ hot-spot requirements;
- General discussions about monitoring data gathered to date on $PM_{2.5}$ hot-spots;
- Narrative, non-technical descriptions of an individual $PM_{2.5}$ area's considerations for potential $PM_{2.5}$ hot-spots;
- Examples of state and local regulations that target potential $PM_{2.5}$ hot-spots from transportation projects; and,
- Plans by individual states and nonattainment areas to conduct studies on the existence of $PM_{2.5}$ hot-spots.

This and other information received from commenters is included in the docket for today's final rule. We will further consider these and other state and local information in the development of our future quantitative $PM_{2.5}$ hot-spot modeling guidance and implementation for this final rule.

Feasibility and resource implications: EPA also considered whether or not the final rule's requirements were feasible and practical. For example, is the

information needed to implement an option available? Do state and local agencies have the methods and experience to implement an option in a reasonable time frame? EPA considered these and other questions, so that meeting statutory requirements was assured to be completed in an efficient manner. EPA rejected options that could not be feasibly implemented.

Targeting projects of air quality concern and not requiring qualitative hot-spot analyses for projects that are not of concern will streamline project-level conformity determinations in $PM_{2.5}$ areas, since many proposed projects in transportation plans and TIPs are not expected to be of air quality concern. Allowing DOT to make categorical hot-spot findings will provide another opportunity to further narrow the focus of quantitative analyses for those projects that matter significantly for air quality. All of these aspects of the final rule will utilize state and local resources in an efficient and reasonable manner while still satisfying Clean Air Act requirements. See Sections V. and VII. for further rationale and responses to comments on criteria for projects of air quality concern and categorical hot-spot findings.

D. Response to Comments on Proposed $PM_{2.5}$ Hot-spot Options

EPA received comments on the proposed options for $PM_{2.5}$ areas from state and local transportation and air quality agencies, environmental groups, transportation advocates, and the general public. Certain general trends were evident where the same commenters supported similar options during the time periods before and after a $PM_{2.5}$ SIP is submitted. In general, commenters who supported finalizing no or limited $PM_{2.5}$ hot-spot requirements prior to $PM_{2.5}$ SIP submission (Options 1, 2, or 5) also generally supported options that would have no hot-spot requirement at all (Option A) or rely on the SIP to identify hot-spot requirements (Option B) after $PM_{2.5}$ SIP submission. Similarly, commenters who supported applying the existing PM_{10} hot-spot requirements prior to $PM_{2.5}$ SIPs (Options 3 or 4), also supported doing the same after $PM_{2.5}$ SIPs are in (Option C). In addition, there were commenters who believed either that EPA should delay finalizing a $PM_{2.5}$ hot-spot requirement at this time, or that EPA should modify the proposed options so that they are more environmentally protective. The following paragraphs describe these and other comments that EPA considered in the development of the final rule, and EPA's responses to those comments.

Comment

Many commenters supported finalizing $PM_{2.5}$ hot-spot requirements that were consistent with the previous conformity rule's provisions for PM_{10} areas (i.e., Options 3 and C), to meet Clean Air Act requirements and protect public health. Commenters supported these options because they believed that these options would promote consistency with EPA's past legal interpretations regarding how federally funded and approved transportation projects met Clean Air Act section 176(c)(1)(B) requirements in PM_{10} areas. Commenters believed that it was reasonable to expect that transportation projects can cause $PM_{2.5}$ hot-spots, and that conducting project-level $PM_{2.5}$ hot-spot analyses would provide an environmental benefit by characterizing emissions impacts and considering mitigating approaches. These commenters also argued that the available scientific studies and research demonstrate that all transportation projects, including highway and transit projects involving significant diesel traffic, have the potential to create $PM_{2.5}$ hot-spots.

EPA also received many comments, including over 5,000 form e-mail comments from private citizens, expressing concerns about many of the proposed options that would require no or limited $PM_{2.5}$ hot-spot analyses (e.g., Options 1, 2, 5, A, and B), which they believed did not go far enough in protecting public health. These commenters were very concerned that all transportation projects, especially major highway projects, be evaluated for local PM air quality impacts on people living in neighborhoods before these projects receive Federal approval or funding. The commenters believed that EPA should consider the severity of $PM_{2.5}$ impacts on the health and welfare of adults who work, children who play, and families living in neighborhoods near heavily traveled highways. The commenters indicated that these populations are at increased risk of suffering from serious health effects from $PM_{2.5}$, including asthma, heart disease, lung cancer, and associated premature death. Other commenters also cited studies on the serious health effects caused by high $PM_{2.5}$ concentrations, and believed that requiring $PM_{2.5}$ hot-spot analyses for all projects best protects the public health for citizens in $PM_{2.5}$ areas, especially vulnerable populations living near proposed transportation projects.

On the other hand, many other commenters supported options that would apply no or only limited $PM_{2.5}$ hot-spot requirements (i.e., Options 1, 2, 5, A, and B), and some preferred that EPA delay issuing final $PM_{2.5}$ hot-spot requirements until certain issues are addressed. These commenters believed that there was insufficient evidence regarding the existence and prevalence of $PM_{2.5}$ hot-spots. Commenters stated that their preferences would be appropriate because $PM_{2.5}$ is a new pollutant that should be further examined at the national and local level before more rigorous $PM_{2.5}$ hot-spot requirements are finalized. Some commenters argued that $PM_{2.5}$ hot-spot requirements are not required by the Clean Air Act at all, and therefore, no such requirements should ever be finalized in EPA regulations.

Other commenters were opposed to requiring existing PM_{10} hot-spot requirements in $PM_{2.5}$ areas (under Options 3 and C) because they believed these options would require extensive analyses without comparable environmental benefits and flexibility. These commenters believed it was unnecessary and excessive to require hot-spot analyses for every project in every $PM_{2.5}$ nonattainment area. Commenters argued that more research is needed to better define the situations where hot-spots may be a concern, and how individual projects could impact air quality standards under different air quality circumstances. Some of these commenters also argued that EPA has not demonstrated why performing $PM_{2.5}$ hot-spot analyses would be beneficial to attaining the $PM_{2.5}$ standards.

Response

EPA believes that the final rule addresses many of the concerns raised by commenters. As described above, EPA concludes that the final rule allows all projects in $PM_{2.5}$ areas to meet Clean Air Act section 176(c)(1)(B) requirements during the time periods both before and after a $PM_{2.5}$ SIP is submitted. EPA believes that today's final rule is consistent with its past legal interpretations for applying hot-spot requirements for projects of air quality concern.

However, EPA disagrees with commenters who argued that there is not enough information at this time to apply a $PM_{2.5}$ hot-spot requirement. Based on our review of scientific studies and information gathered during the rulemaking process, as described above, EPA believes that there is compelling evidence that certain transportation projects of air quality concern have the potential to impact localized $PM_{2.5}$ concentrations. Such impacts, if they would create or worsen violations for the $PM_{2.5}$ standards on communities

surrounding a project of air quality concern, would be contrary to the Clean Air Act's conformity requirements. Furthermore, EPA does not agree that it is appropriate to delay finalizing a $PM_{2.5}$ hot-spot requirement for such projects until certain comments are addressed, for the reasons cited above.

EPA notes again, as described further elsewhere in this notice, that projects which do *not* represent a localized air quality concern can be presumed to meet Clean Air Act requirements and 40 CFR 93.116 without any explicit hot-spot analysis. This aspect of the final rule is expected to streamline $PM_{2.5}$ hot-spot requirements and use state and local resources efficiently.

Comment

EPA also proposed Options 2 and B that relied solely on the SIP to identify projects or project locations of potential $PM_{2.5}$ hot-spot concern. Under these options, quantitative $PM_{2.5}$ hot-spot analyses would only be required at types of project locations identified as a localized air quality concern in a given $PM_{2.5}$ SIP. No quantitative or qualitative analyses would be required for projects in other types of locations, or in $PM_{2.5}$ areas where the SIP does not identify types of locations as a localized $PM_{2.5}$ air quality concern. Furthermore, no hot-spot analyses would be required for any projects in $PM_{2.5}$ areas prior to $PM_{2.5}$ SIP submission.

Many commenters supported these options. Some commenters believed that the existence and prevalence of $PM_{2.5}$ hot-spots was uncertain and that the SIP process could assist in identifying what projects are of concern in a given area and consequently what level of $PM_{2.5}$ hot-spot analysis is appropriate. Commenters opined that Options 2 and B would allow each $PM_{2.5}$ area to better target potential $PM_{2.5}$ hot-spots and protect the public health of their citizens, since the SIP is the appropriate mechanism for addressing state and local air quality goals. These options were considered by some to provide the necessary flexibility in implementing hot-spot requirements both before and after a $PM_{2.5}$ SIP is submitted.

In contrast, other commenters believed that Options 2 and B would not meet Clean Air Act requirements or protect public health. First, such commenters indicated that Option 2 would eliminate any requirement to perform $PM_{2.5}$ hot-spot analyses prior to the development of a $PM_{2.5}$ SIP, which would not meet statutory requirements that apply during this time period. These commenters argued that $PM_{2.5}$ emissions impacts resulting from transportation projects should be assessed and mitigated as part of the conformity process at all times, and that such projects if not analyzed could significantly degrade air quality and increase the number and severity of local $PM_{2.5}$ violations in the time period prior to SIP submission.

Second, several commenters believed that this option may not be feasible in every area because it is unlikely that there is adequate data to identify exact locations of local concern in the SIP. This could be due to the absence of data or lack of specificity of existing data regarding $PM_{2.5}$ hot-spot locations. Some argued that this may be the case due to placement of current monitors away from large transportation projects, or the focus on the annual $PM_{2.5}$ standard rather than the 24-hour $PM_{2.5}$ standard in SIP development. One commenter believed that $PM_{2.5}$ air quality monitors have historically been located more than the 300 feet from where highway projects would have their major impact on $PM_{2.5}$ concentrations.

Third, commenters were concerned that Option B would place an inequitable burden on state and local air agencies that are already tasked with developing $PM_{2.5}$ SIPs to meet other Clean Air Act requirements. $PM_{2.5}$ SIPs are statutorily required to be submitted three years from the effective date of $PM_{2.5}$ nonattainment designations (i.e., April 5, 2008). Unless possible $PM_{2.5}$ hot-spot locations are well-defined and based on developed and verified monitoring data, one commenter argued, it would be inappropriate at this time to solely rely on $PM_{2.5}$ SIPs to implement conformity requirements.

Although two commenters supported the consideration of $PM_{2.5}$ hot-spots in the SIP process, they did not agree that solely relying on that process met Clean Air Act conformity requirements, for the reasons described above. In addition, these commenters argued that it is uncertain whether $PM_{2.5}$ SIPs will be developed on time, based on past history of SIP submissions.

Finally, some commenters were skeptical regarding whether the SIP process was the appropriate forum for identifying transportation-related hot-spots. These commenters believed that there is no legal obligation under the Clean Air Act to identify project locations of air quality concern in the SIP. They argued that Option B was deficient because states may choose not to identify potential hot-spot locations either because sufficient data is not available or out of concern that conformity requirements would apply. These commenters also believed that air agencies had a poor historical record of developing appropriate PM_{10} SIPs, and that it was unclear whether EPA would be willing or able to remedy any $PM_{2.5}$ SIPs that did not identify transportation-related $PM_{2.5}$ hot-spot locations.

Response

EPA is not finalizing Options 2 and B because these options do not sufficiently address all of the factors outlined in the December 2004 supplemental proposal and today's final rule:

- The Clean Air Act conformity requirements for individual transportation projects;
- The current scientific understanding of $PM_{2.5}$ hot-spots and public health effects;
- The feasibility of implementing options; and
- The impact on state and local resources.

EPA has reached this conclusion based on consideration of all of the information gathered during the rulemaking process.

EPA has already stated that any option that is finalized must ensure that all federally funded and approved transportation projects in $PM_{2.5}$ areas are consistent with Clean Air Act section 176(c)(1)(B). As stated in the December 2004 proposal, to meet this provision under Option 2, we would need to conclude that it was necessary to wait until the SIP is developed to understand the potential air quality impacts of projects in any $PM_{2.5}$ area. EPA is unable to support such a conclusion based on our current scientific understanding of transportation-related $PM_{2.5}$ hot-spots, as described in C. of this section. Delaying the application of a $PM_{2.5}$ hot-spot requirement until SIPs are submitted would not ensure that new projects of air quality concern do not cause or contribute to any new $PM_{2.5}$ violations, worsen any existing violations, or delay timely attainment prior to SIP submission.

EPA originally proposed Option B in November 2003 because the potential for transportation-related $PM_{2.5}$ hot-spots was not clearly understood at that time. Rather than not establish any $PM_{2.5}$ hot-spot requirement due to the scientific uncertainty regarding $PM_{2.5}$ hot-spots, EPA proposed an alternate option to allow states to identify project locations of concern through the SIP development process, when information for potential $PM_{2.5}$ hot-spots was available. After considering other scientific information, EPA revisited Option B in its December 2004 supplemental proposal, and provided new options to more broadly evaluate

the potential for $PM_{2.5}$ hot-spots from transportation sources.

EPA also presented a possible legal argument in the November 2003 and December 2004 proposals that Option B may be consistent with the purpose of conformity to ensure that federally funded or approved transportation projects are consistent with the SIP in a given nonattainment or maintenance area. Section 176(c)(1)(A) requires "conformity to an implementation plan's purpose of eliminating or reducing the severity and number of violations of the national ambient air quality standards and achieving expeditious attainment of such standards * * *." However, EPA has now determined that Clean Air Act section 176(c)(1)(B) requiring that projects not create or worsen NAAQS violations is the applicable legal standard for this final rule. This legal standard could only be met if $PM_{2.5}$ SIPs would be developed that identify all potential project locations of air quality concern for any such project proposed in the transportation plan or TIP for years to come.

In the December 2004 supplemental proposal, EPA further considered the feasibility of implementing Option B, as to whether sufficient information existed to allow a state to specify all susceptible locations where $PM_{2.5}$ hot-spots are an air quality concern. We acknowledged that there may be cases where it is unclear whether susceptible locations for hot-spots exist, or where there is a potential for localized $PM_{2.5}$ violations but it is difficult to specify which project locations could create hot-spots. EPA also requested comment on how the proposed options should be implemented in cases where the latest information available on the potential for $PM_{2.5}$ hot-spots is not reflected in the $PM_{2.5}$ SIP.

EPA concludes there are other reasons to believe that Option B does not meet Clean Air Act conformity requirements. SIPs are generally developed to meet regional air quality concerns that are more in parallel with the regional emissions analysis for plan and TIP conformity determinations. As such, EPA does not anticipate requiring $PM_{2.5}$ SIP modeling to be performed at a level of detail that would identify all potential transportation hot-spots. There are also concerns regarding the ability of the SIP to evaluate the local air quality impacts of all future projects, even those that are not even identified during and after the SIP's development. And finally, it is unclear how EPA would enforce a conformity requirement like Option B if SIPs do not identify hot-spot concerns when appropriate.

Based on all of these considerations and the comments received, EPA does not believe that it is realistic or practical to expect that Option B which bases hot-spot analysis requirements solely on the SIP can be sufficiently implemented to meet statutory requirements in all $PM_{2.5}$ areas.

Comment

A few commenters also argued that EPA may not lawfully finalize options that defer $PM_{2.5}$ hot-spot analyses until after a SIP is submitted because such delays are inconsistent with Clean Air Act requirements. The commenters cited several legal arguments. First, commenters believed that where a SIP of any kind exists, Clean Air Act section 176(c)(1) does not require that a state must first have adopted a SIP for a given standard before the conformity requirements for that standard apply.

These commenters also argued that the statute requires conformity to apply as soon as the one-year conformity grace period expires for areas that have Clean Air Act section 110 SIPs in effect. Unless, EPA finds that an area lacks a section 110 SIP (which is not the case for any area), they believed that conformity determinations that meet all statutory requirements are required for projects in areas that have previously been designated nonattainment for $PM_{2.5}$, even if they were not previously PM_{10} nonattainment or maintenance areas.

Furthermore, the commenters stated that the one-year conformity grace period does not even apply to $PM_{2.5}$ nonattainment areas that have been previously designated nonattainment for the PM_{10} air quality standards. These commenters believed that the grace period does not apply if an area is designated nonattainment for a new or revised standard for the same criteria pollutant, in this case, the standards for $PM_{2.5}$ are for the same pollutant as for PM_{10} (i.e., particulates). The commenter cited EPA's 1997 rulemaking that promulgated the $PM_{2.5}$ standards, in which EPA rejected arguments that $PM_{2.5}$ was a new pollutant that required listing under Clean Air Act section 108 prior to adopting a new standard. The commenter also referred to the DC Circuit decision that held that $PM_{2.5}$ has always been regulated as a fraction of PM_{10} and that EPA was not required to list $PM_{2.5}$ as a new pollutant. *American Trucking Assns* v. *U.S. EPA, 175 F.3d 1027, 1055 (DC Cir. 1999).*

Response

As explained above, EPA agrees that it is not appropriate to defer project level hot-spot analyses until SIPs are developed, and thus has not chosen these proposed options in the final rule. EPA also agrees that all conformity requirements apply one year after an area is newly designated nonattainment with respect to a given NAAQS if the state has a general section 110 SIP. To that end, conformity will apply in $PM_{2.5}$ nonattainment areas as of April 5, 2006, since all areas of the country do have section 110 SIPs. PM_{10} nonattainment areas continue to be subject to conformity requirements applicable to the PM_{10} standards, which are covered by this final rule and our existing conformity regulations.

However, EPA disagrees with the commenter's assertion that the one-year conformity grace period for newly designated nonattainment areas does not apply for $PM_{2.5}$ nonattainment areas that are also PM_{10} nonattainment or maintenance areas. The grace period is clearly applicable by its own terms to an area for one year after it is first designated nonattainment for a specific standard. The grace period would apply for all new standards, even if they are different standards for the same pollutant. Section 176(c)(6) states, "Notwithstanding paragraph 5, this subsection shall not apply with respect to an area designated nonattainment under section 107(d)(1) until 1 year after that area is *first designated nonattainment for a specific national ambient air quality standard.* This paragraph only applies with respect to the national ambient air quality standard for which an area is newly designated nonattainment and *does not affect the area's requirements with respect to all other national ambient air quality standards for which the area is designated nonattainment* or has been redesignated from nonattainment to attainment with a maintenance plan pursuant to section 175A (*including any pre-existing national ambient air quality standard for a pollutant for which a new or revised standard has been issued*)." (Emphasis added). The statute thus expressly differentiates between new and existing standards for a given pollutant, and specifically provides the grace period for new standards that may apply for the same pollutant. EPA does not believe there is any ambiguity in the applicability of the grace period under the statute. EPA acknowledges that $PM_{2.5}$ and PM_{10} are both standards applicable to particulate matter, but concludes that given the express language of the statutory grace period there is no question that it applies to newly designated $PM_{2.5}$ nonattainment areas. In addition, the grace period for $PM_{2.5}$ will terminate in April 2006, so

any concerns about this issue will become moot at that point.

Comment

EPA also requested comment on how Option B should be implemented in cases where the latest information available on the potential of $PM_{2.5}$ hot-spots is not reflected in the SIP (December 13, 2004; 69 FR 72148). Such cases would result if information becomes available outside the SIP process that indicates that there may be potential transportation-related hot-spot locations. Some commenters were concerned that it may not be possible to identify all types of projects or locations that could be an air quality concern in the time addressed by the SIP or in future years. New projects of air quality concern that are not addressed by a SIP, the commenter argued, should require a $PM_{2.5}$ hot-spot analyses to protect public health.

Response

EPA considered the concerns raised by commenters. In developing the final rule, EPA considered the ability of all $PM_{2.5}$ SIPs to identify every project of air quality concern in the timeframe of the SIP and future years, and how such projects at locations not identified in the SIP could meet Clean Air Act conformity requirements without a $PM_{2.5}$ hot-spot analysis. EPA did not finalize Option B in the final rule, since the Agency concluded that it is unreasonable to believe that all projects of air quality concern would be identified by the SIP and therefore required to comply with the conformity provisions of the Clean Air Act.

Comment

Some commenters were concerned that the final rule use state and local resources effectively. These commenters, however, differed in their reasons for supporting various options. First, some commenters were concerned that finalizing requirements that required $PM_{2.5}$ hot-spot analyses for all projects (Options 3 and C) could result in an inefficient use of state and local resources that could be used for SIP development, and additional monitoring of the potential and location for $PM_{2.5}$ hot-spots. A few commenters acknowledged that many agencies are also addressing conformity for the 8-hour ozone standard, which takes away resources for $PM_{2.5}$. Other commenters stated that agencies will not have $PM_{2.5}$ data, such as monitoring data and inventory estimates, until SIPs are developed or maybe not at all. These commenters stated that the majority of $PM_{2.5}$ monitors have been in place for less than five years and many do not collect speciated data, which they believed is critical to pinpointing likely sources of $PM_{2.5}$. Other commenters supported not requiring any $PM_{2.5}$ hot-spot analyses (Options 1 and A) or delaying the final rule altogether, which would allow state and local agencies to focus resources on other planning and SIP efforts.

Other commenters believed that a more effective use of resources would be to identify $PM_{2.5}$ problem locations during the SIP development process (through Options 2 and B), which would allow state and local agencies to determine if and where hot-spot analyses would apply. The SIP process allows states and regions to acquire necessary data and research which allows for more conclusive information. All of these commenters believed that focusing $PM_{2.5}$ hot-spot requirements on $PM_{2.5}$ air quality problem areas and potential sources that matter would better use limited state and local resources.

However, other commenters believed that the options involving no hot-spot analyses or tying hot-spot analyses to SIPs (Options 1, 2, A, and B) would not protect public health since these options would eliminate or narrow any requirement to perform $PM_{2.5}$ hot-spot analyses. Furthermore, some commenters believed that options that were consistent with the existing PM_{10} hot-spot requirements (Options 3 and C) would be easier to implement for areas with previous CO or PM_{10} hot-spot analysis experience. Two commenters further stated that these options would be more consistent with how their state is already considering $PM_{2.5}$ localized impacts under state environmental requirements.

Response

EPA believes that the final rule will ensure that state and local resources are used in an efficient manner, since hot-spot analyses will only be required for projects of air quality concern. Eliminating qualitative analyses for projects that are not an air quality concern based on EPA's conclusion that such projects will not create or worsen air quality violations will significantly reduce any challenges in implementing this final rule, since the majority of projects that are usually proposed are not projects of air quality concern. Therefore, most project-level conformity determinations will not contain a hot-spot analysis of any kind, since most projects are not in danger of impacting the $PM_{2.5}$ standards.

As noted above, EPA concludes that requirements keyed only to SIP development may not assure conformity of all projects and thus believes it cannot address the resource issue through such options. However, EPA believes that requiring analyses only for projects of air quality concern will both ensure that all projects meet the statutory requirements and provide sufficient resources to conduct all necessary analyses.

EPA agrees that there are start-up issues that some state and local agencies will need to overcome, especially areas without previous experience in implementing a hot-spot requirement in CO or PM_{10} areas. However, EPA and DOT's qualitative hot-spot guidance, and our future quantitative hot-spot modeling guidance for projects of air quality concern will assist in the implementation of this final rule. As always, EPA will continue to, in cooperation with DOT, work to assist state and local agencies in implementing the final rule's requirements.

Finally, EPA would like to address the comment that further $PM_{2.5}$ monitoring data needs to be gathered before applying a hot-spot requirement. EPA disagrees with this comment. There is sufficient evidence that projects of air quality concern can affect local $PM_{2.5}$ concentrations, and therefore, waiting for additional monitoring data used in SIP development for every $PM_{2.5}$ area is not necessary to meet statutory conformity requirements now. Also, EPA believes that $PM_{2.5}$ hot-spot analyses can be completed for projects of air quality concern even if $PM_{2.5}$ monitoring data is not available for a given project's location. EPA will clarify in its future quantitative hot-spot modeling guidance how monitoring data of current and past $PM_{2.5}$ air quality can be used in estimating future $PM_{2.5}$ air quality concentrations.

Comment

Other commenters were concerned that EPA has not yet issued $PM_{2.5}$ quantitative hot-spot analysis guidance and methods. Some commenters supported doing little or no hot-spot analyses, in part because they asserted that credible tools are not currently available and quantitative analyses would not be required until guidance were available, possibly just before the April 5, 2008 $PM_{2.5}$ SIP deadline. However, other commenters believed that all of the proposed options were insufficient since they would delay quantitative $PM_{2.5}$ hot-spot analyses for years, and in the interim, there would be no consideration of the public health impacts of projects currently under development.

Finally, some commenters believed that EPA needed to issue qualitative $PM_{2.5}$ hot-spot guidance, since the existing PM_{10} qualitative hot-spot guidance was not applicable to $PM_{2.5}$ hot-spot analyses. These commenters noted that $PM_{2.5}$ is chemically different than PM_{10} and most of the $PM_{2.5}$ areas are violating the annual $PM_{2.5}$ standard, whereas most PM_{10} areas were constrained by the 24-hour PM_{10} standard.

