ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R09–OAR–2010–0516; FRL–9434–8]

Approval and Promulgation of Implementation Plans; California; 2008 San Joaquin Valley $PM_{2.5}$ Plan and 2007 State Strategy

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing to approve in part and disapprove in part state implementation plan (SIP) revisions submitted by California to provide for attainment of the 1997 fine particulate matter ($PM_{2.5}$) national ambient air quality standards in the San Joaquin Valley (SJV). These SIP revisions are the SJV 2008 $PM_{2.5}$ Plan (revised 2010 and 2011) and SJV-related provisions of the 2007 State Strategy (revised 2009 and 2011). EPA is proposing to approve the emissions inventories; air quality modeling; the reasonably available control measures/reasonably available control technology, reasonable further progress, and attainment demonstrations; and the transportation conformity motor vehicle emissions budgets. EPA is also proposing to grant California's request to extend the attainment deadline for the SJV to April 5, 2015 and to approve commitments to measures and reductions by the SJV Air Pollution Control District and the California Air Resources Board. Finally, it is proposing to disapprove the SIP's contingency measures. This proposed rule amends EPA's November 30, 2010 proposed rule (75 FR 74518) on the SJV 2008 $PM_{2.5}$ Plan and 2007 State Strategy.

DATES: Any comments must be received on or before August 12, 2011.

ADDRESSES: Submit comments, identified by docket number EPA–R09–OAR–2010–0516, by one of the following methods:

- *Federal eRulemaking Portal: www.regulations.gov.* Follow the on-line instructions.
- *E-mail: wicher.frances@epa.gov.*
- *Mail or deliver:* Frances Wicher, Office of Air Planning (AIR–2), U.S. Environmental Protection Agency Region 9, 75 Hawthorne Street, San Francisco, CA 94105.

Instructions: All comments will be included in the public docket without change and may be made available online at *www.regulations.gov,* including any personal information provided, unless the comment includes Confidential Business Information (CBI) or other information for which disclosure is restricted by statute. Information that you consider CBI or otherwise protected should be clearly identified as such and should not be submitted through *www.regulations.gov* or e-mail. The *www.regulations.gov* Web site is an ''anonymous access'' system, and EPA will not know your identity or contact information unless you provide it in the body of your comments. If you send e-mail directly to EPA, your e-mail address will be automatically captured and included as part of the public comment. If EPA cannot read your comments due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comments.

Docket: The index to the docket for this action is available electronically at *www.regulations.gov* and in hard copy at EPA Region 9, 75 Hawthorne Street, San Francisco, California. While all documents in the docket are listed in the index, some may be publicly available only at the hard copy location (*e.g.,* copyrighted material) and some may not be publicly available at either location (*e.g.,* CBI). To inspect the hard copy materials, please schedule an appointment during normal business hours with the contact listed in the **FOR FURTHER INFORMATION CONTACT** section below.

Copies of the SIP materials are also available for inspection at the following locations:

- California Air Resources Board, 1001 I Street, Sacramento, California 95812.
- San Joaquin Valley Air Pollution Control District, 1990 E. Gettysburg, Fresno, California 93726.

The SIP materials are also electronically available at: *http://www.valleyair.org/Air_Quality_Plans/PM_Plans.htm* and *http://www.arb.ca.gov/planning/sip/sip.htm.*

FOR FURTHER INFORMATION CONTACT: Frances Wicher, Air Planning Office (AIR–2), U.S. Environmental Protection Agency, Region 9, (415) 972–3957, *wicher.frances@epa.gov.*

SUPPLEMENTARY INFORMATION: Throughout this document, ''we'', ''us'' and ''our'' refer to EPA.

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I. The $PM_{2.5}$ NAAQS and the San Joaquin Valley $PM_{2.5}$ Nonattainment Area

On July 18, 1997 (62 FR 36852), EPA established new national ambient air quality standards (NAAQS) for $PM_{2.5}$, particulate matter with a diameter of 2.5 microns or less, including annual standards of 15.0 micrograms per cubic meter (μg/m³) based on a 3-year average of annual mean $PM_{2.5}$ concentrations and 24-hour (daily) standards of 65 μg/m³ based on a 3-year average of the 98th percentile of 24-hour concentrations. 40 CFR 50.7. EPA established these standards after considering substantial evidence from numerous health studies demonstrating that serious health effects are associated with exposures to $PM_{2.5}$ concentrations above the levels of these standards.

Epidemiological studies have shown statistically significant correlations between elevated $PM_{2.5}$ levels and premature mortality. Other important health effects associated with $PM_{2.5}$ exposure include aggravation of respiratory and cardiovascular disease (as indicated by increased hospital admissions, emergency room visits, absences from school or work, and restricted activity days), changes in lung function and increased respiratory symptoms, as well as new evidence for more subtle indicators of cardiovascular health. Individuals particularly sensitive to $PM_{2.5}$ exposure include older adults, people with heart and lung disease, and children. See EPA, *Air Quality Criteria for Particulate Matter,* No. EPA/600/P–99/002aF and EPA/600/P–99/002bF, October 2004.

$PM_{2.5}$ can be emitted directly into the atmosphere as a solid or liquid particle (primary $PM_{2.5}$ or direct $PM_{2.5}$) or can be formed in the atmosphere as a result of various chemical reactions from precursor emissions of nitrogen oxides, sulfur oxides, volatile organic compounds, and ammonia (secondary $PM_{2.5}$). See 72 FR 20586, 20589 (April 25, 2007).

Following promulgation of a new or revised NAAQS, EPA is required by Clean Air Act (CAA) section 107(d) to designate areas throughout the nation as attaining or not attaining the NAAQS. On January 5, 2005, EPA published initial air quality designations for the 1997 $PM_{2.5}$ NAAQS, using air quality monitoring data for the three-year periods of 2001–2003 or 2002–2004. 70 FR 944. These designations became effective on April 5, 2005.[1]

EPA designated the San Joaquin Valley (SJV) nonattainment for both the 1997 annual and 24-hour $PM_{2.5}$ standards. 40 CFR § 81.305. The SJV $PM_{2.5}$ nonattainment area is home to 4 million people and is the nation's leading agricultural area. Stretching over 250 miles from north to south and averaging 80 miles wide, it is partially enclosed by the Coast Mountain range to the west, the Tehachapi Mountains to the south, and the Sierra Nevada range to the east. It encompasses over 23,000 square miles and includes all or part of eight counties: San Joaquin, Stanislaus, Merced, Madera, Fresno, Tulare, Kings, and the valley portion of Kern. For a precise description of the geographic boundaries of the San Joaquin Valley $PM_{2.5}$ nonattainment area, see 40 CFR 81.305. The local air district with primary responsibility for developing a plan to attain the $PM_{2.5}$ NAAQS in this area is the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD or District).

Ambient annual and 24-hour $PM_{2.5}$ levels in the urban Bakersfield area in the southern SJV are the highest recorded in the United States at 21.2 μg/m³ and 65 μg/m³, respectively, for the 2008–2010 period.[2] These values have declined significantly since 2001. See Figures IB–1 and IB–2 in the technical support document (TSD) for this proposal.

The levels and composition of ambient $PM_{2.5}$ in the SJV differ by season. 2008 $PM_{2.5}$ Plan, Figures H–4 and H–5. Higher $PM_{2.5}$ concentrations occur during the winter, between late November and February, when ambient $PM_{2.5}$ is dominated by ammonium nitrate (a secondary particulate formed from nitrogen oxides (NO_X) and ammonia emissions) and directly-emitted particulates, such as wood smoke. During the winter, the SJV experiences extended periods of stagnant weather with cold foggy conditions which are conducive to the formation of ammonium nitrate and which encourage wood burning. During the summer, $PM_{2.5}$ levels generally remain below 15 μg/m³, the level of the annual standards. 2008 $PM_{2.5}$ Plan, Figures H–6 and H–7.

II. California State Implementation Plan Submittals To Address $PM_{2.5}$ Nonattainment in the San Joaquin Valley

A. California's SIP Submittals

Designation of an area as nonattainment starts the process for a state to develop and submit to EPA a state implementation plan (SIP) under title 1, part D of the CAA. This SIP must include, among other things, a demonstration of how the NAAQS will be attained in the nonattainment area as expeditiously as practicable but no later than the date required by the CAA. Under CAA section 172(b), a state has up to three years after an area's designation as nonattainment to submit its SIP to EPA. For the 1997 $PM_{2.5}$ NAAQS, these SIPs were due April 5, 2008. 40 CFR 51.1002(a).

California has made five SIP submittals to address the CAA's $PM_{2.5}$ planning requirements in the San Joaquin Valley. The two principal ones are the SJVAPCD's 2008 $PM_{2.5}$ Plan (2008 $PM_{2.5}$ Plan or Plan) and the California Air Resources Board's (CARB's) State Strategy for California's 2007 State Implementation Plan (2007 State Strategy). Together the 2008 $PM_{2.5}$ Plan and the State Strategy present a comprehensive and innovative strategy for attaining the 1997 $PM_{2.5}$ standards in the SJV.

In addition to these submittals, the District and State have also submitted numerous rules that contribute to improving air quality in the San Joaquin Valley. See Appendices A and B of the TSD for this proposal.

1. SJV 2008 $PM_{2.5}$ Plan

The 2008 $PM_{2.5}$ Plan was adopted by the District's Governing Board on April 30, 2008 and by CARB on May 22, 2008 and submitted to EPA on June 30, 2008.[3] It includes an attainment

[1] On October 17, 2006, EPA strengthened the 24-hour $PM_{2.5}$ NAAQS by lowering the level to 35 μg/m³. At the same time, it retained the level of the annual $PM_{2.5}$ standards at 15.0 μg/m³. 71 FR 61144. On November 13, 2009, EPA designated areas, including the SJV, with respect to the revised 24-hour NAAQS. 74 FR 58688. California is now required to submit an attainment plan for the 35 μg/m³ 24-hour standards no later than 3 years after the effective date of the designation, that is, no later than December 14, 2012. In this preamble, all references to the $PM_{2.5}$ NAAQS, unless otherwise specified, are to the 1997 24-hour $PM_{2.5}$ standards of 65 μg/m³ and annual standards of 15 μg/m³ as codified in 40 CFR 50.7.

[2] See EPA, Air Quality System, Design Value Report, June 1, 2011. These values are the highest design values in the SJV. A design value is an ambient concentration calculated using a specific methodology from monitored air quality data and is used to compare an area's air quality to a NAAQS. The methodologies for calculating design values for the annual and 24-hour $PM_{2.5}$ NAAQS are found in 40 CFR part 50 Appendix N, Sections 1(c)(1) and (c)(2), respectively.

[3] See SJVUAPCD Governing Board Resolution: In the Matter of Adopting the San Joaquin Valley Unified Air Pollution Control District 2008 $PM_{2.5}$ Plan, April 30, 2008 (SJVUAPCD Governing Board Resolution), CARB Resolution No. 08–28, May 22, 2008; and letter, James N. Goldstene, Executive Officer, CARB to Wayne Nastri, Regional

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demonstration, commitments by the District to adopt control measures to achieve emissions reductions from sources under its jurisdiction (primarily stationary sources), and motor vehicle emissions budgets (MVEB) used for transportation conformity purposes. The attainment demonstration includes air quality modeling, a reasonable further progress (RFP) plan, an analysis of reasonably available control measures/reasonably available control technology (RACM/RACT), base year and projected year emissions inventories, and contingency measures. The 2008 $PM_{2.5}$ Plan also includes the District's demonstration that attainment of the $PM_{2.5}$ standards in the SJV will require significant reductions in direct $PM_{2.5}$ and NO_X emissions (25 percent and 50 percent from 2005 levels, respectively) in addition to reductions in SO_X emissions, that the most expeditious date for attaining the 1997 $PM_{2.5}$ NAAQS in the San Joaquin Valley is April 5, 2015, and that all controls necessary for attainment by that date will be in place by the attainment year of 2014.[4] On September 15, 2010, CARB submitted a minor revision to the 2008 $PM_{2.5}$ Plan's control strategy to extend the adoption date for one control measure.[5]

2. CARB 2007 State Strategy

To demonstrate attainment, the 2008 $PM_{2.5}$ Plan relies in part on measures in CARB's 2007 State Strategy. The 2007 State Strategy was adopted on September 27, 2007 and submitted to EPA on November 16, 2007.[6] It describes CARB's overall approach to addressing, in conjunction with local plans, attainment of both the 1997 $PM_{2.5}$ and 8-hour ozone NAAQS not only in the San Joaquin Valley but also in California's other nonattainment areas such as the South Coast Air Basin. It also includes CARB's commitments to propose 15 defined State measures[7] and to obtain specific amounts of aggregate emissions reductions of direct $PM_{2.5}$ and NO_X in the SJV from sources under the State's jurisdiction, which are primarily on- and off-road motor vehicles and engines.

On August 12, 2009, CARB submitted the ''Status Report on the State Strategy for California's 2007 State Implementation Plan (SIP) and Proposed Revision to the SIP Reflecting Implementation of the 2007 State Strategy,'' dated March 24, 2009, adopted April 24, 2009 (2009 State Strategy Status Report)[8] which updates the 2007 State Strategy to reflect its implementation during 2007 and 2008.

In today's proposal, we are only evaluating those portions of the 2007 State Strategy and its revisions (including the 2011 revisions described below) that are relevant for attainment of the $PM_{2.5}$ standards in the San Joaquin Valley.

3. CARB 2011 Progress Report

On May 18, 2011, CARB submitted the ''Progress Report on Implementation of $PM_{2.5}$ State Implementation Plans (SIP) for the South Coast and San Joaquin Valley Air Basins and Proposed SIP Revisions,'' dated March 29, 2011 and adopted April 28, 2011 (2011 Progress Report). This submittal, which updates both the 2007 State Strategy and SJV 2008 $PM_{2.5}$ Plan, shows that both CARB and the District have made significant progress in meeting their commitments to adopt measures and to reduce emissions. More specifically, it updates CARB's rulemaking calendar in the 2007 State Strategy (as revised in 2009) to reflect the current status of CARB's adopted measures and to change the expected action dates for several measures. It also updates the RFP demonstration, contingency measures, and transportation conformity MVEB in the 2008 $PM_{2.5}$ Plan to reflect rule adoptions, changes to activity and emissions factors for certain source categories, and the impact on projected future emissions levels in the SJV of the recent economic recession.[9]

The District has also prepared a report documenting its progress in implementing the 2008 $PM_{2.5}$ Plan. See SJVUAPCD, 2008 $PM_{2.5}$ Plan Progress Report, draft March 2011 (SJV $PM_{2.5}$ Progress Report). This report, which is informational only and does not include any revisions to the SIP, was posted for public comment in March and was presented to the District's Governing Board at its June 2011 meeting.

Future references in this proposal to the SJV 2008 $PM_{2.5}$ Plan and the 2007 State Strategy will be to the Plan as revised in 2010 and 2011 and the Strategy as revised in 2009 and 2011, respectively, unless otherwise noted.

B. CAA Procedural Requirements for SIP Submittals

CAA sections 110(a)(1) and (2) and 110(l) require a state to provide reasonable public notice and opportunity for public hearing prior to the adoption and submittal of a SIP or SIP revision. To meet this requirement, every SIP submittal should include evidence that adequate public notice was given and an opportunity for a public hearing was provided consistent with EPA's implementing regulations in 40 CFR 51.102.

Both the District and CARB have satisfied applicable statutory and regulatory requirements for reasonable public notice and hearing prior to adoption and submittal of the 2008 $PM_{2.5}$ Plan. The District conducted public workshops, provided public comment periods, and held a public hearing prior to the adoption of the Plan on April 30, 2008. See 2008 $PM_{2.5}$ Plan, Appendix J and SJVUAPCD Governing Board Resolution, p. 3. CARB provided the required public notice and opportunity for public comment prior to its May 22, 2008 public hearing on the Plan. See CARB Resolution No. 08–28. The District also provided the required public notice and hearing on the 2010 revision to the Plan. See SJVUAPCD Governing Board Resolution No. 10–06–18.

CARB conducted public workshops, provided public comment periods, and held a public hearing prior to the adoption of the 2007 State Strategy on September 27, 2007. See CARB Resolution No. 07–28. CARB also provided the required public notice, opportunity for public comment, and a public hearing prior to its April 24, 2009 adoption of the 2009 State Strategy Status Report and its April 28, 2011 adoption of the 2011 Progress Report.

Administrator, EPA Region 9, June 30, 2008, with enclosures.

[4] While the applicable attainment date for $PM_{2.5}$ areas with a full five-year extension is April 5, 2015, reductions must be implemented by 2014 to achieve attainment by that date. See 40 CFR 51.1007(b). We, therefore, refer to 2014 as the attainment year and April 5, 2015 as the attainment date.

[5] See letter, James N. Goldstene, Executive Officer, CARB, to Jared Blumenfeld, Regional Administrator, EPA Region 9, September 15, 2010, with enclosures.

[6] See CARB Resolution No. 07–28, September 27, 2007 with attachments and letter, James N. Goldstene, Executive Officer, CARB, to Wayne Nastri, Regional Administrator, EPA Region 9, November 16, 2007, with enclosures.

[7] The 2007 State Strategy also includes measures to be implemented by the California Bureau of Automotive Repair (Smog Check improvements) and the California Department of Pesticide Regulation (VOC reductions from pesticide use). See 2007 State Strategy, pp. 64–65 and CARB Resolution 7–28, Attachment B, p. 8.

[8] See CARB Resolution No. 09–34, April 21, 2009, with attachments and letter, James N. Goldstene, Executive Officer, CARB, to Laura Yoshii, Acting Regional Administrator, EPA Region 9, August 12, 2009 with enclosures. Only pages 11–27 of the 2009 State Strategy Status Report are submitted as a SIP revision. The balance is for informational purposes only. See Attachment A to the CARB Resolution No. 09–34.

[9] On June 21, 2011, CARB posted to its Web site technical revisions to the updated MVEB in the 2011 Progress Report. See *http://www.arb.ca.gov/planning/sip/2007sip/2007sip.htm*. We discuss these revisions in the section on MVEB below.

See CARB Resolution No. 09–34 and CARB Resolution No. 11–24.

The SIP submittals include proof of publication for notices of District and CARB public hearings, as evidence that all hearings were properly noticed. We find, therefore, that each of the five submittals that comprise the SJV $PM_{2.5}$ SIP meets the procedural requirements for public notice and hearing in CAA sections 110(a) and 110(l).

CAA section 110(k)(1)(B) requires EPA to determine whether a SIP submittal is complete within 60 days of receipt. This section also provides that any plan that EPA has not affirmatively determined to be complete or incomplete will become complete by operation of law six months after the date of submittal. EPA's SIP completeness criteria are found in 40 CFR part 51, Appendix V.

The June 30, 2008 submittal of the 2008 $PM_{2.5}$ Plan became complete by operation of law on December 30, 2008. We determined that the 2010 revision to the Plan was complete on September 23, 2010.[10] The November 16, 2007 submittal of the 2007 State Strategy and the August 12, 2009 submittal of the 2009 revisions to the Strategy became complete by operation of law on May 16, 2008 and February 12, 2010, respectively. We determined that the 2011 revision to the Plan was complete on June 13, 2011.[11]

III. EPA's 2010 Proposed Action on the SJV $PM_{2.5}$ SIP

This is the second time that EPA has proposed action on California's SIP to address attainment of the 1997 $PM_{2.5}$ standards in the SJV. On November 30, 2010 (75 FR 74518), EPA proposed to approve in part and disapprove in part the 2008 $PM_{2.5}$ Plan and the related portions of the 2007 State Strategy.

