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**Approval and Promulgation of
Implementation Plans for California—San
Joaquin Valley PM-10 Nonattainment
Area; Serious Area Plan for Attainment of
the 24-Hour and Annual PM-10
Standards; Proposed Rule**

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[CA 294-0432, FRL-7617-6]

Approval and Promulgation of Implementation Plans for California—San Joaquin Valley PM-10 Nonattainment Area; Serious Area Plan for Attainment of the 24-Hour and Annual PM-10 Standards

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing to approve the “2003 PM10 Plan, San Joaquin Valley Plan to Attain Federal Standards for Particulate Matter 10 Microns and Smaller,” submitted on August 19, 2003, and Amendments to that plan submitted on December 30, 2003, as meeting the Clean Air Act (CAA or the Act) requirements applicable to the San Joaquin Valley, California PM-10 nonattainment area (SJV). The SJV violates the national ambient air quality standards (NAAQS) for particulate matter of ten microns or less (PM-10) and is classified as a serious PM-10 nonattainment area.

As a serious PM-10 nonattainment area, the State must submit to EPA a plan that provides for, among other things, the implementation of best available control measures (BACM). In addition, because the serious area attainment deadline, December 31, 2001, has passed, the plan must provide for expeditious attainment of the PM-10 NAAQS and for an annual reduction in PM-10 or PM-10 precursors emissions of not less than five percent until attainment.

DATES: Comments on this proposal must be received by March 5, 2004.

ADDRESSES: Mail comments to Doris Lo, Planning Office (AIR2), EPA Region 9, 75 Hawthorne Street, San Francisco, California, 94105. Comments may also be submitted electronically to lo.doris@epa.gov or through hand delivery/courier.

A copy of the docket is available for public inspection at EPA’s Region 9 at 75 Hawthorne Street, San Francisco, California, 94105, office during normal business hours.

Electronic Availability

This rulemaking and the TSD for this rulemaking are available as electronic files on EPA’s Region 9 Web site at www.epa.gov/region09/air.

FOR FURTHER INFORMATION CONTACT: Doris Lo, Planning Office (AIR2), U.S.

EPA, Region 9, 75 Hawthorne Street, San Francisco, California, 94105. (415) 972-3959, e-mail: lo.doris@epa.gov.

SUPPLEMENTARY INFORMATION:

Throughout this document, “we,” “us” and “our” refer to EPA.

Table of Contents

- I. Summary of Today’s Proposal
- II. PM-10 Air Quality Planning in the SJV Area
- III. Overview of the CAA’s Planning Requirements for the SJV Serious PM-10 Nonattainment Area
 - A. Transportation Conformity and Motor Vehicle Emissions Budgets
 - B. Emissions Inventories
 - C. Best Available Control Measures for Sources of PM-10
 - D. Reasonably Available Control Measures for Sources of PM-10
 - E. Major Stationary Sources of PM-10 Precursors
 - F. Section 189(d) Attainment Demonstration and 5% Requirement
 - G. Reasonable Further Progress and Quantitative Milestones
- IV. The 2003 PM-10 Plan’s Compliance with the CAA’s Requirements
 - A. Overview of the Plan’s NO_x/PM Attainment Strategy
 - B. Transportation Conformity and Motor Vehicle Emissions Budgets
 1. CARB Methodology for Estimating PM-10 in the Emissions Budgets
 2. Adequacy of the Plan’s Budgets
 3. Trading Mechanism
 - C. Emissions Inventories
 - D. Implementation of Reasonably and Best Available Control Measures
 1. Steps 1 and 2: Determining Significant Sources of PM-10 and PM-10 Precursors
 2. Steps 3 and 4: BACM for NO_x and PM-10 Significant Source Categories
 - a. State Sources
 - b. District Sources
 - (1) Agricultural Irrigation Internal Combustion Engines
 - (2) Charbroiling
 - (3) Cotton Gins
 - (4) Internal Combustion Engines, Stationary
 - (5) Fugitive Dust
 - (i) Agricultural Conservation Management Practice Program
 - (ii) Regulation VIII Sources
 - (6) Glass Manufacturing
 - (7) Manufacturing and Industrial Fuel Combustion
 - (8) Natural Gas Boilers
 - (9) Natural Gas Fired Oilfield Steam Generators
 - (10) Oil Drilling and Workover
 - (11) Open Burning
 - (12) Prescribed Burning
 - (13) Residential Space Heating
 - (14) Residential Water Heaters
 - (15) Residential Wood Combustion
 - (16) Service and Commercial-Other Fuel Combustion
 - (17) Solid-Fuel Boiler, Steam Generators and Process Heaters
 - (18) Stationary Gas Turbines
 - E. VOC and SO_x Sources

1. Oil and Gas Fugitives from Crude Oil and Gas Production and Natural Gas Processing Facilities
 2. Oil and Gas Fugitives from Petroleum Refineries and Chemical Plants
 3. Can and Coil Coatings
 4. Agricultural Conservation Management Practice Program
 5. Dryers
 6. Gas-Fired Oilfield Steam Generators
 7. Glass Manufacturing
 8. Small Boilers, Steam Generators and Process Heaters
 9. Steam-Enhanced Crude Oil Production Well Vents
 10. Wineries
 - F. Attainment Demonstration
 1. Modeling Used for the Attainment Demonstration
 2. Attainment Date
 3. Enforceable Commitments for Future Control Measures
 - a. Indirect Source Mitigation Program
 - b. Commitment to Achieve Additional PM-10 and NO_x Reductions in 2010
 - c. Summary of Commitments to Adopt and Implement Control Measures in the 2003 PM-10 Plan
 - d. Approvability of Enforceable Commitments
 - (1) The Commitments Address a Limited Portion of the 2003 PM-10 Plan
 - (2) The State and District Are Capable of Fulfilling their Commitment
 - (3) The Commitments Are for a Reasonable and Appropriate Period of Time
 - (4) Enforceable Commitment for a Mid-Course Review
 5. Summary of Attainment Demonstration
 - G. Section 189(d) 5% Requirement
 - H. Reasonable Further Progress
 1. Annual RFP Demonstration
 2. 24-hour RFP Demonstration
 - I. Quantitative Milestones
- V. Summary of Proposed Action
- VI. Statutory and Executive Order Reviews

I. Summary of Today’s Proposal

EPA is proposing to approve the “2003 PM10 Plan, San Joaquin Valley Plan to Attain Federal Standards for Particulate Matter 10 Microns and Smaller,” submitted by the State of California to EPA on August 19, 2003, and Amendments to that plan submitted on December 30, 2003,¹ as meeting the CAA’s requirements for serious PM-10 nonattainment areas, including the requirements of CAA section 189(d) for serious areas that have failed to meet their attainment dates. Specifically, we are proposing to approve the following elements of the Plan:

- Motor vehicle budgets for transportation conformity;
- Emissions inventories for PM-10 and PM-10 precursors;

¹ The Amendments to the 2003 PM-10 Plan supersede some portions of the 2003 PM-10 Plan and also add to it. References hereafter to the “SJV 2003 PM-10 Plan” or “the Plan” mean the 2003 Plan submitted on August 19, 2003, as amended by the December 30, 2003, submittal.

- A demonstration that reasonably available and best available control measures (RACM and BACM) will be expeditiously implemented for all significant sources of PM-10 and PM-10 precursors;

- A demonstration that attainment will be achieved as expeditiously as practicable;

- A demonstration that the CAA section 189(d) five percent requirement is met; and

- A demonstration that reasonable further progress (RFP) and quantitative milestones will be achieved.

Final action approving the RACM/BACM demonstration for fugitive dust sources regulated by the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD or District) Regulation VIII would terminate all sanction, Federal implementation plan (FIP) and rule disapproval implications of our February 26, 2003, action on Regulation VIII. 68 FR 8830.

We describe our proposed actions and provide an evaluation of the Plan and Plan Amendments below. Additional details of our evaluation may be found in the technical support document (TSD) for this proposed rule ("EPA's Technical Support Document for the San Joaquin Valley, California, 2003 PM-10 Plan and 2003 PM-10 Plan Amendments," January 27, 2004). A copy of the TSD can be downloaded from our Web site or obtained by e-mailing, calling or writing the contact person listed above.

II. PM-10 Air Quality Planning in the SJV Area

In 1990, Congress amended the Clean Air Act to address, among other things, continued nonattainment of the PM-10 NAAQS.² Pub. L. 549, 104 Stat. 2399, codified at 42 U.S.C. 7401-7671q (1991). On the date of enactment of the 1990 Clean Air Act Amendments, PM-10 areas including the SJV, meeting the qualifications of section 107(d)(4)(B) of the amended Act, were designated nonattainment by operation of law. *See*

² EPA revised the NAAQS for PM-10 on July 1, 1987 (52 FR 24672), replacing standards for total suspended particulates with new standards applying only to particulate matter up to 10 microns in diameter (PM-10). At that time, EPA established two PM-10 standards. The annual PM-10 standard is attained when the expected annual arithmetic average of the 24-hour samples, averaged over a three year period, is equal to or less than 50 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). The 24-hour PM-10 standard of 150 $\mu\text{g}/\text{m}^3$ is attained if samples taken for 24-hour periods have no more than one expected exceedance per year, averaged over 3 years. *See* 40 CFR 50.6 and 40 CFR part 50, appendix K.

Breathing particulate matter can cause significant health effects, including an increase in respiratory illness and premature death.

56 FR 11101 (March 15, 1991). EPA codified the boundaries of the SJV nonattainment area at 40 CFR 81.305.³

Once an area is designated nonattainment for PM-10, section 188 of the CAA outlines the process for classifying the area and establishes the area's initial attainment deadline. In accordance with section 188(a), at the time of designation, all PM-10 nonattainment areas, including the SJV, were initially classified as moderate nonattainment. On December 24, 1991, California submitted a moderate area PM-10 Plan for the SJV which demonstrated that the area could not attain the PM-10 NAAQS by the moderate area attainment date, December 31, 1994. EPA has not acted on any portion of the moderate area plan.

Section 188(b)(1) of the Act provides that moderate areas can subsequently be reclassified as serious before the applicable moderate area attainment date if at any time EPA determines that the area cannot "practicably" attain the PM-10 NAAQS by that deadline. On January 8, 1993 (58 FR 3337), EPA made such a determination and reclassified the SJV as serious.

As a serious nonattainment area, the attainment deadline for the SJV is as expeditiously as practicable but no later than December 31, 2001. CAA section 188(c)(2). Section 189(b)(2) of the Act required that the State submit state implementation plan (SIP) revisions for the SJV addressing CAA section 189(b) and (c) by August 8, 1994, and February 8, 1997. The State made these required serious area submittals but withdrew them on February 26, 2002. As a result, on February 28, 2002, EPA made a finding of failure to submit (67 FR 11925).

On July 23, 2002, EPA found that the SJV failed to attain the annual and 24-hour PM-10 standards by December 31, 2001 (67 FR 48039). For serious areas failing to meet their applicable attainment deadlines, section 189(d) of the CAA requires states to "submit within 12 months after the applicable attainment date, plan revisions which provide for attainment of the PM-10 air quality standards and, from the date of such submission until attainment, for an annual reduction of PM-10 or PM-10 precursor emissions within the area of not less than 5 percent of the amount of such emissions as reported in the most recent inventory prepared for the

³The San Joaquin Valley PM-10 nonattainment area includes the following counties in California's central valley: Fresno, Kern, Kings, Tulare, San Joaquin, Stanislaus, Madera and Merced.

area."⁴ On March 7, 2003, EPA made a finding of failure to submit the 5% attainment plan for the San Joaquin Valley which was due on December 31, 2002 (68 FR 13840).

On August 19, 2003, California submitted the "2003 PM10 Plan, San Joaquin Valley Plan to Attain Federal Standards for Particulate Matter 10 Microns and Smaller." On December 30, 2003, California submitted the Amendment to the 2003 PM-10 Plan. California and the SJVUAPCD developed and adopted these SIP revisions in order to address the CAA requirements in section 189(b)-(d).

On August 22, 2003, EPA found the 2003 PM-10 Plan complete (August 22, 2003, letter from Jack P. Broadbent to Catherine Witherspoon) pursuant to CAA section 110(k)(1)(B) and 40 CFR part 51, Appendix V. On January 9, 2004, EPA found the Amendments to the 2003 PM-10 Plan complete (January 9, 2004, letter from Deborah Jordan to Catherine Witherspoon, California Air Resources Board) pursuant to CAA section 110(k)(1)(B) and 40 CFR part 51, appendix V.

III. Overview of the CAA's Planning Requirements for the SJV Serious PM-10 Nonattainment Area

The SJV is a serious PM-10 nonattainment area that has failed to meet the applicable attainment date, December 31, 2001. Such areas are subject to CAA section 189(d) which, as discussed above, requires the submittal, within 12 months of the applicable attainment date, of an attainment plan which provides for a 5% annual reduction of PM-10 or PM-10 precursors. In addition, the SJV must address all of the relevant CAA requirements for moderate and serious areas that have not been previously addressed.

The requirements for moderate and serious PM-10 nonattainment areas are found in section 189 of the CAA, and the general planning and control requirements for nonattainment plans are found in CAA sections 110 and 172. EPA has issued a General Preamble⁵ and Addendum to the General Preamble⁶ describing our preliminary

⁴The section 189(d) requirements are also referred to hereafter as the "5% attainment plan," or the "section 189(d) 5% requirement."

⁵"State Implementation Plans; General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990," 57 FR 13498 (April 16, 1992) and 57 FR 18070 (April 28, 1992).

⁶"State Implementation Plans for Serious PM-10 Nonattainment Areas, and Attainment Date Waivers for PM-10 Nonattainment Areas Generally; Addendum to the General Preamble for the Implementation of Title I of the Clean Air Act

views on how the Agency intends to review SIPs submitted to meet the CAA's requirements for PM-10 plans. The General Preamble mainly addresses the requirements for moderate areas and the Addendum, the requirements for serious areas. EPA has also issued other guidance documents related to PM-10 plans which are cited as necessary when EPA discusses the details of the 2003 PM-10 Plan below. In addition, EPA is addressing the adequacy of the motor vehicle budgets for transportation conformity (CAA section 176(c)) in this proposed plan approval. The PM-10 plan requirements addressed by this proposed approval for the SJV are summarized below.