Response

Today's final rule extends § 93.123(b)(4) of the existing conformity rule's PM_{10} hot-spot provisions to $PM_{2.5}$ areas. This provision now requires that quantitative $PM_{2.5}$ hot-spot analyses be performed once EPA announces in the **Federal Register** that quantitative analysis requirements are in effect. EPA has not yet made such an announcement because the Agency has not approved appropriate motor vehicle emissions factor models for localized analyses, and EPA is in the initial stages of developing quantitative $PM_{2.5}$ and PM_{10} modeling guidance to apply existing air quality dispersion models and future emissions factor models to implement today's rule. Please see Section VI. of today's final rule for further information on the timing of quantitative hot-spot requirements.

EPA agrees that the existing PM_{10} qualitative hot-spot guidance is not applicable to $PM_{2.5}$ analyses. As a result, EPA and DOT have developed qualitative $PM_{2.5}$ hot-spot guidance for immediate use for conformity determinations for projects of air quality concern, which is available at the Web site listed in Section I.B.2. of today's action.

Comment

Some commenters believed that EPA could improve on its proposed options in the final rule. Some examples of commenters' suggestions are as follows:

- Clarifying or expanding the list of projects for which quantitative analyses are to be conducted;
- Adopting a screening method or emissions threshold that would help define what projects require quantitative hot-spot analyses; and,
- Allowing both the MPO and state or local air agency to have the opportunity to identify further projects that should undergo quantitative review.

The screening procedure is necessary, one commenter believed, to avoid unnecessary effort associated with $PM_{2.5}$ hot-spot analyses and project-level conformity determinations. Still another commenter believed that any hot-spot requirement should be limited in geographic scope to those parts of the nonattainment area where monitors indicate that $PM_{2.5}$ levels are above a standard or forecasts indicate they are projected to reach such levels.

Response

EPA has responded to similar comments in other sections of today's action. The final rule addresses many of the suggestions submitted by commenters by further defining what projects need hot-spot analyses to meet statutory requirements and conserve resources. See Section V. for further information on the regulatory criteria for quantitative hot-spot analyses. The elimination of qualitative hot-spot analyses for many projects in part addresses the motivation for a screening method or emissions threshold—i.e., to focus more rigorous quantitative analyses on projects of air quality concern.

EPA also agrees that the air quality circumstances can be considered in further narrowing the focus of quantitative hot-spot analyses. See Section VII. of this notice for further discussion on how such information could be considered for future categorical hot-spot findings.

Comment

EPA also proposed Option 4 and 5 for the time period before $PM_{2.5}$ SIPs are submitted. Two commenters preferred Option 4 which allowed for a finding that hot-spots were not of air quality concern to any other pre-SIP option. One of these commenters preferred Option 4 because it offered the best combination of conformity review continuity and flexibility in determining which projects required $PM_{2.5}$ hot-spot analyses. The commenter argued that its state needed to have $PM_{2.5}$ hot-spot analyses prior to $PM_{2.5}$ SIP submission because many transportation projects would be developed during this time period that could negatively impact air quality. Allowing for a "grace period" before project impacts are considered prior to SIP submission could increase hot-spot emissions, the commenter argued. All of these commenters, however, agreed that Option 4 was consistent with past practice for applying PM10 hot-spot requirements and meeting statutory requirements while providing some relief when EPA and the state air agency has information that $PM_{2.5}$ hot-spots are not a concern in a given area. On the other hand, other commenters did not support Option 4 for the same reasons that they did not support Option 3, which are described in a previous summary.

Some commenters supported Option 5 because they believed that this option reflected the current state of scientific understanding, used resources efficiently, addressed the learning curve for areas without PM experience, and relied on future development of $PM_{2.5}$ SIPs. Option 5, commenters argued, is appropriate because it provided an opportunity for each $PM_{2.5}$ area to tailor its hot-spot requirements when information exists prior to $PM_{2.5}$ SIP submission. However, other commenters stated specific opposition to Option 5; these commenters saw this option as a "loophole" for not protecting $PM_{2.5}$ air quality, since it would presume that $PM_{2.5}$ hot-spot analyses were not needed unless a finding was made. These commenters expressed doubt that such findings would be done at all in any $PM_{2.5}$ area.

EPA also requested comment on whether state and local air agencies will have the necessary data and other information to make the findings described for Options 4 and 5. Comments were mixed on this point. For example, three commenters who supported Option 5 believed that there would not be sufficient information regarding $PM_{2.5}$ hot-spot potential prior to the development of a $PM_{2.5}$ SIP in a given area. Other commenters who supported either Option 3 or 4 believed that there would be information to support making findings based on either existing air quality monitoring data, current state screening thresholds, or other techniques for what projects need $PM_{2.5}$ hot-spot analyses.

Response

EPA originally proposed Options 4 and 5 because of what was seen at the time as the evolving nature of our understanding of $PM_{2.5}$ air quality issues. These options would rely on the proposed interpretation stated in the November 2003 proposal (68 FR 62713): Clean Air Act section 176(c)(1)(B) requirements could be met as long as explicit reviews are performed at locations identified in the $PM_{2.5}$ SIP as susceptible to $PM_{2.5}$ hot-spots. Both Options 4 and 5 were intended to allow EPA and states to target hot-spot requirements in $PM_{2.5}$ nonattainment areas where hot-spots may or may not be an air quality concern.

However, EPA is not finalizing these options either because they do not meet statutory requirements as explained above, or the final rule already provides the flexibility intended by the originally proposed options. In addition, EPA was not convinced based on the comments received that either option was feasible

in identifying all projects of air quality concern.

Comment

There were a few commenters who believed that $PM_{2.5}$ hot-spot analyses would not be an efficient use of resources because of their individual $PM_{2.5}$ nonattainment area's circumstances. Several commenters stated that it is inefficient to direct resources to $PM_{2.5}$ hot-spot analyses when transportation may not be a significant contributor to the $PM_{2.5}$ air quality problem in a given area, such as smaller areas or cities dominated by other PM sources (*e.g.*, wood smoke from residential stoves, fireplaces or other forms of residential heating). Another commenter pointed out that the only exceedance of the 24-hour $PM_{2.5}$ standard in his area was attributable to a fireworks display. This same commenter believed that transportation projects would not impact the annual $PM_{2.5}$ standard, which the commenter stated was more relevant in most areas, or jeopardize the 24-hour standard.

Another commenter believed that his state needed flexibility to consider through the SIP process and consultation the hot-spot concerns of its remote communities. Another commenter stated that hot-spot analyses for projects in non-urbanized areas are never justified because such projects lack the size and density to allow other modes to effectively serve travel needs. A failed conformity test in these areas would simply leave real highway problems unresolved, the commenter hypothesized.

One commenter stated that local agencies, including the MPO, have little or no ability to implement or require control measures or make project design changes that could impact $PM_{2.5}$ at the project level. Also, the commenter believed transportation agencies have no control over existing Federal diesel fuel and off-road standards.

Response

EPA believes that today's final rule protects air quality and public health in $PM_{2.5}$ areas and provide an option for areas where on-road motor vehicles are an insignificant regional and local contributor to an area's particulate matter problem. Today's final rule targets $PM_{2.5}$ hot-spot analyses on the types of projects that are likely to cause or contribute to new or worsened $PM_{2.5}$ violations. Specifically, the rule targets hot-spot analyses on those types of projects that result in significant increases in diesel vehicle traffic (and therefore emissions), which is likely to be a small subset of transportation projects in most areas. In addition, the final rule's minor addition to 40 CFR 93.109(k) will allow $PM_{2.5}$ areas with insignificant regional emissions to also demonstrate, when appropriate, that individual transportation projects will not create new localized violations or make existing violations worse.

For example, isolated rural $PM_{2.5}$ areas where other types of sources such as wood stoves or fireplaces are dominant at the regional level would only be required to perform hot-spot analyses for the types of projects described in § 93.123(b) until such time as a $PM_{2.5}$ SIP is submitted which demonstrates that regional on-road motor vehicle $PM_{2.5}$ emissions are insignificant and will not cause new or worsen existing local violations. EPA also notes that the impact of the final rule may be minimal in such smaller areas, since areas that are dominated by other sources do not typically have complex transportation systems needing new project approvals prior to $PM_{2.5}$ SIP submission.[5]

After EPA makes an adequacy finding (or approves) a SIP that demonstrates insignificant regional and local emissions, $PM_{2.5}$ hot-spot analyses, would no longer be required in that area. EPA discussed its process for evaluating SIPs that claim insignificant regional and localized emissions in the June 30, 2003 proposal (68 FR 38984) and July 1, 2004 final rule (69 FR 40061–40063). EPA Regions and states can work together to appropriately expedite the processing of such SIPs through such methods as parallel processing or direct final rulemaking.

With regard to the concerns expressed about the appropriateness of hot-spot analyses in remote or non-urbanized areas, EPA would like to point out that today's final rule limits the need for $PM_{2.5}$ hot-spot analyses to only those projects which significantly increase diesel vehicle traffic and emissions. As noted above, this is likely to be only a small percentage of projects in remote or non-urbanized areas.

With regard to the comment concerning the ability of MPOs to influence the design of individual projects and the ability of transportation agencies to have control over Federal diesel fuel standards and non-road equipment emissions standards, EPA would like to point out that in most cases hot-spot analyses are completed by project sponsors during the project's environmental review phase. Project sponsors are often state departments of transportation which do have the ability to modify project designs or take other steps to mitigate emissions from the individual project. While it is true that state and local transportation agencies cannot influence national diesel fuel standards, the state and local agencies can be assured that EPA is implementing these standards as planned and that the diesel sulfur standard and heavy duty engine rule will be phased in beginning in 2007.

With regard to the comment on national non-road emissions standards, the commenter is correct that state and local transportation agencies do not have control over such standards. EPA notes that non-road emissions are considered to the extent that they are expected to impact background concentrations in $PM_{2.5}$ hot-spot analyses of on-road highway and transit projects of air quality concern. EPA's future modeling guidance will address how background concentrations are to be calculated for quantitative hot-spot analyses.

Comment

A few commenters argued that EPA's standards for low sulfur diesel fuels in 2006 and heavy-duty engines in 2007 will negate any need for $PM_{2.5}$ hot-spot analyses. The commenters stated that EPA should analyze the impacts of these Federal standards on local air quality before $PM_{2.5}$ hot-spot analysis requirements are finalized.

Response

In the December 2004 supplemental proposal (69 FR 72147), EPA committed to consider the impact of the new diesel fuel and engine standards (January 18, 2001, 66 FR 5002) in the development of the final rule. Such standards are expected to significantly impact the amount of particulate emissions that will be emitted by new diesel vehicles, and consequently may impact the potential for $PM_{2.5}$ transportation-related hot-spots. EPA considered the time frame over which these vehicle standards would phase in. According to the latest Vehicle Inventory and Use Survey from the Census Bureau[6], in 2002, vehicles three years of age and younger constituted only 32.3% of U.S. truck fleet. If the same age distribution holds for 2010, only about one third of trucks on the road will meet the heavy-duty engine emissions standards for 2007 and 2010. In this scenario, most trucks on the road will still be capable

[5] April 2003, *Transportation/Air Quality Issues in Rural Areas*, FHWA and Dye Management Group; and October 2003, *Rural Conformity: A Survey of Practice*, NCHRP Project 08–36, Task 28, prepared by ICF Consulting and Sarah J. Siwek and Associates.

[6] This information can be found at: *http://www.census.gov/svsd/www/vius/products.html.*

of producing elevated concentrations of $PM_{2.5}$. As such, EPA's new emission standards do not eliminate the need for considering $PM_{2.5}$ hot-spots from transportation projects involving a significant number of diesel vehicles. However, consideration of EPA's diesel fuel and engine standards' impact on background air quality will be addressed as part of EPA's future quantitative modeling guidance and possibly in modeling used to support categorical hot-spot findings as described in Section VII. of today's notice.

Comment

One commenter mentioned that EPA has never required hot-spot analyses prior to SIP development for any other pollutants. The commenter stated that significant CO and PM_{10} conformity requirements were not effective until after inventory and air quality models were developed and tested, and SIPs were submitted. Agencies could build on SIP submissions and technical analyses to perform hot-spot analyses. For $PM_{2.5}$, the commenter was concerned that planning agencies will not have this technical information nor the necessary modeling tools and experience.

Response

EPA disagrees with this comment. Hot-spot analyses have in the past been required in areas before SIPs were developed. In fact, Clean Air Act section 176(c)(3)(B)(ii) requires that before CO SIPs were developed, projects could only be found to conform if they eliminated violations or reduced the number or severity of violations. As a result, hot-spot modeling was required to determine whether or not violations were being eliminated or the severity or number of violations were being reduced.

As part of today's rulemaking, EPA believes that scientific evidence supports the conclusion that certain types of projects, particularly those involving significant increases in diesel vehicle traffic and emissions, could cause new violations or worsen existing violations. Therefore, EPA could not finalize a regulation that solely relied on the SIP process to identify locations or types of projects that could cause new violations or worsen existing ones with no hot-spot analyses being required before the submission of a SIP or no analyses being required if the SIP did not address this issue. The final rule does allow for the SIP to identify additional projects or project locations of concern; however, in the face of available scientific evidence concerning projects which could adversely effect localized air quality, EPA is required to establish hot-spot analysis requirements for the types of projects identified in § 93.123(b)(1).

As discussed in this preamble, initially areas will be required to carry out qualitative analyses until such time as EPA announces in the **Federal Register** that quantitative analysis requirements are in effect. The quantitative requirements will not be put into effect until after EPA releases appropriate modeling guidance and the MOVES motor vehicle emission factor model is released, as described further in Section V. of today's action. EPA and DOT have developed guidance on how to complete qualitative hot-spot analyses during the period before quantitative analyses requirements are put into effect. This guidance will be posted on the website provided in Section I.B.2. of today's notice. Therefore, conformity implementers will have the tools and information necessary in order to carry out hot-spot analyses.

Comment

Some commenters also noted that EPA acknowledged in its proposals that the science surrounding the new $PM_{2.5}$ standards is ongoing. These commenters cited preamble language from the November 2003 proposal that air quality data indicates that $PM_{2.5}$ is a regional pollutant like ozone, and therefore $PM_{2.5}$ hot-spot analyses should not be required until there is scientific evidence of localized concerns, especially in areas where exceedances are dominated by sources emitting secondary rather than direct $PM_{2.5}$ emissions.

Response

EPA disagrees with this comment. As noted in C. of this section, EPA believes that directly emitted $PM_{2.5}$ from transportation sources can be both a regional and local air quality concern. Based on an evaluation of more recent studies, EPA has concluded that certain types of projects could be of local air quality concern and therefore has finalized the rule to require hot-spot analyses for all such projects at all times.

Comment

One commenter believed that future changes to the current $PM_{2.5}$ air quality standards should be considered, especially if EPA selects any option involving identifying hot-spot concerns through the SIP. The commenter believed that future SIPs should be completed with respect to more protective $PM_{2.5}$ standards. This commenter argued that more stringent $PM_{2.5}$ standards could significantly increase the potential for transportation projects to cause or contribute to $PM_{2.5}$ violations.

Other commenters noted that existing $PM_{2.5}$ standards were in process of being revised, or that the public health benefits of controlling hot-spots indicate that EPA consider more health-protective standards.

Response

EPA did not finalize hot-spot analysis requirements that rely solely on an area's SIP to identify the types of projects or project locations that require a hot-spot analysis. However, EPA does not believe it is appropriate to address the remainder of these comments concerning the pending review of the current $PM_{2.5}$ standards at this time.

The commenters are correct that EPA is in the process of reviewing the current $PM_{2.5}$ air quality standards. As required by consent decree, EPA proposed revisions to the current $PM_{2.5}$ air quality standards on January 17, 2006 (71 FR 2620). EPA is required to finalize this rulemaking by September 27, 2006. When reviewing an air quality standard, EPA considers available health effects data. As such EPA is considering any available health information related to localized elevated $PM_{2.5}$ concentrations.

EPA will consider the need to revise the conformity rule if appropriate after any changes to the $PM_{2.5}$ standards are finalized. However, today's final rule protects air quality and public health in current $PM_{2.5}$ nonattainment areas according to the current standards. This is accomplished by ensuring that projects that are likely to cause new or worsen existing violations with respect to the currently applicable standards undergo a hot-spot analysis before a project-level conformity determination is made.

Comment

EPA invited commenters to submit studies or data regarding $PM_{2.5}$ hot-spots during the comment period for the December 2004 supplemental proposal. Comments varied regarding whether or not transportation projects could impact the level and forms of the current $PM_{2.5}$ standards at the local level.

Response

EPA reviewed the information submitted by these commenters along with a large number of other studies as discussed above. Based on a review of all of the data, EPA concluded that certain types of individual transportation projects, particularly

those which significantly increase diesel vehicle traffic and emissions, could lead to new violations or could worsen existing violations of either the current annual or 24-hour form of the $PM_{2.5}$ standards. Particularly relevant are the Indale and Burr studies cited in C. of this section. The Indale study showed that facilities where diesel vehicles idle for prolonged periods, such as truck stops or freight terminals, can cause elevated $PM_{2.5}$ concentrations in the vicinity of the facility.

The Burr study showed that individual highway projects can also result in significant changes in $PM_{2.5}$. Specifically, in the Burr study, a highway bypass opened which removed traffic from a roadway that runs through the affected town. After the bypass opened, $PM_{2.5}$ concentrations decreased in the town near the roadway where traffic was removed, thereby documenting the impact that traffic had been having on local air quality. Based on this and other information in the docket for the final rule, EPA concluded that certain projects could cause air quality concerns, and therefore, a hot-spot analysis is required for these projects.

E. Responses to Other Comments

EPA received several comments regarding other issues related to its statutory interpretations supporting proposed options. Please note that some of these comments were related to both $PM_{2.5}$ and PM_{10} hot-spot requirements, and for the sake of completeness, EPA is including the entire comment and response in Section III.

Comment

EPA noted in its previous proposals that Clean Air Act section 176(c)(3)(B)(ii) only specifically requires hot-spot analyses for projects in CO nonattainment areas, and therefore, EPA has discretion to decide if hot-spot analyses are necessary to protect air quality in $PM_{2.5}$ and PM_{10} nonattainment and maintenance areas. EPA received comments concerning this interpretation of the Agency's statutory authority during the comment period following the November 2003 proposal and invited further comments in the December 2004 supplemental proposal.

EPA received several comments on this particular legal argument. Four commenters believed that EPA demonstrated in the December 2004 supplemental proposal that all proposed options complied with Clean Air Act requirements and that EPA has discretion in applying PM hot-spot requirements. These commenters argued that the Clean Air Act does not specifically require $PM_{2.5}$ or PM_{10} hot-spot requirements for any projects. One of these commenters further clarified that EPA has the discretion to specify the form of analyses, based on availability of information, feasibility of analysis methods, and cost and benefit of performing analyses.

However, other commenters disagreed with this interpretation, and believed that the Clean Air Act does not provide EPA the discretion to exempt federally funded or approved projects from project-level conformity determinations, including $PM_{2.5}$ and PM_{10} hot-spot analyses. Rather than being superceded by section 176(c)(3)(B)(ii) which establishes a special requirement to reduce CO violations, applicable only to CO areas before a SIP is approved, these commenters believed that Clean Air Act section 176(c)(1)(A) and (B) take precedence. Section 176(c)(1)(A) and (B) apply for all pollutants for which an area is designated nonattainment pursuant to Clean Air Act section 107(d), and "Conformity to an implementation plan" means that the activity must satisfy these statutory requirements "that such activities will not cause or contribute to any new violation of any standard in any area," "increase the frequency or severity of any existing violation of any standard in any area" or "delay timely attainment." Since EPA does not have discretion to waive these statutory requirements, these commenters believed that $PM_{2.5}$ and PM_{10} hot-spot analyses should be required, consistent with the statute, for "any activity" before it may be approved or funded by a Federal agency.

Response

EPA agrees that the Clean Air Act sets the legal standard for what projects have to meet before receiving Federal funding or approval (i.e., that they cannot create or worsen violations of any standard or delay attainment). EPA also agrees that Clean Air Act 176(c)(1)(A) and (B) set this standard, rather than 176(c)(3)(B)(ii). However, EPA also believes it has discretion to not require analyses of localized impacts of projects if we have scientific evidence that $PM_{2.5}$ and PM_{10} hot-spots are not a concern with respect to the standards. That is, even under the statutory standards of section 176(c)(1)(A) and (B), if EPA determines through rulemaking that certain types of projects will not cause or contribute to violations of any standard or delay attainment, EPA concludes that we have the authority to determine through the conformity rule that no additional analysis would be necessary to meet section 176(c)(1)(A) and (B). Since section 176(c)(3)(B)(ii) does not affirmatively require emissions reductions in $PM_{2.5}$ or PM_{10} areas, EPA believes that conformity determinations would satisfy section 176(c)(1)(A) and (B) without a hot-spot analysis if EPA has demonstrated that specific types of projects will not adversely affect air quality standards. EPA certainly did not mean to imply in its proposals that we could arbitrarily disregard consideration of $PM_{2.5}$ and PM_{10} localized emissions impacts even if such impacts could impact the air quality standards.

EPA agrees that we do not have authority to waive the requirements of Clean Air Act section 176(c)(1)(A) and (B), rather we conclude that those requirements can be met in certain circumstances without additional hot-spot analyses. Nevertheless, since we have information that $PM_{2.5}$ and PM_{10} hot-spots are a concern for certain projects, we are interpreting the statute to apply a specific hot-spot requirement to those projects of air quality concern.

Comment

Other commenters believed that EPA should revise § 93.116(a) of the conformity rule so that proposed transportation projects can meet all Clean Air Act conformity requirements. These commenters argued that EPA had not reflected in the proposed regulatory text all of the requirements of Clean Air Act section 176(c)(1)(A) and (B)(i)(iii) that transportation activities must contribute to reducing violations and providing for expeditious attainment. According to commenters, the Clean Air Act establishes an affirmative responsibility on transportation projects to help attain the standards, and as a result, the conformity rule should be clarified to prohibit conformity determinations for projects that cause or contribute to new or increased violations after a statutory attainment deadline, or that fail to eliminate transportation-related violations by an attainment date.

The commenters provided an example to illustrate their comments. In this example, a CO hot-spot analysis determined that the number of current CO violations would be eliminated by 2015, but that continued growth in vehicle miles traveled (VMT) thereafter would cause at least one new violation by 2020. The concentration for the violating receptor represented a decrease in the concentration predicted at the same receptor under the no-build scenario. In the commenters' opinion, the fact that the violation would be less than current violations, or less than would be expected under the no-build scenario, is not enough to meet statutory

requirements after an area has attained, or after the attainment date.

Response

EPA disagrees with commenters and believes that § 93.116(a) of the conformity rule meets all statutory requirements. Section 176(c)(1)(A) requires "conformity to an implementation plan's purpose of eliminating or reducing the severity and number of violations of the national ambient air quality standards and achieving expeditious attainment of such standards." In general, EPA believes that this statutory criterion is met if a transportation project is consistent with the emissions projections and control measures in the SIP.

The SIP process is the venue where state and local agencies decide on SIP control strategies for attaining the $PM_{2.5}$ and PM_{10} standards. Section 93.116(a) of the conformity rule allows all projects in $PM_{2.5}$ and PM_{10} areas to meet section 176(c)(1)(A) because it requires all non-exempt projects to demonstrate that "no new local violations will be created and the severity or number of existing violations will not be increased as a result of the project." This is accomplished by requiring $PM_{2.5}$ and PM_{10} hot-spot analyses for projects of air quality concern, with the presumption that all other projects meet this requirement.

EPA has previously addressed a similar type of comment regarding the applicability of section 176(c)(1)(A) and commenters' belief that this provision requires transportation activities to specifically contribute emissions reductions towards attainment. Although it is true that transportation projects need to be consistent with a SIP's purpose of reducing violations, this can be accomplished by simply not increasing violations; EPA concludes that the statute does not require an individual transportation project to reduce emissions by itself. Individual transportation projects are not required to reduce all transportation-related emissions; they need only prevent worsening air quality concentrations. So long as the air quality standards are not impacted by a new project, the project will meet all applicable statutory requirements by not causing or contributing to new violations, not increasing the severity of existing violations, not interfering with timely attainment and interim progress, and being consistent with the overall purpose of the SIP to eliminate all violations.

In the July 1, 2004 final rule, EPA disagreed with this similar comment (69 FR 40031). Clean Air Act section 176(c)(3)(A)(iii) is the only provision that requires emissions reductions for transportation plans and TIPs in higher classifications of ozone and CO nonattainment areas prior to having an adequate or approved SIP. This provision does not apply in the case of $PM_{2.5}$ and PM_{10} nonattainment and maintenance areas. EPA has already successfully defended this legal interpretation in *EDF* v. *EPA, 82 F.3d 451 (DC Cir. 1996).*

Furthermore, commenters are incorrect in interpreting section 176(c)(1)(B)(i) and (iii) as prohibiting project approvals in cases where new violations are predicted for a year beyond an attainment year and a project's implementation is resulting in lower $PM_{2.5}$ and PM_{10} concentrations. The commenters indicated that in this context, "any new violation" should be construed to apply to a violation that is anticipated in the period after the area attains the standards.

Sections 176(c)(1)(A) and (B) should not be interpreted that "any new violation" should be construed to imply that an individual transportation project must remedy any violation that is projected to occur after the attainment date as a result of any emissions sources. On the contrary, these provisions only require air quality to not be worsened by an individual project than what would have otherwise occurred. Where the project itself is improving air quality concentrations and thus violations from what they would have been without the project, EPA concludes that the project is consistent with the SIP and meets the applicable conformity requirements.