Specifically, we proposed to approve the emissions inventories as meeting the applicable requirements of the CAA and $PM_{2.5}$ implementation rule in 40 CFR part 41, subpart Z. We also proposed to approve the District's and CARB's commitments to adopt and implement specific measures and to achieve specific aggregate emissions reductions because their approval would strengthen the SIP.

In addition, we proposed to find that volatile organic compounds (VOC) are a $PM_{2.5}$ attainment plan precursor for the 1997 $PM_{2.5}$ NAAQS in the SJV and therefore needed to be addressed in the 2008 $PM_{2.5}$ SIP's RACM/RACT, RFP, and attainment demonstrations and in other $PM_{2.5}$ SIP control requirements, such as contingency measures. As submitted prior to our November 2010 proposal, the Plan did not treat VOC as an attainment plan precursor but did contain information indicating that significant reductions in VOC emissions could significantly reduce ambient $PM_{2.5}$ concentrations in the SJV.

We proposed to disapprove the air quality modeling analysis on which the 2008 $PM_{2.5}$ Plan's RACM/RACT, RFP, and attainment demonstrations and the State's attainment date extension request were based because the Plan did not include sufficient documentation and analyses for EPA to determine the modeling's adequacy.

Based on our proposed finding that VOC should be a $PM_{2.5}$ attainment plan precursor and our proposed disapproval of the air quality modeling, we proposed to disapprove the 2008 $PM_{2.5}$ Plan's RACM/RACT, RFP, and attainment demonstrations and the contingency measures as not meeting the applicable requirements of the CAA and $PM_{2.5}$ implementation rule. We proposed to disapprove the attainment demonstration for the additional reason that it relied too extensively on enforceable commitments to reduce emissions in place of fully-adopted and submitted rules. We also proposed to disapprove the transportation conformity MVEB for the RFP milestone years of 2009 and 2012 and the attainment year of 2014 because they were derived from unapprovable RFP and attainment demonstrations. Finally, based also on our proposed finding on VOC and our proposed disapproval of the air quality modeling as well as our proposed disapproval of the RACM/RACT and attainment demonstrations, we proposed to not grant the State's request to extend the attainment date for the $PM_{2.5}$ NAAQS in the SJV to April 5, 2015.

During the comment period for the November 2010 proposal, we received five comment letters from the public as well as comment letters from CARB and the District. Subsequent to the close of the comment period, CARB adopted and submitted revisions to the SJV $PM_{2.5}$ Plan and 2007 State Strategy After considering information contained in the comment letters and these supplemental SIP submittals, we have substantially amended our November 2010 proposed action as described below. EPA will consider all significant comments submitted in response to both its November 2010 proposal and today's proposal before taking final action on the SJV $PM_{2.5}$ SIP. However, EPA strongly encourages those who submitted comments on the November 2010 proposal to submit revised comments reflecting today's amended proposal during the comment period on this amended proposal.

IV. CAA and Regulatory Requirements for $PM_{2.5}$ Attainment SIPs

EPA is implementing the 1997 $PM_{2.5}$ NAAQS under Title 1, Part D, subpart 1 of the CAA, which includes section 172, ''Nonattainment plan provisions.'' Section 172(a)(2) requires that a $PM_{2.5}$ nonattainment area attain the NAAQS ''as expeditiously as practicable'' but no later than five years from the date of the area's designation as nonattainment. This section also allows EPA to grant up to a five-year extension of an area's attainment date based on the severity of the area's nonattainment and the availability and feasibility of controls. EPA designated the SJV as nonattainment for the 1997 $PM_{2.5}$ NAAQS effective April 5, 2005, and thus the applicable attainment date is no later than April 5, 2010 or, should EPA grant a full five-year extension, no later than April 5, 2015.

Section 172(c) contains the general statutory planning requirements applicable to all nonattainment areas, including the requirements for emissions inventories, RACM/RACT, attainment demonstrations, RFP demonstrations, and contingency measures.

On April 25, 2007, EPA issued the Clean Air Fine Particle Implementation Rule for the 1997 $PM_{2.5}$ NAAQS. 72 FR 20586, codified at 40 CFR part 51, subpart Z ($PM_{2.5}$ implementation rule). The $PM_{2.5}$ implementation rule and its preamble address the statutory planning requirements for emissions inventories, RACM/RACT, attainment demonstrations including air quality modeling requirements, RFP demonstrations, and contingency measures. This rule also addresses other matters such as which $PM_{2.5}$ precursors must be addressed by the state in its attainment SIP and applicable attainment dates.[12] We discuss each of

[10] Letter, Deborah Jordan, EPA-Region 9 to James Goldstene, CARB, September 23, 2010.

[11] Letter, Deborah Jordan, EPA-Region 9 to James Goldstene, CARB, June 13, 2011.

[12] In June 2007, a petition to the EPA Administrator was filed on behalf of several public health and environmental groups requesting reconsideration of four provisions in the $PM_{2.5}$ implementation rule. See Earthjustice, Petition for Reconsideration, ''In the Matter of Final Clean Air Fine Particle Implementation Rule,'' June 25, 2007. These provisions are (1) The presumption that compliance with the Clean Air Interstate Rule satisfies the NO_X and SO_2 RACT requirements for electric generating units; (2) the deferral of the requirement to establish emission limits for condensable particulate matter (CPM) until January 1, 2011; (3) revisions to the criteria for analyzing the economic feasibility of RACT; and (4) the use of out-of-area emissions reductions to demonstrate

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these CAA and regulatory requirements for $PM_{2.5}$ attainment plans in more detail below.

V. Review of the SJV 2008 $PM_{2.5}$ Plan and the SJV Portion of the Revised 2007 State Strategy

We summarize our evaluation of the SJV $PM_{2.5}$ SIP's compliance with applicable CAA and EPA regulatory requirements below. Our detailed evaluation can be found in the TSD for this proposal which is available online at www.regulations.gov in docket number EPA–R09–OAR–2010–0516 or from the EPA contact listed at the beginning of this notice.

A. Emissions Inventories

1. Requirements for Emissions Inventories

CAA section 172(c)(3) requires a state to submit a plan provision that includes a ''comprehensive, accurate, current inventory of actual emissions from all sources of the relevant pollutant.'' The $PM_{2.5}$ implementation rule requires a state to include direct $PM_{2.5}$ emissions and emissions of all $PM_{2.5}$ precursors in this inventory, even if it has determined that control of any of these precursors is not necessary for expeditious attainment. 40 CFR 51.1008(a)(1) and 72 FR 20586 at 20648. Direct $PM_{2.5}$ includes condensable particulate matter. 40 CFR 51.1000. $PM_{2.5}$ precursors are NO_X, SO_2, VOC, and ammonia. *Id.* The inventories should meet the data requirements of EPA's Consolidated Emissions Reporting Rule (codified at 40 CFR part 51 subpart A) and include any additional inventory information needed to support the SIP's attainment demonstration and (where applicable) RFP demonstration. 40 CFR 51.1008(a)(1) and (2).

Baseline emissions inventories are required for the attainment demonstration and for meeting RFP requirements. As determined on the date of designation, the base year for these inventories should be the most recent calendar year for which a complete inventory was required to be submitted to EPA. The emissions inventory for calendar year 2002 or other suitable year should be used attainment planning and RFP plans for areas initially designated nonattainment for the $PM_{2.5}$ NAAQS in 2005. 40 CFR 51.1008(b).

EPA has provided additional guidance for $PM_{2.5}$ emissions inventories in ''Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter NAAQS and Regional Haze Regulations,'' November 2005 (EPA–454/R–05–001).

2. Emissions Inventories in the SJV $PM_{2.5}$ SIP

The base year and future year baseline planning inventories for direct $PM_{2.5}$ and all $PM_{2.5}$ precursors for the SJV $PM_{2.5}$ nonattainment area together with additional documentation for the inventories are found in Appendix B of the 2008 $PM_{2.5}$ Plan. Both average winter day and average annual day inventories are provided for the Plan's base year of 2005 and each baseline year from 2009 to 2014. These base year and baseline inventories incorporate reductions from Federal, State, and District measures adopted prior to 2007. See 2008 $PM_{2.5}$ Plan, p. B–1 and 2007 State Strategy, Appendix A, p. 1. A winter inventory is provided because the majority of high $PM_{2.5}$ days in the SJV occur during the winter months between November and February. 2008 $PM_{2.5}$ Plan, Figures H–4 and H–5.

Both base year and baseline inventories use the most current version of California's mobile source emissions model, EMFAC2007, for estimating on-road motor vehicle emissions. EPA has approved this model for use in SIPs and transportation conformity analyses. 73 FR 3464 (January 18, 2008).

Table 1 is a summary of the average annual day inventories of direct $PM_{2.5}$ and $PM_{2.5}$ precursors for the base year of 2005. These inventories provide the basis for the control measure analysis and the RFP and attainment demonstrations in the 2008 $PM_{2.5}$ Plan.

As a starting point for the 2008 $PM_{2.5}$ Plan's inventories, the District used CARB's inventory for the year 2002. An example of this inventory and CARB's documentation for its inventories can be found in Appendices A and F, respectively, of the 2007 State Strategy. The 2002 inventory for the SJV was projected to 2005 and future years using CARB's California Emissions Forecasting System (CEFSv 1.06). See 2008 $PM_{2.5}$ Plan, p. B–1.

TABLE 1—SAN JOAQUIN VALLEY EMISSIONS INVENTORY SUMMARY FOR DIRECT $PM_{2.5}$ AND $PM_{2.5}$ PRECURSORS FOR THE 2005 BASE YEAR

[Tons per annual average day]

Emissions inventory category	Direct $PM_{2.5}$	NO_X	SO_2	VOC	Ammonia
	2005	2005	2005	2005	2005
Stationary Sources	13.3	80.1	20.4	121.5	19.8
Area Sources	51.5	13.5	0.9	140.7	355.9
On-Road Mobile Sources	12.1	327.9	2.6	94.8	6.2
Off-Road Mobile Sources	9.0	153.9	2.4	62.7	0
Total	86.0	575.4	26.4	419.8	382.0

RFP. These provisions are found in the $PM_{2.5}$ implementation rule and preamble at 72 FR 20586 at 20623–20628, 40 CFR 51.1002(c), 72 FR 20586, 20619–20620 and 20636, respectively. On May 13, 2010, EPA granted the petition with respect to the fourth issue. Letter, Gina McCarthy, EPA, to David Baron and Paul Cort, Earthjustice, May 13, 2010. On April 25, 2011, EPA granted the petition with respect to the first and third issues but denied the petition with respect to the second issue given that the deferral period for CPM emissions limits had already ended. Letter, Lisa P. Jackson, EPA, to Paul Cort, Earthjustice, April 25, 2011. EPA intends to publish a **Federal Register** notice that will announce the granting of the latter petition with respect to certain issues and to initiate a notice and comment process to consider proposed changes to the 2007 $PM_{2.5}$ implementation rule.

Neither the District nor the State relied on the first, third, or fourth of these provisions in preparing the 2008 $PM_{2.5}$ Plan or the 2007 State Strategy. The District has deferred some, but not all, CPM limits in its rules. This limited deferral does not affect the proposed approvals of the SJV $PM_{2.5}$ SIP's RACM/RACT and expeditious attainment demonstrations. EPA will evaluate any rule adopted or revised by the District after January 1, 2011 to assure that it appropriately addresses CPM.

3. Proposed Action on the Emissions Inventories

The inventories in the SJV $PM_{2.5}$ SIP are based on the most current and accurate information available to the State and District at the time the Plan was developed and submitted (including using the latest EPA-approved version of California's mobile source emissions model, EMFAC2007), address comprehensively all source categories in the SJV, and are consistent with EPA's inventory guidance. For these reasons, EPA is proposing to approve the 2005 base year emissions inventory in the SJV $PM_{2.5}$ SIP as meeting the requirements of CAA section 172(c)(3) and 40 CFR 51.1008(a)(1) and to find that the baseline inventories in the SJV $PM_{2.5}$ SIP provide an adequate basis for the RACM/RACT, RFP, and attainment demonstrations. We provide more detail on our review of the base year inventory as well as the projected year inventories in section II.A. of the TSD.

Since late 2007, California has experienced an economic recession that has greatly reduced current levels of economic activity in the State's construction and goods movement sectors. The recession has resulted in lowered projected future levels of activity in this sector. 2011 Progress Report, Appendix E. As a result, projected emissions levels from these categories are now substantially lower than those projected for 2008 and later in the Plan as submitted in 2008. At this time, California is addressing these recession impacts on future economic activity through adjustments to the baseline inventories for specific source categories. 2011 Progress Report, Appendix E. There are no recession-related adjustments to the 2005 base year inventory in the SJV 2008 $PM_{2.5}$ Plan.

CARB also made technical changes to the inventories for diesel trucks, buses, and certain categories of off-road mobile source engines as part of its December 2010 rulemaking amending the In-Use On-Road Truck and Bus Rule and In-Use Off-Road Engine Rule. *Id.* The State estimates that these changes collectively reduce the 2005 base year NO_X inventory in the SJV by approximately 6 percent and the $PM_{2.5}$ inventory by 5 percent.[13] These changes are small given the normal and unavoidable uncertainties in all emissions inventories and, therefore, do not change our basis for proposing to approve the base year inventory or to find the baseline inventories adequate for SIP planning purposes. We discuss the impact of these changes on the Plan's RFP and attainment demonstrations later in this notice.

We note that the State and District are currently working on revisions to the SJV $PM_{2.5}$ SIP to address the 2006 24-hour $PM_{2.5}$ standards. These revisions are due to EPA in December 2012 and will include the most current inventory information that is available.

B. Reasonably Available Control Measures/Reasonably Available Control Technology Demonstration and Adopted Control Strategy

1. Requirements for RACM/RACT

CAA section 172(c)(1) requires that each attainment plan ''provide for the implementation of all reasonably available control measures as expeditiously as practicable (including such reductions in emissions from existing sources in the area as may be obtained through the adoption, at a minimum, of reasonably available control technology), and shall provide for attainment of the national primary ambient air quality standards.'' EPA defines RACM as measures that a state finds are both reasonably available and contribute to attainment as expeditiously as practicable in its nonattainment area. Thus, what constitutes RACM/RACT in a $PM_{2.5}$ attainment plan is closely tied to that plan's expeditious attainment demonstration. 40 CFR 51.1010; 72 FR 20586 at 20612. States are required to evaluate RACM/RACT for direct $PM_{2.5}$ and all of its attainment plan precursors. 40 CFR 51.1002(c).

Consistent with subpart 1 of Part D of the CAA, EPA is requiring a combined approach to RACM and RACT for $PM_{2.5}$ attainment plans. Subpart 1, unlike subparts 2 and 4, does not identify specific source categories for which EPA must issue control technology documents or guidelines for what constitutes RACT, or identify specific source categories for state and EPA evaluation during attainment plan development. 72 FR 20586 at 20610. Rather, under subpart 1, EPA considers RACT to be part of an area's overall RACM obligation. Because of the variable nature of the $PM_{2.5}$ problem in different nonattainment areas, EPA determined not only that states should have flexibility with respect to RACT and RACM controls but also that in areas needing significant emission reductions to attain the standards, RACT/RACM controls on smaller sources may be necessary to reach attainment as expeditiously as practicable. 72 FR 20586 at 20612, 20615. Thus, under the $PM_{2.5}$ implementation rule, RACT and RACM are those reasonably available measures that contribute to attainment as expeditiously as practicable in the specific nonattainment area. 40 CFR 51.1010; 72 FR 20586 at 20612.

The $PM_{2.5}$ implementation rule requires that attainment plans include the list of measures a state considered and information sufficient to show that the state met all requirements for the determination of what constitutes RACM/RACT in its specific nonattainment area. 40 CFR 51.1010. In addition, the rule requires that the state, in determining whether a particular emissions reduction measure or set of measures must be adopted as RACM/RACT, consider the cumulative impact of implementing the available measures and to adopt as RACM/RACT any potential measures that are reasonably available considering technological and economic feasibility if, considered collectively, they would advance the attainment date by one year or more. *Id.* Any measures that are necessary to meet these requirements which are not already either federally promulgated, part of the state's SIP, or otherwise creditable in SIPs must be submitted in enforceable form as part of a state's attainment plan for the area. 72 FR 20586 at 20614.

A more comprehensive discussion of the RACM/RACT requirement for $PM_{2.5}$ attainment plans and EPA's guidance for it can be found in the $PM_{2.5}$ implementation rule preamble (72 FR 20586 at 20609–20633) and in section II.D. of the TSD.

2. RACM/RACT Demonstration in the SJV $PM_{2.5}$ SIP

For the 2008 $PM_{2.5}$ Plan and the 2007 State Strategy, the District, CARB, and the local agencies (through the SJV's eight metropolitan planning organizations (MPO)) each undertook a process to identify and evaluate potential reasonably available control measures that could contribute to expeditious attainment of the $PM_{2.5}$ standards in the SJV. These RACM/RACT analyses address control measures for sources of direct $PM_{2.5}$, NO_X and SO_2, which are the State's selected attainment plan precursors for the 1997 $PM_{2.5}$ standards in SJV (see section V.C.3 below). We describe each agency's efforts below.

[13] See attachment 1 to the letter, Lynn Terry, Deputy Executive Officer, CARB, to Elizabeth Adams, Deputy Director, Air Division, EPA Region 9, May 18, 2011 (CARB Progress Report supplement), in the docket for today's proposal.

a. District's RACM/RACT Analysis and Adopted Control Strategy

The District's RACM/RACT analysis, which focuses on stationary and area source controls, is described in Chapter 6 and Appendix I of the 2008 $PM_{2.5}$ Plan. To identify potential RACM/RACT, the District reviewed potential measures from a number of sources including EPA's list of potential control measures in the preamble to the $PM_{2.5}$ implementation rule (72 FR 20586 at 20621), measures in other nonattainment areas' plans, and measures suggested by the public during development of the 2008 $PM_{2.5}$ Plan. 2008 $PM_{2.5}$ Plan, pp. 6–6 to 6–8. The identified potential measures, as well as existing District measures, are described by emissions inventory category in Appendix I. These measures address emissions of direct $PM_{2.5}$, NO_X and SO_2. See 2008 $PM_{2.5}$ Plan, p. 6–8 and Appendix I. Potential RACM/RACT controls for VOC or ammonia were not specifically identified or evaluated.

From the set of identified potential controls for $PM_{2.5}$, NO_X, and SO_2, the District selected measures for adoption and implementation based on the technological feasibility and practicality of emissions controls, the potential magnitude and timing of emissions reductions, cost effectiveness, and other acceptable criteria. 2008 $PM_{2.5}$ Plan, p. 6–7.

After completing its RACM/RACT analysis for stationary and area sources under its jurisdiction, the District developed its ''Stationary Source Regulatory Implementation Schedule'' (2008 $PM_{2.5}$ Plan, Table 6–2) which gives the schedule for regulatory adoption and implementation of the selected RACM/RACT measures. The District also identified a number of source categories for which feasibility studies would be undertaken to refine the inventory and evaluate potential controls. These categories and the schedule for studying them are listed in Table 6–4 of the 2008 $PM_{2.5}$ Plan.