A. Transportation Conformity and Motor Vehicle Emissions Budgets

Transportation conformity is required by section 176(c) of the Clean Air Act. Our conformity rule (40 CFR part 51, subpart T and part 93, subpart A) requires that transportation plans, programs, and projects conform to state air quality implementation plans and establishes the criteria and procedures for determining whether or not they do. Conformity to a SIP means that transportation activities will not produce new air quality violations, worsen existing violations, or delay timely attainment of the NAAQS. Once a SIP that contains motor vehicle emissions budgets has been submitted to EPA, and EPA has found it adequate, these budgets are used for determining conformity: emissions from planned transportation activities must be less than or equal to the budgets.

B. Emissions Inventories

CAA section 172(c)(3) requires that an attainment plan include a comprehensive, accurate, and current inventory of actual emissions from all sources of the relevant pollutants.

C. Best Available Control Measures for Sources of PM-10

CAA section 189(b)(1)(B) requires provisions to assure that best available control measures (BACM), including the best available control technology (BACT) for stationary sources, for the control of PM-10 shall be implemented no later than 4 years after the date a nonattainment area is reclassified as serious.

D. Reasonably Available Control Measures for Sources of PM-10

When a moderate area is reclassified to serious, the requirements to

implement reasonably available control measures (RACM), 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 (RACT), in CAA sections 172(c)(1) and 189(a)(1)(C) remain. Thus, a serious area PM-10 plan must also provide for the implementation of RACM and RACT to the extent that the RACM and RACT requirements have not been satisfied in the area's moderate area plan.

E. Major Stationary Sources of PM-10 Precursors

CAA section 189(e) requires that control requirements applicable to major stationary sources of PM-10 shall also apply to major stationary sources of PM-10 precursors, except where the Administrator determines that such sources do not contribute significantly to PM-10 levels which exceed the standards in the area.

F. Section 189(d) Attainment Demonstration and 5% Requirement

For areas which do not attain the PM-10 standards by the applicable attainment date, CAA section 189(d) requires the submittal of plan revisions which provide for attainment (attainment demonstration) and an annual 5% reduction in PM-10 or PM-10 precursors. These plan revisions must be submitted within 12 months of the applicable attainment date.

The attainment deadline applicable to an area that misses the serious area attainment date is as soon as practicable, but no later than 5 years from the publication date of the nonattainment finding notice. EPA may, however, extend the attainment deadline to the extent it deems appropriate for a period no greater than 10 years from the publication date, "considering the severity of nonattainment and the availability and feasibility of pollution control measures." CAA sections 179(d)(3) and 189(d).

G. Reasonable Further Progress and Quantitative Milestones

CAA sections 172(c)(2) requires the plan to demonstrate RFP as defined in section 171(1). Section 189(c)(1) requires the plan to contain quantitative milestones which will be achieved every 3 years and which will demonstrate that RFP is being met.

IV. The 2003 PM-10 Plan's Compliance With the CAA's Requirements

An evaluation of the 2003 PM-10 Plan against the CAA requirements is provided below. Additional information

may be found in the TSD for this proposed plan approval.

A. Overview of the Plan's NO_x/PM Attainment Strategy

The 2003 PM-10 Plan relies on reductions from sources of oxides of nitrogen (NO_x), a PM-10 precursor, and directly emitted PM-10 sources to achieve attainment ("NO_x/PM strategy"). Other PM-10 precursors for the SJV include volatile organic compounds (VOC), oxides of sulfate (SO_x) and ammonia (NH₃). The California Air Resources Board (CARB or the State) and SJVUAPCD have examined the effects of controlling VOC, SO_x and NH₃ and have determined that additional VOC controls will not lead to PM-10 reductions throughout the SJV, that the SO_x inventory is too small to have an appreciable impact on PM-10 reductions, and that there is too much uncertainty regarding the effects of ammonia controls. (See pages ES-15, ES-16 and 7-3 of the 2003 PM-10 Plan.) Thus, the State and District believe that the NO_x/PM strategy is currently the most effective and expeditious strategy for attaining the PM-10 standards in the SJV. Additional technical information from the California Regional PM-10/PM-2.5 Air Quality Study (CRPAQS) is expected in 2005. The District has made an enforceable commitment, discussed further below, to re-evaluate the 2003 PM-10 Plan with the results of CRPAQS and to submit a new plan to EPA by March 2006. In the absence of the CRPAQS results, EPA concurs with the 2003 PM-10 Plan's NO_x/PM strategy. Therefore, for the purposes of 189(b)(1)(B) and 189(e) we are proposing to determine that sources of the PM-10 precursors, VOC, SO_x and NH₃, do not contribute significantly to PM-10 levels which exceed the standard in the SJV.

B. Transportation Conformity and Motor Vehicle Emissions Budgets

One of the primary tests for conformity is to show that transportation plans and improvement programs will not result in motor vehicle emissions greater than the levels needed to make progress toward and to meet the air quality standards. The motor vehicle emissions levels needed to make progress toward and to meet the air quality standards are set in the area's applicable SIP and are known as the "motor vehicle emissions budgets." Emissions budgets are established for specific years and specific pollutants and precursors. See 40 CFR 93.118(a).

Before an emissions budget in a submitted SIP revision may be used in a conformity determination, we must

first determine that it is adequate. The criteria by which we determine whether a SIP's motor vehicle emissions budgets are adequate for transportation conformity purposes are outlined in 40 CFR 93.118(e)(4). We have described our process for determining the adequacy of submitted SIP budgets in guidance (May 14, 1999, memo titled "Conformity Guidance on Implementation of March 2, 1999 Conformity Court Decision") and in our proposed rule of June 30, 2003 (68 FR 38974). Applicability of emission trading between conformity budgets for conformity purposes is described in 40 CFR 93.124(c).

EPA must positively affirm that the budgets contained in the SIP are adequate before budgets can be used for transportation conformity. Once adequate budgets are established, transportation plans will then need to conform with those budgets. The determination of whether transportation plans conform to SIPs is outside the scope of this rulemaking. This rulemaking does, however, address whether the budgets found in the 2003 PM-10 Plan are adequate and approvable.

1. CARB Methodology for Estimating PM-10 in the Emissions Budgets

CARB's mobile source emission model, EMFAC2002, was used to estimate direct PM-10 and NO_x emissions from motor vehicles in the 2003 PM-10 SIP. EMFAC2002 was approved by EPA on April 1, 2003 (FR 6815722), for use in SIPs and conformity analyses. EMFAC2002 produces emissions for a wide range of motor vehicles (passenger cars, eight different classes of trucks, motorcycles, buses and motor homes) for calendar years out to 2040. Particulate emissions include tire and brake wear as well vehicle exhaust and evaporative emissions.

The methodology used in the 2003 PM-10 SIP to estimate fugitive dust (*e.g.* paved and unpaved road emissions) is consistent with EPA's AP-42 (5th Revision, 1995) model for estimating paved road dust emissions. However, California-specific inputs to the AP-42 equation, such as silt loading and vehicle weight, have been incorporated. A rainfall correction factor, as provided in EPA's latest version of the AP-42

methodology has also been incorporated into the methodology. Reference documents to the 2003 PM-10 Plan that contain details regarding the methodology are R1: Detailed Annual Emissions Inventories and R2: Detailed Seasonal Emissions Inventories (2003 PM-10 Plan, reference documents on cd-rom). For unpaved roads, a California specific emission factor has been developed from unpaved road emission tests performed primarily in the SJV and is approximately 2 lbs. PM-10/VMT.

CAA section 172(c)(3) and 40 CFR 51.112(a)(1) require that SIP inventories be based on the most current and applicable models that are available at the time the SIP is developed. CAA section 176(c)(1) requires that the latest emissions estimates be used in conformity analyses. EPA approves models that fulfill these requirements. We are proposing to approve the methodologies used in the 2003 PM-10 Plan to calculate PM-10 emissions from paved and unpaved roads for the 2003 PM-10 Plan and also for use in future transportation conformity determinations in the SJV.

2. Adequacy of the Plan's Budgets

The 2003 PM-10 Plan includes county by county subarea motor vehicle emissions budgets for 2005, 2008 and 2010 for direct PM-10 and NO_x. The budgets are summarized in Table 3-2 of the Plan, "Motor Vehicle Emission Subarea Budgets, (tons per average annual day)" and below. The direct PM-10 budgets include emissions of reentrained dust from motor vehicle travel on paved and unpaved roads, vehicular exhaust, vehicle brake and tire wear, and emissions from highway and transit project construction. The emissions budgets for NO_x include only vehicular exhaust. Since the 2003 PM-10 Plan does not consider VOC to be a significant contributor to the PM-10 nonattainment problem, in accordance with 40 CFR 93.102(b)(2)(iii), no VOC budgets are included. Additional details regarding the budgets are presented in "2005 Motor Vehicle Emissions Budgets (tons per average annual day), Date printed: 7/24/2003; SJV PM Plan Budget Derivations. xls; SJV PM Budget Derivation, July 8, 2003," which is part of the 2003 PM-10 Plan submittal.

On August 27, 2003, EPA announced receipt of the 2003 PM-10 Plan on the

Internet and requested public comment on the Plan's emissions budgets by September 26, 2003. No comments were received. EPA's analysis for the 2003 PM-10 Plan's PM-10 and NO_x motor vehicle budgets is provided in the TSD.

Based on our evaluation of the criteria outlined in section 93.118(e) of the conformity rule, EPA finds the PM-10 and NO_x motor vehicle emissions budgets contained in the 2003 PM-10 Plan (and the table below) adequate and proposes to approve them. EPA proposes to approve the budgets because they come from a SIP which EPA concludes demonstrates timely attainment and the budgets are consistent with all of the control measures assumed in the attainment demonstration. We also find adequate and propose to approve the individual county level subarea budgets for NO_x and PM-10, as shown in the table below, consistent with section 93.124(e), which allows for a nonattainment area with more than one Metropolitan Planning Organization (MPO) to establish subarea emission budgets for each MPO or make a collective conformity determination for the entire nonattainment area. Note that, if an individual MPO cannot show conformity to their individual county budget, then the remaining MPOs in the SJV cannot make any new conformity determinations.⁷ An adequate or approved motor vehicle emissions budget must be used for transportation conformity purposes. As mentioned earlier, the county subarea motor vehicle emissions budgets that EPA is proposing to approve are listed in the table below.

⁷ When examined together, section 93.102(b), which requires conformity determinations in all nonattainment areas, and section 93.109(a), which requires that all of the requirements of the conformity rule be met, indicate that subareas cannot find conformity until all subareas conform. Consequently, it is the interpretation of EPA and the Federal Highway Administration that if one subarea is unable to demonstrate conformity, the other subareas cannot determine conformity either. That is, one MPO cannot determine conformity unless the other subareas included in the implementation plan are in conformity. The current transportation improvement program (TIP) and conformity determination for the other subareas would not lapse immediately and the projects in the current TIP for these subareas would be allowed to go forward. Those other subareas simply could not make a new conformity determination until the subarea that originally lapsed was found to conform.

MOTOR VEHICLE EMISSIONS SUBAREA BUDGETS

[Tons/day]

County	SJV 2003 PM-10 Plan					
	2005		2008		2010	
	PM-10	NO _x	PM-10	NO _x	PM-10	NO _x
Fresno	14.1	42.6	13.3	36.4	16.2	29.7
Kern	10.6	38.8	10.7	34.2	10.8	28.4
Kings	5.6	7.5	5.6	6.5	6.7	5.4
Madera	4.3	9.9	4.3	9.1	4.5	7.8
Merced	5.5	15.3	5.2	12.5	5.3	9.9
San Joaquin	9.0	28.9	9.0	23.4	9.2	18.3
Stanislaus	6.5	22.5	6.1	18.7	6.1	14.9
Tulare	8.7	23.6	7.9	20.1	8.9	16.4
Total	64.3	189.1	62.1	160.9	67.7	130.8

At the request of CARB and based on the SJVUAPCD's commitment to update the SIP by March 31, 2006, using improved inventories and air quality modeling,⁸ we are proposing to limit this approval to last only until the effective date of our adequacy findings for new replacement budgets. For further discussion of the rationale for, and the effect of, this limitation, please see our promulgation of a limitation on motor vehicle emission budgets associated with various California SIPs, at 67 FR 69139 (November 15, 2002).

3. Trading Mechanism

Transportation Conformity is demonstrated for each county in the SJV when emissions for both PM-10 and NO_x are estimated to be below the motor vehicle emission budgets for each pollutant for all analysis years before and including 2010. However, for analysis years beyond 2010, the PM-10 Plan allows emissions to be traded from NO_x to PM-10 budgets. Section 93.124(c) allows trading among budgets for the purposes of conformity if there is an approved mechanism in the SIP to allow trading to take place. The provision in section 93.124(c) states that:

"[a] conformity demonstration shall not trade emissions among budgets which the applicable implementation plan (or implementation plan submission) allocates for different pollutants or precursors, or among budgets allocated to motor vehicles and other sources, unless the implementation plan establishes appropriate mechanisms for such trades."

Page 3-16 to 3-17 of the 2003 PM-10 Plan provides a general discussion of how a trading mechanism could be used for determining transportation conformity with the plan's budgets after

⁸ See page 2 of the August 19, 2003, letter from Catherine Witherspoon to Wayne Nastri, transmitting the 2003 PM-10 Plan.

2010. On December 30, 2003, the District provided, as part of the 2003 PM-10 Plan Amendment, additional information which provides details on how the trading mechanism will be implemented (December 18, 2003, letter from David Crow to Deborah Jordan). The trading mechanism will be implemented with the following criteria. The trading applies only to:

- Analysis years after the 2010 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 for that county.
- Trades in one direction from NO_x to direct PM-10.
- A trading ratio of 1.5 tpd NO_x to 1 tpd PM-10.⁹
- Transportation conformity determinations in San Joaquin Valley for purposes of showing conformity to the budgets in the 2003 PM-10 attainment demonstration.