As a result, EPA believes that conformity in the example offered by the commenter meets statutory requirements. If the project's implementation resulted in lower future concentrations than would have otherwise occurred without the project, then statutory conformity requirements are met. In fact, such a situation would result in more than what is required under the statute, since such a project has actually reduced future violations from what they would have been absent the project.

Comment

Two commenters believed that transportation plans and TIPs cannot be found to conform if they include projects that do not meet Clean Air Act requirements. The commenters stated that the conformity rule does not explain how MPOs will implement the Clean Air Act requirement to not "approv[e] any project, program or plan which does not conform." The commenters believed that if projects are found not to conform after the TIP has been approved, there should be a requirement to reconsider the TIP so that there is an opportunity to revisit the regional allocation of available resources. If this opportunity is not provided, commenters were concerned that resources may not be available to remedy or mitigate the impacts of a particular project's conformity determination.

Response

EPA believes that MPOs and project sponsors are already fulfilling the Clean Air Act requirement to not "approv[e] any project, program or plan which does not conform." Furthermore, existing transportation planning and conformity requirements already provide the opportunity to reconsider the allocation of resources in the event that a project cannot meet project-level conformity requirements.

Section 93.122(a)(1) of the conformity rule requires that regional emissions analyses, which serve as the basis for determining whether or not an area conforms to an approved or adequate SIP motor vehicle emissions budget or passes an interim emissions test before budgets are available, include all regionally significant projects expected in the nonattainment or maintenance area and account for the VMT from non-regionally significant projects that are not explicitly modeled. Clearly, not all of the expected projects planned for an area would have received a project-level conformity determination prior to the time that they are included in the regional emissions analysis for a nonattainment or maintenance area because project-level determinations are not made until a project completes the required National Environmental Policy Act (NEPA) process.

If during the NEPA process a project initially does not meet project-level hot-spot requirements, there would be two possible outcomes. In most cases the project sponsor would attempt to mitigate project emissions that are affecting concentrations either through changes in the project's design or through implementation of other measures that reduce concentrations within the geographic area impacted by the project. If a project sponsor was not able to mitigate the impacts of such project, the project could not move forward because a project-level conformity determination could not be made. Since transportation plans and TIPs are updated on a regular basis, the MPO would be able to reallocate the

funding from the project to other projects at that time.

Comment

One commenter recommended that EPA not finalize any $PM_{2.5}$ or PM_{10} hot-spot requirements because doing so would be contrary to what Congress originally intended. This commenter argued that Congress enacted the 1990 Clean Air Act Amendments to focus on the emissions impacts of long-range transportation plans and TIPs. The commenter stated that the key conformity test is whether emissions from the long-range transportation plan or TIP, in their entirety, stay within the SIP's motor vehicle emissions budget, and the impact of any single project on plan/TIP area-wide emissions could be minimal. Meeting the SIP's budget and attaining the air quality standards on a county and regional level, the commenter argued, is the primary mechanism for an area reaching attainment, rather than a momentary increase in the standards at a specific project's location. The commenter believed that projects can be found to conform without PM hot-spot analyses as long as such projects are part of a conforming plan and TIP. The risk of possible legal challenges and delays in streamlining project development would not be a productive use of resources, the commenter also argued.

Response

EPA disagrees with these comments. Clean Air Act section 176(c)(2) does require that in order for a project to be found to conform it must come from a conforming plan and TIP and/or its emissions must have been included in the current conformity determination. However, this is not the sole statutory requirement that must be satisfied in order for a project-level conformity determination to be made. Transportation projects must also satisfy the requirements of section 176(c)(1)(B). Section 176(c)(1) is written very broadly to apply to any Federal activity, and specifically applies to any project as well as any transportation plan or TIP.

Specifically, projects can only be found to conform if it can be shown that they do not cause or contribute to new violations, increase the frequency or severity of existing violations, or delay timely attainment of the relevant air quality standard. EPA has determined that certain types of transportation projects may result in localized $PM_{2.5}$ violations. Therefore, in order to satisfy the requirements of Clean Air Act section 176(c)(1)(B), a hot-spot analysis is required for such projects in order to ensure that new violations are not created, existing violations are not worsened, and timely attainment is not delayed. A regional emissions analysis for an area's entire planned transportation system is not sufficient to ensure that individual projects meet the requirements of section 176(c)(1)(B) where projects could have a localized air quality impact.

EPA agrees that regional emissions analyses are critical for ensuring that emissions from an area's planned transportation system are consistent with emissions estimates contained in the area's SIP, so that the area may meet relevant regional air quality goals such as attainment or reasonable further progress. However, based on a complete reading of Clean Air Act section 176(c), it is clear that Congress intended transportation conformity to apply to transportation projects as well as plans and TIPs. Thus, hot-spot analyses are required as well where localized impacts could occur.

Finally, the commenter states that the risk of possible legal challenges and delays in streamlining project development would not be a productive use of resources. But EPA cannot ignore Clean Air Act conformity requirements simply because there is a risk that some projects may be delayed due to potential lawsuits. Clean Air Act section 176(c)(1)(B) clearly requires that it must be shown that individual projects do not adversely impact air quality. In this final rule, EPA addresses both the Clean Air Act's requirements for project-level conformity determinations and concerns over limited resources. To that end, the final rule requires hot-spot analyses for only those projects that have the likelihood of adversely impacting air quality rather than requiring an analysis for each non-exempt project, including those that EPA concludes would not represent an air quality concern.

Comment

A few commenters urged EPA to consider information that they had previously submitted on the costs of performing conformity analyses for the new standards in response to EPA's proposed November 25, 2003, Information Collection Request (ICR) and final January 5, 2004, ICR (69 FR 336).

Response

EPA believes that conformity procedures must first meet the Clean Air Act requirements contained in section 176(c) and that these procedures should be sensitive to the resource constraints of conformity implementers. EPA recognizes that both air quality agencies and metropolitan planning organizations are currently involved in 8-hour ozone and/or $PM_{2.5}$ SIP development, implementation of conformity requirements for these two air quality standards and MPOs are currently adapting to changes made by SAFETEA–LU to transportation planning and conformity requirements. The final requirements for $PM_{2.5}$ hot-spot analyses meet Clean Air Act conformity requirements and minimize the resource burden on state and local agencies by focusing these reviews on only those projects that are likely to adversely impact air quality rather than requiring analyses for every non-exempt project in $PM_{2.5}$ nonattainment and maintenance areas.

In addition, EPA has already considered the additional burden associated with implementing a $PM_{2.5}$ hot-spot requirement in the ICR that has been approved for implementing transportation conformity for the 8-hour ozone and $PM_{2.5}$ standards. EPA has already considered and responded to all comments that were made for this ICR, which has been approved and assigned OMB control number 2060–0561. In fact, this ICR actually overestimated the burden associated with implementing a $PM_{2.5}$ hot-spot requirement as compared to this final rule's requirements. For example, the ICR assumed that a $PM_{2.5}$ hot-spot analysis would be required for all non-exempt federally funded or approved projects in $PM_{2.5}$ nonattainment or maintenance areas, whereas this final rule only requires such analyses for projects of air quality concern.

F. When Are the $PM_{2.5}$ Hot-Spot Requirements Effective?

Clean Air Act section 176(c)(6) and 40 CFR 93.102(d) provide a one-year grace period before conformity applies in areas newly designated nonattainment for a new standard. On January 5, 2005 (70 FR 943), EPA designated areas as attainment and nonattainment for the $PM_{2.5}$ standards. These designations became effective on April 5, 2005. As a result, conformity for the $PM_{2.5}$ standards will apply to newly designated $PM_{2.5}$ nonattainment areas on April 5, 2006. Starting on that date, $PM_{2.5}$ hot-spot requirements for projects of air quality concern as detailed by this rulemaking must be met prior to any new Federal approvals for such projects.

Therefore, EPA finds good cause to determine that the final rule is effective on April 5, 2006. EPA normally issues final regulations with at least a 30-day effective date after **Federal Register** publication. However, state and local implementers are required by the Clean Air Act to meet conformity

requirements in $PM_{2.5}$ nonattainment areas for transportation plans, TIPs, and non-exempt projects as of April 5, 2006, the end of the $PM_{2.5}$ grace period. And since today's final rule describes how to meet statutory requirements for projects in $PM_{2.5}$ areas, it is imperative that conformity implementers be able to legally use the requirements in this final rule. Absent this determination of good cause, EPA would be placing conformity implementers in the unfortunate position of waiting until a 30-day effective date before conformity rule requirements could be used to proceed with any short-term project approvals. For these reasons, EPA believes it has good cause to expedite the effective date of this final rule in $PM_{2.5}$ nonattainment areas.

IV. PM_{10} Hot-Spot Analyses

A. Background and Proposed Options

EPA proposed to revisit existing PM_{10} hot-spot requirements in parallel with considering new $PM_{2.5}$ hot-spot requirements. As discussed in Section III., EPA originally established a PM_{10} hot-spot requirement in the November 24, 1993 conformity rule, which required some type of hot-spot analysis—quantitative or qualitative—for all FHWA and FTA funded or approved non-exempt projects in PM_{10} nonattainment and maintenance areas (40 CFR 93.116 and 93.123). These requirements applied for all project-level conformity determinations that occurred before and after a PM_{10} SIP is submitted.

EPA established the PM_{10} hot-spot requirements so that more rigorous quantitative hot-spot analyses would only be required for projects that have the potential to impact the PM_{10} air quality standards (i.e., "projects of air quality concern"), once modeling guidance was released. More streamlined, qualitative hot-spot analyses were required for all other non-exempt projects, and for all non-exempt projects until EPA's modeling guidance was released. All hot-spot analyses were intended to demonstrate that a transportation project meets Clean Air Act conformity requirements.

EPA proposed several options to retain, revise, or delete existing PM_{10} hot-spot analysis requirements for project-level conformity determinations in PM_{10} nonattainment and maintenance areas. These options were proposed to apply during the time periods before and after a PM_{10} SIP is submitted. EPA is repeating the previously proposed options to assist in discussing the final rule in today's action.

To that end, the following options were proposed for PM_{10} hot-spot requirements prior to the submission of a PM_{10} SIP:

- *Option 1:* Retain the existing conformity rule's PM_{10} hot-spot analysis requirements in all PM_{10} areas;
- *Option 2:* Apply the existing conformity rule's PM_{10} hot-spot analysis requirements, unless the EPA Regional Administrator or state air agency finds that localized PM_{10} violations are not a concern for a given PM_{10} area;
- *Option 3:* Only apply the existing conformity rule's PM_{10} hot-spot analysis requirements, if the EPA Regional Administrator or state air agency finds that localized PM_{10} violations are a concern for a given PM_{10} area; or
- *Option 4:* Delete the current PM_{10} hot-spot analysis requirements from the conformity rule and impose no hot-spot analysis requirements.

EPA acknowledged in the December 2004 supplemental proposal that the above proposed options may impact only a small number of PM_{10} areas, since most PM_{10} areas already have submitted or approved PM_{10} SIPs. EPA also requested information from commenters about whether sufficient local information was available to make findings under Options 2 and 3.

EPA proposed three PM_{10} hot-spot options for project-level conformity determinations that occur after PM_{10} SIP submission:

- *Option A:* Retain the existing conformity rule's PM_{10} hot-spot analysis requirements for FHWA/FTA non-exempt projects in all PM_{10} areas with one minor addition, as described below;
- *Option B:* Only require quantitative PM_{10} hot-spot analyses for projects at those types of locations that the PM_{10} SIP for a given area identifies as a localized PM_{10} air quality concern. No quantitative or qualitative analyses would be required for projects in other types of locations, or in PM_{10} areas where the SIP does not identify types of locations as a localized PM_{10} air quality concern; or
- *Option C:* Do not apply any PM_{10} hot-spot analysis requirements for any PM_{10} area and delete the current PM_{10} requirements from the conformity rule.

Under Option A, EPA proposed to add a new criterion that would require that quantitative analyses also be performed at those types of project locations that the PM_{10} SIP identifies as a PM_{10} hot-spot concern. Neither Option B nor C would require some type of hot-spot analysis for all projects in the PM_{10} nonattainment or maintenance area, as had been required under the previous conformity rule's PM_{10} hot-spot requirements. In addition, EPA noted in the December 2004 supplemental proposal that the majority of PM_{10} areas already had an attainment demonstration or a maintenance plan in place; therefore, SIP revisions may be necessary under Option B to identify types of locations where quantitative analyses must be performed.

For all relevant options, EPA proposed to rely on the existing conformity rule provision in § 93.123(b)(4) that does not require any quantitative PM_{10} hot-spot analyses until EPA releases quantitative modeling guidance and announces in the **Federal Register** that quantitative modeling requirements are in effect. EPA also proposed to retain the existing conformity rule's flexibility in § 93.123(b)(3) for FTA to make categorical hot-spot findings to streamline PM_{10} hot-spot analyses as appropriate.

EPA requested comments on all of the proposed options, and invited commenters to submit any relevant data or other information, including whether state and local agencies would have information available to implement the proposed options. The December 2004 supplemental proposal included proposed regulatory text that combined various $PM_{2.5}$ and PM_{10} hot-spot options as illustrative examples, and EPA noted that any combination of the proposed $PM_{2.5}$ or PM_{10} hot-spot options could be finalized. See the November 2003 proposal (68 FR 62713–62714) and December 2004 supplemental proposal (69 FR 72149–72153) for more information on the proposed options.

B. Description of Final Rule

Consistent with $PM_{2.5}$ hot-spot requirements, EPA is finalizing a hybrid approach that retains aspects of the previous PM_{10} hot-spot requirements while providing flexibility. The final rule requires quantitative PM_{10} hot-spot analyses only for projects of air quality concern, and qualitative hot-spot analyses would be done for these projects before EPA releases its future modeling guidance and announces that quantitative PM_{10} hot-spot analyses are required under § 93.123(b)(4). EPA specifies in § 93.123(b)(1) that projects of air quality concern are highway and transit projects that involve significant levels of diesel vehicle traffic, and any other project that is identified in the PM_{10} SIP as a localized concern.

Today's final rule does not require any hot-spot analysis—qualitative or quantitative—for all other projects that are not listed in § 93.123(b)(1) as an air quality concern. These projects are presumed to meet Clean Air Act requirements and 40 CFR 93.116

without any explicit hot-spot analysis, because EPA concludes based upon the available evidence that such projects would not have an impact on local air quality. State and local project sponsors should briefly document in their conformity documentation for such projects that an explicit PM_{10} hot-spot analysis was not completed because Clean Air Act and 40 CFR 93.116 requirements were met without an explicit PM_{10} hot-spot analysis.

This final rule requires PM_{10} hot-spot analyses for projects of air quality concern in PM_{10} nonattainment and maintenance areas at all times—both before and after a PM_{10} SIP is submitted. These projects are anticipated to have the potential to increase local PM_{10} concentrations, and as a result, PM_{10} hot-spot analyses are needed to ensure that the local air quality impacts of such projects are considered prior to receiving federal funding or approval. Rather than finalize the proposed and previous rule's criteria for PM_{10} analyses, EPA is finalizing more specific criteria about the types of projects that require such analyses based on our November 2003 and December 2004 proposals and comments received. See Section V. of this notice for further details regarding the regulatory criteria for projects of air quality concern and more information on the general requirements for performing hot-spot analyses. See Section IX. of today's action for further information regarding when today's change in PM_{10} requirements would apply in PM_{10} areas with and without approved conformity SIPs.

In addition, the final rule does not substantively change the existing conformity rule flexibility that allows DOT, in consultation with EPA, to make categorical hot-spot findings that would further streamline quantitative hot-spot analysis requirements in appropriate cases, as described further in Section VII.

This final rule also makes no change in how qualitative PM_{10} hot-spot analyses are currently performed for projects of air quality concern, since the previous conformity rule has always required a qualitative PM_{10} hot-spot analysis for all non-exempt projects in PM_{10} nonattainment and maintenance areas (under the previous rule's § 93.123(b)(2)). As stated in Section III., quantitative PM_{10} hot-spot analyses are not required for projects of air quality concern at this time since EPA has not yet required quantitative PM_{10} hot-spot analyses under § 93.123(b)(4). Qualitative PM_{10} hot-spot analyses should be completed according to joint EPA and DOT guidance, which will be posted on the Web site provided in Section I.B.2. of today's notice. Until this new guidance is available, FHWA's existing September 12, 2001 guidance, "Guidance for Qualitative Project-Level 'Hot-Spot' Analysis in PM_{10} Nonattainment and Maintenance Areas," can be used. See Section VI. of this final rule for more information regarding the timing of EPA's future quantitative hot-spot modeling guidance and application of quantitative requirements.

Finally, EPA notes that its future quantitative modeling guidance will address how the current 24-hour and annual PM_{10} air quality standards are to be considered in quantitative hot-spot analyses. This future guidance will be consistent with how potential impacts on the PM_{10} standards have historically been considered for SIP planning, monitoring, and other applicable requirements.

C. Rationale

EPA considered the following factors in developing the final rule's PM_{10} hot-spot requirements:

- The Clean Air Act conformity requirements for individual transportation projects in PM_{10} areas;
- The current scientific understanding of PM_{10} hot-spots and public health effects;
- The feasibility of implementing proposed options; and
- The impact of proposed options on state and local resources.

EPA stated in its proposals that it was important to re-evaluate the need for hot-spot analyses for PM_{10} nonattainment and maintenance areas, in conjunction with similar options considered for $PM_{2.5}$ hot-spot requirements. The following paragraphs outline how EPA considered the above factors in the final rule.

When the conformity rule was promulgated in 1993, EPA interpreted Clean Air Act section 176(c)(1)(B) to require PM_{10} hot-spot analyses because of the requirement to ensure that transportation activities do not create new violations, worsen existing violations or delay timely attainment of the air quality standard (January 11, 1993, 58 FR 3776–3777). EPA continues to believe that this statutory provision is the applicable standard that applies for considering a final PM_{10} hot-spot requirement, and that the final rule meets this legal standard.

Furthermore, the Clean Air Act requires that section 176(c)(1)(B) be met for all FHWA or FTA funded or approved projects, except for traffic signal synchronization projects; it does not distinguish that these requirements apply based on whether or not a SIP has been submitted. Through previous rulemaking, EPA has determined that the exempt projects listed in 40 CFR 93.126 have met section 176(c)(1)(B) without further hot-spot analyses. Through today's action, EPA is determining that projects not identified in the rule as projects of air quality concern have also met section 176(c)(1)(B) without further hot-spot analyses. The final rule requires that all projects of air quality concern be analyzed for localized impacts, regardless of whether or not the PM_{10} SIP is submitted.

As indicated in Section III. of today's notice and above, EPA believes that Clean Air Act section 176(c)(1)(B) is the primary legal standard that applies for this final rule. This statutory provision requires that federally funded and approved projects not create or worsen air quality violations or delay timely attainment. Also, since projects of air quality concern have the potential to impact local PM_{10} air quality, then a PM_{10} hot-spot requirement is warranted for such projects in today's final rule at all times.

EPA also continues to believe it has discretion to establish the level of PM_{10} hot-spot analysis that is necessary to meet statutory requirements. Therefore, EPA is retaining its previous rule's approach for requiring quantitative PM_{10} hot-spot analyses only for projects of air quality concern once EPA's modeling guidance is available. EPA is revising some of the existing rule's criteria for when PM_{10} analyses are required based on scientific information currently available on PM_{10} hot-spots, and the Agency's experience in implementing CO and PM_{10} hot-spot requirements since 1993 for what level of analysis is appropriate and worthwhile. The final rule's criteria for what projects require hot-spot analyses will ensure that all projects that have the potential to impact the air quality standards will be analyzed before they receive Federal funding or approval. EPA revised its proposed and previous rule's criteria for what projects of air quality concern require PM_{10} analyses based on existing scientific information and comments received, as discussed further in this section and in Section V.

Furthermore, as stated in Section III., EPA is changing its precedent to date in no longer requiring qualitative hot-spot analyses for projects that are not of localized air quality concern. As stated previously, since the original 1993 conformity rule, some type of hot-spot analysis has been required to meet statutory requirements for all non-exempt FHWA and FTA projects in

PM_{10} nonattainment and maintenance areas. However, based on the history of implementation of this provision to date, EPA now believes that these projects do not represent a localized air quality concern and can be presumed to meet Clean Air Act requirements and 40 CFR 93.116 without any explicit hot-spot analysis because EPA concludes based on available data and experience that these projects will not have an impact on local air quality.

The Agency now believes that requiring qualitative hot-spot analyses for projects that are not a concern is also not a beneficial use of Federal, state, or local resources. This conclusion is based in part on a recent review by EPA and DOT field offices of project-level conformity determinations involving historical qualitative hot-spot analyses in PM_{10} areas. See Section III.C. for further information on EPA and DOT's review of PM_{10} qualitative hot-spot analyses and why EPA concludes that they are no longer necessary to meet statutory requirements for projects that are *not* an air quality concern.

However, EPA continues to believe that projects of air quality concern have the potential to impact PM_{10} air quality standards and thus require explicit hot-spot analyses to determine if any such impacts will result in specific cases, based on existing scientific information and the Agency's historical understanding of PM_{10} hot-spots. As stated in the December 2004 supplemental proposal, EPA continues to believe it is appropriate to focus conformity resources where air quality issues are significant and thus need to be in place to address Clean Air Act requirements.

In developing this final rule, EPA considered information that was available when the original 1993 conformity rule was developed, as well as new information that was submitted through the rulemaking process or has otherwise become available. For example, in 1993, EPA stated that direct PM_{10} emissions would be capable of causing violations in conditions of unusually heavy diesel truck/bus traffic and limited dispersion, such as street canyons (January 11, 1993, 58 FR 3780). EPA has also acknowledged that the role of re-entrained road dust could be a major factor in contributing to potential PM_{10} hot-spots, especially in PM_{10} areas where road dust is a major component of the PM_{10} motor vehicle emissions inventory.

EPA also considered in the final rule the impact of our new diesel fuel and engine standards (January 18, 2001, 66 FR 5002) for the necessity of applying any PM_{10} hot-spot requirement. Such standards are expected to significantly impact the amount of particulate emissions that will be emitted by new diesel vehicles, and consequently may impact the potential for PM_{10} transportation-related hot-spots. We considered the time frame over which these vehicle standards would phase in. According to the latest Vehicle Inventory and Use Survey from the Census Bureau, in 2002, vehicles three years of age and younger constituted only 32.3% of U.S. truck fleet. If the same age distribution holds for 2010, only about one third of trucks on the road will meet the heavy-duty engine emissions standards for 2007 and 2010. In this scenario, most trucks on the road will still be capable of producing elevated concentrations. As such, EPA's new emission standards do not eliminate the need for considering PM_{10} hot-spots from transportation projects involving a significant number of diesel vehicles. However, consideration of EPA's diesel fuel and engine standards' impact on background air quality will be addressed as part of EPA's future quantitative modeling guidance and possibly in modeling used to support categorical hot-spot findings as described in Section VII. of today's notice.

As described further below, EPA also considered the feasibility and resource implications of implementing the proposed options and the final rule's requirements to meet statutory requirements before and after PM_{10} SIP submission.

D. Response to Comments

EPA received comments from state and local transportation and air quality agencies, environmental groups, transportation advocates, and the general public with respect to the proposed options for PM_{10} areas. Fewer comments were submitted for PM_{10} options as compared to $PM_{2.5}$ options, and preferences were not as consistent for similar options before and after PM_{10} SIPs are submitted, as compared to preferences for $PM_{2.5}$ options.

Comment

Several commenters supported finalizing PM_{10} requirements that were generally consistent with the previous conformity rule's provisions for PM_{10} areas (*i.e.*, Options 1 and A) because they believed these options were most protective of public health. Commenters also supported these options because they would promote consistency with EPA's past legal interpretations regarding how federally funded and approved transportation projects have historically met Clean Air Act section 176(c)(1)(B) requirements in PM_{10} areas. These commenters believed that existing science and experience have shown that transportation projects can impact local PM_{10} air quality, and therefore, previous PM_{10} hot-spot requirements should be retained to meet statutory requirements.

These commenters generally did not support Options 4 and C since they required no PM_{10} hot-spot analyses, and they believed that these options were inconsistent with current scientific evidence regarding the existence of PM_{10} hot-spots. A few commenters indicated that these options also do not provide the same health protections as other options. Similarly, another commenter stated that it was not in the public's best interest to eliminate all analyses of potential PM_{10} hot-spots, especially due to the commenter's experience with respect to the 24-hour PM_{10} standard. Another commenter argued that hot-spot requirements should not be deleted because of the known relationship between PM_{10} nonattainment areas and transportation-related sources.

Some of these commenters acknowledged that in practice, proposed options prior to a PM_{10} SIP's submission would not impact most areas, but believed if any projects are approved for areas that have yet to submit a PM_{10} SIP, those projects can only meet statutory conformity requirements through a PM_{10} hot-spot analysis. One commenter believed that PM_{10} areas that still do not have SIPs need to complete PM_{10} hot-spot analyses because these SIPs are not reliable in protecting the public health of their citizens. Another commenter argued that consistency with existing PM_{10} hot-spot requirements and procedures for conformity provides better support during environmental reviews from a NEPA and/or state environmental process perspective when determining local or project-level impacts.