In the five years prior to the adoption of the 2008 $PM_{2.5}$ Plan, the District developed and implemented comprehensive plans to address attainment of the PM_{10} standards (2003 PM_{10} Plan, approved 69 FR 30005 (May 26, 2004)), the 1-hour ozone standards (2004 Extreme Ozone Attainment Plan, approved 75 FR 10420 (March 8, 2010)), and the 8-hour ozone standards (2007 Ozone Plan, submitted November 16, 2007). These plans for other NAAQS have resulted in the adoption by the District of many new rules and revisions to existing rules for stationary and area sources. For the most part, the District's current rules are equivalent to or more stringent than those developed by other air districts. In addition to these stationary and area source measures, the District has also adopted an indirect source review rule, Rule 9510, to address increased indirect emissions from new industrial, commercial and residential developments. See SJVUAPCD Rule 9510 ''Indirect Source Review,'' adopted December 15, 2005, approved 76 FR 26609 (May 9, 2011). The District also operates incentive grant programs to accelerate turnover of existing stationary and mobile engines to cleaner units. See 2008 $PM_{2.5}$ Plan, Section 6.5 and SJV $PM_{2.5}$ Progress Report, section 2.3.

For the 2008 $PM_{2.5}$ Plan, the District identified and committed to adopt and implement 13 new control measures for direct $PM_{2.5}$, NO_X, and/or SO_X. In Table 2 below, we list these measures, which mostly involve strengthening existing District rules, their anticipated and actual adoption dates and their current SIP approval status. As can be seen from Table 2, the District has met its intended rulemaking schedule with one exception and has only two rule actions remaining (S–COM–6 and S–COM–10). Table 6–3 in the Plan shows estimated emissions reductions from each rule for each year from 2009 to 2014; however, the District's commitment is only to the aggregate emissions reductions of direct $PM_{2.5}$, NO_X, and SO_2 in each year. 2008 $PM_{2.5}$ Plan, p. 6–9 and SJVUAPCD Governing Board Resolution, p. 5. We show these commitments in Table 3 below. In its SJV $PM_{2.5}$ Progress Report, the District updated the reduction estimates to reflect the rules as adopted. See Table 4 below.

TABLE 2—SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT 2008 $PM_{2.5}$ PLAN SPECIFIC RULE COMMITMENTS

Measure No.	District rule	Expected adoption date	Actual adoption date	Current SIP approval status
S–AGR–1	4103—Open Burning	2nd Q—2010	April 2010	Proposed approval signed: June 29, 2011.
S–COM–1	4320—Advanced Emissions Reductions for Boilers, Steam Generators and Process Heaters (> 5 MMBtu/hr).	3rd Q—2008	October 2008	Approved. 75 FR 1715 (January 13, 2010).
S–COM–2	4307—Boilers, Steam Generators and Process Heaters (2 to 5 MMBtu/hr).	3rd Q—2008	October 2008	Approved. 76 FR 5276 (January 31, 2011).
S–COM–3	4308—Boilers, Steam Generators and Process Heaters (0.075 to < 2 MM Btu/hr).	4th Q—2009	December 2009	Approved. 76 FR 16696 (March 25, 2011).
S–COM–5	4703—Stationary Gas Turbines	3rd Q—2007	September 2007	Approved. 74 FR 53888 (October 21, 2009).
S–COM–6	Rule 4702—Reciprocating Internal Combustion Engines.	4th Q—2010	Anticipated August 2011.	Most current revision of rule approved: January 18, 2007 at 73 FR 1819 (January 10, 2008).
S–COM–7	4354—Glass Melting Furnaces	3rd Q—2008		76 FR 37044, June 24, 2011.
S–COM–9	4902—Residential Water Heaters	1st Q—2009	March 2009	75 FR 24408 (May 5, 2010).
S–COM–10	4905—Natural Gas-Fired, Fan Type Residential Central Furnaces.	4nd Q—2014	TBD	Most current revision of rule approved: October 20, 2005 at 72 FR 29886 (May 30, 2007).
S–COM–14	4901—Wood Burning Fireplaces and Wood Burning Heaters.	3rd Q—2009	October 2008	Approved. 74 FR 57907 (November 10, 2009).
S–IND–9	4692—Commercial Charbroiling	2nd Q—2009	September 2009	Proposed approval signed: June 9, 2011
S–IND–21	4311—Flares	2nd Q—2009	June 2009	Action pending.

TABLE 2—SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT 2008 $PM_{2.5}$ PLAN SPECIFIC RULE COMMITMENTS—Continued

Measure No.	District rule	Expected adoption date	Actual adoption date	Current SIP approval status
M–TRAN–1	9410—Employer Based Trip Reduction Program.	4th Q—2009	December 2009	Action pending.

Source: 2008 $PM_{2.5}$ Plan, Table 6–2, revised June 17, 2010. Anticipated adoption date for Rule 4702, SJVAPCD, District Highlights, June 16, 2011 Actions by the District Governing Board.

TABLE 3—SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT 2008 $PM_{2.5}$ PLAN AGGREGATE EMISSIONS REDUCTIONS COMMITMENTS

[Tons per average annual day]

	2009	2010	2011	2012	2013	2014
NO_X	2.43	3.24	4.26	8.56	8.82	8.97
Direct $PM_{2.5}$	1.60	2.96	4.46	6.69	6.70	6.70
SO_2	0.06	0.11	0.16	0.92	0.92	0.92

TABLE 4—SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT AGGREGATE CREDITABLE EMISSIONS REDUCTIONS FROM ADOPTED RULES

[Tons per average annual day]

	2009	2012	2014
NO_X	2.4	10.2	11.4
Direct $PM_{2.5}$	1.6	4.3	4.3
SO_2	0.1	3.5	3.6

Source: SJVUAPCD, "Table 3–1 Adjusted $PM_{2.5}$ Emission Inventory; Table 3–2 Adjusted NO_X Emission Inventory; and Table 3–3 Adjusted SO_X Emission Inventory," March 2011 and TSD, Table F–4.

b. CARB's RACM Analysis and Adopted Control Strategy

Source categories for which CARB has primary responsibility for reducing emissions in California include most new and existing on- and off-road engines and vehicles, motor vehicle fuels, and consumer products.

Given the need for significant emissions reductions from mobile and area sources to meet the NAAQS in California nonattainment areas, the State of California has been a leader in the development of stringent control measures for on-road and off-road mobile sources and the fuels that power them. California has unique authority under CAA section 209 (subject to a waiver by EPA) to adopt and implement new emission standards for many categories of on-road vehicles and engines and new and in-use off-road vehicles and engines.

California's emissions standards have reduced new car emissions by 99 percent and new truck emissions by 90 percent from uncontrolled levels. 2007 State Strategy, p. 37. The State is also working with EPA on goods movement activities and is implementing programs to reduce emissions from ship auxiliary engines, locomotives, harbor craft and new cargo handling equipment. In addition, the State has standards for lawn and garden equipment, recreational vehicles and boats, and other off-road sources that require newly manufactured equipment to be 80–98 percent cleaner than their uncontrolled counterparts. Id. Finally, the State has adopted many measures that focus on achieving reductions from in-use mobile sources that include more stringent inspection and maintenance requirements in California's Smog Check program, truck and bus idling restrictions, and various incentive programs. Appendix A of the TSD includes a list of all measures adopted by CARB between 1990 and the beginning of 2007. These measures, reductions from which are reflected in the Plan's baseline inventories, fall into two categories: Measures that are subject to a waiver of Federal pre-emption under CAA section 209 (section 209 waiver measures or waiver measures) and those for which the State is not required to obtain a waiver (non-waiver measures). Emissions reductions from waiver measures are fully creditable in attainment and RFP demonstrations and may be used to meet other CAA requirements, such as contingency measures. See section II.F.4.a.i. of the TSD and EPA's proposed approval of the SJV 1-Hour Ozone Plan at 74 FR 33933, 33938 (July 14, 2009) and final approval at 75 FR 10420 (March 8, 2010). Generally, the State's baseline non-waiver measures have been approved by EPA into the SIP and are fully creditable for meeting CAA requirements. See TSD Appendix A.

CARB developed its proposed 2007 State Strategy after an extensive public consultation process to identify potential SIP measures. This process is described in the 2008 $PM_{2.5}$ Plan at p. 7–11.[14] Through this process, CARB identified and has committed to propose 15 new defined measures. These measures focus on cleaning up the in-use fleet as well as increasing the stringency of emissions standards for a number of engine categories, fuels, and consumer products. They build on CARB's already comprehensive program described above that addresses emissions from all types of mobile sources through both regulations and incentive programs. See Appendix A of the TSD. Table 5 lists the defined measures in the 2007 State Strategy that contribute to attainment of the $PM_{2.5}$ standards in the SJV and their current adoption and approval status. Table 6

[14] More information on this public process including presentations from the workshops and symposium that proceeded adoption of the 2007 State Strategy can be found at *http://www.arb.ca.gov/planning/sip/2007sip/2007sip.htm.*

provides the State's current estimate of the emissions reductions in the SJV from these measures.

the emissions reductions in the SJV from these measures.

TABLE 5—2007 STATE STRATEGY DEFINED MEASURES SCHEDULE FOR CONSIDERATION AND CURRENT STATUS

State measures	Expected action year	Current status
Defined Measures in 2007 State Strategy		
Smog Check Improvements	2007–2009	Elements approved 75 FR 38023 (July 1, 2010).[15]
Expanded Vehicle Retirement (AB 118)	2007	Adopted by CARB, June 2009; by BAR, September 2010.
Modification to Reformulated Gasoline Program	2007	Approved, 75 FR 26653 (May 12, 2010).
Cleaner In-Use Heavy Duty Trucks	2008	Proposed approval signed: June 29, 2011.
Accelerated Introduction of Cleaner Locomotives	2008	Prop 1B bond funds awarded to upgrade line-haul locomotive engines not already accounted for by enforceable agreements with the railroads. Those cleaner line-hauls will begin operation by 2012.
Cleaner In-Use Off-Road Engines	2007, 2010	Waiver action pending.
Cleaner In-Use Agricultural Equipment	2009	Incentive program in progress. No credit taken.
New Emissions Standards for Recreational Boats	2013	Partial adoption, July 2008, Additional action expected 2013.

Source: 2009 State Strategy Update, p.4 and 2011 Progress Report, Table 1. Additional information from *http://www.ca.arb.gov.* Only defined measures with direct $PM_{2.5}$ or NO_X reductions in the SJV are shown here.

TABLE 6—EXPECTED EMISSIONS REDUCTIONS FROM DEFINED MEASURES IN THE 2011 PROGRESS REPORT FOR THE SAN JOAQUIN VALLEY

[Tons per day 2014]

State measure	Direct $PM_{2.5}$	NO_X
Smog Check Improvements (BAR)	0.1	0.7
Expanded Vehicle Retirement	.....	.....
Cleaner In-Use Heavy-Duty Trucks	1.7	1.1
Accelerated Intro. of Cleaner Line-Haul Locomotives	0.0	0.0
Cleaner In-Use Off-Road Equipment (> 25 hp)	0.0	0.3

Source: 2011 Progress Report, p. 18. Only defined measures with direct $PM_{2.5}$ or NO_X reductions in the SJV are shown here.

In addition to the State's commitment to propose defined new measures, the 2007 State Strategy includes an enforceable commitment for emissions reductions sufficient, in combination with existing measures and the District's commitments, to attain the $PM_{2.5}$ NAAQS in the San Joaquin Valley by the requested attainment date of April 5, 2015. For the SJV, these emissions reductions commitments were to achieve 5 tpd of direct $PM_{2.5}$ and 76 tpd of NO_X in the SJV by the attainment year of 2014. See 2007 State Strategy, p. 63 and CARB Resolution 07–28, Attachment B, p. 6. The nature of this commitment is described in the State Strategy as follows:

The total emission reductions from the new measures necessary to attain the federal standards are an enforceable State commitment in the SIP. While the proposed State Strategy includes estimates of the emission reductions from each of the individual new measures, it is important to note that the commitment of the State Strategy is to achieve the total emission reductions necessary to attain the federal standards, which would be the aggregate of all existing and proposed new measures combined. Therefore, if a particular measure does not get its expected emission reductions, the State still commits to achieving the total aggregate emission reductions, whether this is realized through additional reductions from the new measures or from alternative control measures or incentive programs. If actual emission decreases occur in any air basin for which emission reduction commitments have been made that are greater than the projected emissions reductions from the adopted measures in the State Strategy, the actual emission decreases may be counted toward meeting ARB's total emission reduction commitments.

CARB Resolution 07–28 (September 27, 2007), Appendix B, p. 3.

c. The Local Jurisdictions' RACM Analysis

The local jurisdictions' RACM analysis was conducted by the SJV's eight MPOs.[16] This analysis focused on potential NO_X emissions reductions from transportation control measures (TCM). TCMs are, in general, measures designed to reduce emissions from on-road motor vehicles through reductions in vehicle miles traveled or traffic congestion. The results of the analysis are described in Chapter 7 (pp. 7–8 to 7–11) of the 2008 $PM_{2.5}$ Plan. It addressed NO_X but not direct $PM_{2.5}$, SO_2, or VOC.

For the 2008 $PM_{2.5}$ Plan, the SJV MPOs reviewed and updated the RACM analysis they performed for the SJV 2007 [8-hour] Ozone Plan, based on EPA's guidance in the preamble to the $PM_{2.5}$ implementation rule. For the 2007 Ozone Plan, they developed a local RACM strategy after an extensive

[15] California Assembly Bill 2289, passed in 2010, requires the Bureau of Automotive Repair to direct older vehicles to high performing auto technicians and test stations for inspection and certification effective 2013. Reductions shown for the SmogCheck program in the 2011 Progress Report do not include reductions from AB 2289 improvements. CARB Progress Report supplement, attachment 5.

[16] These eight MPOs represent the eight counties in the San Joaquin Valley nonattainment area: The San Joaquin Council of Governments, the Stanislaus Council of Governments, the Merced County Association of Governments, the Madera County Transportation Commission, the Council of Fresno County Governments, Kings County Association of Governments, the Tulare County Association of Governments, and the Kern Council of Governments.

evaluation of potential RACM for advancing the 8-hour ozone standard attainment date. After reviewing the 2007 Ozone Plan's local RACM analysis, EPA's suggested RACM, recently developed plans from other areas, and the potential emission reductions available from the implementation of TCMs in the SJV, the MPOs determined that there were no additional local RACM for NO_X, beyond those measures already adopted, that could advance attainment of the $PM_{2.5}$ NAAQS in the SJV. 2008 $PM_{2.5}$ Plan, p. 7–11.

3. Proposed Actions on RACM/RACT Demonstration and Adopted Control Strategy

We propose to find that there are, at this time, no additional reasonably available measures that individually or collectively would advance attainment of the $PM_{2.5}$ NAAQS in the San Joaquin Valley nonattainment area by one year or more. This proposal is based on our review of potential RACM/RACT in the 2008 $PM_{2.5}$ Plan and updated and revised 2007 State Strategy; the District's and State's adopted control strategies, including their commitments to adopt measures and their progress in meeting those commitments; and our proposed concurrence (discussed below in section V.C.3.) with the State's determination that SO_X and NO_X are and VOC and ammonia are not attainment plan precursors per 40 CFR 51.1002(c). Therefore, we propose to find that the 2008 $PM_{2.5}$ Plan, together with the updated and revised 2007 State Strategy, provides for the implementation of RACM/RACT as required by CAA section 172(c)(1) and 40 CFR 51.1010.

We are also proposing to approve, with the exception of the commitment to revise Rule 4702, ''Reciprocating Internal Combustion Engines,'' the District's commitments to adopt and implement specific control measures on the schedule identified in Table 6–2 (as amended June 15, 2010) in the 2008 $PM_{2.5}$ Plan, to the extent that these commitments have not yet been fulfilled, and to achieve specific aggregate emissions reductions of direct $PM_{2.5}$, NO_X and SO_X by specific years as given in Table 6–3 of the 2008 $PM_{2.5}$ Plan. The District had committed to revise Rule 4702 by December 2010, but now expects adoption to occur in August 2011. Because EPA is subject to a consent decree requiring that we approve or disapprove all elements of the SJV 2008 $PM_{2.5}$ Plan by no later than September 30, 2011,[17] we are proposing to disapprove this element of the Plan; however, we will not need to finalize this proposed disapproval if the District adopts revisions to the rule that fulfill the commitment by the time of EPA's final action on the Plan. We note that the District's decision to include the commitment to revise this rule in its Plan was discretionary and that the Plan does not specifically rely upon emission reductions from this particular rule. Adoption of revisions to Rule 4702 is now expected in August 2011.

We are also proposing to approve CARB's commitments to propose certain defined measures, as given in Table B–1 in 2011 Progress Report, Appendix B and to achieve the total aggregate emissions reductions necessary to attain the 1997 $PM_{2.5}$ standards in the SJV, whether these reductions are realized from the new measures, alternative control measures, incentive programs, or other actual emissions decreases. See CARB Resolution 07–28 (September 27, 2007), Appendix B, p. 3. This commitment is to aggregate emissions reductions of 5 tpd direct $PM_{2.5}$ and 76 tpd NO_X in the San Joaquin Valley by 2014 as given on page 21 of the 2009 State Strategy Status Report.

C. Attainment Demonstration

1. Requirements for Attainment Demonstrations

CAA section 172 requires a State to submit a plan for each of its nonattainment areas that demonstrates attainment of the applicable ambient air quality standard as expeditiously as practicable but no later than the specified attainment date. Under the $PM_{2.5}$ implementation rule, this demonstration should consist of four parts:

(1) Technical analyses that locate, identify, and quantify sources of emissions that are contributing to violations of the $PM_{2.5}$ NAAQS;

(2) Analyses of future year emissions reductions and air quality improvement resulting from already-adopted national, state, and local programs and from potential new state and local measures to meet the RACM/RACT and RFP requirements in the area;

(3) Adopted emissions reduction measures with schedules for implementation; and

(4) Contingency measures required under section 172(c)(9) of the CAA.

See 40 CFR 51.1007; 72 FR 20586 at 20605.

The requirements for the first two parts are described in the sections on emissions inventories and RACM/RACT above (sections V.A. and V.B.) and in the sections on air quality modeling, $PM_{2.5}$ precursors, extension of the attainment date, and attainment demonstration that follow immediately below. Requirements for the third and fourth parts are described in the sections on the control strategy and contingency measures (sections V.B. and V.F.), respectively.

2. Air Quality Modeling in the SJV 2008 $PM_{2.5}$ Plan

The $PM_{2.5}$ implementation rule requires states to submit an attainment demonstration based on modeling results. Specifically, 40 CFR 51.1007(a) states:

> For any area designated as nonattainment for the $PM_{2.5}$ NAAQS, the State must submit an attainment demonstration showing that the area will attain the annual and 24-hour standards as expeditiously as practicable. The demonstration must meet the requirements of § 51.112 and Appendix W of this part and must include inventory data, modeling results, and emission reduction analyses on which the State has based its projected attainment date. The attainment date justified by the demonstration must be consistent with the requirements of § 51.1004(a). The modeled strategies must be consistent with requirements in § 51.1009 for RFP and in § 51.1010 for RACT and RACM. The attainment demonstration and supporting air quality modeling should be consistent with EPA's $PM_{2.5}$ modeling guidance.[18]

See also, 72 FR 20586 at 20665.