Not allowed are:

- Trading between counties/subarea budgets.
- Trading for any pollutant other than direct PM-10 and the PM-10 precursor NO_x.
- Trading with sources other than on-road emission sources.
- Trading that would interfere with meeting the NO_x budget.
- Use of the mechanism to supplement the NO_x budget with excess reductions in the direct PM-10 budget.

⁹ The 1.5 tpd NO_x to 1 tpd direct PM-10 ratio is consistent with the attainment modeling supporting the 2003 PM-10 Plan's attainment demonstration. The SJV has made an enforceable commitment to conduct a mid-course review and to submit a new plan by March 31, 2006. The new plan will include a new attainment demonstration and if the NO_x/PM-10 conversion ratio needs to be adjusted in the attainment demonstration, it must also be adjusted for the conformity budget trading ratio. See section IV.F. below.

In practice, in a conformity analysis for years after 2010, an MPO in the SJV would follow these steps:

- Generate the estimates of NO_x and PM-10 emissions from the planned transportation network, using procedures consistent with the conformity rule (40 CFR part 93).
- Compare these estimates to the appropriate SIP budgets.
- If one or both of the budgets are not met, identify and evaluate potential control measures that could achieve additional reductions (*e.g.*, feasibility analysis). This step could include examination of expanded implementation of control measures similar to those used in the SIP (*e.g.*, paving unpaved roads) if included and funded in the Regional Transportation Plan.
- If, after including reductions from additional measures, the direct PM-10 budget still cannot be met, adjust (*i.e.*, increase) the PM-10 subarea budget by trading from the NO_x budget. This trade from the NO_x subarea budget to the PM-10 subarea budget can only occur if the estimated emissions of NO_x from the planned transportation network are less than the NO_x subarea budget. The 1.5 tpd NO_x to 1 tpd PM-10 ratio would be used, as follows, to determine the NO_x reductions needed to offset the excess direct PM10 emissions:

$$(PM-10 \text{ estimate} - PM-10 \text{ budget}) * 1.5$$

$$= \text{tpd of NO}_x \text{ reductions needed to offset excess PM-10}$$

Based on this calculation, the NO_x budget is decreased and the PM-10 budget is increased for this particular conformity determination in the subarea. A subarea has demonstrated conformity if, after trading, the estimates of NO_x and PM-10 emissions from the planned transportation network are at or below the adjusted NO_x and direct PM-10 budgets. For each analysis year after 2010, and in

each subsequent conformity determination, the transportation agency must repeat these steps to determine whether the budgets can be met, or whether they need to be adjusted using this trading mechanism. Once the U.S. Department of Transportation (USDOT) has approved a conformity finding which relied upon the trading mechanism, the transportation planning agency cannot necessarily rely on that trading scenario for future conformity findings. The PM-10 and NO_x budgets will return to the subarea emission budgets in the 2003 PM-10 SIP. Any new conformity determination would have to repeat the steps identified above to determine if further trading is appropriate.

EPA believes that the 2003 PM-10 Plan has provided an approvable trading mechanism for determining transportation conformity after 2010. EPA is proposing to approve the trading mechanism and all of the criteria included in the letter submitted as part of the 2003 PM-10 Plan as enforceable components of the program.

C. Emissions Inventories

Section 172(c)(3) of the CAA requires all plan submittals to include a comprehensive, accurate, and current inventory of actual emissions from all sources in the nonattainment area. Since the San Joaquin Valley exceeds both the 24-hour and annual PM-10 standards, representative emission inventories are needed for both standards. The District chose the year 1999 as the base year for the 2003 PM-10 Plan since it was the most complete emission inventory available. This base year inventory meets the CAA requirement for a comprehensive, accurate and current inventory and is used as the basis for forecasting future year inventories and for developing average annual, seasonal and modeling inventories. (See Chapter 3, 2003 PM-10 Plan.)

The 2003 PM-10 Plan's average annual inventory represents the emissions on an average day in a year and is based on the SJV's yearly emissions. The average annual inventory is used to evaluate the annual PM-10 problem.

The 2003 PM-10 Plan also include seasonal inventories for fall and winter. The seasonal inventories were developed to evaluate the 24-hour PM-10 problem.

EPA is proposing to approve the inventories in the 2003 PM-10 Plan as meeting the CAA 172(c)(3) requirement. A more detailed discussion of the Plan's inventories can be found in the TSD.

D. Implementation of Reasonably and Best Available Control Measures

CAA section 189(b)(1)(B) requires serious area PM-10 plans to provide for the implementation of BACM, including BACT, within four years of reclassification to serious.¹⁰ For the SJV, this date was January 8, 1997. Since that date has passed, BACM must now be implemented as expeditiously as practicable. *Delaney v. EPA*, 898 F.2d 687 (9th Cir. 1990). The General Preamble and Addendum provide EPA's preliminary guidance on how to determine what is a BACM level of control. The Addendum provides the following guidance in discussing BACM:

- BACM is considered to be a higher level of control than RACM¹¹ and is defined as being, among other things, the maximum degree of emissions reduction achievable from a source or source category which is determined on a case-by-case basis, considering energy, economic and environmental impacts. Addendum at 42010, 42013.

- BACM should emphasize prevention rather than remediation (e.g., preventing track out at construction sites rather than simply requiring clean up of tracked out dirt). Addendum at 42011, 42013.

- BACM must be implemented for all categories of sources in serious areas unless the State adequately demonstrates that a particular source category does not contribute significantly to nonattainment of the PM-10 standards. A source category is presumed to contribute significantly to a violation of the 24-hour NAAQS if its PM-10 impact at the location of the expected violation would exceed

¹⁰ As with RACM and RACT, BACT is a subset of the overarching BACM requirement. BACT generally refers to the technological control measures which apply to stationary sources. Addendum at 42008 to 42009.

¹¹ CAA section 189(a)(1)(C) requires implementation of RACM for moderate PM-10 nonattainment areas. As noted above, a serious area PM-10 plan must also provide for the implementation of RACM to the extent that the RACM requirement has not been satisfied in the area's moderate area plan.

However, we do not normally conduct a separate evaluation to determine if a serious area plan's measures meet the RACM as well as BACM requirements as interpreted by us in the General Preamble at 13540. This is because in our serious area guidance (Addendum at 42010), we interpret the BACM requirement as generally subsuming the RACM requirement (i.e., if we determine that the measures are indeed the "best available," we have necessarily concluded that they are "reasonably available"). Consequently, our proposed approval of the 2003 PM-10 Plan's provisions relating to the implementation of BACM also constitutes a proposed finding that the Plan provides for the implementation of RACM and references to BACM in the discussion of the 2003 PM-10 Plan below are intended to include RACM.

5 µg/m³. Likewise, a source category will be presumed to contribute to a violation of the annual NAAQS if its PM-10 impact at the time and location of the expected violation would exceed 1 µg/m³. Addendum at 42011, 42012.

- In contrast to RACM, BACM determinations are to be based more on the feasibility of implementing measures rather than on an analysis of the area's attainment needs. Addendum at 42012.

The Addendum then discusses the following steps for determining BACM. Addendum at 42012-42014.

- Inventory the sources of PM-10 and PM-10 precursors.

- Determine which source categories are significant by modeling their impacts on the 24-hour and annual PM-10 standard.

- Evaluate alternative control techniques and their technological feasibility.

- Evaluate the costs of control measures or their economic feasibility.

Once these analyses are complete, the BACM must be turned into an enforceable rule or commitment to ensure BACM implementation. We use these steps as guidelines in our evaluation of the 2003 PM-10 Plan below. Finally, the Addendum provides examples of determining BACM and also discusses the selection of BACT for stationary sources.^{12,13}

1. Steps 1 and 2: Determining Significant Sources of PM-10 and PM-10 Precursors

The first step in determining BACM is to develop a detailed emissions inventory of source categories for PM-10 and PM-10 precursors that can be used with modeling to determine which categories have a significant impact on the ambient PM-10 levels. The second step is to use modeling to identify those source categories having a greater than *de minimis* impact on PM-10 concentrations. Addendum at 42012.

The development of the detailed emissions inventory of source categories for PM-10 and PM-10 precursors is discussed in a section IV.C. above. The

¹² CAA sections 189(b)(1)(B) and 189(e) require BACT for stationary sources of PM-10 and PM-10 precursors. BACT is determined on a case-by-case basis and should reflect " * * * the maximum degree of emission reduction of each pollutant subject to regulation (PM-10 and/or PM-10 precursors), taking into account energy, environmental, and economic impacts and other costs. * * *" Addendum at 42014.

¹³ Additional discussion on BACM implementation is provided in EPA's proposed rule for the Maricopa County PM-10 Nonattainment Area Serious Area Plan for Attainment of the 24-Hour PM-10 Standard. 66 FR 50252, 50281 (October 2, 2001).

District used receptor modeling to determine the contribution levels (in $\mu\text{g}/\text{m}^3$) from PM-10 and NO_x sources on the worst exceedance days for both the annual and 24-hour PM-10 standards.^{14,15} The District then compared the emissions (tons) to the contribution levels ($\mu\text{g}/\text{m}^3$) for both the annual and 24-hour PM-10 and NO_x emissions (tons) on a county by county basis. The District did the comparisons on a county by county basis because they believe that localized emissions are more important because most of the worst PM-10 exceedances occur on stagnant days. The county by county approach also ensures a more stringent *de minimis* level since county emissions are lower than Valley-wide emissions. The purpose of the comparisons was to determine the tons of PM-10 and NO_x that contribute to 1 $\mu\text{g}/\text{m}^3$ for the annual standard and 5 $\mu\text{g}/\text{m}^3$ for the 24-hour standard on a county by county basis. The lowest PM-10 and NO_x tonnage values between both the annual and 24-hour values were then selected as the *de minimis* levels. (See SJV PM-10 Plan, pages 4–14 to 4–15 and Appendix G, pages G–4 to G–12).

The result of the *de minimis* analysis is the list of significant source categories found in Table G–9 of Appendix G of the 2003 PM-10 Plan. The CAA requires the expeditious implementation of BACM demonstration for all significant source categories. Each of the significant source categories is discussed below.

2. Steps 3 and 4: BACM for NO_x and PM-10 Significant Source Categories

The third and fourth steps involve determining the technical and economic feasibility of potential control measures for each of the significant source categories. Once BACM are identified, they must be implemented as expeditiously as practicable through an enforceable rule or commitment. A discussion of BACM for each of the significant PM-10 and NO_x source categories identified in the 2003 PM-10 Plan follows. EPA is proposing to find that the commitments and rules for the significant source categories below meet

¹⁴ The 2003 PM-10 Plan addresses *de minimis* levels for VOC, SO_x and NH₃; however, since we are concurring with the District's NO_x/PM strategy, an analysis of the significant source categories for VOC, SO_x and NH₃ is not necessary and is not addressed further in connection with BACM. See discussion in section IV.A. above.

¹⁵ The CRPAQS program as well as the routine PM-10 monitoring network provided the necessary information on contribution levels from PM-10 and NO_x. 2003 PM-10 Plan, Appendix G, page G–6. The Plan also includes dispersion modeling; however, the dispersion modeling is not refined enough to calculate *de minimis* levels for PM-10 and PM-10 precursors.

the RACM/BACM requirements of CAA section 189(a)(1)(C) and (b)(1)(B).

a. *State Sources*. The 2003 PM-10 Plan lists several significant source categories as being under State authority (2003 PM-10 Plan, page 4–17, Table 4–7). The State of California has unique authority under the Clean Air Act to adopt regulations to control emissions from new motor vehicles and engines and from nonroad engines, except for locomotives and engines used in farm and construction equipment which are less than 175 horsepower. CAA sections 209(b)(1) and 209(e)(2). In order for California to adopt such regulations, however, several determinations must be made, including a determination that the standards, in the aggregate, are at least as protective of public health and welfare as applicable Federal standards (CAA sections 209(b) and (e)). Following granting of a waiver, compliance with the State new motor vehicle or engine standards is treated as compliance with applicable Federal standards (CAA section 209(b)(3)). Absent a waiver, the corresponding Federal mobile source standards apply.

In exercising its special authority under CAA section 209, California has over the past 30 years adopted increasingly stringent emissions standards for those mobile source categories that are not federally preempted, keeping pace with the development of advanced control technologies and cleaner fuels. In recent years, these adoptions have included the following measures:

(1) California Heavy-Duty Diesel Vehicle Standards, adopted 4/23/98—www.arb.ca.gov/regact/2004/2004.htm;

(2) Large Off-Road Engine Regulations adopted 10/22/98—www.arb.ca.gov/regact/lore/lore.htm;

(3) Low-Emission Vehicle (LEV) 2 and CAP 2000 California Exhaust and Evaporative Emissions Standards, adopted 11/5/98—www.arb.ca.gov/regact/levii/levii.htm;

(4) 1997 and Later Off-Highway Recreational Vehicles and Engines Standards, adopted 12/10/98—www.arb.ca.gov/regact/recreat/recreat.htm;

(5) Exhaust Emission Standards for On-Road Motorcycles, adopted 12/10/98—www.arb.ca.gov/regact/motorcyc/motorcyc.htm;

(6) Off-Road Compression Ignition Engines Standards, adopted 1/27/00—www.arb.ca.gov/regact/ciengine/ciengine.htm;

(7) Transit Bus Standards, adopted 1/27/00 and revised 10/24/02—www.arb.ca.gov/regact/bus/bus.htm and www.arb.ca.gov/regact/bus02/bus02.htm;

(8) Heavy-Duty Diesel Engine Standards for 2007 and Later, adopted 10/25/01—www.arb.ca.gov/regact/HDDE2007/HDDE2007.htm;

(9) Spark-Ignition Inboard and Sterndrive Marine Engines, adopted 7/26/01—www.arb.ca.gov/regact/marine01/marine01.htm;

(10) On-Board Diagnostic II Regulations, adopted 4/25/02—www.arb.ca.gov/regact/obd02/obd02.htm; and

(11) LEV II 2002 Heavy-Duty Otto Cycle Engine Standards, adopted 11/14/02—www.arb.ca.gov/regact/hevhdg02/levhdg02.htm.