Still other commenters supported options that would apply no PM_{10} hot-spot requirements (*i.e.*, Options 4 and C), and some even preferred that EPA delay issuing a final rule until certain issues are addressed. Some of these commenters believed that there was insufficient evidence regarding the existence of PM_{10} hot-spots. Some commenters also argued that PM_{10} hot-spot requirements are not required by the Clean Air Act, and therefore, an option that required PM_{10} hot-spot analyses should never be finalized.

These commenters were also opposed to requiring existing PM_{10} hot-spot requirements (under Options 1 and A) because they believed these options

would require extensive analyses without comparable environmental benefits and flexibility. These commenters believed it was unnecessary to require hot-spot analyses for every project in every PM_{10} area.

One of these commenters stated that they had never identified a transportation project that had a negative impact on PM_{10} concentrations. This commenter noted that transportation projects usually reduce PM_{10} emissions because most projects involve paving unpaved roads and/or shoulders or adding curbs or gutters. The commenter noted that in most mountainous western states, transportation-related PM_{10} problems result from highway maintenance combined with winter air inversions rather than highway improvement projects. This commenter stated that these problems are addressed in the SIP through requirements for street sweeping, flushing and use of chemical de-icers, all of which reduce road dust. Finally the commenter indicated that eliminating PM_{10} hot-spot requirements is preferable because state and local agencies can then focus their limited resources on other transportation and air quality efforts.

Response

As described above, EPA believes that today's final rule is the appropriate way for projects of air quality concern to meet Clean Air Act section 176(c)(1)(B) requirements in all PM_{10} nonattainment and maintenance areas. EPA agrees that applying a hot-spot requirement prior to a PM_{10} SIP being submitted is essential for meeting statutory requirements. EPA agrees that today's final rule is consistent with its past legal interpretations for applying hot-spot requirements for all projects of air quality concern.

EPA disagrees with commenters who argued that there is insufficient information or limited value in applying a PM_{10} hot-spot requirement. Although some commenters noted limited value in performing qualitative PM_{10} hot-spot analyses to date, EPA believes that this information further supports its decision to eliminate qualitative PM_{10} hot-spot analyses for projects that are not an air quality concern, rather than eliminate all PM_{10} hot-spot requirements.

Based on our review of scientific studies and information gathered during the rulemaking process, as described above, EPA believes that projects of air quality concern have the potential to impact PM_{10} concentrations, and as a result, the PM_{10} standards. Such impacts on communities surrounding a project would be contrary to the Clean Air Act's conformity requirements. Thus, EPA concludes that hot-spot analyses are necessary for projects of air quality concern. Furthermore, EPA does not agree that it is appropriate to delay finalizing a change to the PM_{10} hot-spot requirements, for the reasons cited above. EPA has addressed state and local resource concerns by eliminating PM_{10} qualitative hot-spot analyses for projects that are not an air quality concern.

Comment

EPA also proposed Option B that relied solely on the SIP to identify projects or project locations of potential PM_{10} hot-spot concern. Under this option, quantitative PM_{10} hot-spot analyses would only be required at types of project locations identified as a localized air quality concern in a given PM_{10} SIP. No quantitative or qualitative analyses would be required for projects in other types of locations, or in PM_{10} areas where the current or future SIP does not identify types of locations as a localized PM_{10} air quality concern. Furthermore, no hot-spot analyses would be completed for any projects prior to PM_{10} SIP submission, for the limited number of PM_{10} areas without SIPs.

Several commenters supported Option B because they believed that the SIP process could assist in identifying what projects are of concern in a given area and what level of PM_{10} hot-spot analysis is appropriate. Commenters believed that Option B would allow each PM_{10} area to target potential PM_{10} hot-spots, protect public health, and provide necessary flexibility. A few other commenters indicated support for Option B because they did not agree that there was evidence that transportation projects are a PM_{10} hot-spot concern. Two other commenters even believed that this option should apply only once a SIP is approved, rather than when a SIP is submitted, unless EPA were establishing a process similar to its adequacy process for submitted SIPs with motor vehicle emissions budgets that involves sufficient notice and public review.

Other commenters opposed Option B because they believed it was not feasible, and therefore, would not meet statutory requirements or protect public health. Commenters noted that most PM_{10} areas already have SIPs that were developed before EPA's proposed options, without consideration for implementing a conformity hot-spot requirement. If finalized, the commenters believed that Option B would result in new projects in most PM_{10} areas not meeting statutory requirements, since no hot-spot requirement would exist (because no current PM_{10} SIPs were designed to implement such a requirement).

Some commenters believed that Option B is also flawed because a state has no obligation under the Clean Air Act or conformity regulations to identify project locations of air quality concern in its SIP. Commenters argued that if states decline to designate such areas in their SIPs—whether from the lack of meaningful evidence of problems or out of a desire to avoid the application of conformity requirements—statutory requirements would not be met. If such a case occurred, this commenter was concerned that there would be no legal mechanism to challenge a SIP or enforce statutory conformity requirements.

A commenter who did not support Option B as proposed suggested a hybrid option where PM_{10} areas could rely on Option B if the SIP addressed the potential for transportation-related hot-spots, but if this was not the case, the existing PM_{10} requirements under Option A would apply.

Some commenters also provided information and thoughts on developing PM_{10} SIPs to implement Option B. One commenter believed that revising existing SIPs to address transportation-related PM_{10} hot-spots would allow state and local agencies to focus their resources on meaningful analyses. Some commenters believed that available local information and resources to develop SIPs to specify project locations of concern will vary among PM_{10} areas. Still another commenter was concerned that Option B could be problematic if project locations are not identified during SIP development, but are subsequently determined through the consultation process to have a hot-spot concern. Other commenters believed that the consultation process could be used to identify new projects of concern, rather than revise existing SIPs.

Finally, a few commenters went on to state that EPA's proposed options that allow states to determine which projects would require hot-spot analyses conflict with a previous court decision. However, the commenters did not elaborate on what court decision was involved, or how Option B contradicted this judicial decision.

Response

EPA is not finalizing Option B because this option will not ensure that all federally funded and approved transportation projects in PM_{10} areas are consistent with Clean Air Act section 176(c)(1)(B). As described by

commenters, most PM_{10} areas already have SIPs that were established prior to EPA's proposed conformity options, and therefore, were not designed to implement Option B. Due to limited resources, it is doubtful that areas will revise SIPs solely to address PM_{10} hot-spots, and even so, it is unclear whether SIPs could be developed with sufficient detail to consider the local impacts of current and future projects. Based on all of these considerations and the comments received, EPA does not believe that it is realistic or practical to expect that Option B can be sufficiently implemented to meet statutory requirements in all PM_{10} areas. Further discussion on a similar option for $PM_{2.5}$ hot-spot analyses can be found in Section III. of today's action.

Comment

A few commenters supported Options 2 or 3 which would apply existing PM_{10} hot-spot requirements depending on whether or not new or worsened local PM_{10} violations could occur in a given area prior to PM_{10} SIP submission. For example, one commenter believed Option 3—which would require PM_{10} hot-spot analyses if EPA or the state air agency found there to be a hot-spot concern in a given area—would provide the ability to require analyses for certain projects. This commenter highlighted his area's experience that two types of projects listed in 40 CFR 93.126 (i.e., weight inspection stations and bus terminals) may be a PM_{10} hot-spot concern due to a high concentration of diesel vehicles.

Response

EPA is not finalizing approaches such as Options 2 or 3 because it is unclear if they can be implemented in a manner that meets statutory requirements. See Section III. of today's action for further rationale regarding why such options are not being finalized. However, today's final rule provides some of the flexibility intended by these options, i.e., targeting PM_{10} hot-spot analyses for projects that have the potential to impact PM_{10} air quality.

Comment

A few commenters argued that EPA may not lawfully finalize options that defer PM_{10} hot-spot analyses until after a SIP is submitted because such delays are inconsistent with Clean Air Act requirements. Commenters believed that Clean Air Act section 176(c)(1) does not require that a SIP for a given standard be established before conformity requirements for that standard apply. Section 176(c)(1) states that Federal and MPO approval actions cannot be done for "* * * any project * * * which does not conform to an implementation plan approved or promulgated under section 7410 of this title."

Response

EPA agrees that it is not appropriate to defer project-level hot-spot analyses until PM_{10} SIPs are developed, and thus has not chosen these proposed options in the final rule. See Section III. for more on EPA's response to a similar comment raised for $PM_{2.5}$ hot-spot analyses.

Comment

Some commenters were concerned that finalizing options that required PM_{10} hot-spot analyses for all projects (Options 1 and A) could result in an inefficient use of state and local resources, and therefore, deleting or defining PM_{10} hot-spot requirements through the SIP process was a more appropriate use of resources.

However, as stated above, other commenters believed that having no or only limited PM_{10} hot-spot analyses did not meet statutory requirements or protect public health. Furthermore, they believed that implementing the previous PM_{10} hot-spot requirements has not been burdensome, so continuing to do this under the final rule would be acceptable.

Response

EPA believes that the final rule will ensure that state and local resources are used in an efficient manner, since PM_{10} hot-spot analyses will only be required for projects of air quality concern. Eliminating qualitative PM_{10} hot-spot analyses for projects that are not an air quality concern will significantly reduce any resource challenges in implementing this final rule, since most projects should not be considered an air quality concern. As noted above, EPA concludes that this does comply with statutory requirements. EPA will continue to work with DOT to assist state and local agencies in implementing the final rule's requirements.

Comment

Other commenters were concerned that EPA has yet to issue PM_{10} quantitative hot-spot analysis guidance and methods. Some commenters supported doing little or no PM_{10} hot-spot analyses, in part because credible tools are not currently available. However, other commenters believed that all of the proposed options were insufficient since they would delay quantitative PM_{10} hot-spot analyses for years, and in the interim, there would be no consideration of the public health impacts of projects currently under development.

Response

Today's final rule retains § 93.123(b)(4) of the existing conformity rule that requires quantitative PM_{10} hot-spot analyses once EPA announces in the **Federal Register** that quantitative analysis requirements are in effect. EPA has not yet made such an announcement because the Agency believes that appropriate motor vehicle emissions factor models are not yet available for localized analyses, and EPA is in the initial stages of developing quantitative hot-spot modeling guidance to implement today's rule. Please see Section VI. of today's final rule for further information on the timing of quantitative hot-spot requirements. However, pending development of such guidance, the final rule does require qualitative PM_{10} hot-spot analyses for all projects of air quality concern, so consideration of the public health impacts of proposed projects of air quality concern will not be delayed.

Comment

Some commenters stated that PM_{10} hot-spot requirements should be suspended until (1) it can be demonstrated scientifically that re-entrained dust from induced traffic creates PM_{10} hot-spots, and (2) there are more reliable techniques to quantify re-entrained PM_{10} created by induced traffic on paved roads.

Another commenter stated that it is reasonable to expect that some projects would create localized impacts, especially due to the large amounts of re-entrained road dust generated from roadways. This commenter believed that EPA should develop criteria and guidance under which EPA, state or local air pollution control agencies would have the option of requiring project-level PM_{10} hot-spot analyses. Another commenter went on to state that, while re-entrained road dust emissions can be a greater contributor to PM_{10} concentrations than tailpipe emissions, most projects are done on paved roads where re-entrained road dust is less of an issue compared to unpaved roads.

Response

EPA believes based on the available evidence included in the docket for this rulemaking that certain transportation projects have the potential to impact PM_{10} air quality standards, and therefore, a PM_{10} hot-spot analysis for these projects is needed to meet statutory requirements. Furthermore,

sufficient scientific information exists to support the final rule's requirements, and EPA will consider whether additional information is warranted for modeling road dust in its future $PM_{2.5}$ and PM_{10} quantitative hot-spot modeling guidance.

Comment

Some commenters believed that EPA could improve on its proposed options in the final rule, such as adopting a screening method or emissions threshold that would help define what projects require quantitative hot-spot analyses.

Response

EPA believes that today's action addresses this comment by further refining what projects are an air quality concern and need PM_{10} hot-spot analyses. See Section V. for further information on the criteria for projects of air quality concern finalized in today's action. The elimination of qualitative hot-spot analyses for projects not of concern in part addresses the motivation for a screening method or emissions threshold—e.g., to focus more rigorous quantitative analyses on projects of air quality concern.

Comment

A few commenters argued that applying the previous PM_{10} hot-spot requirements was not necessary due to unique circumstances of their individual PM_{10} area. Several commenters stated that it is inefficient to direct resources to PM_{10} hot-spot analysis when transportation projects may not be a significant contributor to the PM_{10} problem in a given area, such as smaller areas or cities dominated by other PM sources.

One commenter said there were four PM_{10} nonattainment and maintenance areas in their state where the operation of specific industries (e.g., quarries, cement plants, steel fabrication plants) is the primary source of direct PM_{10} emissions. Monitors over the last ten years have shown attainment for the PM_{10} standards, but the commenter's state had not submitted redesignation requests to maintenance for two of the areas due to local concerns for specific non-transportation sources. Therefore, this commenter supported the option of only requiring PM_{10} hot-spot requirements if a SIP is submitted that identifies transportation sources as a significant contributor to the PM_{10} air quality problem.

Another commenter believed its state needed flexibility to consider, through the SIP and consultation processes, the hot-spot concerns of its remote communities. The commenter believed the existing PM_{10} hot-spot requirements resulted in a one-size-fits-all approach that is not appropriate for its PM_{10} nonattainment and maintenance areas.

Response

EPA believes that the final rule's PM_{10} hot-spot requirements along with the conformity rule's existing provisions concerning areas with insignificant emissions serve to protect air quality and public health in PM_{10} nonattainment and maintenance areas. First, today's final hot-spot rule targets PM_{10} hot-spot analyses only for projects that are likely to cause or contribute to new or worsened PM_{10} violations. Specifically, the rule targets hot-spot analyses on those types of projects that result in significant increases in diesel vehicle traffic and emissions, which is likely to be a small subset of projects in many areas.

Second, 40 CFR 93.109(k) already allows PM_{10} areas with insignificant regional motor vehicle emissions to demonstrate, when appropriate, that individual projects will not create new localized violations or make existing violations worse. Projects in such cases would not require PM_{10} hot-spot analyses. Therefore, areas where other types of sources principally contribute to nonattainment problems (such as specific stationary sources) would only be required to perform PM_{10} hot-spot analyses for the types of projects described in § 93.123(b)(1) until such time as a SIP is submitted which demonstrates that regional PM_{10} on-road emissions are insignificant and that projects will not cause new violations or make existing violations worse.

EPA also acknowledges that the practical impact of today's final rule may have a minimal impact on the small areas described by commenters, since there may not be a large number or any projects of air quality concern developed before a PM_{10} SIP is submitted that demonstrates insignificance. After EPA makes an adequacy finding on (or approves) such a SIP, PM_{10} hot-spot analyses would no longer be required in that area. EPA Regions and states can work together to expedite the processing of such SIPs through such methods as parallel processing or direct final rulemaking as appropriate.

With regard to the concerns expressed about the appropriateness of hot-spot analyses in remote or non-urbanized areas, EPA would like to point out that today's final rule limits the need for PM_{10} hot-spot analyses to only those projects which significantly increase diesel vehicle traffic and emissions. As noted in Section III., this is likely to be only a small percentage of projects in remote or non-urbanized areas.

Comment

A few commenters argued that EPA's standards for low sulfur diesel fuels in 2006 and heavy-duty engines in 2007 will negate any need for PM_{10} hot-spot analyses. The commenters stated that EPA should analyze the impacts of these federal standards on local air quality before the rule is finalized.

Response

As described in C. of this section, EPA has considered the impacts of the new diesel standards, and has determined that PM_{10} hot-spot analyses are still warranted for projects of air quality concern. However, consideration of EPA's diesel fuel and engine standards' impact on background air quality will be addressed as part of EPA's future quantitative modeling guidance and possibly in modeling used to support categorical hot-spot findings as described in Section VII. of today's notice.

Comment

One commenter expressed support for the previous conformity rule's PM_{10} hot-spot requirements until the current PM_{10} standards are replaced by a new PM-coarse air quality standard, because current hot-spot requirements protect public health.

Response

EPA will evaluate the impact of any new air quality standards and how they impact the current PM_{10} transportation conformity requirements, including hot-spot requirements, if and when such standards are promulgated. However, since the PM_{10} standards and applicable requirements continue to apply at this time, today's final rule continues to address the current PM_{10} standards. As explained above, EPA has concluded that requiring hot-spot analyses only for projects of air quality concern provides for both compliance with statutory requirements and appropriate commitment of resources.

E. Responses to Other Comments

EPA received several comments on $PM_{2.5}$ and PM_{10} hot-spot analyses that covered broader legal arguments or other topics than the proposed options. Rather than restate all of those comments and responses again here, please see Section III.E. for further information and response to these comments covering both $PM_{2.5}$ and PM_{10}.

F. When Are the PM_{10} Hot-spot Requirements Effective?

For reasons described in Section III.F., the final rule is effective on April 5, 2006. Since the same provisions of the amended rule apply in PM_{10} areas as well as $PM_{2.5}$ areas, EPA finds good cause to have these rules effective on April 5, 2006, for PM_{10} areas as well. EPA believes it would not be in the public interest to attempt to draft the regulations to apply to different areas on different dates as it would be overly confusing and difficult to implement. In addition, this final rule is published almost 30 days before April 5, 2006, so PM_{10} areas should not have any difficulty complying with these regulations as of April 5, 2006. See Section IX. of today's notice for more information on when the final rule's PM_{10} hot-spot provisions will apply in PM_{10} nonattainment and maintenance areas with approved conformity SIPs.

V. Projects of Air Quality Concern and General Requirements for $PM_{2.5}$ and PM_{10} Hot-spot Analyses

A. Background

This section covers the specific types of projects that are required to have $PM_{2.5}$ and PM_{10} hot-spot analyses. The following paragraphs describe what the conformity rule has previously required in PM_{10} areas as well as what types of projects were proposed to receive $PM_{2.5}$ and PM_{10} hot-spot analyses under the November 2003 and December 2004 proposals.

As stated in Sections III. and IV., EPA proposed in the December 2004 notice a range of options for when quantitative or qualitative $PM_{2.5}$ or PM_{10} hot-spot analyses would be required for the time periods before and after a SIP is submitted. As part of some of those options, EPA proposed to require the following projects to have $PM_{2.5}$ and PM_{10} hot-spot analyses:

- *Section 93.123(b)(1)(i):* Projects which are located at sites at which violations have been verified by monitoring data;
- *Section 93.123(b)(1)(ii):* Projects which are located at sites which have vehicle and roadway emission and dispersion characteristics that are essentially identical to those of sites with verified violations (including sites near one at which a violation has been monitored);
- Section 93.123(b)(1)(iii): New or expanded bus and rail terminals and transfer points which significantly increase the number of diesel vehicles congregating at a single location; and
- Section 93.123(b)(1)(iv): Projects in or affecting locations, areas, or categories of sites which are identified in the $PM_{2.5}$ or PM_{10} applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

These proposed criteria were generally consistent with what the conformity rule had required for quantitative hot-spot analyses once tools and EPA modeling guidance are released, since the original 1993 conformity rule in PM_{10} areas, with a few exceptions.

First, EPA proposed to clarify that quantitative analyses would be required only for new or expanded bus and rail terminals and transfer points that *significantly* increase the number of diesel vehicles (rather than *any* increase of diesel vehicles). Second, EPA proposed to add a new criterion—consistent with the current rule's CO quantitative hot-spot requirements—to require $PM_{2.5}$ or PM_{10} quantitative hot-spot analyses for those projects that the $PM_{2.5}$ or PM_{10} SIP identifies as a hot-spot concern.

In addition, in the context of options that would rely on the SIP to identify all projects of air quality concern (e.g., Option B), EPA provided the following examples of types of projects and locations that could be identified in a SIP, and as a result, need $PM_{2.5}$ or PM_{10} quantitative hot-spot analyses:

- Highly congested intersections,
- Locations of highest traffic volumes,
- Large transit stations or freight terminals where a Significant increase in diesel vehicle traffic and engine idling occurs,
- Projects involving long or steep grades, or
- Monitors where the $PM_{2.5}$ or PM_{10} standards has been exceeded or violated.

EPA noted in its proposals that the locations listed above are similar to the conformity rule's original requirements in § 93.123(a)(1)(i)–(iv) and § 93.123(b)(1)(i)–(iii) for projects that required quantitative hot-spot analyses in CO and PM_{10} areas. EPA requested comment on the above examples and for any other information regarding other types of projects and locations where potential $PM_{2.5}$ or PM_{10} hot-spots could occur in a given area. See the November 5, 2003 proposal (68 FR 62712) and December 13, 2004 supplemental proposal (69 FR 72144) for further background information. EPA also noted that any combination of proposed $PM_{2.5}$ or PM_{10} hot-spot options could be included in the final rule.

B. Projects of Air Quality Concern

1. Description of Final Rule

This final rule requires $PM_{2.5}$ and PM_{10} hot-spot analyses only for projects that are considered to have the potential to impact the air quality standards (i.e., "projects of air quality concern"). Section 93.123(b)(1) of today's final rule requires $PM_{2.5}$ and PM_{10} hot-spot analyses for the following projects of air quality concern:

- *Section 93.123(b)(1)(i):* New or expanded highway projects that have a significant number of or a significant increase in diesel vehicles;
- *Section 93.123(b)(1)(ii):* Projects affecting intersections that are at Level-of-Service[7] D, E, or F with a significant number of diesel vehicles, or those that will change to Level-of-Service D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project;
- *Section 93.123(b)(1)(iii):* New bus and rail terminals, and transfer points, that have a significant number of diesel vehicles congregating at a single location;
- *Section 93.123(b)(1)(iv):* Expanded bus and rail terminals, and expanded transfer points, which significantly increase the number of diesel vehicles congregating at a single location; and
- *Section 93.123(b)(1)(v):* Projects in or affecting locations, areas, or categories of sites which are identified in the PM_{10} or $PM_{2.5}$ applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

Quantitative hot-spot analyses are required for conformity determinations of such projects in $PM_{2.5}$ and PM_{10} areas once EPA provides guidance and announces that such analyses are required under § 93.123(b)(4). See Section VI. for more information regarding the timing of quantitative hot-spot analyses for projects of air quality concern and EPA's future modeling guidance.

Prior to quantitative analyses being required, section 93.123(b)(2) requires qualitative $PM_{2.5}$ and PM_{10} hot-spot analyses for projects of air quality concern. State and local agencies should follow EPA and DOT's guidance document for completing qualitative

[7] Highway Capacity Manual 2000 states on pp. 10–4 through 10–5 that "[t]he average travel speed for through vehicles along an urban street is the determinant of the operating level of service (LOS). The travel speed along a segment, section, or entire length of an urban street is dependent on the running speed between signalized intersections and the amount of control delay incurred at signalized intersections." Level-of-service D, E, and F are considered the most congested intersections for planning purposes.

$PM_{2.5}$ and PM_{10} hot-spot analyses, which will be posted on the EPA Web site that is listed in Section I.B.2. of today's notice. Until this new guidance is available, FHWA's existing September 12, 2001 guidance, "Guidance for Qualitative Project-Level "Hot-Spot" Analysis in PM_{10} Nonattainment and Maintenance Areas," can be used for PM_{10} hot-spot analyses.

2. Examples

Some examples of *projects of air quality concern* that would be covered by § 93.123(b)(1)(i) and (ii) are:

- A project on a new highway or expressway that serves a significant volume of diesel truck traffic, such as facilities with greater than 125,000 annual average daily traffic (AADT) and 8% or more [8] of such AADT is diesel truck traffic;
- New exit ramps and other highway facility improvements to connect a highway or expressway to a major freight, bus, or intermodal terminal;
- Expansion of an existing highway or other facility that affects a congested intersection (operated at Level-of-Service D, E, or F) that has a significant increase in the number of diesel trucks; and
- Similar highway projects that involve a significant increase in the number of diesel transit busses and diesel trucks.

EPA notes that the above examples are considered to be the most likely projects that would require a $PM_{2.5}$ or PM_{10} hot-spot analysis under today's final rule.

The following are examples of *projects that are not an air quality concern* under § 93.123(b)(1)(i) and (ii) of this final rule:

- Projects that do not meet the criteria under § 93.123(b)(1), such as any new or expanded highway project that primarily services gasoline vehicle traffic (i.e., does not involve a significant number or increase in the number of diesel vehicles), including such projects involving congested intersections operating at Level-of-Service D, E, or F;
- An intersection channelization project or interchange configuration project that involves turn lanes or slots, lanes or movements, that are physically separated. These kinds of projects improve freeway operations by smoothing traffic flow and vehicle speeds by improving weave and merge operations, which would not be expected to create or worsen $PM_{2.5}$ or PM_{10} violations; and
- Intersection channelization projects, traffic circles or roundabouts, intersection signalization projects at individual intersections, and interchange reconfiguration projects that are designed to improve traffic flow and vehicle speeds, and do not involve any increases in idling. Thus, they would be expected to have a neutral or positive influence on $PM_{2.5}$ or PM_{10} emissions.

Some examples of *projects of air quality concern* that would be covered by § 93.123(b)(1)(iii) and (iv) are:

- A major new bus or intermodal terminal that is considered to be a "regionally significant project" under 40 CFR 93.101; [9] and
- An existing bus or intermodal terminal that has a large vehicle fleet where the number of diesel busses increases by 50% or more, as measured by bus arrivals.

Again, the above examples are considered to be the most likely projects that would require a $PM_{2.5}$ or PM_{10} hot-spot analysis under today's final rule.