Air quality modeling is used to establish emissions attainment targets, the combination of emissions of $PM_{2.5}$ and $PM_{2.5}$ precursors that the area can accommodate without exceeding the NAAQS, and to assess whether the proposed control strategy will result in attainment of the NAAQS. Air quality modeling is performed for a base year and compared to air quality monitoring data in order to evaluate model performance. Once the performance is determined to be acceptable, future year changes to the emissions inventory are simulated to determine the relationship between emissions reductions and changes in ambient air quality throughout the air basin. The procedures for modeling $PM_{2.5}$ as part of an attainment SIP are contained in EPA's ''Guidance on the Use of Models

[17] *See Association of Irritated Residents* v. *U.S. EPA,* Case No. 3:10–CV–03051–WHA, Consent Decree dated January 12, 2011.

[18] EPA's modeling guidance can be found in ''Guideline on Air Quality Models'' in 40 CFR part 51, Appendix W and ''Guidance on the Use of Models and Other Analyses for Demonstrating Attainment of Air Quality Goals for the 8–Hour Ozone and $PM_{2.5}$ NAAQS and Regional Haze'', EPA–454/B–07–002, April 2007.

and Other Analyses for Demonstrating Attainment of Air Quality Goals for the 8–Hour Ozone and $PM_{2.5}$ NAAQS and Regional Haze'' (Guidance).

The air quality modeling that underpins the SJV 2008 $PM_{2.5}$ Plan is described in Chapter 3 and documented in Appendices E–H and the several additional appendices submitted with the Plan in 2008. CARB supplemented this documentation in 2011. See Letter, John DaMassa, CARB to Frances Wicher, EPA, January 28, 2011 (CARB modeling supplement).

We provide a brief description of the modeling and a summary of our evaluation of it below. More detailed information about the modeling and our evaluation are available in section II.D. of the TSD.

CARB and the District jointly performed the air quality modeling for the 2008 $PM_{2.5}$ Plan. Significant time, money, and effort by CARB, the District, and many others have gone into preparing the air quality modeling to support the attainment demonstration in the 2008 $PM_{2.5}$ Plan for the San Joaquin Valley, including support for the multi-million dollar California Regional Particulate Air Quality Study (CRPAQS). CRPAQS is a cooperative effort involving California cities, State and local and air pollution control agencies, federal agencies, industry groups, academics, and contractors. Field data for CRPAQS were collected during the 14 months from December 1999 through February 2001 and included short-term, intensive monitoring during the fall and winter. The study's design placed emphasis on collecting sufficient continuous air quality and meteorological data, both at the surface and aloft, to support receptor and photochemical modeling. Data and modeling results based on the CRPAQS study provided solid underpinnings for the 2008 $PM_{2.5}$ Plan.

The 2008 $PM_{2.5}$ Plan uses multiple modeling analyses to demonstrate attainment of the $PM_{2.5}$ NAAQS in the SJV. The narrative mainly relies on several variants of an approach based on receptor modeling for the annual $PM_{2.5}$ NAAQS, but photochemical modeling is also included. The receptor modeling approach begins with Chemical Mass Balance (CMB) modeling, which distinguishes the ambient $PM_{2.5}$ contributions of several broad emissions source categories based on how they match the chemical species components of $PM_{2.5}$ measurements. The CMB results are then refined with emissions inventory data to distinguish additional source categories; an area of influence analysis to better reflect particular sources affecting a monitor; and information from past photochemical modeling to assess how secondarily-formed $PM_{2.5}$ will respond to changes in precursor emissions. Several variants of this approach were used with CMB results from different locations and different base case years. This modeling only addresses the annual $PM_{2.5}$ standard.

The Plan also includes an attainment demonstration using photochemical modeling with the Community Multiscale Air Quality (CMAQ) model. This modeling incorporates data collected during CRPAQS and addresses both the annual and 24-hour $PM_{2.5}$ standards. Under EPA modeling guidance, this is considered the main attainment demonstration, with the receptor modeling as a corroborating analysis. Guidance, p. 4 and p. 103.

EPA recommends that States prepare modeling protocols as part of their modeled attainment demonstrations. Guidance, p. 133. The Guidance at pp. 133–134 describes the topics to be addressed in this modeling protocol. A modeling protocol should detail and formalize the procedures for conducting all phases of the modeling analysis, such as describing the background and objectives, creating a schedule and organizational structure, developing the input data, conducting model performance evaluations, interpreting modeling results, describing procedures for using the model to demonstrate whether proposed strategies are sufficient to attain the NAAQS, and producing documentation to be submitted for EPA Regional Office review and approval prior to actual modeling.

The 2008 $PM_{2.5}$ Plan's modeling protocol is contained in Appendix F and includes descriptions of both the receptor modeling approaches and the photochemical modeling. Additional description of the photochemical modeling is covered in Appendix G, and also in the additional appendix entitled ''Regional Model Performance Analysis'' (RMPA). The protocol covers all of the topics recommended in the Guidance, except that it does not identify how modeling and other analyses will be archived or made available to the public. See Guidance, p. 117.

The 2008 $PM_{2.5}$ Plan's air quality model performance is discussed in the RMPA, starting at p. 6, and also more extensively in the CARB modeling supplement. In the Plan as submitted in 2008, modeling performance was not sufficiently documented for EPA to fully evaluate it, but CARB's modeling supplement provides an extensive statistical and graphical analysis demonstrating adequate model performance. The supplement included discussion of the evaluation results and also of sensitivity or diagnostic testing, both of which are necessary for confidence in the model and the performance statistics presented. The testing described by CARB provides assurance that the model is adequately simulating the physical and chemical processes leading to $PM_{2.5}$ in the atmosphere and that the model responds in a scientifically reasonable way to emissions changes.

The Plan as submitted in 2008 provided insufficient documentation about the deviations from EPA's guidance on performing the Speciated Modeled Attainment Test (SMAT); again the CARB modeling supplement provides a reasonable rationale for the deviations, about which EPA's Office of Air Quality Planning and Standards was consulted. The Plan cites several factors as justifying such deviations (*e.g.,* the prevalence of ammonia, the dominance of ammonium nitrate, the effect of substantial controls on fugitive dust and direct carbon emissions (p. G–10 and p. 3–20)), and the CARB modeling supplement provides documentation on accounting for evaporation of the ammonium ion. The CARB modeling supplement also provides extensive documentation on the Relative Reduction Factors, which are the key results from the model for use in the attainment test, and the details of their calculation, which were not presented in the 2008 $PM_{2.5}$ Plan as originally submitted. EPA proposes to conclude that the attainment tests are adequate and consistent with EPA guidance.

In addition to a modeled attainment demonstration, which focuses on locations with an air quality monitor, EPA generally requires an unmonitored area analysis. This analysis is intended to ensure that a control strategy leads to reductions in $PM_{2.5}$ at other locations that have no monitor but that might have baseline (and future) ambient $PM_{2.5}$ levels exceeding the NAAQS. The unmonitored area analysis uses a combination of model output and ambient data to identify areas that might exceed the NAAQS if monitors were located there. The analysis should include, at a minimum, all counties designated nonattainment and the counties surrounding the nonattainment area. In order to examine unmonitored areas in all portions of the modeling domain, EPA recommends use of interpolated spatial fields of ambient data combined with gridded modeled outputs. Guidance, p. 29.

The section in the 2008 $PM_{2.5}$ Plan entitled ''Unmonitored peaks'' presents an abbreviated simple screening

analysis, consisting of a filled concentration contour plot (Figure 3 on p. G–20), and the observation that ''there are no areas with steep gradients that would result in higher design values than those measured at monitors.'' 2008 $PM_{2.5}$ Plan, p. G–15. This analysis departs significantly from the procedures recommended in the Guidance. However, the CARB modeling supplement documents a subsequent unmonitored area analysis that uses procedures recommended in the Guidance, including use of EPA's MATS software, and concludes that there are no unmonitored $PM_{2.5}$ peaks in the modeling domain that would violate the annual $PM_{2.5}$ NAAQS.

In summary, despite shortcomings in the documentation within the 2008 $PM_{2.5}$ Plan as submitted in 2008, the CARB modeling supplement enables EPA to conclude that the modeling supporting the Plan is sound. EPA proposes to approve the air quality modeling and to find that the modeling provides an adequate basis for the RACM/RACT, RFP, and attainment demonstrations in the Plan.

Effect of Inventory Changes on the Air Quality Modeling and Attainment Demonstrations

As discussed above in section V.A., CARB has recently updated the inventories for several mobile source categories for both the base and future years as well as revised the economic forecasts on which the future inventories were based. Relative to emissions in the Plan, the decreases in the base year 2005 emissions inventory due to the inventory updates are about 6 percent for NO_X and 5 percent for direct $PM_{2.5}$ emissions; the 2014 attainment year target emissions levels are unchanged. CARB Progress Report supplement, Attachment 1. EPA believes that these base year emission changes are small enough to be relatively minor in the context of the overall uncertainties in inventories and in photochemical modeling itself, and that the base case modeling remains valid. However, EPA assessed how these emission inventory changes would be expected to affect the attainment demonstration, which relies on emission reductions between the base year and the 2014 attainment target year. The emissions decreases in the base year tend to reduce the relative effect of controls, and to increase the projected $PM_{2.5}$ concentrations in the attainment year. (This is because the base year ambient concentration is now known to result from a slightly lower level of emissions. The model must therefore be slightly under-predicting, and so the predicted attainment year concentration should be slightly higher to compensate.) To assess the effect of the inventory changes on the attainment demonstration, EPA used model sensitivity results in the 2011 Progress Report supplement, Attachment 3. Taking into account the model's sensitivity to the inventory changes, EPA estimates that predicted ambient concentrations in the 2014 attainment year would be higher by only about 2.5 percent due to the emission inventory revisions, and that predicted design values for 2014 remain below the $PM_{2.5}$ NAAQS. EPA therefore proposes to find that the attainment demonstration remains valid, despite the emission inventory changes.

Pollutant Ratios Used To Determine $PM_{2.5}$ Equivalency

The 2011 Progress Report and the 2011 SJV Progress Report use a $PM_{2.5}$ equivalency metric in a number of tables and demonstrations. Two ratios are used:

- 9 tpd NO_X to 1 tpd direct $PM_{2.5}$
- 1 tpd SO_X to 1 tpd direct $PM_{2.5}$

The NO_X:$PM_{2.5}$ ratio is documented in supplemental information provided by CARB, entitled ''Precursor Effectiveness,'' which is available in the docket for this proposed rulemaking. In two separate runs of the CMAQ modeling application used for the attainment demonstration, CARB simulated an additional 10 percent reduction in modeling domain NO_X emissions and in direct $PM_{2.5}$ emissions. These $PM_{2.5}$ effects were divided by the emissions totals for each pollutant to give a concentration change per emissions change, or effectiveness, for each pollutant. This effectiveness shows the reduction of precursor emissions needed for a given concentration change, and so can be used to estimate an interpollutant equivalence ratio, the amount of one precursor that is equivalent to the other in terms of the effect on ambient concentrations of $PM_{2.5}$. The direct $PM_{2.5}$ effectiveness was divided by the NO_X effectiveness to arrive at a NO_X:$PM_{2.5}$ ratio for each monitor; the average of these is about 9. This method appears to be adequate for purposes of assessing the effect of area-wide emissions changes, such as are used in RFP, contingency measures, and conformity budgets, and EPA is proposing to allow its use here.[19]

The SO_X:$PM_{2.5}$ ratio is documented in supplemental information provided by the District which is available in the docket for this proposed rulemaking. See ''Atmospheric Interpollutant Equivalency between Direct Particulate Emissions and Secondary Particulate Formed from Gaseous Sulfur Oxide Emissions''; the spreadsheet ''Interpollutant Calculation''; and letter dated May 27, 2009 from David Warner, San Joaquin Valley Air Pollution Control District to Mr. Joseph Douglas, California Energy Commission, Attachment II, ''Interpollutant Offset Ratio Explanation.'' After reviewing this documentation, EPA does not agree with the method used to develop the ratio.

The approach used by the District to estimate inter-pollutant equivalency ratios rests on the incorrect assumption that ambient sensitivity to emissions reductions of a given precursor can be estimated as the ratio of concentration to emissions. This is the assumption of linear ''rollback'', and inherently cannot address the complexities of $PM_{2.5}$ formation chemistry, which is nonlinear. It is in contrast to the State's approach for the NO_X:$PM_{2.5}$ ratio which used photochemical modeling results to take into account such nonlinearity. EPA's evaluation of the SO_X:$PM_{2.5}$ approach is discussed in greater detail in section II.B.4. of the TSD.

EPA is proposing to not allow the use of this SO_X to $PM_{2.5}$ interpollutant trading ratio at this time to meet any CAA planning requirements for the 1997 $PM_{2.5}$ standards in the SJV. We note that the State had proposed the use of this ratio to meet only the CAA requirement for contingency measures. See section V.E. below.

[19] EPA is proposing to approve the use of this NO_X to $PM_{2.5}$ interpollutant trading ratio to meet CAA planning requirements for the 1997 $PM_{2.5}$ standards in the SJV. EPA is also proposing to approve the use of this ratio in transportation conformity determinations for the 2006 24-hour $PM_{2.5}$ NAAQS but only until such time as EPA finds adequate or approves budgets developed specifically for the 2006 standard. EPA is not proposing, at this time, to approve the use of this ratio in plans for future PM standards or in the District's new source review (NSR) permitting program.

The District recently submitted revisions to its NSR rule, Rule 2201, which require that interpollutant trading ratios used for purposes of satisfying $PM_{2.5}$ NSR offset requirements first be approved by EPA into the SIP. See Rule 2201 (April 21, 2011), section 4.13.3.2. The Rule 2201 submittal also states that the District intends to submit SJV-specific $PM_{2.5}$ interpollutant trading ratios for EPA's approval in a future SIP revision but will, in the interim, require project proponents to use the default ratios provided in the preamble to EPA's $PM_{2.5}$ NSR rule (73 FR 28321 at 28339 (May 16, 2008)), until alternative trading ratios are approved by EPA into the SIP. See SJVAPCD, Final Draft Staff Report, Proposed Amendments to Rule 2201 (New And Modified Stationary Source Review Rule), March 17, 2011, p. 4.

3. $PM_{2.5}$ Attainment Plan Precursors Addressed in the SJV 2008 $PM_{2.5}$ SIP

EPA recognizes NO_X, SO_2, VOC, and ammonia as the main precursor gases associated with the formation of secondary $PM_{2.5}$ in the ambient air. These gas-phase $PM_{2.5}$ precursors undergo chemical reactions in the atmosphere to form secondary particulate matter. Formation of secondary $PM_{2.5}$ depends on numerous factors including the concentrations of precursors; the concentrations of other gaseous reactive species; atmospheric conditions including solar radiation, temperature, and relative humidity; and the interactions of precursors with preexisting particles and with cloud or fog droplets. 72 FR 20586 at 20589.

As discussed previously, a state must submit emissions inventories for each of the four $PM_{2.5}$ precursor pollutants. 72 FR 20586 at 20589 and 40 CFR 51.1008(a)(1). However, the overall contribution of different precursors to $PM_{2.5}$ formation and the effectiveness of alternative potential control measures will vary by area. Thus, the precursors that a state should regulate to attain the $PM_{2.5}$ NAAQS can also vary to some extent from area to area. 72 FR 20586 at 20589.

In the $PM_{2.5}$ implementation rule, EPA did not require that all potential $PM_{2.5}$ precursors must be controlled in each specific nonattainment area. See 72 FR 20586 at 20589. Instead, for reasons explained in the rule's preamble, a state must evaluate control measures for sources of SO_2 in addition to sources of direct $PM_{2.5}$ in all nonattainment areas. 40 CFR 51.1002(c) and (c)(1). A state must also evaluate control measures for sources of NO_X unless the state and/or EPA determine that control of NO_X emissions would not significantly reduce $PM_{2.5}$ concentrations in the specific nonattainment area. 40 CFR 51.1002(c)(2). In contrast, EPA has determined in the $PM_{2.5}$ implementation rule that a state does not need to address controls for sources of VOC and ammonia unless the state and/or EPA make a technical demonstration that such controls would significantly contribute to reducing $PM_{2.5}$ concentrations in the specific nonattainment area at issue. 40 CFR 51.1002(c)(3) and (4). Such a demonstration is required ''if the administrative record related to development of its SIP shows that the presumption is not technically justified for that area.'' 40 CFR 51.1002(c)(5).

''Significantly contributes'' in this context means that a significant reduction in emissions of the precursor from sources in the area would be projected to provide a significant reduction in $PM_{2.5}$ concentrations in the area. 72 FR 20586 at 20590. Although EPA did not establish a quantitative test for determining what constitutes a significant change, EPA noted that even relatively small reductions in $PM_{2.5}$ levels are estimated to result in worthwhile public health benefits. *Id.*

EPA further explained that a technical demonstration to reverse the presumption for NO_X, VOC, or ammonia in any area could consider the emissions inventory, speciation data, modeling information, or other special studies such as monitoring of additional compounds, receptor modeling, or special monitoring studies. 72 FR 20586 at 20596–20597. These factors could indicate that the emissions or ambient concentration contributions of a precursor, or the sensitivity of ambient concentrations to changes in precursor emissions, differs for a specific nonattainment area from the presumption EPA established for that precursor in the $PM_{2.5}$ implementation rule.

The SJV 2008 $PM_{2.5}$ Plan does not explicitly identify the pollutants that have been selected as $PM_{2.5}$ attainment plan precursors as defined in 40 CFR 51.1000. The Plan addresses NO_X and SO_2 in the RFP and attainment demonstrations and in the District's RACM/RACT analysis, and thereby implicitly identifies NO_X and SO_2 as attainment plan precursors. The Plan also includes supporting documentation for the inclusion of NO_X as an attainment plan precursor and for the exclusion of ammonia. In our November 30, 2010 proposal, we noted that the Plan did not fully evaluate the impact of controlling VOC as a precursor for $PM_{2.5}$ attainment and contained conflicting information on whether controlling VOC, in addition to SO_2 and NO_X, may contribute significantly to reductions in ambient $PM_{2.5}$ levels in the SJV. In 2011, however, CARB provided additional technical information supporting its position that VOC should not be considered a $PM_{2.5}$ attainment plan precursor in the San Joaquin Valley. See letter, James Goldstene, CARB, to Frances Wicher, EPA, January 31, 2011, attachment 4 (CARB VOC supplement). We discuss below our evaluation of this additional technical information.

As mentioned above, ambient contribution and ambient sensitivity to emissions changes may both be considered in determining whether the presumption for an attainment plan precursor should be reversed. The 2008 $PM_{2.5}$ Plan contains numerous qualitative statements that San Joaquin Valley's ambient $PM_{2.5}$ levels are dominated by ammonium nitrate, and that NO_X reductions are more effective at reducing ambient $PM_{2.5}$ than reductions in the other precursors. Most of those statements are in Chapter 3 and Appendix F, and are based on excerpts of findings from the California Regional Particulate Air Quality Study (CRPAQS). Several of the cited CRPAQS documents are available at CARB's ''Central California Air Quality Studies'' Web site (at *http://www.arb.ca.gov/airways*).