Many of the State's regulations have features that are more stringent than the Federal counterpart. For example, California's 1998 amendments to the State's regulations for 280cc and larger motorcycles apply stringent exhaust emission standards: 1.4g/km for the 2004 model year and 0.8g/km for the 2008 model year. EPA issued motorcycle standards in December 2003 (<http://www.epa.gov/otaq/roadbike.htm#final>). These new Federal standards were patterned after California's, but impose the same exhaust emission limits two years later than California (*i.e.*, in 2006 and 2010) and do not match California's controls on evaporative emissions. Thus, the requirements for this source category applicable within the SJV exceed even the stringent national requirements in certain respects. On the other hand, EPA's new regulations set stringent limits on the engines smaller than 50cc, a category not yet regulated by California. These national limits for scooters and mopeds will apply in the SJV in 2006, in accordance with the new EPA rule.

In addition, CARB has adopted more stringent fuel regulations than nationally required. These regulations apply to:

(1) Gasoline—Phase III California Reformulated Gasoline regulations (<http://www.arb.ca.gov/fuels/gasoline/gasoline.htm>);

(2) Diesel fuel regulations for motor vehicles (<http://www.arb.ca.gov/fuels/diesel/diesel.htm>); and

(3) Liquefied petroleum gas and other alternative fuel regulations for motor vehicles (<http://www.arb.ca.gov/fuels/altfuels/altfuels.htm>).

Again, California's fuels programs have elements that are more stringent than National requirements and are in no case less stringent than EPA standards. For example, California applies its reformulated gasoline requirements on a statewide basis in order to maximize benefits both within and outside areas where the Clean Air

Act requires reformulated fuel. California's clean diesel program applies to sale of fuel not only to onroad vehicles but also to nonroad vehicles. California has established standards for LPG and other alternative fuels, while EPA does not currently regulate these fuels.

The State has also established programs to reduce in-use emissions from mobile sources. These programs include:

(1) The Carl Moyer Program, providing funding to pay for the incremental costs of cleaner on-road, off-road, marine, locomotive and stationary agricultural pump engines, as well as forklifts, airport ground support equipment, and auxiliary power units (<http://www.arb.ca.gov/msprog/moyer/moyer.htm>); and

(2) The School Bus Idling regulations (www.arb.ca.gov/regact/sbidling/sbidling.htm).

These California programs are national models for aggressive and successful efforts to reduce in-use emissions and accelerate turnover to cleaner engines.

We believe that the State's control programs constitute BACM at this time for the mobile source and fuels categories, since the State's measures (supplemented by Federal controls for certain mobile source categories) reflect the most stringent emission control programs currently available, taking into account economic and technological feasibility.

b. *District Sources.* Table 4-8 of the 2003 PM-10 Plan lists the significant source categories that are primarily within the District's regulatory authority. A summary of how BACM has been provided for these categories¹⁶ is provided below.

(1) *Agricultural Irrigation Internal Combustion Engines.* This category is estimated to emit 17.4 tpd NO_x and 1.2 tpd PM-10 in 1999 and is currently uncontrolled. SJVUAPCD Rule 4101 establishes a 20% opacity limit for internal combustion (IC) engines and Rule 4702 establishes NO_x emission limits and other requirements which implement BACM for many IC engines,

as discussed below in paragraph IV.D.2.b.iv. (internal combustion engines, stationary), but both of these regulations currently exempt IC engines used in agriculture. Through adoption of the PM-10 Plan Amendments dated December 18, 2003, SJVUAPCD has committed to implement BACM for agricultural IC engines by removing the general agricultural exemptions from Rules 4101 and 4702 and to establish NO_x emission limits in Rule 4702 for diesel IC engines used in agriculture. In a separate action (*see* 68 FR 55917, September 29, 2003, and 69 FR 1271, January 8, 2004), EPA determined that the opacity limits in Rule 4101 are generally sufficient for BACM.

These rules will be revised by 4Q/04¹⁷ and July 1, 2005, implemented by 3Q/05 and January 1, 2006, and will achieve unspecified PM-10 and 7.5 tons/day NO_x emission reductions respectively. *See* pages 4-22, 4-23 and 4-46 to 4-48.

(2) *Charbroiling.* This category is estimated to emit 1.3 tpd of PM-10 in 1999. SJVUAPCD Rule 4692, *Commercial Charbroiling*, limits emissions of, among other things, particulate matter from chain-driven charbroilers at restaurants and fast food facilities by requiring charbroilers to be operated with a tested or certified catalytic oxidizer control device. On June 3, 2003, EPA published a direct final approval of Rule 4692, locally adopted on March 21, 2002.

In developing Rule 4692, SJVUAPCD used South Coast Air Quality Management District (SCAQMD) Rule 1138, *Control of Emissions from Restaurants*, as guidance. SCAQMD Rule 1138 is considered the most effective district regulatory standard in effect for this source category. The flameless catalytic oxidizer was determined to be the most cost-effective control method for reducing PM-10 emissions from chain-driven charbroilers. SJVUAPCD's staff report supporting adoption of Rule 4692 provides a detailed analysis of the technological and economic feasibility of possible control technologies.

SJVUAPCD estimates that implementation of Rule 4692 will reduce PM-10 emissions by 0.11 ton/day.

(3) *Cotton Gins.* This category is estimated to emit 2.7 tpd of PM-10 in 1999. SJVUAPCD commits to adopt a new rule to require 95% efficient 1D-3D cyclones for high-pressure exhaust units, 90% efficient 2D-2D cyclones for

low-pressure exhaust units, and appropriate trash hoppers to minimize fugitive emissions. These limits are considered as BACT when issuing permits for new and modified sources in the SJV.

This rule will be adopted by 4Q/04, implemented by 2005, and will reduce PM-10 emissions by 1.5 tpd. *See* pages 4-22, 4-23, 4-29 and 4-30.

(4) *Internal Combustion Engines, Stationary.* This category is estimated to emit 47 tpd of NO_x in 1999. SJVUAPCD Rule 4701, *Internal Combustion Engines—Phase 1*, and SJVUAPCD Rule 4702, *Internal Combustion Engines—Phase 2*, limit emissions of NO_x and other pollutants from internal combustion (IC) engines rated greater than 50 horsepower. These rules establish different emission limits and compliance schedules depending on engine type, size and location. On February 28, 2002, EPA published a final limited approval and limited disapproval of the version of Rule 4701 locally adopted on December 19, 1996. In this action, EPA noted that Rule 4701 would strengthen the SIP, but also noted several deficiencies in the rule regarding rule applicability and enforceability that prevented EPA from fully approving the rule. *See* 67 FR 9209 (February 28, 2002).

SJVUAPCD amended Rule 4701 and adopted new Rule 4702 on August 21, 2003. Rule 4701 applies to both spark-ignited and compression-ignited (*i.e.*, diesel) IC engines, whereas Rule 4702 applies only to spark-ignited IC engines. Rule 4702 and the amendments to Rule 4701 address the issues identified in EPA's limited disapproval and tighten the NO_x emission limits for spark-ignited IC engines to fulfill Best Available Retrofit Control Technology (BARCT). BARCT is a California requirement that is defined similarly to Federal BACT. The NO_x emission limits for diesel IC engines in Rule 4701 did not need to be tightened since they already reflect BARCT level of control. Both Rules 4701 and 4702 currently exempt IC engines used in agriculture. However, as noted above in paragraph IV.D.2.b.i. (Agricultural irrigation internal combustion engines), SJVUAPCD has committed to remove the general agricultural exemption from Rule 4702 and to amend Rule 4702 to establish BACM-level NO_x emission limits for diesel IC engines used in agriculture.

SJVUAPCD's staff report supporting the 2003 amendments to Rule 4701 and the adoption of Rule 4702 provides a detailed analysis of the inventory of affected engines and the technological and economic feasibility of possible

¹⁶ Pages 4-16 and 8-2 explain that emission estimates from agricultural crop processing losses (3.1 tpd NO_x and 4.4 tpd PM-10) and unspecified agricultural products processing losses (6.2 tpd NO_x) could not be adequately described to allow development of emission controls. This problem occasionally occurs because of the way inventories have been historically generated and is reasonably addressed by SJVUAPCD's efforts to improve the inventory. Page 4-18 reasonably explains that plastic and plastic product manufacturing should now be treated as part of the baseline rather than as a significant source category because of regulations adopted in 2000.

¹⁷ Where commitments are made for a given month, quarter or year, EPA considers the deadline to be the last day of the month, quarter or year.

control technologies. With the exception of agricultural IC engines, Rule 4701 establishes BACM level of control for diesel IC engines, and new Rule 4702 establishes BACM level of control for spark-ignited IC engines. SJVUAPCD estimates 85–96% control for the various requirements, resulting in reduced NO_x emissions of 1.8 tons/day. See final draft staff report to SJVUAPCD Rules 4701 and 4702 (August 21, 2003). In a separate action (see 68 FR 55917, September 29, 2003, and 69 FR 1271, January 8, 2004), EPA also determined that the opacity limits in Rule 4101, which also apply to these sources, are generally sufficient for BACM.

In a separate rulemaking, we are proposing approval of Rule 4702.

(5) *Fugitive Dust. (i) Agricultural Conservation Management Practice Program.* The Agricultural Conservation Management Practices (Ag CMP) Program covers the following significant PM–10 source categories: Agricultural unpaved roads, agricultural windblown dust, cattle feedlot dust, harvest operations, livestock wastes, tilling dust, and windblown dust from pasture lands. SJVUAPCD estimates that, without this program, these source categories will emit 144.3 tons per day of PM–10 in 2010. Like other PM–10 nonattainment areas (e.g., Phoenix and Los Angeles), SJVUAPCD has chosen to reduce emissions from agricultural sources with a program that provides more flexibility than a typical command and control regulation.

The Ag CMP Program will require growers to submit CMP plans to SJVUAPCD. The plans will identify the CMPs that the growers are implementing in each of five (three for concentrated animal feeding operations) categories: Unpaved roads, unpaved vehicle/equipment traffic areas, land preparation, harvest, and other

(including windblown PM–10 from open areas and agricultural burning). A list of CMPs for these categories is currently being developed, and the CMP plans will include information on the CMPs selected by each grower. The District will ensure that growers comply with the CMP plans and that overall reductions for the Ag CMP Program are met.

Based on the program description and its similarity to programs we have approved elsewhere as BACM, we believe that SJVUAPCD’s Ag CMP program will achieve a BACM level of control for these source categories. SJVUAPCD has committed to adopt the Ag CMP Program in April 2004, implement it in July 2004, and reduce PM–10 emissions by 33.8 tons per day in 2010. See pages 4–22 to 4–29.

(ii) *Regulation VIII Sources.* SJVUAPCD Regulation VIII addresses fugitive dust emissions from the following significant source categories: agricultural unpaved roads, earthmoving, open areas, and non-agricultural paved and unpaved roads. The eight rules composing Regulation VIII are Rule 8011, General Requirements, Rule 8021, *Construction, Demolition, Excavation, Extraction, and Other Earthmoving*, Rule 8031, *Bulk Materials*, Rule 8041, *Carryout and Trackout*, Rule 8051, *Open Areas*, Rule 8061, *Paved and Unpaved Roads*, Rule 8071, *Unpaved Vehicle/Equipment Traffic Areas*, and Rule 8081, *Agricultural Sources*. The TSD provides more information about these sources and emissions.

The TSD also summarizes the history of EPA rulemaking on Regulation VIII, including previous findings on RACM and BACM. Most recently, we issued a conditional approval of Regulation VIII as fulfilling RACM, and a limited approval/disapproval regarding BACM.

See 68 FR 8830 (February 26, 2003). As the basis for this limited disapproval, we cited the absence of sufficiently detailed information to evaluate the feasibility and impacts of Regulation VIII at various thresholds and at alternative thresholds.¹⁸

In the 2003 PM–10 Plan, the District provided a cost-effectiveness analysis to help determine what measures and applicability thresholds in Regulation VIII fulfill BACM.¹⁹ In general, the District adopted all measures projected to cost less than \$5,000 per ton PM–10 reduced, and the District performed additional analyses on those measures projected to cost between \$5,000 and \$500,000 per ton PM–10 reduced. The District also provided a comparison between Regulation VIII and analogous rules that we have recently determined to fulfill BACM in other areas. Based on these analyses, the District committed to change many of the applicability thresholds listed in EPA’s 2003 Final Rule.

The Table titled, “Summary of Regulation VIII Measures” summarizes the measures, both adopted and committed, that help fulfill RACM and BACM for fugitive dust source categories covered by Regulation VIII. These are discussed in greater detail in the TSD. We believe these measures and SJVUAPCD’s supporting analyses adequately fulfill the condition that was the subject of the conditional approval regarding RACM, and cure the deficiencies that were the subject of the limited disapproval regarding BACM. As a result, final action approving the RACM/BACM demonstration in the 2003 PM–10 Plan would terminate the sanctions and FIP clocks and the disapproval implications associated with our February 26, 2003 action on Regulation VIII.

SUMMARY OF REGULATION VIII MEASURES

Source category	Adopted or committed measure
Paved roads	<p><i>Adopted measure</i> requires paved shoulders on new or modified paved roads that receive 500–3,000 average daily vehicle trips (ADT).</p> <p><i>Committed measure</i> to pave shoulders of 50% highest-ADT urban roads and 25% highest-ADT rural roads, subject to funding availability.</p> <p><i>Committed measure</i> for new street sweepers to be PM–10 efficient, including purchase of at least one efficient sweeper within 3 years.</p> <p><i>Committed measure</i> requires removal of dirt/debris from roadways within 24 hours of identification following a wind/rain event.</p> <p><i>Committed measure</i> requires at least once-per-month sweeping on roads where PM–10 efficient street sweepers are used.</p> <p><i>Committed measure</i> requires trackout control devices on unpaved haul/access roads with ≥ 20 trips per day by 3-axle vehicles.</p>

¹⁸ Technical Support Document for EPA’s Notice of Proposed Rulemaking for SJVUAPCD Rules 8011, 8021, 8031, 8041, 8051, 8061, 8071 and 8081, U.S. EPA, March 14, 2002, pg. 9.