Examples of *projects that are not an air quality concern* under § 93.123(b)(1)(iii) and (iv) would be:

- A new or expanded bus terminal that is serviced by non-diesel vehicles (e.g., compressed natural gas or hybrid-electric vehicles); and
- A 50% increase in daily arrivals at a small terminal (e.g., a facility with 10 buses in the peak hour).

3. Rationale

Legal rationale for targeting diesel vehicles. EPA continues to believe it has discretion to establish the level of $PM_{2.5}$ and PM_{10} hot-spot analysis that is necessary to meet statutory requirements. The Clean Air Act requires that projects not create new air quality violations, exacerbate existing violations, or delay timely attainment, but the statute does not specify what type of analysis is needed to meet these requirements. Therefore, EPA is finalizing criteria for when hot-spot analyses are required based on scientific information available on $PM_{2.5}$ and PM_{10} hot-spots, and the Agency's experience in implementing CO and PM_{10} hot-spot requirements since 1993 for what level of analysis is appropriate and worthwhile. As described in Sections III. and IV., the final rule does not require any hot-spot analysis—qualitative or quantitative—for all other projects that are not listed in § 93.123(b)(1) as an air quality concern. These projects are presumed to meet Clean Air Act requirements and 40 CFR 93.116 without any explicit hot-spot analysis because EPA concludes based on the available data that these projects do not have the potential to cause or contribute to violations.

The final rule's criteria for hot-spot analyses targets highway and transit projects that involve a significant increase in diesel vehicle traffic, since EPA believes that directly emitted particles from diesel vehicles are the primary consideration for potential $PM_{2.5}$ and PM_{10} hot-spots. EPA believes the final rule's criteria for what projects require hot-spot analyses will ensure that all projects that have the potential to impact air quality by causing new violations, making existing violations worse or delaying timely attainment will be analyzed before they receive federal funding or approval. The final criteria are consistent with comments that we received, as discussed further below.

Technical rationale for targeting diesel vehicles. There is substantial evidence that sites near concentrated diesel activity can experience higher concentrations of $PM_{2.5}$ and PM_{10} relative to background sites. EPA has considered several technical factors in making this conclusion in today's final rule.

First, $PM_{2.5}$ and PM_{10} diesel emission factors are significantly higher than gasoline vehicles on a per-vehicle basis, and direct particulate emissions from gasoline vehicles are more evenly distributed across all types of vehicle activity. Current $PM_{2.5}$ and PM_{10} exhaust emission factors in MOBILE6.2 for heavy duty diesel vehicles are approximately 40 to 50 times the rates for gasoline vehicles, on a per vehicle basis. Even with the implementation of tighter heavy duty vehicle emission standards beginning in 2007, MOBILE6.2 projects that $PM_{2.5}$ and PM_{10} emission factors for heavy duty diesel vehicles will still be 15 to 20 times the rate for gasoline vehicles in 2015. Given this difference in emission rates, projects involving increases in diesel vehicle activity are much more likely to result in conditions associated with a potential air quality concern.

[8] This percentage is the national average of truck vehicle miles traveled (VMT) to total VMT, based on FHWA's Highway Statistics publication which can be found at: *http://www.fhwa.dot.gov/policy/ohim/hs04/index.htm*. EPA's MOBILE6.2 motor vehicle emissions model also uses 8% truck VMT as a national default.

[9] 40 CFR 93.101 defines a "regionally significant project" as "a transportation project (other than an exempt project) that is on a facility which serves regional transportation needs (such as access to and from the area outside of the region, major activity centers in the region, major planned developments such as new retail malls, sports complexes, etc., or transportation terminals as well as most terminals themselves) and would normally be included in the modeling of a metropolitan area's transportation network, including at a minimum all principal arterial highways and all fixed guideway transit facilities that offer an alternative to regional highway travel."

Second, several studies examined air quality at sites involving high-diesel traffic which showed consistently positive findings; whereas, sites with low diesel traffic showed more inconsistent results. High levels of vehicle-related particles arise in areas with high diesel activity, particularly areas with elevated acceleration or in areas with large numbers of trucks operating for long periods in close proximity, such as around truck routes, freight terminals or truck stops. Studies in proximity of vehicular traffic tend to show that elevated $PM_{2.5}$ concentrations occur near diesel vehicle operations, but show less consistent evidence near locations with high gasoline vehicle operations.

For example, one recently-published study (Charron et al., 2005) from a site in downtown London, England, conducted a hierarchical cluster analysis of $PM_{2.5}$ concentrations, $PM_{2.5-10}$,[10] CO, oxides of nitrogen (NO_X), light-duty traffic, and heavy-duty traffic. Two clusters were found. CO clustered with light-duty traffic, in one cluster, while $PM_{2.5}$, $PM_{2.5-10}$, and NO_X clustered with heavy-duty traffic in the other. No clusters indicating changes in $PM_{2.5}$ air quality were found for light-duty traffic, which further supports EPA's rationale for targeting hot-spot analyses for projects involving significant traffic from diesel vehicles. Another study (Cyrys et al., 2003) showed that the difference in long-term average $PM_{2.5}$ mass between traffic sites and background sites was equal to the difference in elemental carbon mass between the two types of sites. Elemental carbon predominantly comes from diesel exhaust, as demonstrated in several source apportionment studies. Finally, in a Dutch study (Janssen et al., 2001), concentrations of $PM_{2.5}$ measured outside schools were significantly associated with truck traffic on nearby motorways and distance from the motorways, but not with car traffic.

In addition, studies examining sites with only gasoline vehicle traffic show much less consistency in results for whether or not such traffic is a $PM_{2.5}$ or PM_{10} air quality concern at the project level. For example, Kuhn et al. (2005) measured $PM_{2.5}$ concentrations at sites 2.5 meters and about 150 meters away from a major freeway in Los Angeles that was restricted to light-duty vehicle traffic. Traffic volumes during sampling were around 5700 per hour. Differences in average mass concentrations for $PM_{2.5}$ between upwind and downwind monitors at one site ranged from −0.2 μg/m³ for particles with 180–2500 nm diameters to 1.8 μg/m³ for smaller particles. At another site, total particle mass under 180 nm diameter differed by 3.8 or 4.1 μg/m³, depending on measurement method. Due to the relative inconsistency of $PM_{2.5}$ results across the study area, this study demonstrates that gasoline vehicles do not appear to reliably create higher $PM_{2.5}$ concentrations that could create or worsen an air quality violation in a localized area.

These and other studies provide consistent evidence for elevated $PM^{2.5}$ concentrations associated with nearby diesel vehicle activity, while for gasoline vehicle activity, the evidence is less consistent. Because diesel vehicle activity tends to be more concentrated along truck routes, freight terminals, and truck stops, the air quality impact of direct $PM_{2.5}$ emissions from these vehicles is likely to be more geographically focused. Compared to diesel vehicles, gasoline vehicles tend to be relatively uniformly distributed throughout an urban area.

In conclusion, EPA believes that it is appropriate to only require $PM_{2.5}$ and PM_{10} hot-spot analyses for projects that involve significant numbers of diesel vehicles, based on current information and $PM_{2.5}$ and PM_{10} air quality standards. EPA will continue to review and evaluate new research on the mass and distribution of direct $PM_{2.5}$ and PM_{10} emissions from gasoline and diesel vehicles in the future.

Rationale for specific criteria for identifying projects of air quality concern. EPA has made several revisions to the criteria in § 93.123(b)(1) to ensure that $PM_{2.5}$ and PM_{10} hot-spot analyses are completed for all projects of air quality concern. Rather than finalize only the proposed criteria for $PM_{2.5}$ and PM_{10} quantitative analyses, EPA is finalizing more specific criteria for the types of projects that require evaluation consistent with the discussions in the proposals and comments received. The following paragraphs describe in more detail EPA's rationale for the specific criteria in this final rule.

First, EPA is finalizing two criteria to specifically target highway projects that involve significant increases in diesel vehicle traffic (§ 93.123(b)(1)(i) and (ii)), so that highway projects of air quality concern are analyzed and therefore meet statutory requirements. The final rule requires $PM_{2.5}$ and PM_{10} analyses for "new or expanded highway projects that have a significant number of or significant increase in diesel vehicles," and somewhat consistent with a similar criterion for CO quantitative hot-spot analyses, "projects affecting intersections that are at Level-of-Service D, E, or F with a significant number of diesel vehicles, or those that will change to Level-of Service D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project." [11]

EPA believes that it can finalize these revised criteria for highway projects of air quality concern based on information provided in preamble discussions, in the proposals, and comments received as discussed further below. To omit such highway projects from hot-spot analyses would not ensure that these projects meet statutory requirements. See Section VII. for how categorical hot-spot findings could take into account air quality circumstances for projects of concern and ultimately eliminate the need for a quantitative analysis for some individual projects.

Second, EPA is deleting the previous conformity rule's vague criteria that would have required quantitative $PM_{2.5}$ and PM_{10} hot-spot analyses for projects that "are located at sites at which violations have been verified by monitoring" and "which are located at sites which have vehicle and roadway emission and dispersion characteristics that are essentially identical to those of sites with verified violations (including sites near one at which a violation has been monitored)." EPA also notes that the final rule deletes a consultation requirement from § 93.105(c)(1)(v) and § 93.123(b)(3) of the previous conformity rule, which were intended to implement these previous vague criteria. While the air quality circumstances at a project's location are an important modeling consideration, these previous regulatory criteria are insufficient to ensure that all projects of air quality concern are analyzed before they receive federal funding or approval. The final rule's criteria will ensure that all projects that have the potential to impact a local air quality violation will be analyzed. All other projects are not expected to impact the air quality standards, even in the case where such a project is located near a violating monitor or is similar to a project by a violating monitor.

EPA believes that the critical factor for establishing $PM_{2.5}$ and PM_{10} hot-spot criteria is whether or not a project's direct $PM_{2.5}$ or PM_{10} emissions could actually cause a new violation or worsen an existing air quality violation. The previous criteria did not address

[10] $PM_{2.5}-10$ considers air quality concentrations of particles of a diameter of 2.5–10 micrometers.

[11] EPA notes, however, that the CO criterion in 40 CFR 93.123(a)(1)(ii) focuses on all such intersections. In contrast, today's final rule only focuses on such intersections involving significant levels of new diesel traffic.

specific types of projects that have significant levels of diesel emissions. Instead, the previous criteria could have resulted in hot-spot modeling for any project being located near an existing violating monitor or for any project that is similar to a project that is near an existing violating monitor, even if the project is not anticipated to result in enough $PM_{2.5}$ or PM_{10} emissions to impact local air quality. An example of such a project could be a minor arterial that primarily serves gasoline fueled passenger vehicles. As discussed above, EPA concludes that quantitative hot-spot modeling for such a project is not necessary to meet statutory requirements, and would be a waste of limited state and local resources. Further discussion on the elimination of these criteria are discussed below in the response to comments part of this section.

Next, EPA is finalizing § 93.123(b)(1)(iii) and (iv) relating to bus and rail terminals to be consistent with its December 2004 supplemental proposal and previous PM_{10} requirements. EPA has split the proposed and previous criterion into two separate criteria since the factors to consider for brand new versus expanded terminals and transfer points are different. Whereas a new terminal or transfer point would look at whether the total number of diesel vehicles was significant, an expansion of an existing terminal or transfer point would be evaluated based on whether the increase from current operations was significant for a given project's circumstances.

Today's action clarifies § 93.123(b)(1)(iii) and (iv) so that quantitative hot-spot analyses would only be required for such projects that involve significant increases of diesel vehicle traffic, and not insignificant vehicle increases with *de minimis* localized emissions increases. EPA believes that it can finalize these minor clarifications to existing PM_{10} hot-spot requirements and create $PM_{2.5}$ requirements as a logical outgrowth of the December 2004 proposal and comments received.

EPA is also finalizing its proposed new criterion for when $PM_{2.5}$ and PM_{10} hot-spot analyses are completed if a $PM_{2.5}$ or PM_{10} SIP identifies additional projects of air quality concern for a given area. Since the primary intent of the Clean Air Act is to ensure consistency between transportation decisions and SIP air quality objectives, it is appropriate to require more intensive hot-spot analyses in cases where the SIP specifically identifies a type of transportation project location as having the potential to increase local emissions and worsen air quality.

This is especially true if the SIP identifies a type of project not otherwise listed in § 93.123(b)(1) of today's final rule as being of air quality concern in the circumstances of a particular area. That is, requiring hot-spot analyses to also be completed for types of project locations that the SIP identifies will support the SIP's goals for an individual area in those cases where a state has the information to identify specific types of locations as potential hot-spot concerns. Where a state does not have such information, EPA believes that the other four regulatory criteria included in today's final rule for when analyses are completed sufficiently cover the cases where it is likely for a hot-spot to occur.

EPA again notes that the criterion in § 93.123(b)(1)(v) is consistent with a similar criterion in § 93.123(a)(1)(i) of the existing rule's requirements for quantitative CO hot-spot analyses. That criterion requires quantitative CO hot-spot analyses "[f]or projects in or affecting locations, areas, or categories of sites which are identified in the applicable implementation plan as sites of violation or possible violation; * * *."

Efficient use of state and local resources. Targeting projects of air quality concern and eliminating qualitative analyses for projects that are not of concern will also streamline conformity determinations in $PM_{2.5}$ and PM_{10} hot-spot reviews, since the majority of proposed projects are not of air quality concern. As a result, the final rule will utilize state and local resources in an efficient and reasonable manner while still satisfying Clean Air Act requirements.

4. Response to Comments

EPA received many comments regarding what projects should be required to have $PM_{2.5}$ and PM_{10} hot-spot analyses as part of project-level conformity determinations. Many commenters believed that the existing and proposed criteria for quantitative hot-spot analyses were insufficient for meeting Clean Air Act requirements. Others only commented on the proposed changes to a specific criterion. Many commenters agreed that hot-spot analyses should be focused on highway and transit projects involving heavy diesel traffic.

Comment

Many commenters believed that EPA's proposed regulatory criteria for $PM_{2.5}$ and PM_{10} hot-spot analyses were inadequate. These commenters argued that EPA should specify in the conformity rule what types of projects are most likely to cause $PM_{2.5}$ or PM_{10} hot-spots, and thus where quantitative hot-spot analyses should be considered to meet statutory requirements. For example, several commenters argued that the final regulatory criteria needed to specifically require hot-spot analyses for larger highway projects, such as capacity expansions and congested intersections with diesel traffic. Another commenter believed that heavy diesel traffic at large toll road entrance areas and transit tunnel entrances were also a concern, but not specifically addressed by the proposed criteria. By establishing more specific regulatory criteria, commenters believed all projects of air quality concern will meet Clean Air Act requirements by not causing new or more severe or more frequent violations, or by not delaying timely attainment.

Some commenters acknowledged that EPA has already adopted objective criteria for when quantitative hot-spot analyses are required for certain cases. They cited the current conformity rule's CO quantitative hot-spot criteria in § 93.123(a)(1)(ii)–(iv) as a good example for establishing objective criteria for $PM_{2.5}$ and PM_{10} quantitative hot-spot analyses. These commenters also supported § 93.123(b)(1)(iii) of the previous conformity rule (now covered by § 93.123(b)(1)(iii) and (iv) of today's final rule). This criterion, the commenters stated, relied on objective criteria to be applied for the circumstances of a given project (i.e., the number of diesel vehicles likely to be in an area).

Two commenters cited several scientific studies that they believed showed that highway projects of four lanes or more must be considered significant and analyzed under the final rule. Commenters believed that studies confirmed that heavily trafficked highways can be expected to contribute an increment to urban background of the annual $PM_{2.5}$ standard in the range of 1–3 $\mu g/m^3$ in neighborhoods near the freeway traffic lanes.

One study cited by commenters was the "East Bay Children's Respiratory Health Study" (Kim, et al., AJRCCM, Table 2), which showed that major freeways contribute at least 3 $\mu g/m^3$ to $PM_{2.5}$ concentrations in adjacent neighborhoods studied. In this study, mean $PM_{2.5}$ concentrations measured in a school yard 60 meters downwind from a freeway with annual average daily trips (AADT) of 190,000 was 15 $\mu g/m^3$, which was 3 $\mu g/m^3$ above the levels reported at the regional scale monitors operated by air agencies. These commenters concluded that highways of 4 lanes or larger can be expected to

contribute at least 1 μg/m³ or more to local $PM_{2.5}$ concentrations. Commenters believed that larger highway projects of six lanes or more should be expected to change $PM_{2.5}$ concentrations even further.

Commenters also cited other information in their comments, and EPA notes only a portion of this information here. A study completed by Dutch researchers (Netherlands Aerosol Programme, October, 2002), commenters believed, was consistent with the East Bay Children's Health Study in that highways were estimated to contribute about 3 μg/m³ at 60 meters from the highway, with the impact tailing off to about 1 μg/m³ at 100 meters. In addition, commenters cited an April 2004 research project of an interstate in downtown Seattle, Washington, where AADT is more than 200,000. The project found that the annual mean $PM_{2.5}$ and black carbon concentrations found 20 meters from the interstate were significantly higher as compared to another monitoring site 600 meters from the interstate.

Further, some commenters urged EPA to add new regulatory criteria that do not rely upon data from existing monitors for the purpose of identifying projects that must undergo $PM_{2.5}$ and PM_{10} hot-spot analyses. Commenters believed that EPA's proposed and previous rule's criteria in § 93.123(b)(1)(i) and (ii) would not ensure that quantitative analyses would be completed for all projects of concern, since sufficient air quality monitoring data does not exist to implement these criteria. Two commenters further stated that most new major highways, expansions or interchanges will occur at sites where no relevant ambient air quality data is available, or where current data does not show a violation (although a violation may occur when a given project is built). Consequently, the proposed and previous criteria in § 93.123(b)(1)(i) and (ii), commenters opined, would be arbitrary and capricious since sufficient data is not available to identify every potential highway project of concern.

Response

EPA agrees with the bulk of these comments and has changed the final rule in part in response to these comments, as described in EPA's rationale above. As stated above, it is essential that a quantitative $PM_{2.5}$ or PM_{10} hot-spot analysis be performed for all projects of air quality concern, as stipulated through the final rule's criteria. EPA accomplishes this in the final rule by (1) specifically addressing all projects with significant levels of diesel traffic, and (2) eliminating previous vague criteria that targeted monitoring locations rather than the air quality impacts of projects of concern.

The previous conformity rule's PM_{10} hot-spot requirements and the December 2004's proposed regulatory criteria would not have captured all necessary highway projects and possibly resulted in an inefficient use of limited state and local resources by requiring analyses for projects that are not of concern that are located by violating monitors.

EPA generally agrees with comments that recommend adopting regulatory criteria that are similar to the criteria in 40 CFR 93.123(a)(1). EPA suggested such criteria in its preamble for the November 5, 2003 proposal (68 FR 62712) and December 13, 2004 supplemental proposal (69 FR 72145), where we either cited the CO criteria or discussed analyzing heavily congested intersections. However, EPA has decided not to finalize specific regulatory criteria for quantitative $PM_{2.5}$ and PM_{10} hot-spot analyses similar to § 93.123(a)(1)(iii) and (iv), which apply to projects identified in the SIP as affecting the top three intersections of the highest volumes and worst level of service. Such criterion would be redundant since the final rule already requires hot-spot analyses for projects at large intersections involving significant diesel traffic and projects identified in the SIP as an air quality concern.

EPA has already noted above the types of projects that are most likely to be considered projects of air quality concern under today's final rule. For example, new highway or expressway facilities that serve a significant volume of diesel traffic are considered projects of air quality concern under today's final rule.

Comment

Another commenter stressed the importance of selecting appropriate examples of project locations of potential concern in EPA's future guidance. This commenter was concerned that the examples given in the December 2004 supplemental proposal for PM_{10} hot-spot analyses under proposed Option B concentrated on diesel exhaust particulate matter. Although these examples are appropriate for $PM_{2.5}$, this commenter believed that localized PM_{10} concentrations are more likely to be dominated by re-entrained road dust.

Response

The final rule will ensure that re-entrained road dust will be considered in PM_{10} hot-spot analyses for projects that have the potential to create new or worsen existing air quality violations. EPA has determined that these projects of air quality concern are those involving significant diesel emissions which is the most critical factor in applying a PM_{10} hot-spot requirement, for reasons already stated in this final rule and the original 1993 conformity rulemaking (January 11, 1993, 58 FR 3780). In addition, the conformity rule requires that road dust be included in all PM_{10} hot-spot analyses, as described later in this section.

Comment

Several commenters supported EPA's proposed clarification to the previous rule's § 93.123(b)(1)(iii) (now covered by § 93.123(b)(1)(iii) and (iv) of the final rule) indicating that quantitative $PM_{2.5}$ and PM_{10} hot-spot analyses would be required for projects that *significantly* increase the quantity of diesel vehicles. EPA also notes that a few commenters supported targeting projects addressed by this requirement, such as weight inspection stations and bus terminals with significant diesel traffic. Commenters also believed that other projects should also be considered such as transit maintenance yards, truck stops and school bus terminals and maintenance yards.

Response

The final rule is generally supportive of these comments. The interagency consultation process should be used to identify projects needing $PM_{2.5}$ and PM_{10} hot-spot analyses, and EPA's future quantitative modeling guidance will provide further information to consider for such analyses. EPA agrees that hot-spot analyses should be targeted to projects of air quality concern, which involve projects with significant diesel traffic.

Comment

Some commenters expressed support for the newly proposed criterion now in § 93.123(b)(1)(v) of the final rule that would require $PM_{2.5}$ or PM_{10} hot-spot analyses if the SIP identifies other projects of air quality concern. These commenters believed that this criterion would support the SIP's air quality goals and Clean Air Act conformity requirements in the case where a state identified such projects as a hot-spot concern.

Two of these commenters, however, did not support this criterion if it was the sole mechanism for ensuring that projects of concern were evaluated for potential $PM_{2.5}$ or PM_{10} hot-spots. Commenters strongly objected to proposed options (e.g., Option B for $PM_{2.5}$ and PM_{10} hot-spot analyses after

SIP submission) to rely upon the SIP to solely identify where hot-spot analyses were required for a variety of reasons. For example, commenters were concerned that those options depended too heavily on a SIP that would not be submitted for several years during which time highway projects of concern would be approved that could impact local air quality and public health. See Sections III. and IV. of this notice for further comments regarding the options cited by commenters.

Response

EPA agrees with these comments, which are addressed by the final rule as described elsewhere in this notice.

Comment

Some commenters believed that the MPO and the state or local air agency should have the opportunity to identify projects to undergo quantitative hot-spot analyses. One commenter argued that this authority, which should be specifically recognized in § 93.123(b)(1), is especially important in those portions of nonattainment and maintenance areas where small increases in emissions may cause a new violation or interfere with an attainment strategy that barely achieves attainment.

Response

EPA agrees that the consultation process—which includes state and local transportation and air quality agencies—is critical in transportation conformity determinations. EPA has provided examples and other information to target projects of air quality concern. Projects not of air quality concern are not expected to result in new air quality violations, worsen existing violations or delay timely attainment of the air quality standards, even in the situations described by commenters.

Comment

Some commenters also believed that EPA should define what projects could be "significant" and require $PM_{2.5}$ and PM_{10} quantitative hot-spot analyses. There were several variations from commenters on this theme, depending on the options EPA proposed and would consider in the development of the final rule. A few commenters welcomed the opportunity to work with EPA to determine appropriate criteria for identifying projects that require quantitative analyses.

Some commenters suggested that EPA establish significance thresholds or a screening methodology that would define when quantitative or qualitative hot-spot analyses were required. For example, commenters cited significance criteria that New York State and New York City have adopted for identifying projects that have a "significant" impact and are required to undergo a detailed impact analyses and evaluation of mitigation measures for NEPA purposes.[12]

Two commenters also proposed that highway projects of concern could be identified based on specific average daily vehicle trip criteria, such as:

- An estimate of daily emissions from a given highway segment based upon aggregated hourly emissions expected from traffic conditions over the course of current and expected future daily traffic patterns for the segment; or
- Traffic loads measured as AADT taking into account the variability in emissions that can result from high or low diesel vehicle contribution to AADT.

These commenters provided an example conducted last year by the Wisconsin Department of Natural Resources that projected that a proposed warehouse and distribution center at which an average of 235 semi-trailer trucks would arrive and depart each day would contribute, on average, 1.6 $\mu g/m^3$ of $PM_{2.5}$, and potentially more than 2.0 $\mu g/m^3$, to the annual average $PM_{2.5}$ standard (Wisconsin DNR memorandum, *Revised Air Dispersion Analysis for $PM_{2.5}$ Emissions from Roundy's Warehouse and Distribution Center—Oconomowoc*, April 29, 2004).

Response

EPA agrees that there should be guidelines for further defining which highway or transit projects are considered to have a significant number of or a significant increase in diesel vehicles. EPA has provided some examples in this notice, along with other commenter suggestions. Any project that will cause such a significant number of or significant increase in diesel vehicles will require a $PM_{2.5}$ or PM_{10} hot-spot analysis. EPA and DOT are available for further discussions on a particular project.

Comment

Some commenters requested EPA guidance on what specifically is intended by a significant increase in the number of diesel vehicles in a location under § 93.123(b)(1)(iii) and (iv) of the final rule. One commenter expressed concern that significance be determined solely through interagency consultation.