For the 1997 annual and 24-hour $PM_{2.5}$ NAAQS, the 2008 $PM_{2.5}$ Plan contains some qualitative descriptions of precursor ambient contributions. For example, the 2008 $PM_{2.5}$ Plan states on p. 2–8 that annual concentrations are driven by wintertime concentrations and further, that the highest short term concentrations are driven by ammonium nitrate, as found in the CRPAQS study:

> For most of the sites within the SJV, 50–75% of the annual average $PM_{2.5}$ concentration could be attributed to a high $PM_{2.5}$ period occurring from November to January. At non-urban sites, the elevated $PM_{2.5}$ was driven by secondary [ammonium nitrate].[20]

There are also quantitative data in the Plan's Appendix G (p. G–21, Table 2) and, projected to 2014, in the Receptor Modeling Documentation (RMD). Ammonium nitrate for 2000 monitored data ranges from 24–36 percent of total $PM_{2.5}$, and if projected to 2014, ranges from 36–51 percent, confirming the importance of NO_X, one source of the nitrate in ammonium nitrate, as a precursor that significantly contributes to annual $PM_{2.5}$ levels in the SJV.

In addition to composition data, ambient sensitivity to emissions changes can also be a consideration in determining which pollutants should be regulated in the attainment plan for a specific area. For ammonium nitrate $PM_{2.5}$, which is formed from both ammonia and NO_X, a key issue is whether the control of either or both precursors would be effective at reducing ambient $PM_{2.5}$ concentrations. Among the findings cited in the 2008 $PM_{2.5}$ Plan that address this issue are that:

> Particulate [ammonium nitrate] concentrations are limited by the rate of [nitric acid] formation, rather than by the availability of [ammonia].

and

[20] Quote from ''Initial Data Analysis of Field Program Measurements,'' DRI Document No. 2497, July 29, 2005; Judith C. Chow, L.W. Antony Chen, Douglas H. Lowenthal, Prakash Doraiswamy, Kihong Park, Steven D. Kohl, Dana L. Trimble, John G. Watson, Desert Research Institute.

Comparisons of ammonia and nitric acid concentrations show that ammonia is far more abundant than nitric acid, which indicates that ammonium nitrate formation is limited by the availability of nitric acid, rather than ammonia * * *. This study's analyses suggest that reductions in NO_X emissions will be more effective in reducing secondary ammonium nitrate aerosol concentrations than reductions in ammonia emissions. Reductions in VOC emissions will reduce secondary organic aerosol concentrations and may reduce ammonium nitrate. * * * The results indicate ammonium nitrate formation is ultimately controlled by NO_X emission rates and the other species, including VOCs and background ozone, which control the rate of NO_X oxidation in winter, rather than by ammonia emissions.[21]

These findings are based on the relative abundance of ammonia relative to nitrate: There is so much ammonia present that significantly reducing its emissions would still leave ample ammonia to form ammonium nitrate. On the other hand, NO_X is scarce (relative to ammonia), so reducing it could reduce ammonium nitrate significantly.

Finally, sensitivity results from photochemical modeling were used in conjunction with the CMB results mentioned above. The 2014 RMD section on ''Review of control strategy effectiveness supported by CMAQ nitrate particulate evaluation'' shows the projected effect of a 50 percent reduction of NO_X emissions on $PM_{2.5}$ concentrations annually and in shorter seasonal episodes. For the annual concentration, the NO_X reduction resulted in a predicted 5 μg/m³ $PM_{2.5}$ reduction, while for the winter episode the NO_X reduction resulted in a predicted 28 μg/m³ $PM_{2.5}$ reduction. 2014 RMD, p. 80. A 50 percent reduction in ammonia emissions, on the other hand, predicted $PM_{2.5}$ reductions of only 0.1 μg/m³ on an annual basis and 0.3 μg/m³ during the winter episode. RMD, p. 81. When compared to the annual and 24-hour NAAQS of 15 and 65 μg/m³, respectively, the effect of NO_X reductions appears to be significant while the effect of ammonia reductions does not. Thus, the data and modeling results presented in the 2008 $PM_{2.5}$ Plan, as well as the results of the cited studies, support the inclusion of NO_X and the exclusion of ammonia as $PM_{2.5}$ attainment plan precursors, consistent with the EPA presumptions in the $PM_{2.5}$ implementation rule.

EPA's presumption in the $PM_{2.5}$ implementation rule is that VOC need not be an attainment plan precursor. 40 CFR 51.1002(c)(3). This presumptive policy for VOC is largely based on uncertainties regarding the role of VOC in secondary organic aerosol (SOA) formation and in photochemical reactions that lead to the formation of certain free radical compounds (such as the hydroxyl radical [OH]), which participate in the formation of nitrate $PM_{2.5}$. See 72 FR 20586 at 20593 (April 25, 2007). As explained in the preamble to the rule, this presumption may not be technically justified for a particular nonattainment area, i.e., where emissions of VOC significantly contribute to $PM_{2.5}$ concentrations in the specific nonattainment area at issue. 72 FR 20586 at 20590–93, 20596–97. States or EPA may conduct a technical demonstration to reverse the presumptive exclusion of VOC as a $PM_{2.5}$ attainment plan precursor based on the weight of evidence of available technical and scientific information. *Id.*

We note that because the SJV is designated and classified as extreme nonattainment for the 8-hour ozone standard, VOC emission sources in this area are already subject to specific control requirements under subpart 2 of title I, part D of the Act. Nevertheless, EPA examined the available evidence on the effect of VOC reductions on ambient $PM_{2.5}$ levels in the SJV, consistent with the $PM_{2.5}$ implementation rule.

The 2008 $PM_{2.5}$ Plan contains inconclusive information on whether VOC should be considered a $PM_{2.5}$ attainment plan precursor for the SJV nonattainment area. On the one hand, some information in the Plan indicates that VOC reductions may contribute to reduced ambient $PM_{2.5}$ levels in the area. Table 2 in Appendix G (p. G–21) gives an organic carbon range of 38–49 percent of the total $PM_{2.5}$ on an annual basis. This includes a secondary organic aerosol (SOA) contribution of 2–5 percent of total annual $PM_{2.5}$. RMD at 19. This SOA contribution to overall $PM_{2.5}$ levels appears to be non-negligible, although it may not necessarily be significant. The 2008 $PM_{2.5}$ Plan also states: ''Secondary organic aerosols (SOA) contribute to a significant fraction of $PM_{2.5}$. SOA is organic carbon particulate formed in the photochemical oxidation of anthropogenic and biogenic VOC precursor gases. Aromatic compounds are believed to be efficient SOA producers contributing to this secondary particulate.'' 2008 $PM_{2.5}$ Plan, p. 3–8. On a 24-hour episodic basis, the contribution of SOA could theoretically be higher than the annual 2–5 percent, but SOA is formed mainly in the summer and so tends to be lower for the winter episodes of most concern in the SJV, due to decreased photochemical activity when the SJV winter's fog and clouds partially block sunlight. The SOA contribution to 24-hour $PM_{2.5}$ is thus smaller than for annual $PM_{2.5}$. Finally, the RMD at page 82 contains sensitivity analyses for VOC, similar to the ones described above for NO_X and ammonia. The 2014 RMD concludes: ''Finding: VOC reduction is effective for the annual standard and the winter episode for reduction of total carbon secondary particulates.'' It is not clear whether this refers only to SOA or to all secondary particulates including ammonium nitrate. The various statements above indicate VOC reductions may contribute to reducing ambient $PM_{2.5}$ levels.

On the other hand, some statements in the Plan indicate VOC should not be considered a $PM_{2.5}$ attainment plan precursor. In response to comments on the VOC issue submitted during the District's public comment period, the Plan states that the ''modeling has shown that VOC reductions are not as effective in reducing secondary $PM_{2.5}$ as NO_X or SO_2 reductions'' and that ''[a]ll of the technical evaluations for CRPAQS and prior assessments of regional particulate models have indicated that NO_X is the dominant factor and VOC and ammonia are not.'' 2008 $PM_{2.5}$ Plan, pp. J–9 and p. J–19. These statements reflect the District's conclusion that VOC should not be considered an attainment plan precursor. This conclusion was also later explicitly stated by CARB. CARB VOC supplement. In addition, CARB later clarified that statements in the Receptor Modeling Document (cited above) were not intended to address the question of whether VOC should be a $PM_{2.5}$ attainment plan precursor, and that the methodology used in the RMD does not substitute for actual photochemical modeling performed by CARB. (Personal communication, Karen Magliano, CARB, January 26, 2011.) As noted above, EPA agrees that the CMAQ photochemical modeling is the primary basis for the Plan's attainment demonstration.

Given the later and more definitive statements against VOC as an attainment plan precursor, overall the evidence on SOA does not constitute a technical demonstration that VOC is a $PM_{2.5}$ attainment plan precursor in the San Joaquin Valley, and does not overcome the negative presumption for VOC as a $PM_{2.5}$ attainment plan precursor.

However, the Plan's inconsistency on VOC as an attainment plan precursor applies not just to the SOA just discussed, but also to the indirect role

[21] Quote from Lurmann, F. *et al.,* 2006, ''Processes Influencing Secondary Aerosol Formation in the San Joaquin Valley During Winter,'' Journal of the Air & Waste Management Association, (56): 1679–1693, cited at 2008 $PM_{2.5}$ Plan p. 3–10.

of VOC, which also requires a conclusion on its precursor status. VOC may be a $PM_{2.5}$ precursor not just via formation of SOA, but also via its participation in the oxidant chemistry that leads to nitrate formation, a necessary step in the formation of ammonium nitrate $PM_{2.5}$. As noted in the preamble to the $PM_{2.5}$ implementation rule at pp. 20592–20593, the lightest organic molecules can participate in atmospheric chemistry processes that result in the formation of ozone and certain free radical compounds (such as the hydroxyl radical [OH]) and these in turn participate in oxidation reactions to form secondary organic aerosols, sulfates, and nitrates. NO_X emissions must be oxidized to nitric acid before they form particulate ammonium nitrate. Two pathways for this oxidation to occur are (1) daytime oxidation by OH, which VOC radicals help create and which could be affected by VOC controls, and (2) nighttime oxidation by ozone, which might not be affected by VOC controls in the area.[22]

Some statements in the Plan seem to favor VOC as an attainment plan precursor in this indirect role. The discussion in the 2008 $PM_{2.5}$ Plan regarding ammonium nitrate (at p. 3–10, quoted above) also refers to VOC, which is identified as one of the controlling factors in NO_X oxidation (which leads to ammonium nitrate $PM_{2.5}$): ''Reductions in VOC emissions will reduce secondary organic aerosol concentrations and may reduce ammonium nitrate.'' The Plan also states: ''Relatively low non-methane organic compounds/nitrogen oxide ratios indicate the daytime photochemistry is VOC, sunlight, and background-ozone limited in winter.'' *Id.* Although these are only generic statements, if nitrate formation is VOC-limited under some circumstances, then VOC emissions reductions could lead to ambient $PM_{2.5}$ reductions. On the other hand, in this same section, the Plan states that ''entrainment of aerosol nitrate formed aloft at night may explain the spatial homogeneity of nitrate in the San Joaquin Valley''. *Id.* Since this nighttime pathway may not be VOC-limited, overall it is not clear whether VOC reductions would be effective for reducing $PM_{2.5}$.

Given the inconclusive statements about VOC in the Plan, EPA reviewed the results of several modeling and monitoring studies of $PM_{2.5}$ in the San Joaquin Valley, and previously proposed a technical demonstration that VOC should be a plan precursor. See 75 F 74518, 74530. Some of the study documents EPA reviewed are available on the ''Central California Air Quality Studies'' Web site (at *http://www.arb.ca.gov/airways*) and/or are cited in the Plan and are reports from contractors involved in CRPAQS. Others are papers from peer-reviewed journals and are analyses using CRPAQS data or data from the earlier 1995 Integrated Monitoring Study (IMS95 study). We found that four monitoring studies and six modeling studies were relevant to the VOC precursor issue. A list of these studies as well as further information on them and excerpts from them are provided in section II.E. of the TSD. The monitoring studies all contain evidence that the VOC pathway for nitrate creation is important at least some of the time but differ as to how important it is relative to other pathways such as the nighttime ozone pathway, and are not conclusive on the efficacy of VOC controls. As noted above, the study by Lurmann *et al.,* which is the most recent of the monitoring studies and which was quoted in the Plan, stated that the observed spatial homogeneity of ammonium nitrate could be explained by nighttime production aloft via the ozone pathway, followed by mixing down to the surface, as opposed to production during the day via the VOC pathway. As noted in the CARB VOC supplement, CARB technical staff involved in the CRPAQS work cite this study and agree with this conclusion.

Unlike the monitoring studies, most of the modeling studies explicitly assessed the relative effectiveness of precursor controls, simulating the effect of 50 percent reductions in NO_X, ammonia, and VOC. (One study does not explicitly address the VOC reductions, but states that background ozone flowing in from outside the nonattainment area is the most important oxidant, so that VOC controls in the SJV would have little effect.) The two earliest modeling studies are based on photochemical box modeling and differ on whether VOC controls would significantly affect $PM_{2.5}$. Three later studies use more sophisticated photochemical grid models and find VOC control to be effective, though generally less so than NO_X control. One study predicts VOC control to be about two-thirds as effective as NO_X control. The second study predicted VOC control to be effective, though only by a relatively small amount, at most 10 percent for a 50 percent reduction in VOC emissions, or only on certain days. The third grid modeling study predicts VOC control to give slightly more benefit than NO_X control. In our November 2010 proposal, EPA indicated that although the models, input data, and results differ among these studies, the studies indicated that control of VOC could significantly reduce $PM_{2.5}$ concentrations in the SJV.

In its VOC supplement, however, CARB provided additional interpretation of these same studies. CARB makes several points about the modeling studies that argue against VOC as an attainment plan precursor in the SJV, namely their unreasonableness for this assessment and the lack of benefits shown in some of them. On the first of these main points, CARB argues that the hypothetical 50 percent VOC reduction evaluated in the modeling studies is not a reasonable basis for assessing VOC as a plan precursor, for at least two reasons. Its first reason is that this amount of reductions may not be feasible, especially given the VOC reductions already undertaken as part of other plans, such as the ozone plan for the SJV area. EPA agrees that reasonable assumptions are important for an attainment plan precursor technical demonstration; however, without an assessment from the State of the feasibility of a 50 percent VOC reduction, the model results cannot be dismissed on that basis. Indeed, an assessment of the feasible degree of VOC control in a RACM/RACT analysis would be required if VOC were considered an attainment plan precursor.[23]

The second reason offered in the CARB VOC supplement for why the modeled 50 VOC percent reduction may not be a reasonable basis for evaluation of VOC as an attainment plan precursor is that it considers VOC in isolation from the other $PM_{2.5}$ precursors. CARB argues that because precursors interact in complex ways in the atmosphere, the expected effect of VOC controls should be evaluated in the context of the expected emission levels of the other precursors in the attainment demonstration. In particular, CARB notes that the existing NO_X control program will provide substantial NO_X emission reductions, and this will affect the benefit of VOC controls. Thus, it argues that while the modeling studies' VOC reduction results may be technically correct in themselves, they do not translate directly into measurable reductions in ambient $PM_{2.5}$ concentrations per ton of VOC, nor do they support a need for additional VOC controls in the $PM_{2.5}$ control strategy.

[22] Lurmann, F. *et al.,* 2006, *op cit.,* p. 1688.

[23] See 72 FR 20586 at 20591 (''Assessments of which source categories are more cost effective or technically feasible to control should be part of the later RACT and RACM assessment, to occur after the basic assessment of which precursors are to be regulated is completed.'').

EPA agrees that the studies highlight a need to consider multiple precursor effects at once, in the context of what is needed for attainment in the target year, and that it makes sense to examine precursor interactions in assessing plan precursors.

Another main point made by CARB in its VOC supplement about the modeling studies is that the more sophisticated ones, based on photochemical grid modeling, tended to show small benefits and sometimes disbenefits [24] from VOC controls in the more realistic scenarios modeled. CARB pointed out that when NO_X reductions are considered at the same time, two studies showed $PM_{2.5}$ disbenefits from VOC reduction at multiple locations, though in one this occurred only at some times. (No similar disbenefit was seen for additional NO_X reductions when they were considered simultaneously with VOC reductions.) Thus, under the realistic assumption that NO_X reductions will occur as a result of the Plan control strategy, according to these studies additional VOC reductions could be counterproductive, making it more difficult for the SJV to come into $PM_{2.5}$ attainment. EPA agrees that these analyses raise legitimate questions about the efficacy of VOC reductions and do not support a reversal of the $PM_{2.5}$ implementation rule's presumption that VOC is not an attainment plan precursor.

Finally, CARB notes that one of the studies showed a benefit from VOC control only at the very highest $PM_{2.5}$ levels, above 80 μg/m³, well above current design values in the SJV which are more in the range of 50–60 μg/m³. See CARB VOC supplement, p. 10.[25]

Based on an examination of model output throughout the episode, CARB hypothesizes that a different chemical regime is entered at high levels, for which this VOC sensitivity does occur, though this hypothesis apparently has not been explored with modeling tools such as process analysis. CARB staff involved in the CRPAQS modeling effort believes that, under current SJV conditions, the nighttime nitrate production route via background ozone is the main oxidation driver for nitrate $PM_{2.5}$ in the SJV, and that the VOC-sensitive daytime oxidant route is of less importance. CARB VOC supplement, p. 10.

After careful review, EPA is proposing to determine that the information submitted by CARB in the VOC supplement raises significant questions about the efficacy of VOC controls for reducing ambient $PM_{2.5}$ concentrations in the SJV and demonstrates that the available technical information does not provide a sufficient basis for reversing the presumption in the $PM_{2.5}$ implementation rule that VOC is not an attainment plan precursor in this area. Accordingly, EPA proposes to concur with CARB's determination that at this time, VOC should not be an attainment plan precursor in the SJV area.[26] EPA also proposes to concur with the evaluation in the 2008 $PM_{2.5}$ Plan that, at this time, ammonia does not need to be considered an attainment plan precursor for purposes of attaining the 1997 $PM_{2.5}$ NAAQS in the SJV.

EPA's proposed concurrence on excluding ammonia and VOC as attainment plan precursors in the SJV is limited to the SIP for attainment of the 1997 $PM_{2.5}$ NAAQS. EPA revised the 24-hour $PM_{2.5}$ standards in 2006 to lower them to 35 μg/m³. Evaluation of whether ammonia and VOC controls may be necessary for the expeditious attainment of the 2006 $PM_{2.5}$ standards and any future revised standards may show that such controls would significantly contribute to lower $PM_{2.5}$ levels in the SJV.

4. Extension of the Attainment Date

CAA section 172(a)(2) provides that an area's attainment date ''shall be the date by which attainment can be achieved as expeditiously as practicable, but no later than 5 years from the date such area was designated nonattainment * * *, except that the Administrator may extend the attainment date to the extent the Administrator determines appropriate, for a period no greater than 10 years from the date of designation as nonattainment considering the severity of nonattainment and the availability and feasibility of pollution control measures.''

Because the effective date of designations for the 1997 $PM_{2.5}$ standards is April 5, 2005 (70 FR 944), the initial attainment date for $PM_{2.5}$ nonattainment areas is as expeditiously as practicable but not later than April 5, 2010. For any area that is granted a full five-year attainment date extension under section 172, the attainment date would be not later than April 5, 2015.