¹⁹ Appendix G to the 2003 PM–10 Plan, Exhibit A, “Final BACM Technological and Economic Feasibility Analysis”, Sierra Research, March 21, 2003; and Exhibit C, “Supplemental BACM

Analysis”, San Joaquin Valley Air Pollution Control District, added December 18, 2003.

SUMMARY OF REGULATION VIII MEASURES—Continued

Source category	Adopted or committed measure
Unpaved roads (public and private, non-agricultural).	<i>Committed measure</i> requires removal of trackout extending ≥ 50 ft. onto public paved roads within one hour of occurrence, excluding rural area construction sites less than 10 acres in size. <i>Committed measure</i> requires all new non-temporary roads in urban areas to be paved. Some county ordinances and commitments prohibit creation of new unpaved roads in rural areas. <i>Committed measures</i> require paving of 20% or up to 5 miles of existing urban owned road per city jurisdiction and stabilization of any existing unpaved roads with ≥ 26 annual ADT. <i>Committed measure</i> limits vehicle speeds to 25 mph.
Unpaved roads (agricultural)	<i>Committed measure</i> requires control of roads on days they receive ≥ 75 vehicle trips and/or ≥ 25 heavy truck trips. <i>Committed measure</i> limits speeds on unpaved agricultural roads subject to the Agricultural CMP rule (other options include surface treatment or restricted access).
Unpaved parking/traffic areas public and private, nonagricultural).	<i>Committed measure</i> requires stabilization of unpaved parking areas with ≥ 50 annual ADT and/or on days they receive ≥ 25 heavy truck trips. <i>Committed measure</i> to revise the existing single-day 75 vehicle trip threshold and replace it with a 150 single-day or 30-day threshold.
Unpaved parking/traffic areas (agricultural)	<i>Committed measure</i> requires control of parking/traffic areas with ≥ 50 annual ADT and/or on days they receive ≥ 25 heavy truck trips. <i>Committed measure</i> to revise the existing single-day 75 vehicle trip threshold and replace it with a 150 single-day or 30-day threshold.
Construction demolition, industrial (incl. earthmoving, bulk materials handling/storage and windblown sources).	<i>Committed measure</i> requires Dust Control Plans for residential projects > 10 acres and commercial projects > 5 acres and District notification of earthmoving projects ≥ 1 acre. <i>Adopted measure</i> requires pre-watering sites before earthmoving to meet 20% opacity. <i>Adopted measure</i> requires application of water or dust suppressant during earthmoving to meet 20% opacity. <i>Adopted measure</i> requires application of water or dust suppressant on unpaved haul/access roads to meet 20% opacity and the conditions of a stabilized surface. <i>Committed measure</i> to cease construction activities during wind events. Water trucks must continue operating unless it is unsafe. <i>Adopted measure</i> requires application of water or dust suppressant on disturbed inactive surfaces to meet the conditions of a stabilized surface.
Agricultural bulk materials storage piles and trackout.	<i>Adopted measure</i> requires application of water or dust suppressant during handling of bulk materials to meet 20% opacity. <i>Committed measure</i> to remove existing 100 cubic yard exemption for applying controls during the active handling of bulk material piles. <i>Adopted measure</i> requires inactive bulk material piles ≥ 100 cubic yards to be covered or stabilized. <i>Committed measure</i> to adopt California Vehicle Code trackout removal requirements.
Vacant disturbed land (non-agricultural)	<i>Committed measure</i> to require stabilization of urban vacant lots ≥ 0.5 acres with $\geq 1,000$ sq. ft. of disturbed surface. Applicable rural vacant lot size is ≥ 3 acres. <i>Adopted measure</i> requires physical barriers or other means to prevent trespass. <i>Adopted measure</i> requires watering to meet 20% opacity and surface stabilization following weed abatement on lots $\frac{1}{2}$ acre or larger.

SJVUAPCD commits to adopt revisions to Regulation VIII as summarized in the previous table. These revisions will be adopted in September 2004, implemented in September 2004, and will reduce PM-10 emissions from 2010 baseline estimates as shown in the following table. See pages 4-22, 4-23 and 4-31 to 4-38.

ESTIMATED PM-10 EMISSION REDUCTIONS FROM REGULATION VIII

Rule	2010 Emissions (tpd)	2010 Emission reductions (tpd)	% Reduction
8021	30.5	6.1	20.0
8031	0.2	0.0	0.3
8051	3.0	0.5	16.7
8061	85.3	10.4	12.2
8071	1.0	0.3	30.0
8081	16.9	1.5	8.9
Total	136.9	18.8	13.7

(6) *Glass Manufacturing*. This category is estimated to emit 12.3 tpd of NO_x in 1999. SJVUAPCD Rule 4354, *Glass Melting Furnaces*, limits emissions of NO_x and other pollutants from glass melting furnaces in the San

Joaquin Valley. On September 1, 2000 (65 FR 53181), EPA finalized a limited approval and limited disapproval of the version of Rule 4354 locally adopted on April 16, 1998. In that action, EPA noted that the rule as a whole strengthens the SIP, but identified several deficiencies regarding monitoring and compliance requirements.

SJVUAPCD amended Rule 4354 on February 21, 2002. In addition to addressing the issues identified in EPA's limited disapproval, this amendment changed the definition of "major NO_x source" from 50 to 25 tons or more per year of NO_x, to reflect the San Joaquin Valley's reclassification from serious to severe ozone nonattainment status. EPA fully approved this Rule on December 6, 2002 (65 FR 72573).

SJVUAPCD's staff report supporting the 2002 amendments provides a rule consistency analysis that compares the elements of Rule 4354 with the corresponding elements of other District rules, Federal regulations and guidelines that apply to the same type of equipment or source category. The staff report for the April 16, 1998, version of the rule described the rule as implementing BARCT.

The NO_x emission limits in Rule 4354 for container glass furnaces are consistent with limits imposed in SCAQMD and the Bay Area Air Quality Management District. The SJVUAPCD conducted cost effectiveness and socioeconomic analyses for the emission limits in Rule 4354, and the results of these analyses are contained in the staff report for the April 16, 1998, version of the rule. See final draft staff reports for amendments to SJVUAPCD Rule 4354 (April 16, 1998 and February 22, 2002).

(7) *Manufacturing and Industrial Fuel Combustion*. This category is estimated to emit 24.3 tpd of NO_x in 1999. SJVUAPCD commits to adopt new rules that would establish NO_x emission standards for dryers based on PUC-quality natural gas, low excess air, low-NO_x burners and flue gas recirculation; require low excess air, low-NO_x burners and flue gas recirculation for small boilers, steam generators and process heaters; and require BACM-level prohibitions for industrial, commercial and institutional water heaters.

These rules will be adopted by 2Q/04, 4Q/04 and 4Q/04; implemented by 2006, 2006 and 2004; and will reduce emissions by 1.0, 1.0 and 0.2 tpd of NO_x respectively, although not all these reductions fall within this source category. See pages 4–22, 4–23, 4–30, 4–31 and 4–42 to 4–44.

(8) *Natural Gas Boilers*. This category is estimated to emit 3.7 tpd NO_x in 1999. SJVUAPCD Rule 4351, *Boilers, Steam Generators, and Process Heaters—Phase 1*, Rule 4305, *Boilers, Steam Generators, and Process Heaters—Phase 2*, and Rule 4306, *Boilers, Steam Generators, and Process Heaters—Phase 3*, limit emissions of NO_x and other pollutants from gaseous fuel or liquid fuel fired boilers, steam generators, and process heaters with a total rated heat input greater than 5 million Btu per hour. These rules establish different emission limits and compliance schedules depending on unit type, fuel and size. On February 28, 2002, EPA published a final limited approval and limited disapproval of Rule 4305, locally adopted on December 19, 1996, and Rule 4351, locally adopted on October 19, 1995. In this action, EPA noted that the general requirements of these rules would strengthen the SIP, but identified several deficiencies regarding rule applicability and enforceability that prevented EPA from fully approving the rule. See 67 FR 9209 (February 28, 2002).

SJVUAPCD amended Rules 4351 and 4305 on August 21, 2003, and adopted Rule 4306 on September 18, 2003. The District took these actions partly to address the issues identified in EPA's limited disapproval but also to establish BACM level of control for this source category.

SJVUAPCD's staff report supporting the 2003 amendments for Rule 4305 and 4351, and the adoption of Rule 4306, provides a detailed analysis of the technological and economic feasibility of possible control technologies. This includes socioeconomic and cost effectiveness analyses of combustion modification and exhaust gas treatment. The analysis also includes comparison to analogous requirements in other nonattainment areas. While Rules 4305 and 4351 remain enforceable, they will become obsolete as the more stringent limits of Rule 4306 become effective. These limits are generally at least as stringent as State BARCT. SJVUAPCD estimates that Rule 4306 will reduce NO_x emissions by about 7.7 tons/day in 2005. See final draft staff report to SJVUAPCD Rules 4305, 4351 and 4306 (September 18, 2003). In a separate rulemaking, we are proposing approval of these rules.

(9) *Natural Gas Fired Oilfield Steam Generators*. This category is estimated to emit 6.4 tpd of NO_x and 1.4 tpd of PM–10 in 1999. The discussion above of NO_x controls for natural gas boilers in Rule 4306 applies to natural gas fired oilfield steam generators as well. Page

4–18 states that a BACT investigation revealed that there are no available controls for PM–10.

(10) *Oil Drilling and Workover*. This category is estimated to emit 10.8 tpd of NO_x in 1999. The PM–10 plan (pages 4–18, G–133 and G–134) explains that SJVUAPCD Rule 2280 and CARB's portable equipment registration program (PERC, see 13 California Code of Regulations 2450–2466) provide BACM for this category. These rules establish numerous operational requirements and emission limitations for applicable engines. Sources may choose to register engines, including those used for oil drilling and workover, under either PERC or SJVUAPCD's analogous Rule 2280 program. Most sources register under PERC because it is less expensive and allows use of portable engines throughout the state. To register under PERC, engines manufactured after January 1, 1996, must meet the most stringent emission standard (see 13 CCR 2456(e)(b)), which is effectively California's Off-Road Compression Ignition Engine Standards referenced in section IV.D.2.a.(6).

(11) *Open Burning*. This category is estimated to emit 4.6 tpd of NO_x and 11.3 tpd of PM–10 in 1999. EPA has separately determined that SJVUAPCD Rule 4103 implements BACM for open burning. See 67 FR 8894 (Feb. 27, 2002).

(12) *Prescribed Burning*. This category is estimated to emit 16.5 tpd of NO_x and 28.9 tpd of PM–10 in 1999. EPA has separately determined that SJVUAPCD Rule 4106 implements BACM for prescribed burning. See 67 FR 8894, (Feb. 27, 2002).

(13) *Residential Space Heating*. This category is estimated to emit 2.7 tpd of NO_x in 1999. SJVUAPCD commits to adopt a new rule requiring that newly installed residential furnaces emit no more than 40 nanograms NO_x per joule of heat output. This standard is equivalent to controls adopted in the South Coast, Bay Area and other parts of California, and is believed to be the most stringent in effect in the country.

This rule will be adopted by 3Q/04, implemented fully by 2020, and will reduce NO_x emissions by 0.01 tons/day. See pages 4–22, 4–23, 4–45 and 4–46.

(14) *Residential Water Heaters*. This category is estimated to emit 1.6 tpd of NO_x in 1999. SJVUAPCD Rule 4902, *Residential Water Heaters*, limits NO_x emissions from residential gas-fired water heaters in the San Joaquin Valley. This rule establishes a maximum NO_x emission limit for newly manufactured water heaters with a rated heat input less than or equal to 75,000 Btu/hr. Rule 4902 was originally adopted by the SJVUAPCD on June 17, 1993, and

submitted to EPA on November 4, 2003, as a revision to the SIP. EPA is publishing a separate direct final approval of this submittal.

SJVUAPCD estimates that the 40 nanograms per joule of heat output limit in Rule 4902 will reduce NO_x emissions by 2.24 tons per day by 2003.

The requirements in Rule 4902 are among the most stringent in the country and the NO_x emission limit is equivalent to limits in effect elsewhere in California (e.g., Sacramento, Santa Barbara and Ventura). See staff report to SJVUAPCD Rule 4902 (May 25, 1993).

(15) Residential Wood Combustion.

This category is estimated to emit 11.3 tpd of PM-10 in 1999. EPA has separately determined that SJVUAPCD Rule 4901 implements BACM for residential wood combustion. See 68 FR 56181 (Sept. 9, 2003).

(16) Service and Commercial—Other Fuel Combustion. This category is estimated to emit 25.7 tpd of NO_x and 1.0 tpd of PM-10 in 1999. SJVUAPCD has committed to adopt new rules that would establish NO_x emission standards for dryers based on PUC-quality natural gas, low excess air, low-NO_x burners and flue gas recirculation; require low excess air, low-NO_x burners and flue gas recirculation for small boilers, steam generators and process heaters; and require BACM-level prohibitions for industrial, commercial and institutional water heaters.

These rules will be adopted by 2Q/04, 4Q/04 and 4Q/04; implemented by 2006, 2006 and 2004; and will reduce emissions by 1.0, 1.0 and 0.2 tpd of NO_x respectively, although not all these reductions fall within this source category. See pages 4–22, 4–23, 4–30, 4–31 and 4–42 to 4–44.

(17) Solid-Fuel Boiler, Steam Generators and Process Heaters. This category is estimated to emit 3.5 tpd of NO_x in 1999. SJVUAPCD Rule 4352, *Solid Fuel Fired Boilers, Steam Generators, and Process Heaters*, limits emissions of NO_x and other pollutants from boilers and similar units burning coal, biomass and other solid fuels in the San Joaquin Valley. On February 11, 1999 (64 FR 6803), EPA published a direct final approval of the version of Rule 4352 locally adopted on October 19, 1995. In this action, EPA noted that the emission limits in Rule 4352 (e.g., 0.20 lb/MMBtu of heat input for coal) generally fulfilled RACT requirements.