Response

It is important to consider both the actual number of vehicles increased at a project location as well as how this increase relates to existing vehicle fleets. For example, a bus terminal expansion that increases the number of daily arrivals by more than 50% would be significant for an existing bus terminal served by a large fleet. In contrast, a 50% increase in daily arrivals at a small terminal (e.g., a facility with 10 buses in the peak hour) would not be significant. Areas should consider the circumstances involved at an individual project's location, including the total vehicle increase and how such an increase compares to the size of the existing diesel fleet for a given project location. Areas should also consider the type of vehicles that are added to an area either through a brand new or expanded existing terminal. As noted above, this final rule specifies projects of air quality concern as terminals or transfer points involving diesel vehicles. Projects involving new or expanded fleets of compressed natural gas or hybrid electric vehicles would not be considered to be projects of air quality concern.

Comment

Another commenter stated that, for intersections, a clear, scientifically based criterion for "highly congested" is needed. The commenter gave as examples studies done for the California Department of Transportation by the University of California, Davis, in the 1990's which failed to find a clear indication of PM_{10} hot-spots near two major intersections with higher traffic volumes and levels of congestion than in other areas. The commenter stated that it is still unclear at what level of congestion and volume the potential for an intersection hot-spot would arise. The commenter believed that additional research and technical review is needed before reasonable analysis methods (including changes to emission models to better fit microscale analysis needs) for such situations can be defined.

Response

This commenter is referring to the examples of projects provided in the December 2004 supplemental proposal that could possibly be identified under an option that solely relied on the SIP to identify projects needing quantitative hot-spot analyses (e.g., Option B). The examples included "highly congested intersections."

EPA is finalizing instead a criterion that was discussed in the November 2003 proposal and is more similar to the

[12] These commenters included documentation that New York City has adopted guidance requiring an assessment of mitigation measures if emissions from a transportation project are expected to add 0.1 $\mu g/m^3$ annually, or 5.0 $\mu g/m^3$ daily of $PM_{2.5}$ to the ambient air.

current conformity rule's § 93.123(a)(1)(ii) which involves projects in CO areas at intersections of Level-of-Service D, E, and F. However, the final rule only requires $PM_{2.5}$ or PM_{10} hot-spot analyses of such projects involving significant levels of diesel traffic. This final rule does not require a $PM_{2.5}$ or PM_{10} hot-spot analysis for projects at intersections of Level-of-Service D, E, and F that are used primarily by gasoline vehicles. EPA has provided other examples of what a significant level of diesel vehicles could include elsewhere in this notice.

Comment

Another commenter stated that ports and airports should also be included in the list of projects that require an analysis for potential $PM_{2.5}$ and PM_{10} hot-spots. This commenter felt that potential air quality impacts from ports and airports need to be carefully considered to enable economic growth while ensuring appropriate mitigation of emission increases and that ports, their transportation support systems, and airports are also often located in areas with sensitive populations and environmental justice concerns.

Response

EPA has not addressed port and airport projects funded or approved by the Federal Aviation Administration (FAA) and other federal agencies in this final rule, because these types of projects are not covered by the transportation conformity rule. These projects are covered by the general conformity rule.

However, EPA notes that any transit or highway projects that are intended to service transportation to and from a port or airport project would be addressed by transportation conformity, and may require $PM_{2.5}$ or PM_{10} hot-spot analyses if they are a project of air quality concern under § 93.123(b)(1).

Comment

A commenter supported EPA and DOT developing a list of "exempt" projects that would not require quantitative hot-spot analyses. The commenter also suggested that further consideration should be given to refine a list of projects or situations that can be tested through qualitative hot-spot analyses as agreed upon through the consultation process. One commenter noted that only qualitative $PM_{2.5}$ and PM_{10} hot-spot analyses would be possible prior to the development and release of quantitative methods.

Response

EPA has addressed this comment in part by removing the requirement to perform qualitative hot-spot analyses for projects that are not an air quality concern. As described in Sections III. and IV., these qualitative analyses for projects that are not expected to impact air quality violations are not an efficient use of state and local resources, in light of past practice indicating that no such analyses have ever found a hot-spot problem in such areas. EPA agrees with the commenter that qualitative hot-spot analyses will be required for projects of concern before quantitative guidance and tools are available. Finally, future categorical hot-spot findings, as described in Section VII., could possibly streamline hot-spot requirements further for certain projects if it is found that additional analyses are not needed to meet statutory requirements.

C. General Requirements

1. Description of Final Rule

EPA is retaining for PM_{10} areas and extending for $PM_{2.5}$ areas the general requirements in § 93.123(c) for hot-spot analyses of projects of air quality concern. EPA did not propose any substantive changes to these requirements, which are:

- Analyzing the total emissions burden of direct $PM_{2.5}$ and PM_{10} emissions which may result from the implementation of the project (including re-entrained road dust and construction dust, as described below), summed together with future background concentrations;
- Analyzing the entire transportation project, after the identification of major design features which will significantly impact local concentrations;
- Using consistent assumptions with those used in regional emissions analyses for inputs that are required for both analyses (e.g., temperature, humidity);
- Assuming the implementation of mitigation or control measures only where written commitments for such measures have been obtained; and
- Not considering temporary emissions increases from construction-related activities which occur only during the construction phase and last five years or less at any individual site.

Re-entrained road dust would be included in all PM_{10} hot-spot analyses, since fugitive dust dominates PM_{10} inventories. EPA has historically required road dust to be considered in all PM_{10} conformity analyses. In contrast, road dust emissions are only to be considered in $PM_{2.5}$ hot-spot analyses if EPA or the state air agency has made a finding that such emissions are a significant contributor to the $PM_{2.5}$ air quality problem (40 CFR 93.102(b)(3)). EPA has provided more information later in this section in response to a comment on including fugitive dust in $PM_{2.5}$ or PM_{10} hot-spot analyses.

EPA continues to believe that construction dust emissions from a particular project would not be included in a $PM_{2.5}$ or PM_{10} hot-spot analysis, if such emissions are considered temporary as defined in § 93.123(c)(5). Further information on including non-temporary construction emissions for certain projects is discussed further below.

EPA is also extending the requirements of § 93.125(a) for all projects in $PM_{2.5}$ nonattainment and maintenance areas that rely on control or mitigation measures in project-level conformity determinations. As described in the November 2003 and December 2004 proposals, FHWA or FTA must obtain from the project sponsor and/or operator enforceable written commitments to implement any required project-level control or mitigation measures, prior to making a project-level conformity determination for projects in $PM_{2.5}$ nonattainment or maintenance areas. The final rule does not revise the existing commitment requirement for projects in PM_{10} areas.

In its previous proposals, EPA had implied that § 93.125(a) might only be relevant for proposed options that would require $PM_{2.5}$ and PM_{10} hot-spot analyses. EPA is clarifying in today's preamble that § 93.125(a) applies to all project-level conformity determinations that involve projects with control or mitigation measures that are:

- Identified as conditions for the NEPA process;
- Identified as conditions for a transportation plan or TIP conformity determination's regional emissions analysis; or
- Used in a project-level hot-spot analysis.

Of course, today's final rule does not require any control or mitigation measures for project-level conformity determinations in $PM_{2.5}$ areas; it simply requires that sufficient commitments be in place if there happen to be any measures for a given project before a $PM_{2.5}$ project-level conformity determination is made.

EPA does not expect this clarification in today's preamble to have a practical impact on project implementation. Today's final rule does not change the regulatory text that was proposed for § 93.125(a). Again, adding a reference for $PM_{2.5}$ to § 93.125(a) simply provides

added enforcement of measures if any exist for projects in $PM_{2.5}$ areas.

Today's final rule also includes minor clarifications with respect to $PM_{2.5}$ to various parts of the current conformity rule that are consistent with existing CO and PM_{10} hot-spot analysis requirements. For example, EPA is adding $PM_{2.5}$ to the current rule's "hot-spot analysis" definition in § 93.101. This and other clarifications were proposed in regulatory text in the December 2004 supplemental proposal.

2. Rationale

EPA is extending to $PM_{2.5}$ areas the current conformity rule's general requirements for conducting PM_{10} hot-spot analyses. These changes for $PM_{2.5}$ do not substantively change these PM_{10} provisions of the current conformity rule (e.g., §§ 93.123(c) and 93.125(a)), but rather just apply these requirements to $PM_{2.5}$. These provisions are intended to produce credible analyses for whether project emissions create new or worsen existing air quality violations. EPA intends that the hot-spot analysis compare concentrations with and without the project based on modeling conditions in the analysis year. The hot-spot analysis is intended to assess possible violations due to the project in combination with changes in background levels over time. Estimation of background concentrations may take into account the effectiveness of any anticipated control measures if they are enforceable and creditable.

EPA also believes that conformity should address long-term emissions from the transportation system, and that conformity should not prevent project implementation because of temporary emissions increases. In addition, the NEPA process provides the most appropriate forum to analyze construction-related emissions impacts and to establish mitigation measures. $PM_{2.5}$ and PM_{10} hot-spot analyses would not have to include construction-related activities which cause temporary and self-correcting increases in local concentrations, which are defined under the existing and today's final rule as those which occur only during the construction phase and last five years or less at any individual site. See the preamble for the January 1, 1993 proposal (58 FR 3779–3780) and November 24, 1993 final rule (58 FR 62212–62213) for further information regarding the intent and rationale for these general hot-spot requirements.

3. Response to Comments

EPA received a limited number of comments on the general requirements for performing $PM_{2.5}$ and PM_{10} hot-spot analyses.

Comment

One commenter supported the EPA proposal that § 93.123(c) requirements should be maintained in an effort to develop continuity between analysis efforts. The commenter further agreed that § 93.125(a) requirements should be applied to $PM_{2.5}$ hot-spot analyses so that the implementation of any project-level control or mitigation measure is assured.

Response

EPA agrees for the reasons cited by the commenter. The existing requirements have a proven track record since the original 1993 conformity rule for providing credible and reasonable hot-spot analyses.

Comment

However, another commenter disagreed with EPA's proposal to apply §§ 93.123(c)(4) and 93.125(a) to $PM_{2.5}$ hot-spot analyses since $PM_{2.5}$ SIP measures are already enforceable as a matter of law based on the Clean Air Act and the NEPA process. The commenter argued that EPA should reevaluate its previous rulemaking decisions on compliance with $PM_{2.5}$ and PM_{10} SIP control measures in 40 CFR 93.117 because these requirements are duplicative and unnecessary.

Response

EPA disagrees with this comment and believes that the conformity rule is the appropriate context for meeting all Clean Air Act conformity requirements. Implementation and enforcement of measures can be an important part of reducing emissions for projects, when necessary. Without assurance that such measures will be implemented, it is not possible to accurately predict what emissions may be for project-level conformity determinations, and whether or not projects meet statutory requirements.

EPA also acknowledges that, though these control measures would already be applicable to such projects through NEPA and other mechanisms, including commitments to them in conformity determinations provides an additional enforcement tool that, at times, may be necessary.

Comment

EPA also received comments regarding when § 93.123(c) requires fugitive dust to be included in $PM_{2.5}$ or PM_{10} hot-spot analyses. Some commenters did not believe that road dust should be included in $PM_{2.5}$ or PM_{10} hot-spot analyses due to lack of state and local information on the importance of dust emissions on air quality. They also argued that road dust should only be included in $PM_{2.5}$ hot-spot analyses if road dust has been found to be a significant contributor to the $PM_{2.5}$ air quality problem (40 CFR 93.102(b)(3)). Commenters submitted several documents that supported their judgement that further research was needed to make decisions regarding significance of road dust for $PM_{2.5}$ areas. The commenters agreed with the existing conformity rule's provisions for using the interagency consultation process for deciding whether road dust is significant for a given $PM_{2.5}$ area.

Another commenter believed that EPA's December 2004 supplemental proposal was incorrect in stating that there could be cases where highway and transit construction emissions from an individual project would be included in a $PM_{2.5}$ or PM_{10} hot-spot analysis pursuant to § 93.123(c)(1). This commenter also cited § 93.123(c)(5)'s requirement that PM hot-spot analyses not include temporary increases in emissions caused by construction-related activities that last 5 years or less at any individual site.

Response

EPA agrees with some of these comments. In the preamble to the December 2004 supplemental proposal, EPA described applying § 93.123(c)(1) requirements to $PM_{2.5}$ or PM_{10} hot-spot analyses while including re-entrained road dust and construction emissions in such analyses only "as applicable" (69 FR 72146). However, EPA did not elaborate on this caveat in its proposal, so further clarification in today's notice is warranted. Whether or not to include road or construction dust in $PM_{2.5}$ or PM_{10} emissions analyses are addressed by different provisions in the existing conformity rule.

Section 93.102(b)(3) states that re-entrained road dust is to be considered in any $PM_{2.5}$ conformity determination, including $PM_{2.5}$ hot-spot analyses, if road dust has been found to be a significant contributor to the $PM_{2.5}$ air quality program in a given area. In its July 1, 2004 final rule, EPA highlighted this requirement in the context of including such dust emissions in plan and TIP regional emissions analyses. However, § 93.102(b)(3) defines more broadly what types of emissions are considered in all types of conformity determinations for a given pollutant and precursor, and consequently, only requires $PM_{2.5}$ hot-spot analyses to include road dust emissions if such emissions have been found significant

through a finding of significance prior to the $PM_{2.5}$ SIP or as part of an adequate $PM_{2.5}$ SIP motor vehicle emissions budget.

However, EPA disagrees that re-entrained road dust would not be included in a PM_{10} hot-spot analysis, when performed in a PM_{10} nonattainment or maintenance area. Since the 1993 conformity rule was promulgated, EPA has intended for road dust emissions to be included in all conformity analyses of direct PM_{10} emissions because fugitive dust from roadways and other sources dominate PM_{10} emissions inventories. To that end, the conformity rule does not include an exception for when road dust emissions are not included in PM_{10} hot-spot analyses, like the exception for such emissions in $PM_{2.5}$ analyses in 40 CFR 93.102(b)(3). By definition, PM_{10} includes larger particles from fugitive dust including roadway sources, whereas the role of re-entrained road dust for $PM_{2.5}$ air quality issues is less clear (November 5, 2003, 68 FR 62709).

As described above, EPA continues to believe that construction dust emissions would not be included in $PM_{2.5}$ and PM_{10} hot-spot analyses, if such emissions are considered temporary as defined by § 93.123(c)(5). In most cases, EPA anticipates that construction emissions would not be included in hot-spot analyses because they would be considered temporary. However, there may be limited cases where a large project is constructed over a longer time period where it may be appropriate to include any non-temporary construction emissions, when an analysis year is chosen in which construction of the project is still occurring.

Comment

Another commenter believed that $PM_{2.5}$ and PM_{10} hot-spot analyses need to meet existing requirements for up-to-date and reasonable conformity analyses. The commenter specifically cited 40 CFR 93.110 and 93.122 as requiring the latest planning assumptions in conformity analyses and reasonable assumptions regarding land use projections in regional emissions analyses. Furthermore, the commenter believed that EPA should clarify that hot-spot analyses must be based on honest and accurate assumptions and include trip distribution and land use changes in order to meet statutory requirements.

The commenter also argued that project analyses are currently inadequate because they rely on unrealistic assumptions for no-build cases, and ultimately, understate emissions impacts. This commenter believed that almost all transportation agencies apply the growth and land use assumptions from the build case also to the no-build case, which was found to be inappropriate in a previous court decision. The commenter cited EPA's January 2001 guidance entitled, "Improving Air Quality Through Land Use Activities," which recommends the interagency consultation be used for agencies to agree to use the most reasonable and best available assumptions.

Response

EPA agrees that $PM_{2.5}$ and PM_{10} hot-spot analyses must be based on the latest planning and land use development assumptions before and after a project is expected to be implemented in a given analysis year. To do otherwise would not produce credible hot-spot analyses that meet Clean Air Act requirements. Section 93.105(c)(1)(i) of the existing conformity rule requires the interagency consultation process to be used to evaluate and choose models and associated methods and assumptions to be used in $PM_{2.5}$ and PM_{10} hot-spot analyses.

VI. Timing of $PM_{2.5}$ and PM_{10} Quantitative Hot-spot Analyses and Development of Future Guidance

A. Description of Final Rule

EPA is finalizing its proposal to not apply quantitative $PM_{2.5}$ and PM_{10} hot-spot requirements until EPA releases quantitative modeling guidance and announces in the **Federal Register** that such requirements are in effect. This action extends the existing conformity rule's § 93.123(b)(4) requirements for PM_{10} areas to also cover $PM_{2.5}$. EPA will consult with conformity stakeholders when developing its future quantitative modeling guidance.

B. General Rationale

EPA is finalizing the proposal because we continue to believe that appropriate tools and guidance are necessary to ensure credible and meaningful quantitative $PM_{2.5}$ and PM_{10} hot-spot analyses. Before such analyses can be performed, technical limitations in applying existing motor vehicle emission factor models must be addressed, and proper federal guidance for using dispersion models for PM hot-spot analysis must be issued, as described further below.

C. Rationale and Response to Comments About Motor Vehicle Emissions Factor Models

1. Rationale

On February 24, 2004, EPA released MOBILE6.2 as the approved motor vehicle emissions factor model for SIP and conformity purposes outside of California, where EMFAC2002 is the most recently EPA-approved model for that state. With the release of MOBILE6.2, state and local transportation agencies now have an approved model for estimating regional $PM_{2.5}$ and PM_{10} emissions factors in SIP inventories and regional emissions analyses for transportation conformity. However, MOBILE6.2 has significant limitations that make it unsatisfactory for use in microscale analysis of $PM_{2.5}$ and PM_{10} emissions as necessary for quantitative hot-spot analyses. To understand those limitations it is necessary to compare how emissions of CO, hydrocarbons (HC), and NO_X are calculated in MOBILE6.2 with the methods used to calculate $PM_{2.5}$ and PM_{10} emissions.

EPA has incorporated CO, HC, and NO_X emissions in MOBILE from the very first version of the model. EPA has had many years to collect data and refine the methodologies used to estimate emissions of these pollutants. As a result, MOBILE6.2 incorporates adjustments for the effects on CO, HC, and NO_X emissions of environmental conditions, such as temperature, humidity, altitude; fleet characteristics, such as age distribution and mileage accumulation by age; activity impacts, such as speed and road type (i.e, driving cycle); and fuel characteristics, such as fuel sulfur level. These adjustments are incorporated as local input options in MOBILE6.2 and changes in any of them can have significant affects on emissions of CO, HC, and NO_X as determined by the model. Therefore, quantitative CO hot-spot analyses have been required since the original 1993 conformity rule because the MOBILE model has been appropriate for these analyses in project-level conformity determinations for CO areas (40 CFR 93.123(a)).

In contrast, emissions estimation for $PM_{2.5}$ and PM_{10} was only added to MOBILE6.2 in 2004.[13] Because EPA has not since then developed sufficient databases of vehicle $PM_{2.5}$ or PM_{10} emissions that are as complete as those for CO, HC, and NO_X, the algorithms used in MOBILE6.2 for estimating PM emissions are much simpler than those

[13] PM_{10} emissions were previously estimated using an EPA model called PART5, which had the same limitations described here for MOBILE6.2.

used for CO, HC, and NO_X. While MOBILE6.2 has the same input options for PM as for the other pollutants, most of those input options do not have any affect on $PM_{2.5}$ or PM_{10} emission estimates calculated by the model. For example, there are no temperature, humidity, or altitude corrections in MOBILE6.2 for $PM_{2.5}$ or PM_{10}. Speed, driving cycle, engine starts, and all of the other activity input options similarly have no affect on $PM_{2.5}$ or PM_{10} emissions in MOBILE6.2. The only conditions that do affect $PM_{2.5}$ or PM_{10} emissions in MOBILE6.2 are fleet and fuel characteristics.

EPA has already determined that these limitations are not a substantial problem for regional scale emissions estimation needed for $PM_{2.5}$ and PM_{10} SIP inventories and regional emissions analyses for conformity. MOBILE6.2 does account for the effects of vehicle standards and the impacts of fleet turnover. Growth in activity is also accounted for in projections of future VMT which are multiplied by emission factors to derive emissions inventories. While it is desirable to include other activity effects such as speed and driving cycle, differences in these inputs are generalized over a larger area in a regional analysis. Even in the absence of data and methods to derive adjustment factors for these effects, EPA believes that MOBILE6.2 is an adequate tool for evaluation of $PM_{2.5}$ and PM_{10} emissions at the regional level.

However, at the micro-scale level needed for hot-spot analyses, these limitations become very significant. Activity factors such as speed, driving cycle, and number and distribution of engine starts per day do have an important impact on actual $PM_{2.5}$ or PM_{10} emissions from motor vehicles. Most, if not all, transportation projects that would need to be analyzed would result in changes in these activity levels that would need to be incorporated in credible hot-spot analyses. For example, the construction of a highway interchange would likely result in significant changes to average speeds, driving cycles of vehicles, idling time, etc. in the immediate vicinity of the interchange. The effects of these changes are an important and necessary component of estimating the impact of the new interchange on nearby $PM_{2.5}$ or PM_{10} concentrations, but none of these changes can be accounted for in the currently available emissions factor models.

Likewise, the mitigating effects of potential control measures that smooth traffic flow, such as synchronization of traffic signals, cannot be accounted for in existing models. These limitations apply even to projects where changes in vehicle speed are less of an issue. For example, long duration idling emissions are also poorly accounted for in MOBILE6.2. As a result, it is not an adequate tool for assessing the localized impacts of individual projects such as bus, rail or freight terminals, or potential mitigation measures for incorporation into such projects.

EPA is working to resolve limitations in MOBILE6.2 through a major data collection and model development effort. As part of that effort, EPA is collecting data on real-world environmental and activity effects on emissions for all pollutants, including $PM_{2.5}$ and PM_{10}. The next version of EPA's motor vehicle emissions model (called MOVES) will incorporate $PM_{2.5}$ or PM_{10} adjustments for environmental and activity conditions (including long-duration idling) that are currently missing in MOBILE6.2, and relevant to hot-spot modeling as described above. MOVES will be specifically designed to work at both the regional and micro-scale level. EPA believes that MOVES will provide the level of detail needed for credible and meaningful $PM_{2.5}$ or PM_{10} hot-spot analysis. A draft version of MOVES that incorporates new emissions information for motor vehicles is expected in 2006 with a final version in 2007.

EPA also believes that both an appropriate motor vehicle emissions factor model and EPA's guidance on applying air quality models is necessary before quantitative $PM_{2.5}$ and PM_{10} hot-spot modeling guidance can be required in California. While EPA has approved EMFAC2002 for $PM_{2.5}$ and PM_{10} regional emissions analysis in California, we do not currently have enough information about how it handles vehicle activity effects on $PM_{2.5}$ or PM_{10} emissions to make a determination of its applicability to quantitative $PM_{2.5}$ and PM_{10} hot-spot analyses. EPA will evaluate the applicability of EMFAC2002 for quantitative $PM_{2.5}$ and PM_{10} hot-spot analyses in the context of EPA's future quantitative modeling guidance.

2. Response to Comments

EPA received several comments directed at the application of motor vehicle emissions models in quantitative $PM_{2.5}$ or PM_{10} hot-spot analyses.

Comment

Some commenters agreed that the current modeling tools do not have the ability to evaluate $PM_{2.5}$ for hot-spot analyses adequately. They believed that MOBILE6.2 is insensitive to many variables likely to affect localized $PM_{2.5}$ emissions, specifically speed and drive cycles. One commenter supported EPA's development of MOVES since it will provide for better $PM_{2.5}$ and PM_{10} analyses in the future. Some of these commenters also noted that implementors will now have time to gather data and obtain experience for conducting future quantitative analysis of PM emissions.

Response

EPA agrees with these comments for the reasons given above and therefore has not required quantitative hot-spot analyses until appropriate tools and EPA guidance are available.

Comment

Other commenters strongly disagreed with EPA's proposed approach to extend § 93.123(b)(4) to $PM_{2.5}$ hot-spot analyses. Commenters argued that the absence of emissions factors was the single greatest obstacle to modeling $PM_{2.5}$ motor vehicle emissions, and now that EPA has released MOBILE6.2, there is no basis for further delaying a requirement that emissions from highways be quantified and assessed as part of a project-level conformity determination. Most of these commenters argued that continuing to delay quantitative $PM_{2.5}$ or PM_{10} hot-spot analyses for transportation projects is unjustified, given that great advancements in modeling tools have been made since the publication of the original 1993 conformity rule. Because EPA has required the use of MOBILE6.2 for SIP development and regional emissions analyses, one commenter also believed it would be unlawful not to require its use in $PM_{2.5}$ and PM_{10} hot-spot analyses.

Response

EPA disagrees with these commenters based on the technical limitations of using MOBILE6.2 for hot-spot analyses as discussed in detail above. The use of MOBILE6.2 in hot-spot analyses will produce inaccurate results in some cases. For example, a project that would actually result in lower net emissions due to traffic flow improvements, would appear to result in an increase in emissions in an analysis done using MOBILE6.2 if the project also resulted in some increase in activity. This is because MOBILE6.2 is insensitive to the effects of changes in speed for $PM_{2.5}$ or PM_{10}. At the same time, a project that actually results in increased emissions due to increased long-duration idling, might appear to have no impact on emissions given that MOBILE6.2 does not properly account for long-duration

idling emissions. Further, EPA does not believe that it can be assumed that a model is appropriate for a hot-spot analysis simply because EPA has approved a model for regional analyses. Any model EPA approves must be appropriate for the use to which it will be put. For all the reasons explained above, MOBILE6.2 is not appropriate for $PM_{2.5}$ or PM_{10} hot-spot analyses despite the fact that it may be appropriate for regional analyses of those pollutants.