Section 51.1004 of the $PM_{2.5}$ implementation rule addresses the attainment date requirement. Section 51.1004(b) requires a state to submit an attainment demonstration justifying its proposed attainment date and provides that EPA will approve an attainment date when we approve that demonstration.

States that request an extension of the attainment date under CAA section 172(a)(2) must provide sufficient information to show that attainment by April 5, 2010 is impracticable due to the severity of the nonattainment problem in the area and the lack of available and feasible control measures to provide for faster attainment. 40 CFR 51.1004(b). States must also demonstrate that all RACM and RACT for the area are being implemented to bring about attainment of the standard by the most expeditious alternative date practicable for the area. 72 FR 20586 at 20601.

The 2008 $PM_{2.5}$ Plan includes a demonstration that the attainment date for the SJV should be April 5, 2015, i.e., that the area qualifies for the full five-year extension of the attainment date allowable under section 172(a)(1). This demonstration is found in Chapter 9 of the 2008 $PM_{2.5}$ Plan and is updated by information in Appendix C of the 2011 Progress Report.

SJV's $PM_{2.5}$ nonattainment problem is severe. The area typically records the highest ambient $PM_{2.5}$ levels in the nation, with the 2008–2010 design value for the annual $PM_{2.5}$ levels in urban Bakersfield area of 21.2 μg/m³. See EPA, Air Quality System, Design Value Report, June 1, 2011. The $PM_{2.5}$ problem in the San Joaquin Valley is complex, caused by both direct and secondary $PM_{2.5}$ and compounded by the area's topographical and meteorological conditions that are very conducive to the formation and concentration of $PM_{2.5}$ particles. See 2008 $PM_{2.5}$ plan, Chapter 3.

As discussed in section V.B.2.a. above, the District's strategy for attaining the $PM_{2.5}$ standard relies on reductions of direct $PM_{2.5}$ as well as the $PM_{2.5}$ precursor pollutants NO_X and

[24] VOC typically contributes to the formation of ozone and hydroxyl, which through its oxidizing effect can help convert NO_X emissions to particulate nitrate. However, there are also direct VOC–NO_X interactions that act as a ''sink'', forming e.g. peroxyaceytl nitrate (PAN), and removing both VOC and NO_X from the photochemical reactions that lead to ozone and some particulate. Under some circumstances, VOC reductions can lessen the effect of this ''sink'', so that more NO_X remains to form particulate, resulting in a $PM_{2.5}$ disbenefit from VOC control.

[25] According to monitoring data in EPA's AQS database, there were 172 values over 80 μg/m³ during 1999–2002; by contrast, there were only 24 values over 80 during 2007–2010. EPA's Air Quality System, Violation Day Count Report, May 13, 2011.

[26] In its approval of the SJV 2003 PM_{10} plan, EPA determined that for the purposes of CAA section 189(b)(1)(B) and (e) and in the absence of final data from CRPAQS, VOC did not contribute significantly to PM_{10} levels which exceed the standards in the SJV. See 69 FR 30006, 30011 (May 26, 2004). We note that EPA made that 2004 finding for a different NAAQS (the 24-hour and now revoked annual PM_{10} standards of 150 μg/m³ and 50 μg/m³, respectively), based on criteria for evaluation of precursors that differ from those provided in the $PM_{2.5}$ implementation rule. See 72 FR 20586 at 20590–20594 and 40 CFR § 51.1000.

SO_X. The SJV needs significant reductions in direct $PM_{2.5}$ and NO_X to demonstrate attainment. Further reducing these pollutants is challenging because the State and District have already adopted stringent control measures for most sources of direct $PM_{2.5}$ and NO_X emissions. Moreover, attainment in the SJV depends upon emissions reductions that offset the emissions increases associated with projected increases in population.

Reductions of direct $PM_{2.5}$ are achieved primarily from open burning, commercial charbroiling, residential wood combustion, and in-use truck and bus control measures. These types of control measures present special implementation challenges (*e.g.*, the large number of individuals subject to regulation and the difficulty of applying conventional technological control solutions). NO_X reductions come largely from District rules for fuel combustion sources and from the State's mobile source rules.

Because of the necessity of obtaining additional emissions reductions from these source categories in the SJV and the need to conduct significant public outreach if applicable control approaches are to be effective, EPA agrees with the District and CARB that the 2008 $PM_{2.5}$ Plan reflects expeditious implementation of the available control programs during the 2008–2014 time frame. EPA also agrees that the implementation schedule for the District's revised stationary source controls is expeditious, taking into account the time necessary for purchase and installation of the required control technologies.

In addition, the State has adopted standards for many categories of on-road and off-road vehicles and engines, gasoline and diesel fuels, as well as improvements to California's vehicle inspection and maintenance program, and programs requiring the retrofitting and replacement of in-use trucks, buses and off-road equipment. The State is implementing these rules and programs as expeditiously as practicable, and it is not feasible to accelerate the schedule for new emissions standards under the State and Federal mobile source control program.

EPA also expects that the District and CARB will continue to investigate opportunities to accelerate progress toward attainment as new control opportunities arise, and that these agencies will promptly adopt and expeditiously implement any new measures found to be feasible in the future.

As discussed in section V.B.3. above, we are proposing to approve the RACM/RACT demonstration in the SJV 2008 $PM_{2.5}$ SIP. As discussed below in section V.C.6., we are also proposing to approve the attainment demonstration in the SIP. Based on these proposed approvals as well as the Plan's demonstration that April 5, 2015 is the most expeditious attainment date practicable, EPA is proposing to grant an extension of the attainment date for the 1997 $PM_{2.5}$ standards in the SJV to April 5, 2015 pursuant to CAA section 172(b)(2) and 40 CFR 51.1004(b).

5. Attainment Demonstration

Table 7 below summarizes the reductions that are relied on in the 2008 $PM_{2.5}$ Plan to demonstrate attainment by April 5, 2015.

TABLE 7—SUMMARY OF REDUCTIONS NEEDED FOR SJV'S $PM_{2.5}$ ATTAINMENT DEMONSTRATION

[Tons per average annual day]

	Direct $PM_{2.5}$	NO_X	SO_2
A. 2005 emissions level	86.0	575.4	26.4
B. 2014 attainment target	63.3	291.2	24.6
C. Total reductions needed by 2014 (A–B)	22.7	284.2	1.8
D. Adjustments to baseline/reductions from baseline (pre-2007) measures	13.7	258.1	1.0
Percent of total reductions from baseline measures/adjustments	60%	91%	56%
E. Reductions needed from new measures (C–D)	9.0	26.1	0.8
Percent of total reductions needed from new measures	40%	9%	44%

Note: The 2005 emissions level, 2014 attainment target, and total reductions needed by 2014 remain unchanged from the November 30, 2010 proposal.

As shown in this table, the majority of the emissions reductions that the State projects are needed for $PM_{2.5}$ attainment in the SJV by 2015 come from baseline reductions. These baseline reductions include not only the benefit of numerous adopted District and State measures which generally have been approved by EPA either through the SIP process or the CAA section 209 waiver process but also the effect of the recent economic recession on projected future inventories. See 2011 Progress Report, Appendix E and Appendices A and B of the TSD. The remaining reductions needed for attainment are to be achieved through the District's and CARB's commitments to reduce emissions in the SJV. Since the submittal of the 2008 $PM_{2.5}$ Plan and 2007 State Strategy, the District and CARB have adopted measures (summarized in Table 8 below) that can be credited toward reducing their aggregate emissions reduction in their enforceable commitments.

TABLE 8—REDUCTIONS NEEDED FOR ATTAINMENT REMAINING AS COMMITMENTS BASED ON SIP-CREDITABLE MEASURES

[Tons per average annual day in 2014]

	Direct $PM_{2.5}$	NO_X	SO_X
A. Total reductions needed from baseline and control strategy measures to attain	22.7	284.2	1.8
B. Reductions from baseline measures	13.7	258.1	1.0
C. Total reductions from approved/proposed for approval measures	6.0	13.2	3.6
Total reductions remaining as commitments (A–B–C)	3.0	12.9	0.0
Percent of total reductions needed remaining as commitments	13.2%	4.5%	0.0%

a. Enforceable Commitments

As shown above, measures already adopted by the District and CARB (both prior to and as part of the 2008 $PM_{2.5}$ Plan) provide the majority of emissions reductions the State projects are needed to demonstrate attainment. The balance of the needed reductions is in the form of enforceable commitments by the District and CARB.

The CAA allows approval of enforceable commitments that are limited in scope where circumstances exist that warrant the use of such commitments in place of adopted measures.[27] Once EPA determines that circumstances warrant consideration of an enforceable commitment, it considers three factors in determining whether to approve the CAA requirement that relies on the enforceable commitment: (a) Does the commitment address a limited portion of the CAA-requirement; (b) is the state capable of fulfilling its commitment; and (c) is the commitment for a reasonable and appropriate period of time.[28]

With respect to the 2008 $PM_{2.5}$ Plan and 2007 State Strategy, circumstances warrant the consideration of enforceable commitments as part of the attainment demonstration for this area. As shown in Table 7 above, the majority of emissions reductions that are needed to demonstrate attainment and RFP in the SJV come from rules and regulations that were adopted prior to 2007, *i.e.,* they come from the baseline measures.

As a result of these already-adopted District and State measures, most sources in the San Joaquin Valley nonattainment area were already subject to stringent rules prior to the development of the 2007 State Strategy and the 2008 $PM_{2.5}$ Plan, leaving fewer and more technologically challenging opportunities to reduce emissions. In the 2008 $PM_{2.5}$ Plan and the 2009 revisions to the 2007 State Strategy, the District and CARB identified potential control measures that could achieve the additional emissions reductions needed for attainment. However, the timeline needed to develop, adopt, and implement these measures went well beyond the April 5, 2008[29] CAA deadline to submit the $PM_{2.5}$ plan. As discussed above and below, since 2007, the District and State have made progress in adopting measures to meet their commitments, but have not completely fulfilled them. Given these circumstances, the 2008 $PM_{2.5}$ Plan's and 2007 State Strategy's reliance on enforceable commitments is warranted. We now consider the three factors EPA uses to determine whether the use of enforceable commitments in lieu of adopted measures to meet CAA planning requirements is approvable.

i. The Commitment Represents a Limited Portion of Required Reductions

For the first factor, we look to see if the commitment addresses a limited portion of a statutory requirement, such as the amount of emissions reductions needed for attainment in a nonattainment area.

As shown in Table 8, the remaining portion of the enforceable commitments in the 2008 $PM_{2.5}$ Plan and the 2007 State Strategy are 3.0 tpd direct $PM_{2.5}$ and 12.6 tpd NO_X after accounting for measures that are either approved or proposed for approval and revisions to the future year baseline inventories resulting from changes to the Plan's economic forecasts and other factors. When compared to the total reductions needed by 2014 for $PM_{2.5}$ attainment in the SJV on a per-pollutant basis, these remaining commitments represent approximately 13.2 percent of the direct $PM_{2.5}$ and 4.5 percent of the NO_X needed to attain the 1997 $PM_{2.5}$ standards in the SJV.

We find that the reductions remaining as enforceable commitments in the 2008 $PM_{2.5}$ Plan and 2007 State Strategy represent a limited portion of the total emissions reductions needed to meet the statutory requirement for attainment in the SJV and therefore satisfy the first factor. The level of reductions remaining as commitments is reasonably close to the 10 percent range that EPA has historically accepted in approving attainment demonstrations.[30]

ii. The State Is Capable of Fulfilling Its Commitment

For the second factor, we consider whether the State and District are capable of fulfilling their commitments. As discussed above, CARB has adopted and submitted a 2009 State Strategy Status Report and a 2011 Progress Report, which update and revise the 2007 State Strategy. These reports show that CARB has made significant progress in meeting its enforceable commitments for the San Joaquin Valley and several other nonattainment areas in California. Additional ongoing programs that address locomotives and in-use agricultural equipment have yet to be quantified but are expected to reduce NO_X and direct $PM_{2.5}$ emissions in the SJV by 2014. See 2011 Progress Report, Appendix E, page 2.

The District has already exceeded its commitments to reduce NO_X emissions in 2014 by 9 tpd and SO_x emissions by 0.9 tpd and has substantially met its commitment to reduce direct $PM_{2.5}$ emissions by 6.7 tpd. See Tables 3 and 4. In addition, it is expecting to adopt revisions to District Rule 4702 (Reciprocating Internal Combustion Engines) later this year that are likely to achieve substantial NO_X reductions by 2014. See SJVUAPCD, Draft Staff Report For Draft Amendments To Rule 4702 (Internal Combustion Engines–Phase 2), September 9, 2010. It is also continuing to work to identify and adopt additional measures to reduce emissions. Table F–5 in the TSD describes a number of the feasibility studies currently underway at the District.

Beyond the rules discussed above, both CARB and the District have well-funded incentive grant programs to reduce emissions from the on- and off-

[27] Commitments approved by EPA under CAA section 110(k)(3) are enforceable by EPA and citizens under CAA sections 113 and 304, respectively. In the past, EPA has approved enforceable commitments and courts have enforced these actions against states that failed to comply with those commitments. See, *e.g., American Lung Ass'n of N.J.* v. *Kean,* 670 F. Supp. 1285 (D.N.J. 1987), aff'd, 871 F.2d 319 (3rd Cir. 1989); *NRDC, Inc.* v. *N.Y. State Dept. of Env. Cons.,* 668 F. Supp. 848 (S.D.N.Y. 1987); *Citizens for a Better Env't* v. *Deukmejian,* 731 F. Supp. 1448, recon. granted in par, 746 F. Supp. 976 (N.D. Cal. 1990); *Coalition for Clean Air* v. *South Coast Air Quality Mgt. Dist.,* No. CV 97–6916–HLH, (C.D. Cal. Aug. 27, 1999). Further, if a state fails to meet its commitments, EPA could make a finding of failure to implement the SIP under CAA section 179(a), which starts an 18-month period for the State to correct the non-implementation before mandatory sanctions are imposed.

CAA section 110(a)(2)(A) provides that each SIP ''shall include enforceable emission limitations and other control measures, means or techniques * * * as well as schedules and timetables for compliance, as may be necessary or appropriate to meet the applicable requirement of the Act.'' Section 172(c)(6) of the Act, which applies to nonattainment SIPs, is virtually identical to section 110(a)(2)(A). The language in these sections of the CAA is quite broad, allowing a SIP to contain any ''means or techniques'' that EPA determines are ''necessary or appropriate'' to meet CAA requirements, such that the area will attain as expeditiously as practicable, but no later than the designated date. Furthermore, the express allowance for ''schedules and timetables'' demonstrates that Congress understood that all required controls might not have to be in place before a SIP could be fully approved.

[28] The U.S. Court of Appeals for the Fifth Circuit upheld EPA's interpretation of CAA sections 110(a)(2)(A) and 172(c)(6) and the Agency's use and application of the three factor test in approving enforceable commitments in the 1-hour ozone SIP for Houston-Galveston. *BCCA Appeal Group et al.* v. *EPA et al.,* 355 F.3d 817 (5th Cir. 2003).

[29] The 2007 State Strategy was developed to address both the 1997 $PM_{2.5}$ NAAQS and the 1997 8-hour Ozone NAAQS. The 8-hour ozone SIPs were due in November 2007, and the development and adoption of the State Strategy was timed to coordinate with this submittal date. 2007 State Strategy, p. 1.

[30] See, for example, our approval of the SJV PM_{10} Plan at 69 FR 30005 (May 26, 2004), the SJV 1-hour ozone plan at 75 FR 10420 (March 8, 2010), and the Houston-Galveston 1-hour ozone plan at 66 FR 57160 (November 14, 2001).

road engine fleets. See, for examples, SJV $PM_{2.5}$ Progress Report, section 2.3. Reductions from several of these programs have yet to be quantified and/or credited in the attainment demonstration but efforts are underway to do so. See, for example, ''Statement of Principles Regarding the Approach to State Implementation Plan Creditability of Agricultural Equipment Replaced Incentive Programs Implemented by the USDA Natural Resources Conservation Service and San Joaquin Valley Air Pollution Control District,'' December 2010.

Finally, the SJV is designated nonattainment for the 2006 24-hour $PM_{2.5}$ standard. The State must submit a plan to address attainment of that standard by December 2012. 74 FR 58688, 58689 (November 13, 2009).

Given the evidence of the State's and District's efforts to date and their continuing efforts to reduce emissions, we find that the State and District are capable of meeting their enforceable commitments to reduce emissions of direct $PM_{2.5}$ and NO_X by 2014 to the levels needed to attain the 1997 $PM_{2.5}$ standards in the San Joaquin Valley by its proposed attainment date of April 5, 2015.

iii. The Commitment Is for a Reasonable and Appropriate Timeframe

For the third and last factor, we consider whether the commitment is for a reasonable and appropriate period of time.

In order to meet the commitments to reduce emissions to the levels needed to attain the 1997 $PM_{2.5}$ standards in the San Joaquin Valley, the 2008 $PM_{2.5}$ Plan and 2007 State Strategy included an ambitious rule development, adoption, and implementation schedules, which both the District and CARB have substantially met. EPA considers these schedules to provide sufficient time to achieve by 2014 the few remaining reductions needed to attain by the proposed attainment date of April 5, 2015. We, therefore, conclude that the third factor is satisfied.

6. Proposed Action on the Attainment Demonstration

In order to approve a SIP's attainment demonstration, EPA must make several findings and approve the plan's proposed attainment date.

First, we must find that the demonstration's technical bases, including the emissions inventories and air quality modeling, are adequate. As discussed above in sections V.A. and V.C.2, we are proposing to approve both the emissions inventories and the air quality modeling on which the SJV 2008 $PM_{2.5}$ Plan's attainment demonstration and other provisions are based.

Second, we must find that the SIP submittal provides for expeditious attainment through the implementation of all RACM and RACT. As discussed above in section V.B., we are proposing to approve the RACM/RACT demonstration in the SJV $PM_{2.5}$ SIP.

Third, EPA must find that the emissions reductions that are relied on for attainment are creditable. As discussed in section V.C.5., the 2008 $PM_{2.5}$ Plan relies principally on adopted and approved/waived rules to achieve the emissions reductions needed to attain the 1997 $PM_{2.5}$ standards in the SJV by April 5, 2015. The balance of the reductions is currently in the form of enforceable commitments that account for 13.2 percent of the direct $PM_{2.5}$ and 4.5 percent of the NO_X emissions reductions needed from 2005 levels for attainment. See Table 8.

EPA has previously accepted enforceable commitments in lieu of adopted control measures in attainment demonstrations when the circumstances warrant it and the commitments meet three criteria. As discussed above in section V.C.5., we find that circumstances here warrant the consideration of enforceable commitments and that the three criteria are met: (1) The commitments constitute a limited portion of the required emissions reductions, (2) both the State and the District have demonstrated their capability to meet their commitments, and (3) the commitments are for an appropriate timeframe. Based on these conclusions, we propose to allow the State to rely on these limited enforceable commitments in its attainment demonstration.

Finally, for a $PM_{2.5}$ nonattainment area that cannot attain within five years of its designation as nonattainment, EPA must grant an extension of the attainment date in order to approve the attainment demonstration for the area. As discussed above in section V.C.4., we propose to determine that a five-year extension of the attainment date is appropriate given the severity of the nonattainment problem in the SJV and availability and feasibility of control measures and, therefore, to grant the State's request to extend the attainment date in the SJV to April 5, 2015.