Appendix G, Exhibit D, of the PM-10 Plan provides an analysis of the 15 units subject to Rule 4352. This analysis compares the emission limits in District permits with analogous limits provided in EPA's RACT/BACT/LAER clearinghouse. The analysis shows that

each District permit is more stringent than the average limit found in the clearinghouse for similar sources (e.g., large coal units, medium biomass units).

Because cost, feasibility and effectiveness of control vary widely in this source category depending on fuel, size and design of each unit, a BACM demonstration for the category is necessarily complex. The methodology provided by SJVUAPCD is conservative in that the RACT/BACT/LAER clearinghouse describes controls for new sources, which are generally more stringent than those required as BACM for existing sources. However, some of the clearinghouse requirements may be dated and BACM is generally implemented by rule rather than permit. Given the relatively small size of this source category and the complexity of the analysis, we believe SJVUAPCD has made reasonable assumptions on balance.

(18) Stationary Gas Turbines. This category is estimated to emit 10.2 tpd of NO_x in 1999. SJVUAPCD Rule 4703 limits emissions of NO_x and other pollutants from stationary gas turbine systems with ratings equal to or greater than 0.3 megawatt (MW) and/or maximum heat input ratings of more than 3 million Btu per hour. This rule that establishes different emission limits and compliance schedules depending on turbine size, fuel and design. On February 28, 2002, EPA published a final limited approval and limited disapproval of the version of Rule 4703 locally adopted on October 16, 1997. In this action, EPA noted that the emission limits in Rule 4703 (e.g., 9–42 ppmv NO_x, depending on size, for natural gas fired units) generally established RACT-level of control for this source category, but EPA noted several other deficiencies in the rule, however, regarding rule applicability and enforceability that prevented EPA from fully approving the rule. See 67 FR 9209.

SJVUAPCD amended Rule 4703 on April 25, 2002. In addition to addressing the issues identified in EPA's limited disapproval, this amendment significantly tightened the emission limits (e.g., 3–35 ppmv NO_x, depending on size, for all but one natural gas fired design). SJVUAPCD tightened the emission limits partly to fulfill State BARCT.

SJVUAPCD's staff report supporting the 2002 amendments provides a detailed analysis of the inventory of affected turbines and the technological and economic feasibility of possible control technologies. SJVUAPCD's 2002 amendments to Rule 4703 establish BACM level of control for this source category. SJVUAPCD estimates that the

2002 amendments will reduce NO_x emissions by about 5.4 tons/day in 2010. See final staff report to SJVUAPCD Rule 4703 (April 25, 2002). In a separate rulemaking, we are proposing action on this rule.

E. VOC and SO_x Sources

SJVUAPCD committed to adopt new or revised rules to reduce VOC and SO_x emissions. A BACM demonstration is not needed for these emissions because, given the NO_x/PM strategy, they are not considered to be necessary at this time. After the CRPAQS results are available and as part of the mid-course review for the 2003 PM-10 Plan, the District will reexamine whether VOC and SO_x reductions are necessary. We are, however, proposing to approve the commitments for VOC and SO_x requirements under CAA sections 301(a) and 110(k)(3) as strengthening the SIP.

1. Oil and Gas Fugitives From Crude Oil and Gas Production and Natural Gas Processing Facilities

This category is estimated to emit 10.6 tpd of VOC in 2005. SJVUAPCD commits to adopt Rule 4403 to reduce fugitive emissions from flanges, valves, fittings, and other components. Possible controls include lowering the gaseous leak threshold, eliminating exemptions, increasing inspection frequency, shortening the repair period and replacing frequently leaking components with BACT. This rule revision will be adopted in 1Q/04, implemented in 1Q/05 and will reduce VOC emissions by 4.8 tpd. See page 4–10.

2. Oil and Gas Fugitives From Petroleum Refineries and Chemical Plants

This category is estimated to emit 0.5 tpd of VOC in 2005. SJVUAPCD commits to adopt Rule 4455 to reduce fugitive emissions from flanges, valves, and other components. Possible controls include lowering the gaseous leak threshold, increasing inspection frequency, shortening the repair period and replacing frequently leaking components with BACT. This rule revision will be adopted in 1Q/04, implemented in 1Q/05 and will reduce VOC emissions by 0.2 tpd. See pages 4–10 and 4–11.

3. Can and Coil Coatings

This category is estimated to emit 4.6 tpd of VOC in 2005. SJVUAPCD commits to revise Rule 4604 to lower VOC content limits consistent with the State's RACT/BARCT determination. This rule revision will be adopted in 1Q/04, implemented in 4Q/04 and will

reduce VOC emissions by 0.3 tpd. *See* page 4–11.

4. Agricultural Conservation Management Practice Program

The commitment for this category, summarized above, is also projected to achieve unspecified VOC emission reductions.

5. Dryers

The commitment for this category, summarized above in sections IV.D.2.b.7. (manufacturing and industrial fuel combustion) and IV.D.2.b.16. (service and commercial-other fuel combustion), is also projected to reduce SO_x emissions by 1.1 tpd.

6. Gas-Fired Oilfield Steam Generators

The sources subject to this commitment are estimated to emit 8.5 tpd of SO_x in 2006. SJVUAPCD commits to revise Rule 4406 to require fuel conditioning and/or caustic scrubbing of the exhaust gas. This rule revision will be adopted in 4Q/04, implemented in 2006, and will reduce SO_x emissions by 5.0 tpd. *See* pages 4–22, 4–23, 4–39 and 4–40.

7. Glass Manufacturing

Rule 4354 also establishes NO_x limits as described in section IV.D.2.b.6., Glass Manufacturing. This category is estimated to emit 4.2 tpd of SO_x in 2006. SJVUAPCD commits to revise Rule 4354 to establish SO_x emission limits designed to require low-sulfur fuel or caustic scrubbing of the exhaust gas. This rule revision will be adopted in 2Q/05, implemented in 2006, and will reduce SO_x emissions by 1.1 tpd. *See* pages 4–22, 4–23 and 4–39.

8. Small Boilers, Steam Generators and Process Heaters

The commitment for this category, described above in paragraphs IV.D.2.b.vii (manufacturing and industrial fuel combustion) and IV.D.2.b.xv (service and commercial-other fuel combustion), is also projected to reduce SO_x emissions by 0.1 tpd.

9. Steam-Enhanced Crude Oil Production Well Vents

Sources subject to this commitment are estimated to emit 14.7 tpd of VOC in 2006. SJVUAPCD commits to revise Rule 4401 to lower exemption thresholds. This rule will be revised in 1Q/05, implemented in 2006, and will reduce VOC emissions by 1.5 tpd. *See* pages 4–22, 4–23 and 4–45.

10. Wineries

Sources subject to this commitment are estimated to emit 7.9 tpd of VOC in

2007. SJVUAPCD commits to adopt a new rule to establish controls for wineries using tanks with vapor collection/control, carbon adsorption, water scrubbers, catalytic incineration, condensation, and/or additional temperature controls. This rule will be adopted in 4Q/04, implemented in 2007, and will reduce VOC emissions by 2.5 tpd. *See* pages 4–22, 4–23, 4–44 and 4–45.

F. Attainment Demonstration

For serious PM–10 nonattainment areas, CAA section 189(b)(1)(A) requires an attainment demonstration showing attainment by the applicable attainment date using appropriate air quality modeling. As explained in section III.F. above, for serious PM–10 areas that have failed to attain by the applicable attainment date (such as the SJV), the CAA requires plan revisions which provide for, among other things, attainment of the PM–10 standards as expeditiously as practicable. CAA section 189(d). Because the SJV missed the 2001 attainment date otherwise applicable, we believe that the attainment date is governed by other provisions of the CAA. The attainment deadline applicable to the plan revision is therefore as soon as practicable, but no later than 5 years from the publication date of the nonattainment finding notice (67 FR 48039, published July 23, 2002). EPA may, however, extend the attainment deadline to the extent it deems appropriate for a period no greater than 10 years from the publication date, “considering the severity of nonattainment and the availability and feasibility of pollution control measures.” CAA section 179(d)(3).

The 2003 PM–10 Plan demonstrates attainment of the PM–10 standards by 2010 based on the NO_x/PM strategy (see section IV.A. above). To provide for expeditious attainment, the Plan relies on fully adopted regulations and enforceable commitments to adopt new, identified measures that will constitute BACM (section IV.D.2. above).

In addition, the 2003 PM–10 Plan’s attainment demonstration relies on emission reductions from an enforceable commitment by the SJVUAPCD to adopt and implement a new Indirect Source Mitigation Program achieving 4.1 tons/day of NO_x and 6.2 tons/day of PM–10 and an enforceable commitment by the State achieving 10 tons/day of NO_x and 0.5 tons/day of PM–10 in 2010. Finally, the Plan includes an enforceable commitment to submit a SIP revision in March 2006 (mid-course review or MCR) which will include the results of

the CRPAQS. These commitments are discussed further below.

1. Modeling Used for the Attainment Demonstration

EPA’s modeling guidance (PM–10 SIP Development Guideline (PMSDG), EPA–450/2–86–001, June 1987) presents three options for estimating air quality impacts of emissions of PM–10 using dispersion and receptor models:²⁰ (1) Use of receptor and dispersion models in combination (preferred); (2) use of dispersion model alone; and (3) use of two receptor models, with a control stratagem developed using a proportional model. The third approach is only encouraged if no applicable dispersion model is available, which is the case for the SJV.²¹ Therefore, EPA based its evaluation of the attainment demonstration on the District’s use of two receptor models, with a control stratagem developed using a proportional model.

The recommended approach for PM–10 source apportionment is the use of at least two receptor methods: Chemical Mass Balance (CMB) and a corroborating method.²² If CMB is used for source apportionment, it is required that at least one other modeling approach be used as a corroborating analysis. The corroborating analysis may be factor analysis, microscopy, automated scanning electron microscopy, microinventory, trajectory analysis, or other corroborating approach.²³ In the PMSDG, the terms “model” and “method” are used interchangeably, even though analysis methods such as

²⁰ PMSDG, 4.1 Introduction.

²¹ The Guideline on Air Quality Models (GAQM), 40 CFR part 51, Appendix W, has a detailed discussion of modeling requirements for particulate matter and states that “[n]o model recommended for general use at this time accounts for secondary particulate formation or other transformations in a manner suitable for SIP control strategy demonstrations.” (40 CFR Part 51, Appendix W, 7.2.2.c.) Primary particulates cannot be modeled independently through dispersion modeling. Thus, although the 2003 PM–10 Plan includes dispersion modeling (Appendix M, UAM Documentation for NO_x and NH₃), we are not relying on it for our proposed approval of the Plan’s attainment demonstration. For more information, *see* the TSD for this rulemaking.

Given that the guidance documents for PM–10 do not indicate how to model secondary pollutant formation, EPA must evaluate submitted PM–10 SIPs on a case-by-case basis, depending on the air quality facts of each area. EPA has evaluated the attainment demonstration in the 2003 PM–10 Plan based on the Agency’s PM–10 guidance documents, PMSDG and GAQM. EPA is currently developing guidance for demonstrating attainment of the PM–2.5 standard, 40 CFR 50.7, that may ultimately provide more specificity regarding the models to be used for secondary particulates.

²² PMSDG, Table 4–2 Recommended Approaches for PM10 Source Apportionment.

²³ PMSDG, 4.4 Receptor Models for Estimation PM10 Concentrations.

scanning electron or optical microscopy are methods, not models.²⁴

In the 2003 PM-10 Plan, receptor modeling is used to identify the source contributions for each of the measured ambient concentrations above the PM-10 standards (*i.e.*, days exceeding the PM-10 standards). The corroborating analysis for the Plan includes the use of

correlation coefficients, episode day and time serious analyses, and wind trajectory analyses. The proportional modeling is used to identify the relationship between source categories and PM-10 concentrations for specific days and the effect of emission reductions from the proposed control

strategy on PM-10 concentrations. See TSD for more details.

The results of the proportional modeling for the 24-hour standard and annual standard are presented in the tables below, which show the current and future design concentrations for each site which exceeds the standards.

SIMULATED FUTURE YEAR 24-HOUR PM-10 VALUES

Site name	Design value	2010 without additional reductions	2010 with additional reductions
Bakersfield—California Ave	190	186	137
Bakersfield—Golden # 2	205	203	151
Clovis	155	145	120
Corcoran, Patterson Ave	174	185	143
	174	197	138
Fresno—Drummond	186	181	140
Fresno—First St	193	182	144
Hanford, Irwin St	185	189	143
Modesto, 14th Street	158	144	121
Oildale, 3311 Manor St	158	151	120
Turlock, 900 Minaret Street	157	162	116

SIMULATED FUTURE YEAR ANNUAL PM-10 VALUES

Site name	Design value	2010 without additional reductions	2010 with additional reductions
Bakersfield—Golden # 2	57	58	49
Fresno—Drummond	50	50	45
Hanford—Irwin St	53	52	47
Visalia—Church St	54	52	46

Using the District's analysis, attainment is demonstrated for both the 24-hour and annual PM-10 standards. See 2003 PM-10 Plan, p. 6-8 to 6-9. Each site is projected to have design concentrations at or below the PM-10 standards in 2010. We believe that the attainment demonstration approach in the 2003 PM-10 Plan satisfies EPA's requirements for demonstrating attainment of the 24-hour and annual PM-10 standards.

2. Attainment Date

The SJV is one of only eight PM-10 nonattainment areas in the country. For urban areas nationwide, the SJV has the third highest average annual mean PM-10 concentration (ranking only behind Phoenix, Arizona and the greater Los Angeles area.) The PM-10 concentrations recorded over the last few years at the Corcoran and Bakersfield monitoring sites have been significantly above the Federal standard. The PM-10 problem in the SJV is complex, caused by both direct PM-10 and reactive precursors, and compounded by the topographical and

meteorological conditions for the area. 2003 PM-10 Plan, Chapter 2.