Comment

One of these commenters also referenced text from pages 40–41 of EPA's August 2004 "Technical Guidance on the Use of MOBILE6.2 for Emission Inventory Preparation" as evidence that MOBILE6.2 can be used to estimate emissions from individual transportation projects.

Response

The commenter incorrectly interpreted the specific text referenced in the MOBILE6.2 technical guidance that describes how the model can be used to account for differences in emissions by roadway type. Although this input accounts for the differences in emissions in stop-and-go driving as on an arterial street and continuous speed driving as on a freeway, those differences only apply to the estimation of CO, HC, and NO_X emissions. PM_{10} and $PM_{2.5}$ emissions are not effected by these inputs. As described above, differences in emissions by the type of driving that will occur are critical to analyses of individual projects and MOBILE6.2 cannot account for these differences for $PM_{2.5}$ or PM_{10} hot-spot analyses.

D. Rationale and Response to Comments About Dispersion Models and Other Modeling Issues

1. Rationale

In order to complete appropriate hot-spot modeling, EPA needs to specify which air quality dispersion models are appropriate for transportation projects and provide additional guidance for estimating $PM_{2.5}$ and PM_{10} concentrations at the local level. Dispersion models estimate air quality concentrations based on the emissions produced by a particular project (which will be provided in part through models like MOVES) and the background concentrations assumed at a project location. There are currently many different dispersion models that are being used for air quality modeling, including modeling of localized air quality impacts for other pollutants. However, as described further below, EPA believes that it must first release quantitative modeling guidance that describes how to apply existing air quality dispersion models to result in credible $PM_{2.5}$ and PM_{10} hot-spot analyses.

2. Response to Comments

Comment

Many commenters supported the final rule approach because they believed that EPA guidance is essential for highlighting which dispersion models are appropriate and for addressing other modeling issues. Some commenters requested clarification on whether hot-spot analyses would be compared to the $PM_{2.5}$ or PM_{10} annual or daily standards. Some commenters agreed that guidance is also necessary for the projection of future travel activity levels and future background concentrations. Other commenters believed that the issuance of guidance would provide modeling consistency and eliminate redundancy across the country.

Response

EPA agrees with these comments for the reasons cited by the commenters. EPA believes that the future hot-spot modeling guidance will provide information that will be essential for addressing PM-specific modeling issues, which some commenters supported. In addition, as stated elsewhere in this section, EPA also believes that its future development of the MOVES model is essential to providing credible $PM_{2.5}$ and PM_{10} hot-spot analyses.

Comment

Other commenters believed § 93.123(b)(4) was originally included in the 1993 conformity rule with EPA's commitment to issue timely guidance on quantitative hot-spot analyses, which has not occurred. These commenters were very concerned that finalizing the proposal would create a loophole for delaying quantitative PM hot-spot analyses for projects that could negatively impact air quality and public health. These commenters believed that adequate dispersion models are already available for $PM_{2.5}$ and PM_{10} quantitative hot-spot analyses, and no additional EPA guidance is needed before requiring such analyses. Another commenter believed that quantitative hot-spot analyses of transportation projects should either apply immediately upon promulgation of the final rule or within a short period of time after promulgation (*e.g.*, 120 days), if EPA has not yet issued quantitative modeling guidance by that time.

Response

Although EPA agrees with commenters that quantitative $PM_{2.5}$ and PM_{10} hot-spot analyses are critical for considering the public health implications of transportation projects, we strongly disagree with commenters' conclusions. EPA is not using the release of its future hot-spot modeling guidance to delay credible and meaningful quantitative $PM_{2.5}$ or PM_{10} hot-spot analyses. In fact, requiring such analyses now without having all models and EPA's guidance available could result in analyses that are not credible and waste limited state and local resources.

EPA agrees that adequate air quality dispersion models may be available, but having such models is only one aspect of conducting credible $PM_{2.5}$ or PM_{10} hot-spot analyses. As described in C.1. of this section, adequate dispersion models alone are not enough to conduct credible $PM_{2.5}$ or PM_{10} hot-spot analyses; adequate motor vehicle emissions factors and guidance for using motor vehicle emissions factor and dispersion models is also needed. The results from dispersion models would not be reliable for $PM_{2.5}$ and PM_{10} estimates if the emission factor models used to provide input (such as MOBILE6.2) do not provide sufficient detail to distinguish changes in activity factors.

Nevertheless, even if the emission factor models did provide this level of detail, EPA would still need to provide guidance on the application of dispersion models in determining whether a $PM_{2.5}$ or PM_{10} hot-spot will occur. Dispersion models are complicated tools that, if used incorrectly, could result in incorrect conclusions about the impact of an individual project's localized concentrations. For example, the location of model receptors is particularly important in dispersion modeling of $PM_{2.5}$ and PM_{10} emissions. If the receptors are predominately upwind of the project being analyzed, it could lead to false conclusions about the likelihood of a violation. Guidance is also needed on making model output comparable to the relevant form of the air quality standards, and to EPA regulations and guidance for $PM_{2.5}$ monitoring for the 24-hour and annual $PM_{2.5}$ standards.

Another important factor in dispersion modeling is the choice of meteorological data used in $PM_{2.5}$ and PM_{10} hot-spot analyses. Areas need guidance in how to choose meteorological conditions that are properly representative of conditions

that might result in a violation. Without proper guidance, areas might choose to use meteorological data that lead to under-or over-predicting the likelihood of a violation.

Guidance is also necessary to describe how the projection of future travel activity levels and future background concentrations can be used as inputs to dispersion modeling. Projects need to be analyzed based on assumptions that they are fully utilized, or are experiencing maximum predicted emissions, rather than projections of use when they first open. Likewise, dispersion modeling has to take into account projected changes in background $PM_{2.5}$ and PM_{10} concentrations.

These are just a few examples of the kinds of issues that modelers will face when developing $PM_{2.5}$ and/or PM_{10} hot-spot analyses. EPA is currently researching these kinds of issues so that currently available dispersion models can be applied appropriately for $PM_{2.5}$ and PM_{10} hot-spot analyses. Without having all necessary models and detailed guidance, EPA cannot have reasonable assurance that the results of dispersion modeling in hot-spot analyses will be consistent and credible throughout the country, and ensure that all projects will meet statutory requirements.

Comment

Two commenters cited a recent paper[14] on modeling toxic emissions which they interpret as providing strong evidence that currently available dispersion models are suitable for estimating local PM concentrations. Toxic air pollutants include non-reactive gases that would disperse like CO, and others that are aerosols that would disperse as particles in the ambient air.

Response

As discussed in the previous response, EPA agrees that current dispersion models may be suitable for estimating $PM_{2.5}$, or PM_{10} concentrations, provided that accurate emissions inputs are available for the dispersion models and that the models are used properly, as will be addressed in EPA's future quantitative modeling guidance. The limitations of existing emissions information for localized analysis have already been discussed in detail in C.1 of this section. The need for additional guidance on dispersion models is further discussed in this section.

Comment

Three commenters recommended that new regulatory language be added to the conformity rule to require that "state-of-the-art" modeling tools be used to conduct $PM_{2.5}$ or PM_{10} hot-spot analyses as determined through the interagency consultation process. By having model selection determined through consultation, a commenter believed that EPA would have an opportunity to provide guidance on specific details even if formal guidance has not yet been issued.

Response

EPA disagrees with this general approach. The significant technical limitations in MOBILE6.2 discussed in C.1. of this section cannot simply be resolved through interagency consultation, and EPA's future modeling guidance will ensure that credible analyses are conducted. However, once an appropriate motor vehicle emissions model and EPA's future guidance is available, EPA agrees that the consultation process will play an important role in performing $PM_{2.5}$ or PM_{10} hot-spot analyses. Section 93.105(c)(1)(i) of the conformity rule already requires that consultation be used to evaluate and choose models and associated methods and assumptions for hot-spot analyses. Such consultation must be consistent with the use of EPA-approved motor vehicle emissions models and our future guidance.

Comment

One commenter stated that $PM_{2.5}$ source apportionment techniques should first be improved, and that models that simulate the chemistry and transport of $PM_{2.5}$ should be validated at the microscale level before hot-spot modeling is required. This same commenter also noted that MOBILE6.2 estimates that low-sulfur diesel fuel and cleaner vehicles, due to the phase-in of Tier 2 and federal heavy duty engine standards, will dramatically reduce $PM_{2.5}$ emissions in the future. Therefore, this commenter implied that $PM_{2.5}$ hot-spots may not be as much of a concern once $PM_{2.5}$ source apportionment techniques and chemical/dispersion models are available, since by that time on-road mobile sources may only represent a small fraction of $PM_{2.5}$ emissions in nonattainment areas.

Response

PM source apportionment is not a relevant technique for project-level air quality modeling, because it pertains to current, observed outdoor PM measurements. The air quality impacts of those transportation projects that are relevant to a conformity determination are estimated in the future, when actual monitoring data is not available. As such, source-oriented models that use emissions estimates and run them through an air quality model are the only appropriate tools for projecting future-year impacts of transportation projects. The second part of this comment suggests that chemical transport models are required for microscale analysis. However, over the time during which air parcels pass from a transportation project to a location several hundred meters downwind, where PM hot-spots could be a concern, there is insufficient time for chemical reactions to affect PM mass concentrations. Dispersion models have been used for this purpose in the past, and have been evaluated in the scientific literature. The commenter is correct that $PM_{2.5}$ emissions from motor vehicles are expected to decline in the future as a result of new vehicle standards and fuels. However, the impact of those new standards is gradual and does not preclude the possibility of PM hot-spot problems in the future.

Comment

Two commenters noted that existing tools have already been used in a few cases for localized NEPA analyses for PM_{10}, which they argued supported the mandatory application of these tools for all PM_{10} and $PM_{2.5}$ hot-spot analyses.

Response

EPA disagrees. While it is true that these analyses were done on a voluntary basis, it is not clear how well these analyses would stand up to review if there was a mandatory requirement for quantitative $PM_{2.5}$ or PM_{10} hot-spot analyses, for the technical reasons discussed above.

E. Process and Timing for Developing Guidance

As described above, EPA is working to resolve the limitations in MOBILE6.2 as part of the development of MOVES, EPA's new emissions model for mobile sources. As described above, EPA is currently collecting and analyzing data, while simultaneously developing the MOVES model itself. A draft version of MOVES that incorporates new emissions information for motor vehicles is expected in 2006 with a final version in 2007. MOVES will undergo both stakeholder and peer review. More information on MOVES can be found at *http://www.epa.gov/otaq/ngm.htm*. EPA

[14] Robert G. Ireson, "Dispersion Modeling for Mobile Source Air Toxics Exposure," (January 9, 2005) Transportation Research Board's 84th Annual Meeting of Air Quality Management Consulting.

will also release SIP and transportation conformity policy guidance for the final release of MOVES, which among other issues will describe the grace period for using MOVES in regional and hot-spot conformity analyses.

EPA has also dedicated significant resources to conducting research that will be used in the development of the Agency's future guidance for quantitative $PM_{2.5}$ and PM_{10} hot-spot analyses, which would be available when states are able to begin using MOVES. This guidance will discuss how MOVES and dispersion models can be used to complete quantitative $PM_{2.5}$ and PM_{10} hot-spot analyses for the transportation projects specified in today's final rule.

Comment

Several commenters agreed that stakeholders should be involved during the development of the future quantitative hot-spot modeling guidance. One commenter suggested that this guidance should be developed through a formal process similar to rulemakings. Another commenter recommended that EPA subject future hot-spot models and guidance to peer review.

Response

EPA agrees that stakeholder input will be important in the guidance development process and intends to provide for such input, but has not yet determined exactly what that process will be. However, EPA does not intend to develop its future hot-spot modeling guidance through notice-and-comment rulemaking, since this has not been our past practice for such guidance or even for motor vehicle emissions factor models like MOBILE6.2.

F. Suggestions for Future Guidance

Comment

Several commenters had specific recommendations for items that should be included in EPA's future quantitative $PM_{2.5}$ and PM_{10} hot-spot guidance. Examples of recommendations include:

- A screening procedure for reducing the number of quantitative analyses required;
- A list of potential project-level mitigation measures;
- Information on determining background contributions;
- A new assessment of re-entrained road dust and construction dust emission factors; and
- Information about idling emissions.

Response

EPA will review these suggestions and others as part of the stakeholder process during the development of quantitative $PM_{2.5}$ or PM_{10} hot-spot guidance.

VII. Categorical $PM_{2.5}$ and PM_{10} Hot-spot Findings

A. Description of Final Rule

EPA is finalizing its proposal allowing DOT to make categorical hot-spot findings [15] for appropriate cases in $PM_{2.5}$ and PM_{10} nonattainment and maintenance areas. A categorical hot-spot finding would be made if there is appropriate modeling that shows that a particular category of highway or transit projects covered by § 93.123(b)(1) will not cause or contribute to new or worsened local violations. Such findings have the potential to further streamline meeting the $PM_{2.5}$ or PM_{10} hot-spot requirements, since no additional quantitative hot-spot modeling would be required to support a qualifying project's conformity determination.[16] A project-level conformity determination relying on the categorical finding and meeting all other requirements is still required.

This final rule provides for FHWA and FTA to make categorical hot-spot findings as appropriate for $PM_{2.5}$ and PM_{10} hot-spot analyses for projects listed in § 93.123(b)(1) of today's final rule. See Section V. for more information about projects of air quality concern. EPA notes that the final rule clarifies and improves the existing conformity rule's flexibility for FTA to make categorical hot-spot findings in PM_{10} areas, which was originally promulgated in the conformity rule in November 24, 1993.[17] See EPA's January 11, 1993 proposal (58 FR 3780) for further information.

Modeling used to support a categorical hot-spot finding must be based on appropriate motor vehicle emissions factor models, dispersion models, and EPA's future quantitative hot-spot modeling guidance. As a result, categorical hot-spot findings will not be made prior to EPA's announcement in the **Federal Register** that quantitative $PM_{2.5}$ and PM_{10} hot-spot analyses are required (40 CFR 93.123(b)(4)). Modeling used to support categorical hot-spot findings must consider the emissions produced from a category of projects based on project sizes, configurations, and activity levels. Modeling could also consider the emissions produced by a category of projects and the resulting impact on air quality under different circumstances.

Categorical hot-spot findings could apply in a variety of situations where modeling shows that such projects will not cause or contribute to new or worsened violations. For instance, there may be cases where a categorical hot-spot finding could be made for a category of projects that would never cause a new air quality violation, worsen an existing violation or delay timely attainment in any $PM_{2.5}$ or PM_{10} area.

There may be other categories of projects that may be expected to meet Clean Air Act requirements without further hot-spot analysis if a given area has $PM_{2.5}$ or PM_{10} air quality data which is significantly below the $PM_{2.5}$ or PM_{10} air quality standards. For example, a categorical hot-spot finding may be appropriate for a highway project with significant levels of diesel traffic in a PM_{10} maintenance area if that area is significantly below the PM_{10} standards. FHWA is currently examining, in consultation with EPA, whether certain categories of highway projects could qualify for a finding based on different levels of activity and air quality circumstances.

EPA, with concurrence from DOT, is clarifying in this final rule the general process for making any categorical hot-spot findings. As stated above, this final rule does not affect the requirement for conformity determinations to be completed for all non-exempt projects in $PM_{2.5}$ and PM_{10} areas. The modeling on which a categorical finding is based would serve to fulfill the quantitative hot-spot analysis requirement for qualifying projects. The modeled scenarios used by DOT to make categorical hot-spot findings would be derived through consultation and participation by EPA.

Interagency consultation procedures for project-level conformity determinations must be followed (40 CFR 93.105). Any project-level conformity determination that relies on a categorical hot-spot finding would also be subject to the public involvement requirements of the NEPA process and the transportation

[15] In the December 2004 supplemental proposal and previous conformity rule, EPA used the term "categorical *conformity determination*," but now believes this term is misleading. A *conformity determination* that meets all applicable requirements continues to be required for projects where a categorical hot-spot finding is relied upon. Consequently, the final rule uses the more appropriate terminology of "categorical hot-spot finding."

[16] Of course, categorical hot-spot findings would not be done for all other projects that are not an air quality concern since no hot-spot analysis—quantitative or qualitative—is required for those projects in $PM_{2.5}$ and PM_{10} areas. These projects are already presumed to meet statutory requirements without any hot-spot analysis, as stipulated under § 93.116(a) of the final rule.

[17] EPA notes that no categorical hot-spot findings have been made by FTA to date for transit projects in PM_{10} nonattainment and maintenance areas.

conformity rule (40 CFR 93.105(e)), during which commenters can address all appropriate issues relating to the categorical finding used in the conformity determination. Today's final rule does not create any new public participation requirements in project-level conformity determinations. See C. of this section for further details on the process for making categorical hot-spot findings.

B. Rationale and Response to Comments on Categorical Findings

1. Rationale

EPA concludes that it is both appropriate and in compliance with the Clean Air Act to allow DOT to make categorical hot-spot findings with respect to categories of projects of air quality concern, where modeling shows that such projects will not cause or contribute to new or worsened air quality violations. As long as modeling shows that projects do not cause, contribute or worsen violations of the standards—either through an analysis of a category of projects or a hot-spot analysis for a single project—then statutory conformity requirements are met.

As discussed in Section V., EPA finalized the criteria in § 93.123(b)(1) of this final rule for when quantitative $PM_{2.5}$ or PM_{10} hot-spot analyses are required, based on the best available information to date. Expanding the ability for DOT to make categorical hot-spot findings will allow future information to be taken into account in an expedited manner, so that quantitative $PM_{2.5}$ and PM_{10} hot-spot analyses are only required for individual projects when necessary to protect public health and meet statutory requirements.

Making hot-spot findings on a category basis will reduce the resource burden for state, regional and local agencies, and provide greater certainty and stability to the transportation planning process. A specific project-level conformity determination, including use of the categorical finding, will still be subject to applicable interagency consultation and public involvement as described in 40 CFR 93.105(e).

Categorical hot-spot findings must be supported by credible modeling demonstrations showing that project categories will not cause or contribute to new or worsened violations of the air quality standards. Such modeling would need to be derived in consultation with EPA, and consistent with EPA's future $PM_{2.5}$ and PM_{10} quantitative hot-spot modeling guidance.

2. Response to Comments

EPA received numerous comments that supported the proposal, as well as a number of comments that did not.

Comment

Several commenters supported the proposal to allow FHWA and FTA to make categorical hot-spot findings, if appropriate modeling shows that the Clean Air Act requirements are met without additional $PM_{2.5}$ or PM_{10} hot-spot analyses. These commenters believed using Federal resources to make such findings would also reduce the resource burden for state, regional and local agencies, and provide greater certainty and stability to the transportation planning process.

Response

EPA agrees and is taking final action consistent with the December 2004 supplemental proposal and these comments.

Comment

Other commenters objected to EPA's proposal because they believed that it would illegally delegate to FHWA and FTA the Agency's statutory authority to establish criteria and procedures for $PM_{2.5}$ and PM_{10} transportation conformity determinations. These commenters believed that Congress explicitly required in the 1990 Clean Air Act Amendments that EPA, not DOT, promulgate the criteria and procedures for determining conformity, including the criteria and procedures for making categorical hot-spot findings. Many of these commenters stated that the proposal to expand the application of categorical hot-spot findings would cede EPA's authority not only to identify projects that do not require hot-spot analyses, but also to select the models or methods for determining whether emissions will cause or contribute to violations or delay timely attainment. These commenters believed that it is EPA's statutory responsibility to adopt criteria and procedures for any PM_{10} and $PM_{2.5}$ categorical hot-spot findings.

Response

EPA disagrees with these comments. EPA does not believe that allowing DOT to make categorical hot-spot findings in any way delegates EPA's statutory obligation to establish criteria and procedures for $PM_{2.5}$ and PM_{10} transportation conformity determinations. EPA, through its regulations and modeling guidance, continues to establish the criteria and procedures for $PM_{2.5}$ and PM_{10} transportation conformity determinations, including hot-spot analyses. These criteria are contained in §§ 93.116 and 93.123 of the conformity rule, including the revised provisions relating to categorical hot-spot findings. The conclusions by DOT in making categorical hot-spot findings that certain categories of projects will not cause or contribute to new or worsened violations, as well as the modeling supporting such findings, will be conducted consistent with EPA's conformity rule and future hot-spot modeling guidance discussed in Section VI. All aspects of a project-level conformity determination—including the reliance on a categorical hot-spot finding—are subject to interagency consultation and public comment as described in 40 CFR 93.105(e).

Furthermore, the authority to make categorical hot-spot findings does not enable DOT to identify projects that do not require hot-spot analyses at all. Rather, although hot-spot analyses are still required for all projects of air quality concern, this requirement can be satisfied by relying on modeling that concludes that certain categories of projects will not cause or contribute to new or worsened violations. Further, although EPA retains the authority to require hot-spot modeling in its conformity procedures and to specify appropriate models and methods in its future guidance, DOT has always had the authority to make project-level conformity determinations, including deciding whether a project meets the hot-spot analysis requirement through a categorical hot-spot finding or separate analysis.

Comment

A few commenters stated that EPA's proposal also conflicts with § 93.123(b)(4) of the conformity rule, which one commenter believes requires EPA (not DOT) to issue modeling guidance for quantitative $PM_{2.5}$ and PM_{10} hot-spot analyses. A different commenter believed that the proposal conflicted with § 93.123(b)(3) of the proposed conformity rule, which required interagency consultation be used to identify sites that require a hot-spot analysis. This commenter argued that the screening threshold or mechanism for identifying projects that do not require hot-spot analyses and selection of models or methods for hot-spot analyses need to be agreed upon under the interagency consultation process.

Response

EPA disagrees with commenters. The final rule does not cede any of EPA's statutory authority to another Federal agency, and EPA will issue modeling

guidance for quantitative $PM_{2.5}$ and PM_{10} hot-spot analyses. Furthermore, DOT will follow this guidance in conducting modeling to support any future categorical hot-spot findings.

The final rule merely allows DOT to conduct such a single analysis for a category of projects rather than state and local agencies conducting a separate analysis for each project in such a category. DOT will consult with EPA on categorical hot-spot findings, and project-level conformity determinations will be subject to interagency consultation and public involvement.

Comment

Some commenters argued that the criteria and procedures for making categorical hot-spot findings, including modeling tools or other methods, must be established through a revision to the conformity rule or in 40 CFR part 51, Appendix W (Guideline on Air Quality Models). Such an approach, these commenters argued, would be consistent with 40 CFR 93.123(a)(1) for quantitative CO hot-spot analyses, which requires such analyses to be based on "applicable air quality models, data bases, and other requirements specified in 40 CFR part 51, Appendix W * * * unless different procedures developed through the interagency consultation process" are approved by EPA. Finally, one of these commenters also specified that criteria for whether a project qualifies for a categorical hot-spot finding must be promulgated by EPA through notice-and-comment procedures prescribed by 42 U.S.C. 7506(c)(4)(A).

Response

EPA does not agree that additional rulemaking is required or necessary to ensure that credible modeling is done to support categorical hot-spot findings. EPA has already requested comment in the development of today's final rule on: (1) The criteria for whether a project qualifies for a categorical hot-spot finding; and (2) the modeling that is used in such findings. The categorical hot-spot finding provisions in this final rule do not change the requirement for projects to not cause or contribute to $PM_{2.5}$ or PM_{10} air quality violations under the Clean Air Act and 40 CFR 93.116.

EPA also notes that the conformity regulations have historically required PM_{10} hot-spot analyses without reference in its regulations to the air quality modeling requirements in Appendix W, since the "Guideline" includes only general information regarding $PM_{2.5}$ and PM_{10} air quality modeling that would be applicable to such hot-spot analyses. The reference to Appendix W in the conformity regulation is due to a historical anomaly resulting from the fact that EPA had approved localized CO modeling techniques available at the time the original 1993 conformity rule was promulgated; however, no such techniques were approved for $PM_{2.5}$ or PM_{10} hot-spot analyses at that time. EPA intends to recommend in its future hot-spot modeling guidance the use of air quality models, data bases, and other requirements that are consistent with SIP development for those provisions of Appendix W that apply. The public will have the opportunity to comment on this guidance. For all of these reasons, EPA believes that the final rule is consistent with both the Clean Air Act and the public input requirements of the Administrative Procedures Act.

Comment

Some commenters questioned whether FHWA could adequately implement categorical hot-spot findings so that Clean Air Act requirements are met and protect public health. One commenter believed that FHWA has not properly implemented the current PM_{10} hot-spot requirements and FHWA's September 2001 guidance on PM_{10} qualitative hot-spot analyses. Other commenters stated that EPA should maintain the statutory responsibility Congress transferred in the 1990 Clean Air Act Amendments, since EPA was given this authority due to DOT not sufficiently implementing the 1977 Clean Air Act conformity requirements.

Response

This final rule requires that project-level conformity determinations include hot-spot analyses for projects of air quality concern in $PM_{2.5}$ and PM_{10} areas. As stated above, EPA believes that it is retaining its authority to promulgate conformity criteria and procedures in providing for categorical hot-spot findings in this final rule. It is true that qualitative PM_{10} hot-spot analyses have been required to this point, however this is due to the fact that credible quantitative hot-spot analyses cannot yet be performed. Finally, prior to the 1977 Clean Air Act Amendments, specific requirements on transportation conformity determinations including hot-spot analyses did not exist, thus this comment is not relevant to implementation of the current statutory provisions.