For the foregoing reasons, we are proposing to approve the attainment demonstration in the SJV 2008 $PM_{2.5}$ SIP.

D. Reasonable Further Progress Demonstration

1. Requirements for RFP

CAA section 172(c)(2) requires that plans for nonattainment areas shall provide for reasonable further progress (RFP). RFP is defined in section 171(1) as ''such annual incremental reductions in emissions of the relevant air pollutant as are required by this part or may reasonably be required by the Administrator for the purpose of ensuring attainment of the applicable [NAAQS] by the applicable date.''

The $PM_{2.5}$ implementation rule requires submittal of an RFP plan at the same time as the attainment demonstration for any area for which a state requests an extension of the attainment date beyond 2010. For areas for which the state requests an attainment date extension to 2015, such as SJV, the RFP plan must demonstrate that in the applicable milestone years of 2009 and 2012, emissions in the area will be at a level consistent with generally linear progress in reducing emissions between the base year and the attainment year. 40 CFR 51.1009(d). States may demonstrate this by showing that emissions for each milestone year are roughly equivalent to benchmark emissions levels for direct $PM_{2.5}$ and each $PM_{2.5}$ attainment plan precursor addressed in the plan. The steps for determining the benchmark emissions levels to demonstrate generally linear progress are provided in 40 CFR 51.1009(f).

The RFP plan must describe the control measures that provide for meeting the reasonable further progress milestones for the area, the timing of implementation of those measures, and the expected reductions in emissions of direct $PM_{2.5}$ and $PM_{2.5}$ attainment plan precursors. See 40 CFR 51.1009(c).

2. The RFP Demonstration in the SJV 2008 $PM_{2.5}$ Plan

CARB provided an updated and revised RFP demonstration for the SJV in Appendix C of the 2011 Progress Report. The demonstration addresses direct $PM_{2.5}$, NO_X, and SO_2 and uses the 2005 annual average day inventory as the base year inventory and 2014 as the attainment year. The control strategy measures that are relied on to demonstrate RFP and the emissions reductions from each measure in each year are given in the 2011 Progress Report, Appendix C, Table C–1 and supplemental information provided by the District.[31] The revised RFP

[31] See SJVUAPCD, ''Table 3–1 Adjusted $PM_{2.5}$ Emission Inventory; Table 3–2 Adjusted NO_X

demonstration is shown in Table 9 below.

TABLE 9—RFP DEMONSTRATION USING UPDATED CONTROL MEASURES AND BASELINE DATA

[Tons per annual average day]

	Direct $PM_{2.5}$	NO_X	SO_2
2009			
Benchmark emissions level	76	449	26
Revised projected controlled emissions level	73	387	23
Emissions below benchmark emissions level	−3	−62	−3
Percent below benchmark emissions level	−4%	−14%	−12%
2012			
Benchmark emissions level	68	354	25
Revised projected controlled emissions level	71	336	20
Emissions above/below benchmark emissions level	+3	−18	−5
Percent above/below benchmark emissions level	+4%	−5%	−20%

Source: Table H–4 in the TSD.

3. Proposed Action on the RFP Demonstration

EPA has reviewed the revised RFP demonstration in the 2011 Progress Report and has determined that it was prepared consistent with applicable EPA regulations and policies. See Section II.H of the TSD. As can be seen from Table 9, controlled emissions levels for direct $PM_{2.5}$, NO_X, and SO_X were below the benchmarks for 2009, demonstrating that the SJV met its RFP targets in that year. For 2012, the projected controlled emissions levels for direct $PM_{2.5}$ are only slightly above the benchmark (by about 4 percent) and the projected controlled levels for NO_X and SO_X are substantially below the benchmarks. We find that, overall, these projected controlled emissions levels represent generally linear progress for 2012.

Based on our evaluation, which is summarized above and discussed in detail in section II.H. of the TSD, and our proposed concurrence (discussed above in section V.C.3.) with the State's determination that SO_X and NO_X are and VOC and ammonia are not attainment plan precursors per 40 CFR 51.1002(c), we propose to find that the SJV 2008 $PM_{2.5}$ SIP provides for reasonable further progress as required by CAA section 172(c)(2) and 40 CFR 51.1009 and that the SJV has met its 2009 RFP benchmarks.[32]

E. Contingency Measures

1. Requirements for Contingency Measures

Under CAA section 172(c)(9), all $PM_{2.5}$ attainment plans must include contingency measures to be implemented if an area fails to meet RFP (RFP contingency measures) and contingency measures to be implemented if an area fails to attain the $PM_{2.5}$ NAAQS by the applicable attainment date (attainment contingency measures). These contingency measures must be fully adopted rules or control measures that are ready to be implemented quickly without significant additional action by the state. 40 CFR 51.1012. They must also be measures not relied on in the plan to demonstrate RFP or attainment and should provide SIP-creditable emissions reductions equivalent to approximately one year of the emissions reductions needed for RFP. 72 FR 20586 at 20642–43. Finally, the SIP should contain trigger mechanisms for the contingency measures and specify a schedule for their implementation. *Id.*

Contingency measures can include Federal, State and local measures already adopted and implemented or scheduled for implementation that provide emissions reductions in excess of the reductions needed to provide for RFP or expeditious attainment. EPA has approved numerous SIPs under this interpretation. See, for example, 62 FR 15844 (April 3, 1997) direct final rule approving Indiana ozone SIP revision; 62 FR 66279 (December 18, 1997), final rule approving Illinois ozone SIP revision; 66 FR 30811 (June 8, 2001), direct final rule approving Rhode Island ozone SIP revision; 66 FR 586 (January 3, 2001), final rule approving District of Columbia, Maryland, and Virginia ozone SIP revisions; and 66 FR 634 (January 3, 2001), final rule approving Connecticut ozone SIP revision. The State may use the same measures for both RFP and attainment contingency if the measures will provide reductions in the relevant years; however, should measures be triggered for failure to make RFP, the State would need to submit replacement contingency measures for attainment purposes.

2. Contingency Measures in the SJV 2008 $PM_{2.5}$ Plan

There are several types of contingency measures in the 2008 $PM_{2.5}$ SIP: A new commitment to an action by the District, surplus reductions in the RFP demonstration, post-2014 emissions reductions, a contingency provision in an adopted rule, and reductions from incentive funds and control strategy measures that are not relied on in the attainment and RFP demonstrations. We discuss each of these types of contingency measures below.

The Plan does not calculate the emissions reductions that are equivalent to one year's worth of RFP. Based on information in the Plan, we have calculated one year's worth of RFP to be 2.5 tpd direct $PM_{2.5}$, 31.6 tpd NO_X, and 0.2 tpd SO_2. See section II.I. of the TSD.

Emission Inventory; and Table 3–3 Adjusted SO_X Emission Inventory,'' March 2011.

[32] As discussed above in section V.A., CARB has recently updated the inventories for several mobile source categories and estimates that these updates would reduce, if incorporated into those inventories, the Plan's 2005 base year NO_X inventory by approximately 6 percent and the direct $PM_{2.5}$ inventory by approximately 5 percent. CARB Progress Report supplement, Attachment 1. EPA evaluated the potential impact of revising the 2005 base year inventories on the RFP demonstration and found that the Plan would continue to show the RFP. See Section II.H. of the TSD.

Request CARB To Accelerate State Measure Implementation—This proposed contingency measure (which could function as both a RFP and attainment contingency measure), requires the District's Governing Board to adopt a resolution requesting CARB to accelerate the adoption and/or implementation of any remaining CARB control measures that have not yet been adopted or fully implemented. 2008 $PM_{2.5}$ Plan, p. 9–7.

Under CAA section 172(c)(9) and EPA's policies [33] interpreting this section, contingency measures must require minimal additional rulemaking by the state and take effect within a few months of a failure to make RFP or to attain. This proposed contingency measure would require additional rulemaking at the District level and potentially substantial and lengthy additional rulemaking at the State level to be implemented. For these reasons, this proposed measure does not meet CAA requirements for contingency measures.

Surplus Reductions in the RFP Demonstration—In the June 2008 version of the Plan, the method used to calculate emissions reductions needed to meet RFP benchmarks withheld a certain percentage of those reductions for contingency purposes: 1 percent of the baseline $PM_{2.5}$ inventory and 3 percent of the baseline NO_X inventory. These percentages equate to roughly 1 tpd $PM_{2.5}$ and 17 tpd NO_X being reserved for contingency. No reserve was included for SO_X because SO_X emissions levels were projected to be below the applicable benchmarks and these excess reductions served as contingency measures. See 2008 $PM_{2.5}$ Plan, p. 8–4.

The 2011 Progress Report updates the RFP demonstrations in the 2008 $PM_{2.5}$ Plan. See 2011 Progress Report, Table C–1. The updated demonstration does not include a contingency measure reserve but rather shows that expected controlled emissions levels of NO_X and SO_x will be below the required RFP benchmarks. SO_X reductions that are in excess of those needed to meet RFP and contingency are reserved for $PM_{2.5}$ contingency measures at an interpollutant trading ratio of 1 tpd SO_X to 1 tpd direct $PM_{2.5}$. See 2011 Progress Report, Appendix A, p. 2 and (for the trading ratio), SJV $PM_{2.5}$ Progress Report, Table 2–2. These excess reductions are from SIP-approved or otherwise SIP-creditable adopted measures and therefore may be used to meet the contingency measure requirement. We do not, however, agree at this time with the use of a SO_X to direct $PM_{2.5}$ interpollutant trading ratio of 1:1 as the State has not provided an adequate technical justification for such a ratio. See Section V.D.2 above and section II.B.4.

Post-Attainment Year Emissions Reductions—The 2008 $PM_{2.5}$ Plan relies on the incremental emissions reductions that will occur from existing controls in 2015 to provide for contingency measures for failure to attain. See p. 9–9. CARB estimates these incremental emissions reductions, including reductions expected from its In-use Truck and Bus and In-Use Off-Road Engine Rules, are 3 tpd SO_2 and 21 tpd NO_X. CARB Progress Report supplement, Attachment 2. These excess reductions are from SIP-approved or otherwise SIP-creditable adopted measures and therefore may be used to meet the contingency measure requirement.

Contingency Provision in Rule 4901 ''Wood Burning Fireplace and Wood Burning Heaters''—In October, 2008, the District revised Rule 4901 to incorporate a contingency provision in section 5.6.5. This provision requires that 60 days after EPA finds the SJV nonattainment area has failed to attain the 1997 $PM_{2.5}$ NAAQS, the District will lower the level at which mandatory curtailment of residential wood burning is required from a predicted level of 30 $\mu g/m^3$ to 20 $\mu g/m^3$. EPA approved this rule, including the contingency provision, on November 10, 2009. 74 FR 57907.

This attainment contingency provision in Rule 4901 meets the statutory and regulatory requirements for attainment contingency measures: It is triggered by a failure to attain, requires no additional rulemaking by the District, will be fully implemented within 60 days of being triggered, and is SIP approved. The District has preliminarily quantified the emissions reductions expected from this contingency provision at 1.6 tons of $PM_{2.5}$ per winter average day.[34]

Control Strategy Reductions Not Included in the RFP and/or Attainment Demonstrations—In its resolution approving the SJV $PM_{2.5}$ Plan, CARB required the District to adopt two additional contingency measures. See CARB Resolution No. 08–28, Attachment A. These measures are revisions to SJVUAPCD's Rule 4307 (Boilers, 2 to 5 MMBtu) and Rule 4702 (Internal Combustion Engines). While the District had already included these rule revisions as Measures S–COM–2 and S–COM–6 in the Plan's control strategy, it had not estimated or included the NO_X emissions reductions from the measures in either the Plan's RFP or attainment demonstration.

The District adopted revisions to Rule 4307 in October 2008. Reductions from these rule revisions are now included in the revised RFP and attainment demonstrations in the 2011 Progress Report and are no longer in excess of those demonstrations and, therefore, cannot be used to meet the contingency measure requirement.

Revisions to Rule 4702 are not yet adopted. As discussed above, contingency measure must be fully-adopted measures. Therefore, expected emissions reductions from revisions to Rule 4702 cannot currently be used to meet the contingency measure requirement.

Emissions Reductions From Incentive Funds—As noted previously, the District has several incentive grant programs that have the potential to generate considerable emissions reductions. The 2008 $PM_{2.5}$ Plan suggests the use of these reductions as contingency measures for failure either to meet RFP or to attain. While neither the CAA nor EPA policy bar the use of emissions reductions from incentive programs to meet all or part of an area's contingency measure obligation, the incentive programs must assure that the reductions are surplus, quantifiable, enforceable, and permanent in accordance with EPA guidance. See ''Improving Air Quality with Economic Incentive Programs,'' EPA–452/R–01–001 (January 2001).

The 2008 $PM_{2.5}$ Plan does not identify the incentive grant programs expected to generate the emissions reductions, nor the quantity of the emissions reductions, that the District intends to use to meet the contingency measure requirement. Therefore, we are unable to determine if they are SIP creditable, surplus to attainment and/or RFP needs, or sufficient to provide the one-year's worth of RFP needed. For these reasons, this proposed measure does not currently meet the CAA requirements for contingency measures.

3. Proposed Action on the Contingency Measures

We are not evaluating the provisions in the 2008 $PM_{2.5}$ SIP that address contingency measures for failure to meet the 2009 RFP benchmarks. Information in the 2011 Progress Report shows that SJV has met its 2009 benchmarks for direct $PM_{2.5}$, NO_X, and SO_X. See 2011

[33] See ''State Implementation Plans; General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990,'' 57 FR 13498 at 13512 (April 16, 1992).

[34] Personal communications, Jessica Ferrio, SJVUAPCD, to Frances Wicher, EPA, August 27, 2010.

Progress Report, Table C–1. Therefore, contingency measures for failure to meet the 2009 RFP benchmark no longer have any meaning or effect under the CAA and do not require any further review or action by EPA. In addition, as noted above, the purpose of RFP contingency measures is to provide a continued progress while the SIP is being revised to meet a missed RFP milestone. Failure to meet the 2009 benchmark would have required California to revise the SJV $PM_{2.5}$ Plan to assure that the next milestone was met and that the Plan still provided for attainment. California has already prepared and submitted a revision to the SJV $PM_{2.5}$ SIP that shows that the SIP continues to provide for RFP in 2012 and for attainment by April 5, 2015. This revision is the 2011 Progress Report, which is one of the submittals that EPA is proposing action on in this notice.

The 2008 $PM_{2.5}$ Plan includes suggestions for several potentially approvable contingency measures as well as several measures that do not currently meet the CAA's minimum requirements. The Plan does not, however, provide sufficient information for us to determine if the emissions reductions from some of the potentially approvable measures are SIP creditable (*e.g.,* those from incentive grant programs) and does not quantify the expected emissions reductions.

The 2011 Progress Report does show that there are surplus reductions in the RFP demonstration for 2012. Appendix C, Table C–1. As shown on Table 10, these reductions, however, do not provide emissions reductions equivalent to one year's worth of RFP when considered on a per-pollutant basis.[35]

The continuing implementation of the State's mobile source program in combination with the District's contingency measure in Rule 4901, if triggered, will reduce emissions substantially in 2015 (the year after the attainment year of 2014). However, as shown on Table 10, these reductions do not provide emissions reductions equivalent to one year's worth of RFP when considered on a per-pollutant basis.

Based on this evaluation, EPA proposes to disapprove the RFP and attainment contingency measures in the SJV 2008 $PM_{2.5}$ SIP pursuant to CAA section 172(c)(9) and 40 CFR 51.1012.

TABLE 10—SUMMARY OF REDUCTIONS FROM CONTINGENCY MEASURES IN THE SJV 2008 $PM_{2.5}$ PLAN

[Tons per average annual day]

	Direct $PM_{2.5}$	NO_X	SO_X
Excess reductions in the RFP demonstration that are available to meet the 2012 RFP contingency requirements (excess reduction in the 2012 RFP demonstration)	0	18	5
Reductions from contingency provision in Rule 9401 and new 2015 reductions available to meet the attainment contingency requirement	1.6	21	3
Reductions equivalent to 1-year's worth of RFP	2.5	31.6	0.2

F. Motor Vehicle Emissions Budgets for Transportation Conformity

1. Requirements for Motor Vehicle Emissions Budgets

CAA section 176(c) requires Federal actions in nonattainment and maintenance areas to conform to the goals of SIPs. This means that such actions will not: (1) Cause or contribute to violations of a NAAQS, (2) worsen the severity of an existing violation, or (3) delay timely attainment of any NAAQS or any interim milestone.

Actions involving Federal Highway Administration (FHWA) or Federal Transit Administration (FTA) funding or approval are subject to the EPA's transportation conformity rule, codified at 40 CFR part 93, subpart A. Under this rule, Metropolitan Planning Organizations (MPOs) in nonattainment and maintenance areas coordinate with State and local air quality and transportation agencies, EPA, FHWA, and FTA to demonstrate that an area's regional transportation plans (RTPs) and transportation improvement programs (TIPs) conform to the applicable SIPs. This is typically determined by showing that estimated emissions from existing and planned highway and transit systems are less than or equal to the motor vehicle emissions budgets (MVEB or budgets) contained in the SIP. An attainment or RFP SIP should include MVEB for the attainment year and each required RFP year, as applicable.

An MPO must use budgets in a submitted but not yet approved SIP, after EPA has determined that the budgets are adequate. Budgets in submitted SIPs may not be used before they are found adequate or are approved. In order for us to find a budget adequate, the submittal must meet the conformity adequacy requirements of 40 CFR 93.118(e)(4) and (5). Additionally, motor vehicle emissions budgets cannot be approved until EPA completes a detailed review of the entire SIP and determines that the SIP and the budgets will achieve their intended purpose (i.e., RFP, attainment or maintenance). The budget must also reflect all of the motor vehicle control measures contained in the attainment and RFP demonstrations. See 40 CFR 93.118(e)(4)(v).

$PM_{2.5}$ attainment and RFP plans should identify budgets for direct $PM_{2.5}$ and $PM_{2.5}$ attainment plan precursors. Direct $PM_{2.5}$ SIP MVEB should include $PM_{2.5}$ motor vehicle emissions from tailpipes, brake wear, and tire wear. States must also consider whether re-entrained paved and unpaved road dust or highway and transit construction dust are significant contributors and should be included in the direct $PM_{2.5}$ budget. See 40 CFR 93.102(b) and § 93.122(f) and the conformity rule preamble at 69 FR 40004, 40031–40036 (July 1, 2004). The applicability of emission trading between conformity budgets for conformity purposes is described in 40 CFR 93.124(c).

2. Motor Vehicle Emissions Budgets in the SJV 2008 $PM_{2.5}$ Plan

The 2008 $PM_{2.5}$ Plan included MVEB for direct $PM_{2.5}$ and NO_X for the attainment year of 2014 and the RFP years of 2009 and 2012. See 2008 $PM_{2.5}$

[35] In the 2011 Progress Report, the State asserts that these reductions are equal to at least one-year's worth of RFP when considered on a $PM_{2.5}$ equivalency basis; that is, an air quality basis. To make this showing, the State relies in part on an interpollutant trading ratio of 1 ton of SO_X reductions to 1 ton of $PM_{2.5}$ reductions. As discussed in section V.D.2. of this notice and V.B.4. of the TSD, EPA has found that the technical demonstration submitted in support of this ratio is not adequate and is not allowing its use as part of the 2008 $PM_{2.5}$ Plan. EPA may consider additional technical information submitted by the State to support an appropriate trading ratio and will provide an opportunity for public comment on such new information.