As discussed in section IV.A. above, the District's strategy for attaining the PM-10 standard relies on reductions of PM-10 and NO_x. The SJV needs significant reductions in PM-10 and NO_x to demonstrate attainment. Further reduction of these pollutants is challenging, since the State and local air pollution regulations already in place include most of the readily available PM-10 and NO_x control measures. Moreover, attainment in the San Joaquin Valley must also mitigate the emissions increases associated with the projected increases in population and activity levels for this high-growth area.

As discussed in section IV.D. above, we believe that the combination of previously adopted measures and commitments for specific future controls in the Plan represent BACM for this area. The Plan also includes two measures, the Indirect Source Mitigation Program and the State mobile source measure commitment (discussed in section IV.F.3. below.) which we believe

go beyond the BACM requirement. We believe that the District's implementation schedule for all measures needed for attainment is expeditious. The direct PM-10 reductions are achieved primarily from Regulation VIII fugitive dust, the Ag CMP Program and residential wood combustion requirements. These types of dust and smoke controls present special implementation challenges (*e.g.*, the large number of individuals subject to regulation and the difficulty of applying conventional technological control solutions). Because of the importance of these relatively difficult to control source categories in the San Joaquin emissions inventory and the need to conduct significant public outreach if applicable control approaches are to be effective, EPA agrees with the District and State that the Plan reflects expeditious implementation of the programs during the 2003-2010 time frame. EPA also agrees that the implementation schedule for enhanced stationary source controls is expeditious, taking into account the

²⁴ PMSDG, p. 4-11.

time necessary for purchase and installation of the required control technologies. Finally, we believe that it is not feasible at this time to accelerate the emission reduction schedule for the State and Federal mobile source requirements which set aggressive compliance dates for new emission standards and which must rely on fleet turnover over the years to deliver the ultimate emission reductions. See 2003 PM-10 Plan, p. ES-19. The District's control strategies are discussed in greater detail in Chapter 4 of the 2003 PM-10 Plan, in section IV.D.2. above and in section IV.F.3. below.

Therefore, EPA believes that the District and State are implementing these rules and programs as expeditiously as practicable and that it is not feasible to have faster implementation dates nor are there any additional feasible measures which can be implemented. We anticipate that the

District will reevaluate this conclusion after completion of the CRPAQS and mid-course review, discussed below.

Based on the above evaluation, as provided for in CAA section 179(d)(3), EPA is proposing to find that the attainment date of 2010 for the SJV is as expeditious as practicable due to the severity of nonattainment and availability and feasibility of pollution control measures. EPA expects, however, that the State and District will continue to investigate opportunities to accelerate progress as new control opportunities arise, and that the agencies will promptly adopt and expeditiously implement any new measures found to be feasible in the future.

3. Enforceable Commitments for Future Control Measures.

In addition to adopted regulations and enforceable commitments for new,

identified BACM for PM-10 and NO_x sources discussed in section IV.D.2.b. above,²⁵ the 2003 PM-10 Plan's attainment demonstration relies on reductions from the District's commitment for an Indirect Source Mitigation Program and the State's commitment for a additional NO_x and PM-10 reductions from mobile sources.

a. *Indirect Source Mitigation Program.* The 2003 PM-10 Plan contains an enforceable commitment by SJVUAPCD to adopt and implement a new Indirect Source Mitigation Fee rule to require new development projects to mitigate emissions onsite or contribute to a mitigation fund used for offsite emission reductions. This rule will be adopted in 2004, implemented in 2005, and will be designed to reduce PM-10 emissions from 2010 baseline estimates as shown in the following table:

ESTIMATED PM-10 EMISSION REDUCTIONS FROM INDIRECT SOURCE MITIGATION PROGRAM

Category	2010 Emissions (tpd)	2010 Emission reductions (tpd)	% Reduction
Paved Road Dust	43.3	4.2	9.7
Unpaved Road Dust	6.6	1.2	18.2
Windblown Dust	3.1	0.6	19.4
Unpaved Traffic Areas	1.0	0.2	20.0
Total	54.0	6.2	11.5

This rule will also be designed to reduce 4.1 tpd of NO_x. See pages 4-22, 4-23 and 4-40 to 4-42. EPA is proposing to approve this commitment.

b. *Commitment to Achieve Additional PM-10 and NO_x Reductions in 2010.* The 2003 PM-10 Plan also contains an enforceable commitment by the State to adopt mobile source measures between 2002 and 2008 that will achieve an additional 10 tons/day of NO_x and 0.5 tons/day of PM-10 by 2010. Measures being considered to achieve these reductions are listed in the Plan. See 2003 PM-10 Plan, pages 4-49 to 4-50. These measures are necessary for the

attainment demonstration. While the State has provided estimates of potential reductions from each of the measures listed in the 2003 PM-10 Plan, the State has committed to achieve the overall emission reductions. 2003 PM-10 Plan, page 4-49 to 4-50, Table 4-14. We are proposing, therefore, to approve and make federally enforceable the State's commitment to adopt and implement measures sufficient to achieve 10 tpd of NO_x and 0.5 tpd of PM-10 in 2010. We will review the State's projected reductions from individual measures when they are fully adopted by the State

and will track progress to ensure that the State is on a path to deliver the needed reductions.

c. *Summary of Commitments to Adopt and Implement Control Measures in the 2003 PM-10 Plan.* The PM-10 and NO_x commitments, including the adoption and implementation dates,^{26 27} and annual and seasonal emissions reductions, relied upon by the attainment demonstration in the Plan are summarized in the two tables below (See section IV.D.2.b above and 2003 PM-10 Plan, pages 4-16 to 4-19, 4-23, 4-52 and 4-53).

²⁵ The 2003 PM-10 Plan includes commitments for VOC and SO_x sources; however, since we are concurring with the District's NO_x/PM strategy, these commitments are not necessary for attainment. We are, however, approving these commitments under CAA sections 301(a) and 110(k)(3) as strengthening the SIP. The VOC and SO_x commitments are summarized in section IV.E. above.

²⁶ See footnote 17.

²⁷ In addition, the District and State have committed to submit rules and other measures to EPA in a timely manner. The SJVUAPCD Governing Board, Resolution No. 03-06-07, #10, June 19, 2003

commits to " * * * submit * * * rules and measures to the California Air Resources Board within one month of adoption for transmittal to EPA as a revision to the State Implementation Plan." The State's submittal letter for the 2003 PM-10 Plan (August 19, 2003 letter from Catherine Witherspoon to Mr. Wayne Natri) states that "[t]o ensure steady progress on SIP implementation, [the State] will * * * work closely with the U.S. EPA and District staff to ensure timely rule submittal." CARB has entered into a protocol with the California Air Pollution Control Officers Association (CAPCOA) providing that CARB will complete its final review of rules within 60 days

and will submit approvable rules as a SIP revision as part of quarterly submittals, or, in cases where there is an EPA deadline, as soon as possible. (Revisions to CAPCOA-ARB Protocol, Section III, adopted November 7, 1986, <http://www.arb.ca.gov/drdp/protocol.pdf>). In compliance with these provisions, approvable rules are submitted as SIP revisions to EPA within 6 months from air district adoption and submittal. Therefore, EPA is interpreting the statement in the State's submittal commitment as a State commitment to submit SIP revisions from the SJVUAPCD to EPA within 6 months of the District's submission of those revisions to CARB.

ENFORCEABLE COMMITMENTS FOR PM-10 CONTROL MEASURES

Source category	Adoption date	Implementation date	2010 reductions (annual) (tpd)	2010 reductions (seasonal) (tpd)
Agricultural Internal Combustion Engines.	4Q/04 and 7/1/05	3Q/05 and 1/1/06	n/a	n/a
Cotton Gins	4Q/04	2005	1.7	2.5
Ag CMP Program	April 2004	July 2004	33.8	26.7
Fugitive PM-10, Regulation VIII Sources.	September 2004	September 2004	18.8	17.9
Indirect Source Mitigation Program	2004	2005	6.2	5.7
State Mobile Sources	2002-2008	2002-2008	0.5	0.5

ENFORCEABLE COMMITMENTS FOR NO_x CONTROL MEASURES

Source category	Adoption date	Implementation date	2010 reductions (annual) (tpd)	2010 reductions (seasonal) (tpd)
Agricultural Internal Combustion Engines.	4Q/04 and 7/1/05	3Q/05 and 1/1/06	<9.3	<9.3
Indirect Source Mitigation Program	2004	2005	4.1	3.1
Manufacturing and Industrial Fuel Combustion (dryers, small boilers and water heaters).	2Q/04, 4Q/04 and 4Q/04	2006, 2006 and 2004	2.6	3.1
Residential Space Heating	3Q/04	2020	0	0
Service and Commercial-Other Fuel Combustion (dryers, small boilers and water heaters).	2Q/04, 4Q/04 and 4Q/04	2006, 2006 and 2004	1	1
State Mobile Sources	2002-2008	2002-2008	10	10

¹ See Manufacturing and Industrial Fuel Combustion above.

d. Approvability of Enforceable Commitments. EPA believes, consistent with past practice, that 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.^{28 29} Once EPA

²⁸ Commitments approved by EPA under section 110(k)(3) of the CAA are enforceable by the EPA and citizens under, respectively, sections 113 and 304 of the CAA. 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 nonimplementation before mandatory sanctions are imposed.

²⁹ 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

determines that circumstances warrant consideration of an enforceable commitment, EPA believes that three factors should be considered in determining whether to approve the enforceable commitment: (a) Whether the commitment addresses a limited portion of the statutorily-required program; (b) whether the state is capable of fulfilling its commitment; and (c) whether the commitment is for a reasonable and appropriate period of time.³⁰

As an initial matter, EPA believes that circumstances in the SJV warrant the consideration of enforceable commitments. The great bulk of emission reductions needed for attainment comes from regulations

"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.

³⁰ The U.S. Court of Appeals for the Fifth Circuit recently upheld EPA's interpretation of CAA sections 110(a)(2)(A) and 172(c)(6) (see previous footnote) and the Agency's use and application of the three factor test in approving enforceable commitments in the Houston-Galveston ozone SIP. *BCCA Appeal Group et al. v. U.S.E.P.A. et al.*, 2003 U.S. App. LEXIS 21975 (5th Cir. 2003).

already fully adopted by the District, the State, or the Federal government. These previously adopted measures include CARB regulations governing area and mobile sources, SJV regulations governing stationary sources, and Federal regulations such as standards that apply to diesel engines and locomotives.

Moreover, EPA believes that the SJV rulemaking schedule is proceeding as expeditiously as practicable and that it was not possible for the District and State to complete the rule development and adoption processes prior to plan submittal for the new, identified NO_x and PM-10 control measures to which the plan commits and therefore consideration of enforceable commitments is warranted. First, because the vast majority of NO_x sources are already subject to stringent, adopted rules, it is increasingly difficult to develop regulations for the remaining universe of uncontrolled sources. Also, the District is continuing its efforts to control direct PM-10 sources which have been historically difficult to control due to the fact that a large fraction of the sources are area-wide sources whose emissions are directly related to growth in population and vehicle miles traveled (2003 PM-10 Plan, pages 4-8 to 4-9). In addition, a

significant portion of the necessary PM-10 reductions are from agricultural fugitive dust sources, a previously unregulated source in the SJV. Since agricultural sources in the United States vary by factors such as regional climate, soil type, growing season, crop type, water availability and relation to urban centers, each PM-10 agricultural strategy is uniquely based on local circumstances. Unlike many stationary sources, which can have many common design features, whether located in California or Minnesota, agricultural sources and activities vary greatly throughout the country. Finally, since the State sources are already covered by BACM (see IV.D.2.a. above), any additional controls from the State source categories would be beyond BACM and difficult to achieve.

EPA has also determined that the submission of enforceable commitments for the adoption of identified control measures necessary to achieve attainment by 2010 will not interfere with the SJV's ability to make reasonable progress toward attainment of the standard. The majority of the enforceable commitments have adoption and implementation dates by 2006 with incremental reductions from the implementation dates until 2010 (see 2003 PM-10 Plan, page 4-52, 4-53).

As discussed above, after concluding that the circumstances warrant consideration of an enforceable commitment, EPA considers three factors in determining whether to approve the submitted commitments. These factors are satisfactorily

addressed with respect to the District's and the State's commitments.

(1) The Commitments Address a Limited Portion of the 2003 PM-10 Plan. The 2003 PM-10 Plan provides annual average and winter seasonal inventories for NO_x and PM-10. See 2003 PM-10 Plan, pages 3-35 to 3-37, 3-40 to 3-42 and Appendix D. The annual average inventories (annual inventory) are representative of the annual PM-10 standard and the winter seasonal inventories (seasonal inventory) are representative of the 24-hour PM-10 standard.

As mentioned above, for NO_x, there is a steady decline in emissions in both the annual and seasonal inventories from 1999 through 2010 (See 2003 PM-10 Plan, page 3-37).

SUMMARY OF 2003 PM-10 PLAN'S NO_x EMISSIONS INVENTORIES
[Tons per day]

	1999	2002	2005	2008	2010
Annual inventory	565.2	519.8	478.8	430.3	401.6
Seasonal inventory	571.7	525.8	484.1	435.7	406.3

This steady decline in emissions is attributable to reductions in the State's mobile source programs (see section IV.D.2.a.) and from previously adopted stationary and area source rules.³¹ 2003 PM-10 Plan, pages 3-9 and 3-12.³² In order to attain, the 2010 NO_x inventories, must be reduced by 45.3 tpd for the annual average inventory and 44.9 tpd for the winter seasonal inventory. See 2003 PM-10 Plan, page 4-53.

The 2003 PM-10 Plan will achieve these emissions reductions through a combination of enforceable commitments and already adopted measures. During the period from 1999

to 2010, the annual and seasonal inventories for NO_x shows a reduction of 163.6 tpd and 165.4 tpd, respectively. These significant reductions take into account substantial future growth in population and activity levels and, as mentioned above, have resulted from the ongoing development and implementation of stringent District, State and Federal requirements. In 2010, approximately 26 tpd of the annual inventory and 25.5 tpd of the seasonal inventory are based on enforceable commitments. For both the annual and seasonal inventories, the NO_x enforceable commitments make up approximately 15-16% of the overall

reductions since 1999. EPA believes this limited portion of NO_x reductions coming from enforceable commitments is acceptable.