Comment

One commenter believed that the proposed flexibility for FHWA and FTA to make categorical hot-spot findings should be extended to CO nonattainment and maintenance areas.

Response

EPA did not propose expansion of the hot-spot flexibility to CO, and therefore can not take final action on such expansion at this time.

Comment

One commenter who supported options that would define the need for $PM_{2.5}$ hot-spot analyses through the SIP (i.e., Options 2 and B) opposed EPA's proposal for categorical hot-spot findings. This commenter believed that SIP revisions and consultation procedures could best address when categories of projects may be assumed to conform. In addition, this commenter stated that SIP revisions should be required to detail the types of projects where hot-spots are likely. The commenter also believed that quantitative analyses can be performed, where appropriate or where data is sufficient.

Response

EPA concludes that the comment is no longer relevant to this rulemaking because the rule will not be defining the need for hot-spot analyses solely through the SIP process. Moreover, EPA reiterates that categorical hot-spot findings do not provide a determination that projects are assumed to conform. Rather, they are a conclusion based on modeling that a category of projects will not cause or contribute to NAAQS violations. A conformity determination is still required for all projects including a localized hot-spot analysis, which would be done by reference to the categorical finding. Finally, EPA notes that the Agency does not have authority under Clean Air Act section 176(c) to impose requirements on the content of SIP revisions relating to types of transportation projects that might produce hot-spots. States are free to consider this issue when developing $PM_{2.5}$ attainment SIPs and to impose appropriate controls on transportation activities as necessary to demonstrate timely attainment.

Comment

One commenter also recommended that any categorical hot-spot findings may need to be subject to a SIP finding should the SIP for an area determine that such a categorical finding is inappropriate under local conditions.

Response

Categorical hot-spot findings are a conclusion by DOT based on appropriate modeling data that projects

of a certain type will not worsen air quality. Such findings would be used in future conformity determinations to satisfy the requirements of 40 CFR 93.116 and 93.123 relating to localized $PM_{2.5}$ and PM_{10} hot-spot analyses for projects of air quality concern. Should any SIP include a determination based on modeling that various categories of transportation projects would cause or contribute to violations of the standards, a categorical hot-spot finding could not be made, unless updated modeling and assumptions at a later date showed that such projects met statutory requirements.

C. Description of and Response to Comments on Process for Making Categorical Hot-spot Findings

1. Description of Process

In its December 2004 supplemental proposal, EPA stated that it would work with DOT to provide additional guidance on making categorical hot-spot findings. EPA has consulted with DOT and categorical hot-spot findings will be made according to the following general process:

- FHWA and/or FTA, as applicable, will develop modeling, analyses, and documentation to support the categorical hot-spot finding. This would be done with early and comprehensive consultation and participation with EPA.
- FHWA and/or FTA will provide EPA an opportunity to review and comment on the complete categorical hot-spot finding documentation. Any comments would need to be resolved in a manner acceptable to EPA prior to issuance of the categorical hot-spot finding. Consultation with EPA on issue resolution would be documented.
- FHWA and/or FTA would make the final categorical hot-spot finding in a memorandum or letter, which would be posted on EPA's and DOT's respective conformity Web sites.
- Subsequently transportation projects that meet the criteria set forth in the categorical finding would reference that finding in their project-level conformity determination, which would be subject to interagency consultation and the public involvement requirements of the NEPA process and the conformity rule. The existing consultation and public involvement processes would be used to consider the categorical hot-spot finding in the context of a particular project.

2. Response to Comments

Comment

Several commenters believed that EPA needed to further define the process for DOT to make categorical hot-spot findings for certain highway and transit projects. Commenters generally supported the proposal to have FHWA consult with EPA on categorical hot-spot findings. Several of these commenters stipulated that transportation and other conformity stakeholders should also be consulted when FHWA and EPA select the types of roadway and intersection projects covered and the modeling analyses used to support categorical hot-spot findings.

Response

EPA has outlined the process for making categorical hot-spot findings in the preamble to the final rule as requested by commenters. DOT will consult with EPA in making the findings as requested by commenters. Project-level conformity determinations that rely on categorical hot-spot findings will remain subject to interagency consultation and public comment, as described in 40 CFR 93.105. As discussed under Section VI., EPA also plans to consider stakeholder input when preparing its future quantitative hot-spot modeling guidance; categorical hot-spot findings must be consistent with this guidance.

Comment

One commenter believed that the proposed options for defining the need for $PM_{2.5}$ hot-spot analyses through the SIP (*i.e.*, Options 2 and B) could provide a full public process for categorical findings, since the public is involved in the development of SIPs.

Response

As described in Sections III. and IV., EPA is not finalizing SIP-based options for applying $PM_{2.5}$ and PM_{10} hot-spot analysis requirements because these options do not meet statutory conformity requirements. Furthermore, the conformity rule already provides an opportunity for project-level conformity determinations—including those that rely on a categorical hot-spot finding—to be subject to interagency consultation and public comment. The final rule relies on these existing requirements.

Comment

One commenter believed that EPA should make categorical hot-spot findings in consultation with FHWA. Another commenter suggested that the types of roadway and intersection projects covered by this flexibility be developed through EPA and DOT consultation.

Response

It is not reasonable for EPA to make categorical hot-spot findings because EPA does not conduct the analyses to support conformity determinations. EPA promulgates criteria and procedures for making conformity determinations and then DOT makes the determinations consistent with those criteria. It is DOT that determines whether appropriate models from EPA's modeling guidance have been used in individual conformity determinations, and DOT that makes the final conformity determinations. Thus, it is proper for DOT to make all findings with respect to localized emission impacts, whether on an individual basis or categorically. EPA will participate with DOT on final categorical hot-spot findings and the modeling used to support such findings, as recommended by the commenter.

Comment

One commenter believed that EPA and state and local air quality agencies must be required to concur on categorical hot-spot findings, at a minimum.

Response

EPA does not believe it is necessary for EPA, state or local air agencies to concur in a categorical hot-spot finding. These findings are a preliminary step in DOT completion of a conformity determination. Neither EPA, states nor local air agencies concur in conformity determinations, which are made by DOT after interagency consultation with EPA, states and local agencies, as well as public involvement. Stakeholders retain all of the input authority they have under EPA and DOT rules with respect to conformity determinations in general. DOT is authorized to make conformity determinations under the Clean Air Act and the conformity regulations without explicit concurrence by other stakeholders. EPA concludes that it is appropriate for DOT to continue to do so consistent with the Clean Air Act after providing for interagency consultation and public comment, including those determinations that rely on a categorical hot-spot finding.

Comment

One commenter was concerned that the proposal appeared to only apply to projects in which FHWA is participating. This commenter requested that language be added to the final rule to allow state transportation agencies to apply for the identified categorical hot-spot finding for projects that require no Federal funds, if applicable.

Response

EPA disagrees with this comment. Under the conformity regulations, only projects of air quality concern that require FHWA or FTA funding or approval are subject to the requirements of 40 CFR 93.116 and thus are required to have conformity determinations and localized hot-spot analyses. Therefore, state transportation agencies would have no need to conduct categorical hot-spot findings under the Federal conformity rule for regionally significant non-federal projects, as the commenter suggested. State transportation planners are certainly free to do localized hot-spot analyses as part of their transportation planning, but such analyses would not need to be conducted pursuant to the provisions of the Federal conformity regulations. As a result, EPA concludes that it is unnecessary to change the final rule in response to this comment.

Comment

One commenter stated that categorical hot-spot findings should be left to the states working through their existing interagency consultation processes. This commenter believed that the analysis associated with such findings would more appropriately be performed at the state level due to variations between projects, emission control programs, meteorology, etc. at the local, state, regional and national level.

Response

The final rule relies on the existing rule's interagency consultation provisions. Categorical findings are simply a way to streamline hot-spot analysis requirements in advance to support subsequent project-level conformity determinations that meet statutory and regulatory requirements. However, it is DOT, not states that make conformity determinations, and thus it is appropriate for DOT to also make categorical hot-spot findings that will support future project-level conformity determinations. Project-level conformity determinations that rely on a categorical finding will remain subject to interagency consultation and public comment.

As stated above, states will have input to any conformity determinations relying on a categorical hot-spot finding through the interagency consultation process on such determinations, and as such can provide input on the applicability of the categorical hot-spot finding analysis for a particular project's determination.

D. Stakeholder Suggestions for Eligible Projects and Future Federal Efforts

In the December 2004 supplemental proposal, EPA specifically requested comment on the types of projects that might be appropriate for consideration under a categorical hot-spot finding. EPA received numerous helpful suggestions, which are summarized below. EPA has decided that it does not have sufficient information at this time to specify in the final rule which projects of air quality concern could receive future categorical hot-spot findings to streamline meeting the quantitative $PM_{2.5}$ and PM_{10} hot-spot requirements. EPA is instead indicating here that findings could be made for any categories of projects addressed in § 93.123(b)(1) for which the Federal agencies have adequate modeling to support demonstrating that such types of projects will not cause or contribute to any new or worsened localized violations.

However, the suggestions submitted to the docket for this final rule will be considered in deciding where to begin to consider the development of the technical analyses necessary to support future categorical hot-spot findings, and could be considered by DOT in deciding whether to make a categorical hot-spot finding. The following are some of the suggestions received from commenters for categories of projects and different air quality circumstances that could be addressed by future findings:

Types of projects:

- Projects that reduce congestion and idling. One commenter suggested that projects that eliminated bottlenecks and reduced congestion could be eligible since less congestion means less stop-and-go traffic, and hence would reduce PM even with a significant increase in diesel traffic. This commenter believed that analyses could be conducted to quantify this tradeoff so as to determine if and when a congestion-reducing project might still trigger hot-spot concerns.

Types of air quality circumstances:

- Projects in locations with significant margins of safety relative to the applicable standards.
- Projects in portions of the nonattainment area where current monitoring data and forecasted concentrations show no violation of the $PM_{2.5}$ standards.

FHWA has recently dedicated resources to begin considering what projects could qualify for future categorical hot-spot findings, in consultation with EPA. This ongoing effort is focused on evaluating the impacts of individual types of projects and air quality circumstances, for example the NAAQS level at different kinds of project locations. This and other future work may eventually lead to development of categorical hot-spot findings through the process identified above, and this work will be consistent with EPA's future quantitative $PM_{2.5}$ and PM_{10} modeling guidance and any models that are appropriate for use by state and local implementers in individual project analyses.

VIII. Minor Change for Exempt Projects Regarding Compliance With $PM_{2.5}$ SIP Control Measures

EPA proposed a minor regulatory change in the December 2004 supplemental proposal in regard to compliance with $PM_{2.5}$ SIP control measures. EPA is finalizing today a small change to the footnote at the bottom of Table 2 in 40 CFR 93.126. Section 93.126 is titled, "Exempt projects" and Table 2 lists these projects under several different headings. Projects listed in the table are exempt from the requirement to determine conformity, and may proceed even in the absence of a conforming transportation plan and TIP.

Today's final rule adds "and $PM_{2.5}$" after "PM_{10}" in the footnote at the bottom of Table 2. Currently, the footnote reads, "Note: In PM_{10} nonattainment or maintenance areas, such projects are exempt only if they are in compliance with control measures in the applicable implementation plan." However, $PM_{2.5}$ areas also need to be included in this note to make § 93.126 consistent with 40 CFR 93.117. In the July 1, 2004 final rule, EPA updated § 93.117, which discusses compliance with SIP control measures to also cover $PM_{2.5}$ areas. EPA should have updated the footnote in § 93.126 in the July 1, 2004 rule; we are correcting this oversight in today's action. With this change, projects on the exempt list in § 93.126 would be exempt in a $PM_{2.5}$ area only if they are in compliance with control measures in the applicable SIP.

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

A. $PM_{2.5}$ Areas and PM_{10} Areas Without Approved Conformity SIPs

All provisions in today's final rule relating to $PM_{2.5}$ hot-spots apply immediately in all $PM_{2.5}$ nonattainment and maintenance areas because no prior conformity rules (or approved conformity SIPs) address these $PM_{2.5}$ hot-spot requirements. PM_{10} areas that do not have approved conformity SIPs will be able to use immediately all of the conformity amendments related to

PM_{10} that are included in today's final rule.

B. PM_{10} Areas With Approved Conformity SIPs

In some areas, EPA has already approved conformity SIPs that include PM_{10} hot-spot provisions from previous conformity rulemakings that EPA is revising in today's final rule. In these areas, the Clean Air Act prohibits today's Federal rule amendments from superceding the previously approved state rules. Therefore, the PM_{10} hot-spot rule amendments in today's final rule—including the new §§ 93.116(a) and 93.123(b)—will only be effective in areas with approved conformity SIPs that include related rule provisions when the state either:

- Withdraws the existing provisions from its approved conformity SIP and EPA approves the withdrawal because, as discussed below, the Clean Air Act has been amended to streamline conformity SIP requirements, or
- Includes the revised PM_{10} hot-spot requirements in a SIP revision and EPA approves that SIP revision.

EPA has no authority to disregard this statutory requirement for those portions of today's final rule.

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA–LU) (Pub. L. 109–59) amended the conformity SIP requirements contained in Clean Air Act section 176(c)(4). Prior to SAFETEA–LU being signed into law, Clean Air Act section 176(c)(4)(C) required states to submit revisions to their SIPs to reflect all of the Federal criteria and procedures for determining conformity.

SAFETEA–LU section 6011(f)(4) amends Clean Air Act section 176(c)(4) so that states are now required to address in their conformity SIPs only the three sections on the Federal conformity rule that are required to be tailored, which are:

- Section 93.105 which addresses consultation procedures;
- Section 93.122(a)(4)(ii) which addresses written commitments to control measures that are not included in an MPO's transportation plan and TIP which must be obtained prior to a conformity determination and the requirement that such commitments must be fulfilled; and
- Section 93.125(c) which addresses written commitments to mitigation measures which must be obtained prior to a project-level conformity determination, and the requirement that project sponsors must comply with such commitments.

SAFETEA–LU eliminates the previous statutory conformity rule requirement to also include all other sections of the Federal rule. Therefore, states with approved conformity SIPs may decide to withdraw the sections which they are no longer required to include in their SIPs. EPA will process these SIP revisions as expeditiously as possible through flexible administrative techniques such as parallel processing and direct final rulemaking, since these provisions are no longer required by the Clean Air Act.

C. No New Conformity SIP Deadline Is Created by Final Rule

EPA believes that no new conformity SIP deadline is triggered by this final rule in any $PM_{2.5}$ or PM_{10} nonattainment or maintenance area. However, PM_{10} areas with approved conformity SIPs may decide to update their SIPs to reflect the final rule's PM_{10} hot-spot provisions, as described above.

With respect to the provisions that now must be included in SIPs under SAFETEA–LU, today's final rule does not make any changes to either § 93.122(a)(4)(ii) or § 93.125(c). However, today's final rule does amend § 93.105 by deleting § 93.105(c)(1)(v) from the conformity rule. Section 93.105(c)(1)(v) required areas to consult on determining which projects in PM_{10} nonattainment and maintenance areas are located at sites which have vehicle and roadway emission and dispersion characteristics which are essentially identical to those at sites which have violations verified by monitoring, and therefore require a quantitative PM_{10} hot-spot analysis. EPA deleted this provision for reasons described in Section V. of today's action.

EPA believes the deletion of § 93.105(c)(1)(v) is not significant enough by itself to warrant any states being required to update their conformity SIPs within 12 months of the publication of today's final rule given that states can continue to effectively implement their existing conformity SIPs with this provision remaining in place. Although as noted above, a PM_{10} area with an approved SIP may decide to update its SIP in order to use the final rule's PM_{10} hot-spot provisions.

EPA and DOT have provided guidance on implementing the conformity SIP provisions contained in SAFETEA–LU. This guidance is posted on EPA's transportation conformity Web site listed in Section I.B.2. of today's final rule, and is also available on DOT's Web site at: *http://www.fhwa.dot.gov/environment/conformity/sec6011guidmemo.htm.*

X. 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 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.

Under the terms of Executive Order 12866, it has been determined that amendments to this rule that are related to conformity under the current $PM_{2.5}$ air quality standards are a "significant regulatory action." As such, this action was submitted to OMB for Executive Order 12866 review. Changes made in response to OMB suggestions or recommendations are documented in the public record.

B. Paperwork Reduction Act

OMB has approved the information collection requirements related to $PM_{2.5}$ contained in this rule for $PM_{2.5}$ areas 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 51.390 and 40 CFR part 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.

Provisions in today's final rule that are related to conformity requirements in existing PM_{10} nonattainment and maintenance areas do not impose any new information collection requirements from EPA that require approval by OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* The information collection requirements of revisions in today's action for existing PM_{10} areas are covered under the DOT information collection request (ICR) entitled, "Metropolitan and Statewide Transportation Planning," with the OMB control number of 2132–0529.

EPA provided two opportunities for public comment on the incremental burden estimates for transportation conformity determinations under the new 8-hour ozone and $PM_{2.5}$ standards. EPA received comments on both the initial burden estimates provided in the November 5, 2003 proposal (68 FR 62719–62720) and on the revised estimates in the January 2004 ICR (69 FR 336). EPA responded to all of these comments in the ICR that has been approved by OMB. The approved ICR addresses all aspects of the conformity rule as it applies to the new 8-hour ozone and $PM_{2.5}$ air quality standards. The approved ICR accounts for $PM_{2.5}$ hot-spot burden associated with the most intensive of the proposed options (*i.e.*, requiring $PM_{2.5}$ hot-spot analyses for all projects in $PM_{2.5}$ areas at all times). Consequently, since this final rule only requires hot-spot analyses for a subset of all types of projects (*i.e.*, projects of air quality concern), the approved ICR addresses—and even overestimates—the actual $PM_{2.5}$ hot-spot burden that will occur under this final rule.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, 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, processing and maintaining information, and disclosing and providing 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 conduct a regulatory flexibility analysis of any significant impact a rule will have on a substantial number of small entities. Small entities include small businesses, small not-for-profit organizations and small government 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 which 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 final rule is to determine requirements for hot-spot analyses in $PM_{2.5}$ and PM_{10} 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 new nonattainment designations. Thus, although this rule explains how these analyses should be conducted, it 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. Thus, today's final rule 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 action 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 final 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 requires transportation conformity to apply in any area that is designated nonattainment or maintenance by EPA. This final rule incorporates into the conformity rule provisions addressing newly designated $PM_{2.5}$ nonattainment and maintenance areas subject to conformity requirements under the Clean Air Act that would not 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, since these rules merely establish procedures for implementing the statutory mandates of the conformity provisions which already apply under the Clean Air Act as a matter of law. 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 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 to 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 No. 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 final rule 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 final rule is effective April 5, 2006 for good cause found as explained in this rule.

K. Petitions for Judicial Review

Under Clean Air Act section 307(b)(1), petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by May 9, 2006. 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 proceedings to enforce its requirements. (See section 307(b)(2) of the Administrative Procedures Act.)

L. Determination Under Section 307(d)

Pursuant to Clean Air Act section 307(d)(1)(U), the Administrator determines that this action is subject to the provisions of section 307(d). Section 307(d)(1)(U) provides that the provisions of section 307(d) apply to "such other actions as the Administrator may determine." While the Administrator did not make this determination earlier, the Administrator

believes that all of the procedural requirements, e.g., docketing, hearing and comment periods, of section 307(d) have been complied with during the course of this rulemaking.

List of Subjects in 40 CFR Part 93

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

Dated: February 23, 2006.

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.

§ 93.101 [Amended]

■ 2. Section 93.101 is amended in the first sentence of the definition for "Hot-spot analysis" by removing "CO and PM_{10}" and adding in its place "CO, PM_{10}, and/or $PM_{2.5}$".

§ 93.105 [Amended]

■ 3. Section 93.105 is amended by removing paragraph (c)(1)(v) and redesignating paragraphs (c)(1)(vi) and (vii) as paragraphs (c)(1)(v) and (vi).

■ 4. Section 93.109 is amended as follows:

■ a. In Table 1 of paragraph (b), revising both entries for "§ 93.116";

■ b. By redesignating paragraphs (i)(1) and (2) as paragraphs (i)(2) and (3) and adding new paragraph (i)(1);

■ c. In paragraph (j) by removing "CO and PM_{10}" and adding in its place "CO, PM_{10}, and $PM_{2.5}$";

■ d. In paragraph (k) by removing "CO and PM_{10}" and adding in its place "CO, PM_{10}, and $PM_{2.5}$"; and

■ e. In paragraph (l)(1) by removing "CO and PM_{10}" and adding in its place "CO, PM_{10}, and $PM_{2.5}$".

§ 93.109 Criteria and procedures for determining conformity of transportation plans, programs, and projects: General.

* * * * *

(b) * * *

TABLE 1.—CONFORMITY CRITERIA

* * * * *	
§ 93.116	CO, PM_{10}, and $PM_{2.5}$ hot-spots.

TABLE 1.—CONFORMITY CRITERIA—Continued

* * * * *	
§ 93.116	CO, PM_{10}, and $PM_{2.5}$ hot-spots.
* * * * *	

* * * * *

(i) * * *

(1) FHWA/FTA projects in $PM_{2.5}$ nonattainment or maintenance areas must satisfy the appropriate hot-spot test required by § 93.116(a).

* * * * *

■ 5. In § 93.116, the section heading and paragraph (a) are revised to read as follows:

§ 93.116 Criteria and procedures: Localized CO, PM_{10}, and $PM_{2.5}$ violations (hot-spots).

(a) This paragraph applies at all times. The FHWA/FTA project must not cause or contribute to any new localized CO, PM_{10}, and/or $PM_{2.5}$ violations or increase the frequency or severity of any existing CO, PM_{10}, and/or $PM_{2.5}$ violations in CO, PM_{10}, and $PM_{2.5}$ nonattainment and maintenance areas. This criterion is satisfied without a hot-spot analysis in PM_{10} and $PM_{2.5}$ nonattainment and maintenance areas for FHWA/FTA projects that are not identified in § 93.123(b)(1). This criterion is satisfied for all other FHWA/FTA projects in CO, PM_{10} and $PM_{2.5}$ nonattainment and maintenance areas if it is demonstrated that during the time frame of the transportation plan (or regional emissions analysis) no new local violations will be created and the severity or number of existing violations will not be increased as a result of the project. The demonstration must be performed according to the consultation requirements of § 93.105(c)(1)(i) and the methodology requirements of § 93.123.

* * * * *

■ 6. Section 93.123 is amended as follows:

■ a. Revising the section heading;

■ b. Amending the first sentence in paragraph (a)(1) introductory text by removing "CO and PM_{10}" and adding in its place "CO, PM_{10}, and $PM_{2.5}$";

■ c. Amending paragraph (b) by:

■ i. Revising the paragraph heading;

■ ii. Revising paragraphs (b)(1)(i), (ii) and (iii), and adding new paragraphs (b)(1)(iv) and (v); and

■ iii. Revising paragraphs (b)(2) and (b)(3);

■ d. Amending paragraph (c)(4) by removing "PM_{10} or CO" in the first sentence and adding in its place "CO, PM_{10}, or $PM_{2.5}$"; and

■ e. Amending paragraph (c)(5) by removing "CO and PM_{10}" in the first sentence and adding in its place "CO, PM_{10}, and $PM_{2.5}$".

§ 93.123 Procedures for determining localized CO, PM_{10}, and $PM_{2.5}$ concentrations (hot-spot analysis).

* * * * *

(b) *PM_{10} and $PM_{2.5}$ hot-spot analyses.*

(1) * * *

(i) New or expanded highway projects that have a significant number of or significant increase in diesel vehicles;

(ii) Projects affecting intersections that are at Level-of-Service D, E, or F with a significant number of diesel vehicles, or those that will change to Level-of-Service D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project;

(iii) New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location;

(iv) Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location; and

(v) Projects in or affecting locations, areas, or categories of sites which are identified in the PM_{10} or $PM_{2.5}$ applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

(2) Where quantitative analysis methods are not available, the demonstration required by § 93.116 for projects described in paragraph (b)(1) of this section must be based on a qualitative consideration of local factors.

(3) DOT, in consultation with EPA, may also choose to make a categorical hot-spot finding that § 93.116 is met without further hot-spot analysis for any project described in paragraph (b)(1) of this section based on appropriate modeling. DOT, in consultation with EPA, may also consider the current air quality circumstances of a given $PM_{2.5}$ or PM_{10} nonattainment or maintenance area in categorical hot-spot findings for applicable FHWA or FTA projects.

* * * * *

§ 93.125 [Amended]

■ 7. Section 93.125(a) is amended by removing "PM_{10} or CO" in the first sentence and adding in its place "CO, PM_{10}, or $PM_{2.5}$".

§ 93.126 [Amended]

■ 8. Section 93.126 is amended in footnote 1 by removing "PM_{10}" and adding in its place "PM_{10} and $PM_{2.5}$".

§ 93.127 [Amended]

■ 9. Section 93.127 is amended as follows:

■ a. Amending the second sentence by removing "or PM_{10}".

■ b. Adding a new sentence after the second sentence to read as follows: "The local effects of projects with respect to PM_{10} and $PM_{2.5}$ concentrations must be considered and a hot-spot analysis performed prior to making a project-level conformity determination, if a project in Table 3 also meets the criteria in § 93.123(b)(1)."

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