Plan, Section 7.2.2 and Appendix C. The direct $PM_{2.5}$ budgets include tailpipe, brake wear, and tire wear emissions but do not include paved road, unpaved road, and road and transit construction dust because these are not considered to be significant contributors to $PM_{2.5}$ levels in the Valley. No budgets for SO_2 are included because on-road emissions of SO_2 are also considered insignificant. No budgets for ammonia or VOC are included because these pollutants are not considered attainment plan precursors for the 1997 $PM_{2.5}$ standards in the San Joaquin Valley. *Id.*

In April 2010, based on our initial preliminary review of the Plan, EPA found the RFP budgets in the 2008 $PM_{2.5}$ Plan as submitted in 2008 adequate and the attainment budgets inadequate for transportation conformity purposes.[36] We published a notice of our findings at 75 FR 26749 (May 12, 2010).

3. Updated Motor Vehicle Emissions Budgets in the 2011 Progress Report and Additional Revisions

CARB submitted updated MVEB for the San Joaquin Valley in the 2011 Progress Report, Appendices A and D. The updated MVEB were for direct $PM_{2.5}$ and NO_X for the RFP year of 2012 and the attainment year of 2014. No updated budgets were included for the RFP year of 2009 because there are no applicable conformity analysis years prior to 2012.

The submittal also includes a proposed trading mechanism for transportation conformity analyses that would allow future decreases in NO_X emissions from on-road mobile sources to offset any on-road increases in $PM_{2.5}$, using a NO_X:$PM_{2.5}$ ratio of 9:1. Transportation conformity trading mechanisms are allowed under 40 CFR 93.124. The basis for the trading mechanism is the SIP attainment modeling which establishes the relative contribution of each $PM_{2.5}$ precursor pollutant.

As proposed in the 2011 Progress Report, this trading mechanism would only be used, if needed, for conformity analyses for years after 2014. To ensure that the trading mechanism does not impact the ability of the SJV to meet the NO_X budget, the NO_X emission reductions available to supplement the $PM_{2.5}$ budget would only be those remaining after the 2014 NO_X budget has been met. Clear documentation of the calculations used in the trade would be included in the conformity analysis. See 2011 Progress Report, Appendix D, footnote to Table D–2.

On June 20, 2011, CARB posted on its website technical revisions to the updated MVEBs in the 2011 Progress Report that were referenced in a June 3rd letter to EPA.[37] See CARB, ''Proposed 8-Hour Ozone State Implementation Plan Revisions and Technical Revisions to the $PM_{2.5}$ State Implementation Plan Transportation Conformity Budgets for the South Coast and San Joaquin Valley Air Basins,'' Appendix C, June 20, 2011, posted at *http://www.arb.ca.gov/planning/sip/2007sip/2007sip.htm.* These revised updated MVEBs are shown in table 11 below. The technical revisions correct data entry errors in the budget calculations and remove the emission reductions attributed to SJVAPCD's Rule 9510, ''Indirect Source Review'' (ISR). EPA recently approved Rule 9510 into the California SIP but disallowed the use of emissions reductions from the rule for any SIP purpose including transportation conformity. See 75 FR 28509 (May 21, 2010) and 76 FR 26609 (May 9, 2011).

TABLE 11—REVISED UPDATED $PM_{2.5}$ MVEB FOR THE SAN JOAQUIN VALLEY

[Tons per average annual day]

County	2012		2014	
	$PM_{2.5}$	NO_X	$PM_{2.5}$	NO_X
Fresno	1.5	35.7	1.1	31.4
Kern (SJV)	1.9	48.9	1.2	43.8
Kings	0.4	10.5	0.3	9.3
Madera	0.4	9.2	0.3	8.1
Merced	0.8	19.7	0.6	17.4
San Joaquin	1.1	24.5	0.9	21.6
Stanislaus	0.7	16.7	0.6	14.6
Tulare	0.7	15.7	0.5	13.8

4. Proposed Action on the Motor Vehicle Emissions Budgets

EPA has evaluated the revised updated budgets against our adequacy criteria in 40 CFR 93.318(e)(4) as part of our review of the budgets' approvability. The results of this review are documented in Section II.J. of the TSD. We are also posting a notice of availability on our transportation adequacy Web site at *http://www.epa.gov/otaq/stateresources/transconf/currsips.htm.* EPA is not required under its Transportation Conformity rules to find budgets adequate prior to proposing approval of them. We will ultimately complete the adequacy review of these budgets. That could occur when we take a final action on this SIP or it could happen at an earlier date.

As discussed in sections V.C. and V.D., we have completed our detailed review of the 2008 SJV $PM_{2.5}$ SIP and supplemental submittals including the 2011 Progress Report. Based on this thorough review of these submittals, we are proposing to approve the attainment and RFP demonstrations in the 2008 SJV $PM_{2.5}$ SIP. As discussed above, CARB has recently posted revisions to the updated budgets that were submitted in the 2011 Progress Report and intends to present these budgets for adoption as a SIP revision at its July 21, 2011 Board meeting. After reviewing these revised updated MVEBs, we are proposing to find them to be consistent with the approvable attainment and RFP demonstrations and to find that they meet all other applicable statutory and regulatory requirements including the adequacy criteria in § 93.118(e)(4) and (5). Therefore, EPA proposes to approve the revised updated MVEB based on the assumption that we will receive the revised budgets as a complete SIP revision from the State prior to our final

[36] See letter, Deborah Jordan, Air Division Director, EPA Region 9, to James M. Goldstene, Executive Officer, CARB, ''RE: Adequacy Status of San Joaquin Valley $PM_{2.5}$ Reasonable Further Progress and Attainment Plan Motor Vehicle Emissions Budgets,'' dated April 23, 2010.

[37] See letter, James M. Goldstene, Executive Officer, CARB, to Deborah Jordan, Air Division Director, EPA Region 9, June 3, 2011.

action on the SJV $PM_{2.5}$ SIP. If CARB is unable to adopt and submit the revised updated budgets, then EPA intends to find inadequate and disapprove the updated MVEB contained in the 2011 Progress Report.[38] If we disapprove the MVEB, a conformity freeze would take effect upon the effective date of the disapproval (usually 30 days after publication of the final action in the **Federal Register**). A conformity freeze means that only projects in the first four years of the most recent conforming RTP and TIP can proceed. During a freeze, no new RTPs, TIPs or RTP/TIP amendments can be found to conform. See 40 CFR 93.120.

5. Proposed Action on the Trading Mechanism

As noted above, CARB included a trading mechanism to be used in transportation conformity analyses that use the proposed budgets as allowed for under 40 CFR 93.124. This trading mechanism would allow future decreases in NO_X emissions from on-road mobile sources to offset any on-road increases in $PM_{2.5}$, using a NO_X:$PM_{2.5}$ ratio of 9:1. As proposed by CARB, the trading mechanism would only be used, if needed, for conformity analyses for years after 2014. To ensure that the trading mechanism does not affect the ability of the SJV to meet the NO_X budget, the NO_X emissions reductions available to supplement the $PM_{2.5}$ budget would only be those remaining after the 2014 NO_X budget has been met. The trading mechanism will be implemented with the following criteria. The trading applies only to:

- Analysis years after the 2014 attainment year.
- On-road mobile emission sources.
- Trades using vehicle NO_X emission reductions in excess of those needed to meet the NO_X budget.
- Trades in one direction from NO_X to direct $PM_{2.5}$.
- A trading ratio of 9 tpd NO_X to 1 tpd $PM_{2.5}$.

Clear documentation of the calculations used in the trade would be included in the conformity analysis. See 2011 Progress Report, Appendix D, footnote to Table D–2.

EPA has reviewed the 9:1 NO_X:$PM_{2.5}$ ratio and finds it is an appropriate ratio for trading between NO_X and direct $PM_{2.5}$ for transportation conformity purposes in the San Joaquin Valley for the 1997 $PM_{2.5}$ NAAQS. The method discussed in the documentation appears to be adequate for purposes of assessing the effect of area-wide emissions changes, such as are used in conformity budgets. See section V.D.2. above and II.B.4. of the TSD.

EPA believes that the 2008 $PM_{2.5}$ Plan as revised by the 2011 Progress Report includes an approvable trading mechanism for determining transportation conformity after 2014. EPA is proposing to approve the trading mechanism and all of the criteria included in the footnote to Table D–2 as enforceable components of the transportation conformity program for the SJV for the 1997 $PM_{2.5}$ NAAQS. EPA is also proposing to approve the use of this ratio in transportation conformity determinations for the 2006 24-hour $PM_{2.5}$ NAAQS but only until EPA finds adequate or approves budgets developed specifically for the 2006 24-hour $PM_{2.5}$ standard. Until that time, conformity will be determined using the budgets for the 1997 annual $PM_{2.5}$ NAAQS.

VI. EPA's Proposed Actions and Potential Consequences

A. EPA's Proposed Approvals and Disapprovals

For the reasons discussed above, EPA proposes to approve, with the exception of the contingency measures and one commitment by the SJVUAPCD, California's SIP for attaining the 1997 $PM_{2.5}$ NAAQS in the San Joaquin Valley and to grant the State's request for an extension of the attainment date. This SIP is composed of the SJVUAPCD's 2008 $PM_{2.5}$ Plan as revised in 2010 and 2011 and the SJV-specific portions of CARB's 2007 State Strategy as revised in 2009 and 2011 addressing CAA and EPA regulations for attainment of the 1997 $PM_{2.5}$ NAAQS in the SJV.

Specifically, EPA proposes to approve under CAA section 110(k)(3) the following elements of the SJV $PM_{2.5}$ attainment SIP:

1. The 2005 base year emissions inventories as meeting the requirements of CAA section 172(c)(3) and 40 CFR 51.1008;
2. The reasonably available control measures/reasonably available control technology demonstration as meeting the requirements of CAA section 172(c)(1) and 40 CFR 51.1010;
3. The reasonable further progress demonstration as meeting the requirements of CAA section 172(c)(2) and 40 CFR 51.1009;
4. The attainment demonstration as meeting the requirements of CAA sections 172(c)(1) and (6) and 40 CFR 51.1007;
5. The air quality modeling as meeting the requirements of the CAA and EPA guidance;
6. The revised updated 2012 RFP year and 2014 attainment year motor vehicle emissions budgets as posted by CARB on June 21, 2011 contingent upon our receipt of a SIP revision because they are derived from approvable RFP and attainment demonstrations and meet the requirements of CAA section 176(c) and 40 CFR part 93, subpart A and CARB's trading mechanism to be used in transportation conformity analyses as allowed under 40 CFR 93.124;
7. SJVUAPCD's commitments to the adoption and implementation schedule for specific control measures listed in Table 6–2 (amended June 15, 2010) of the 2008 $PM_{2.5}$ Plan to the extent that these commitments have not yet been fulfilled, and to achieve specific aggregate emissions reductions of direct $PM_{2.5}$, NO_X and SO_X by year, as listed in Table 6–3 of the $PM_{2.5}$ Plan, except for the commitment to adopt revisions to Rule 4702; and
8. CARB's commitments to propose certain defined measures, as listed in Table B–1 on page 1 of Appendix B of the 2011 Progress Report and to achieve aggregate emissions reductions by 2014 sufficient to provide for attainment of the 1997 $PM_{2.5}$ NAAQS as described in CARB Resolution 07–28, Attachment B.

EPA also proposes to concur with the State's determination under 40 CFR 51.1002(c) that SO_X and NO_X are and VOC and ammonia are not attainment plan precursors for the attainment of the 1997 $PM_{2.5}$ NAAQS in the SJV.

EPA proposes to grant, pursuant to CAA section 172(a)(2)(A) and 40 CFR 51.1004(a), California's request to extend the attainment date for the San Joaquin Valley $PM_{2.5}$ nonattainment area to April 5, 2015.

EPA proposes to disapprove under CAA section 110(k)(3) the contingency measures provisions of the SJV $PM_{2.5}$ attainment SIP as failing to meet the requirements of CAA section 172(c)(9) and 40 CFR 51.1012.

Finally, EPA proposes to disapprove the commitment by the SJVUAPCD to adopt revisions to Rule 4702 ''Reciprocating Internal Combustion Engines'' by December 2010 because that date has passed and the District has not adopted revisions to the rule. We will not finalize this proposed disapproval, however, if the District adopts revisions to the rule that fulfill the commitment by the time of EPA's final action on the Plan.

B. CAA Consequences of a Final Disapproval

EPA is committed to working with the District, CARB and the SJV MPOs to resolve the remaining issues that make the current $PM_{2.5}$ attainment SIP for the

[38] EPA cannot approve or find adequate the updated budgets included in the 2011 Progress Report because they include uncreditable reductions from the District's ISR rule and because of the technical error in the budget calculations.

SJV not fully approvable under the CAA and the $PM_{2.5}$ implementation rule. However, should we finalize the proposed disapproval of the contingency measure provisions in the SJV 2008 $PM_{2.5}$ Plan or finalize a disapproval of the MVEB, the offset sanction in CAA section 179(b)(2) would apply in the SJV $PM_{2.5}$ nonattainment area 18 months after the effective date of a final disapproval. The highway funding sanctions in CAA section 179(b)(1) would apply in the area six months after the offset sanction is imposed. Neither sanction will be imposed under the CAA if California submits and we approve prior to the implementation of the sanctions, SIP revisions that correct the deficiencies identified in our proposed action. In addition to the sanctions, CAA section 110(c)(1) provides that EPA must promulgate a Federal implementation plan addressing the deficient elements in the $PM_{2.5}$ SIP for the SJV nonattainment area, two years after the effective date of any disapproval should we not approve a SIP revision correcting the deficiencies within the two years.

Neither sanctions nor a FIP would be imposed should EPA disapprove the District's discretionary commitment to revise Rule 4702. Sanctions would not be imposed because the District's decision to include the commitment in its Plan was discretionary (*i.e.,* not required to be included in the SIP), and EPA would not promulgate a FIP in this instance because the disapproval does not reveal a deficiency in the $PM_{2.5}$ SIP that such a FIP must correct. This is because the failure of the District to adopt revisions to Rule 4702 would not adversely affect the 2008 $PM_{2.5}$ SIP's compliance with the CAA's mandated requirements for RACM/RACT, RFP, and/or attainment demonstrations nor would it prevent EPA from granting an extension of the attainment date under CAA section 172(b).

Because we are proposing to approve the RFP and attainment demonstrations and the motor vehicle emission budgets, we are proposing to issue a protective finding under 40 CFR 93.120(a)(3) to the disapproval of the contingency measures. Without a protective finding, final disapproval would result in a conformity freeze, under which only projects in the first four years of the most recent conforming Regional Transportation Plan and Transportation Improvement Programs can proceed. During a freeze, no new RTPs, TIPs or RTP/TIP amendments can be found to conform. See 40 CFR 93.120(a)(2). Under a protective finding, however, final disapproval of the contingency measures would not result in a transportation conformity freeze in the San Joaquin $PM_{2.5}$ nonattainment area.

VII. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submittal that complies with the provisions of the Act and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submittals, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely proposes to partially approve and partially disapprove State law as meeting Federal requirements and does not impose additional requirements beyond those imposed by State law.

A. Executive Order 12866, Regulatory Planning and Review

This action is not a ''significant regulatory action'' under the terms of Executive Order (EO) 12866 (58 FR 51735, October 4, 1993) and is therefore not subject to review under the EO.

B. Paperwork Reduction Act

This action does not impose an information collection burden under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq,* because this proposed SIP partial approval and partial disapproval under CAA section 110 and subchapter I, part D will not in-and-of itself create any new information collection burdens but simply approves certain State requirements for inclusion into the SIP and disapproves others. Burden is defined at 5 CFR 1320.3(b).

C. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires an agency to conduct a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small not-for-profit enterprises, and small governmental jurisdictions. For purposes of assessing the impacts of today's 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 proposed rule on small entities, I certify that this action will not have a significant impact on a substantial number of small entities. This rule does not impose any requirements or create impacts on small entities. This proposed partial approval and partial disapproval of the SIP under CAA section 110 and subchapter I, part D will not in-and-of itself create any new requirements but simply approves certain State requirements for inclusion into the SIP and disapprove others. Accordingly, it affords no opportunity for EPA to fashion for small entities less burdensome compliance or reporting requirements or timetables or exemptions from all or part of the rule. The fact that the CAA prescribes that various consequences (e.g., higher offset requirements) may or will flow from a final disapproval does not mean that EPA either can or must conduct a regulatory flexibility analysis for this action. Therefore, this action will not have a significant economic impact on a substantial number of small entities.

We continue to be interested in the potential impacts of this proposed rule on small entities and welcome comments on issues related to such impacts.

D. Unfunded Mandates Reform Act

This action contains no Federal mandates under the provisions of Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), 2 U.S.C. 1531–1538 for State, local, or tribal governments or the private sector.'' EPA has determined that the proposed partial approval and partial disapproval action does not include a Federal mandate that may result in estimated costs of $100 million or more to either State, local, or tribal governments in the aggregate, or to the private sector. This action proposes to partially approve and partially disapprove pre-existing requirements under State or local law, and imposes no new requirements. Accordingly, no additional costs to State, local, or tribal governments, or to the private sector, result from this action.

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 action 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, because it merely partially approves and partially disapproves certain State requirements for inclusion into the SIP and does not alter the relationship or the distribution of power and responsibilities established in the CAA. Thus, Executive Order 13132 does not apply to this action.

F. Executive Order 13175, Coordination With Indian Tribal Governments

This action does not have tribal implications, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP EPA is proposing to partially approve and partially disapprove would not apply in Indian country located in the State, and EPA notes that it will not impose substantial direct costs on tribal governments or preempt tribal law. Thus, Executive Order 13175 does not apply to this action.

G. Executive Order 13045, Protection of Children From Environmental Health Risks and Safety Risks

EPA interprets EO 13045 (62 FR 19885, April 23, 1997) as applying only to those regulatory actions that concern health or safety risks, such that the analysis required under section 5–501 of the EO has the potential to influence the regulation. This action is not subject to EO 13045 because it because it is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997). This proposed partial approval and partial disapproval of the SIP under CAA section 110 and subchapter I, part D will not in-and-of itself create any new regulations but simply disapproves certain State requirements for inclusion into the SIP.

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

This proposed rule is not subject to Executive Order 13211 (66 FR 28355, May 22, 2001) because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Public Law 104–113, 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. NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

The EPA believes that this action is not subject to requirements of Section 12(d) of NTTAA because application of those requirements would be inconsistent with the CAA.

J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order (EO) 12898 (59 FR 7629 (Feb. 16, 1994)) establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

EPA lacks the discretionary authority to address environmental justice in this proposed action. In reviewing SIP submittals, EPA's role is to approve or disapprove State choices, based on the criteria of the CAA. Accordingly, this action merely proposes to approve certain State requirements for inclusion into the SIP under CAA section 110 and subchapter I, part D and to disapprove others will not in-and-of itself create any new requirements. Accordingly, it does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Nitrogen dioxide, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

Authority: 42 U.S.C. 7401 *et seq.*

Dated: June 29, 2011.

Jared Blumenfeld,

Regional Administrator, EPA Region 9.

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