The PM-10 inventories do not have the same steady decline exhibited by the NO_x inventories due to the need to further refine the backcasted inventories (see 2003 PM-10 Plan, page 4-8 to 4-9) and difficulties in achieving and maintaining direct PM-10 reductions from area-wide sources, especially from fugitive dust sources. The annual and seasonal PM-10 inventories are summarized below.

SUMMARY OF 2003 PM-10 PLAN'S PM-10 EMISSIONS INVENTORIES
[Tons per day]

	1999	2002	2005	2008	2010
Annual average inventory	324.7	329.5	335.8	340.5	350.1
Winter seasonal inventory	248.8	290.3	296.8	302.0	311.2

In order to attain these standards by 2010, the District's demonstration indicates that the annual PM-10 inventory must be reduced by 66.4 tpd and the seasonal PM-10 inventory must

be reduced by 73.7 tpd. See 2003 PM-10 Plan, page 4-52. Approximately 61 tpd (72%) of the reductions needed from the annual inventory and 53.3 tpd (92%) of the reductions needed for the

seasonal inventory are based on enforceable commitments. As shown above, a significant portion (33.8 tpd or 51% for annual and 26.7 tpd or 36% for seasonal) of the needed reductions come

³¹ These previously adopted measures include CARB regulations governing area and mobile sources, SJV regulations governing stationary sources and Federal regulations such as standards that apply to diesel engines and locomotives.

³² It is also important to note that there have been significant reductions in NO_x emissions from 1990 to 2001 (796 tons/day to 547 tons/day). These significant reductions take into account substantial growth in population and activity levels and have

resulted from the ongoing development and implementation of stringent District, State and Federal requirements. 2003 PM-10 Plan, pages 4-4 to 4-9.

from the Ag CMP Program which controls agricultural fugitive dust sources, a previously unregulated category. As discussed above, measures for agricultural sources must be determined on a case-by-case basis. The Ag CMP Program is an effort that is well under way as the District has worked diligently with stakeholders (*i.e.*, farmers, EPA, CARB, and citizens) to develop the best available measures for the SJV. An enforceable commitment is necessary at this time in order to allow the additional time required to further assess the dust measures that the District will establish for agricultural sources, including determining the emissions reductions potential and the technical and economic feasibility of the measures. In addition, the majority of the PM-10 commitments have adoption and implementation dates in 2004. Given the difficulties in controlling direct PM-10 in the SJV and the near term adoption and implementation dates EPA believes the PM-10 reductions coming from enforceable commitments is acceptable.

(2) *The State and District Are Capable of Fulfilling their Commitment.* In many cases the new measures that are the subject to commitments are already undergoing rulemaking and have very near term adoption and implementation dates and specific requirements. For example, the enforceable commitment for the Ag CMP Program has an adoption date of April 2004 and an implementation date of July 2004 and specifically requires the development of a program that will require farmers to submit CMP plans that will reduce PM-10 emissions to the District (see section IV.D.2.(5)(i) above). Another example is the enforceable commitment for Regulation VIII which has an adoption and implementation date of September 2004 and provides a specific list of new requirements (see section IV.D.2.(5)(ii) above).

Furthermore, EPA believes that the State will be able to meet their enforceable commitment for 10 tpd of NO_x and 0.5 tpd of PM-10 in 2010 from State mobile source measures. (2003 PM-10 Plan, page 4-49 to 4-50.) Measures being considered by the State include: A pilot program to replace or upgrade emission control systems on existing passenger vehicles, Smog Check improvements, pursuing approaches to clean up the existing and new truck/bus fleet, pursuing approaches to clean up the existing heavy-duty off-road equipment fleet with retrofit controls, cleaning up existing off-road gas equipment through retrofit controls, and requiring zero emission forklifts where feasible. The State has already devoted

time and resources in the development of feasible control approaches for most of these measures. Although the potential control measures are complex and difficult, the State has a long history of success in adopting new and challenging mobile source controls and achieving projected emission reductions. The State's record of accomplishment and the State's commitment of resources and progress to date on these new measures assure us that the State will meet its commitment in this plan.

Finally, we are confident that the District will be able to meet the tonnage commitment in the 2003 PM-10 Plan because the District makes a specific enforceable commitment that if it cannot achieve the emissions reductions provided by the Plan, they will " * * * adopt, submit and implement substitute rules and measures that will achieve equivalent reductions in the same adoption and implementation timeframes." SJVUAPCD Governing Board, Resolution No. 03-06-07, #10, June 19, 2003.

(3) *The Commitments Are for a Reasonable and Appropriate Period of Time.* The adoption, implementation, and submittal dates for the new control measures reflect a reasonable amount of time for the development and implementation of each measure. In light of the above commitments and their adoption and implementation dates and the District's discussion of their rule development schedule (2003 PM-10 Plan, Chapter 4), EPA believes that the time frame for the commitments is reasonable and appropriate.

For the above reasons, EPA is proposing to approve as one element of the attainment demonstration in the 2003 PM-10 Plan the District's enforceable commitments to adopt and implement the specified control measures and the State's enforceable commitment to achieve additional PM-10 and NO_x reductions from mobile sources. The PM-10 and NO_x emission reductions that will result from these commitments are necessary to attain the PM-10 standards by 2010, which we find to be the most expeditious attainment date practicable. Based on the previously adopted measures and these commitments, the 2003 PM-10 Plan demonstrates that the SJV will achieve sufficient reductions to attain the PM-10 standards by 2010. Final approval of these commitments would make the commitments enforceable by EPA and by citizens.

4. Enforceable Commitment for a Mid-Course Review

The District has made an enforceable commitment " * * * to conduct a mid-course review that will include an evaluation of the modeling from CRPAQS and the latest technical information (inventory, data, monitoring, etc.) to determine the level of PM-10 and PM-10 precursor emission reductions needed to attain the Federal PM-10 annual and 24-hour standards. The mid-course review will also include a complete reassessment of all Plan elements including the attainment demonstration and control measures. * * * The District commits to adopt and submit by March 31, 2006 a SIP revision based on this mid-course review." SJVUAPCD Governing Board, Resolution No. 03-06-07, #12, June 19, 2003. EPA is proposing to approve this commitment as part of the attainment demonstration under CAA sections 179(d)(3) and 189(d).

The commitment has been adopted by the District because the 2003 PM-10 Plan's attainment demonstration has limitations which are the direct result of the shortage of key input data. This lack of input data has resulted in some uncertainty regarding the amount and type (*i.e.*, which PM-10 precursors) of emissions reductions that will be necessary to attain the PM-10 standards. However, the CRPAQS will provide a more comprehensive and reliable data base for future PM-10 analyses.

The State expects that CRPAQS will provide more reliable modeling based on more refined modeling techniques and improved input data. This information should result in a more reliable determination of whether the amount of emissions reductions required in the 2003 PM-10 Plan will be sufficient for the SJV to attain the PM-10 standards expeditiously. The information will be used to establish revised attainment targets and motor vehicle budgets and to develop new control measures, if necessary, in the 2006 SIP submission.

5. Summary of Attainment Demonstration

Based on receptor modeling and proportional rollback modeling, the District's attainment demonstration for 2003 PM-10 Plan relies on emissions reductions from previously adopted measures, commitments for BACM measures, a commitment for the Indirect Source Mitigation program, and a commitment for an additional reduction of 10 tpd of NO_x and 0.5 tpd of PM-10 from State mobile sources. Also, since

the modeling has limitations due to a shortage of key input data, the Plan includes a commitment to submit a SIP revision by March 31, 2006 based on a mid-course review that will include an evaluation of the modeling from CRPAQS and the latest technical information (inventory, data, monitoring, etc.) to determine the level of emission reductions necessary to attain. EPA is proposing to approve the Plan's attainment demonstration modeling, all of the commitments necessary for attainment and the mid-course review commitment as meeting the requirements of CAA sections 179(d)(3) and 189(d).

G. Section 189(d) 5 Percent Requirement

As discussed above, areas such as the SJV which fail to meet their attainment deadlines are subject to CAA section 189(d) which requires a new attainment plan with “* * * an annual reduction in PM-10 or PM-10 precursor emissions * * * of not less than 5 percent of the amount of such emissions as reported in the most recent inventory prepared for such area.”

Tables 7-1 and 7-2 of the 2003 PM-10 Plan provide two methods of demonstrating a 5% annual reduction. The methods are different, but the emissions of NO_x and PM-10 reduced each year are the same in both.³³ EPA does not believe that the method summarized in Table 7-1 satisfies the CAA section 189(d) 5% requirement because adding percentages does not achieve the necessary 5% reductions.

However, EPA does believe that the Table 7-2 “Alternative Method” is an approvable method for meeting the section 189(d) 5% requirement. This method:

- Achieves the 5% annual reduction of either PM-10 or PM-10 precursors from 2002 to 2010,
 - Is consistent with the District's NO_x/PM attainment strategy for PM-10 precursors; and
 - Carries forward any reductions beyond 5% towards calculating the 5% requirement for a future year.
- Reliance on reductions in either PM-10 or PM-10 precursor emissions is specifically provided for in section 189(d). Since the attainment demonstration is based on a NO_x/PM strategy (see section IV.A. above), EPA believes it is reasonable to calculate the percentage of reductions required based upon NO_x reductions, and not to require reductions in the other PM-10 precursors VOC, SO_x, or ammonia for which there is either less benefit or high

uncertainty toward attaining the NAAQS. Finally, EPA believes it is reasonable and beneficial to allow for any emissions reductions beyond the required 5% in one year to be carried forward in order to encourage emissions reductions as quickly as possible. Thus, the Table 7-2 Alternative Method is an acceptable method for meeting the 5% requirement of CAA section 189(d). A more detailed analysis of the annual emissions and the 5% requirement is provided in the TSD. In order to ensure that the 5% requirement is met, EPA is proposing to approve as enforceable emissions levels each of the yearly NO_x and PM-10 emissions levels found in Table 7-2 of the 2003 PM-10 Plan and summarized below.

SUMMARY OF NO_x AND PM-10 EMISSION LEVELS NECESSARY FOR SATISFYING THE 5% REQUIREMENT

Year	NO _x (tons/day)	PM-10 (tons/day)
2002	519.8	329.4
2003	493.5	329.4
2004	479.5	312.1
2005	461.8	285.5
2006	441.0	285.8
2007	420.1	285.4
2008	403.6	280.1
2009	389.1	284.5
2010	363.7	283.7

H. Reasonable Further Progress

CAA sections 172(c)(2) and 189(c)(1) require nonattainment areas to provide for reasonable further progress (RFP). Section 171(1) of the Act defines RFP as “such annual incremental reductions in emissions of the relevant air pollutant as are required by this part [part D of title I] or may reasonably be required by the Administrator for the purpose of ensuring attainment of the applicable national ambient air quality standard by the applicable date.” The Addendum to the General Preamble at 42016 explains that “EPA will determine whether the annual emission reductions to be achieved are reasonable in light of the statutory objective to ensure timely attainment of the PM-10 NAAQS.”

The 2003 PM-10 Plan implies that the RFP requirement is satisfied by meeting the 5% requirement. 2003 PM-10 Plan, Chapter 7. As discussed above, the 5% requirement is based on emission reductions in the annual average inventory. However, RFP is a separate statutory requirement and is determined relative to attainment. Thus, in order to satisfy the RFP requirement, there must be an analysis which shows that incremental reductions towards attainment are being made for both the

24-hour and annual standards. While this analysis is not explicitly provided by the District in the 2003 PM-10 Plan, our evaluation of the attainment demonstration coupled with the expected yearly emissions reductions shows that RFP is being met. Based on our evaluation for both the 24-hour and annual PM-10 standards below, we believe that the progress achieved is reasonable in light of the Act's attainment goal and therefore propose to approve the Plan as meeting the RFP requirements in sections 172(c)(2) and 189(c)(1).

The District's control strategy relies on reductions of PM-10 precursors and primary PM-10 for both the annual and the 24-hour PM-10 standards. For each standard, the most substantial reductions in PM-10 from the control strategy are from decreases of the concentration of ammonium nitrate, vegetative burning and geological material. Smaller reductions are achieved from reductions in motor vehicle exhaust, and ammonium sulfate. There were slight increases in the concentrations of organic carbon, and tires and brakes. The specific relationships between the emission inventory and PM concentrations are documented in the 2003 PM-10 Plan, Appendix N, for each 24-hour and annual PM-10 concentration above the standard.

1. Annual RFP Demonstration

The annual average inventory is representative of the annual standard. As discussed in Chapter 7 of the 2003 PM-10 Plan and in section I above, annual reductions of PM-10 or NO_x are being achieved until the attainment year. Reductions of PM-10 and NO_x in the annual average inventory should correspond to annual incremental reductions towards the annual PM-10 standard.

2. 24-Hour RFP Demonstration

Relative to the PM-10 concentrations above the annual standard, the 24-hour PM-10 values have less contribution from geological material, and a greater contribution from ammonium nitrate and vegetative burning. Therefore, the control of PM-10 precursors and vegetative burning is relatively more effective for the 24-hour standard than for the annual standard. The 2003 PM-10 Plan provides for annual incremental reductions in NO_x emissions (page 7-3, Table 7-2), thus, this should help ensure that incremental reductions towards the 24-hour PM-10 standard are being achieved.

³³ As a result of the NO_x/PM strategy, NO_x is the only PM-10 precursor used in the 5% calculation.

I. Quantitative Milestones

CAA section 189(c)(1) also requires PM-10 plans demonstrating attainment to contain quantitative milestones which are to be achieved every 3 years until the area is redesignated attainment and which demonstrate RFP. The 2003 PM-10 Plan commits to provide the first quantitative milestone report for 2003 through 2005 (2003 PM-10 Plan, page 7-4). Thus, the next quantitative milestone report will be due for 2006 through 2008.

In addition to the District's commitment to provide an RFP Milestone Report on March 31, 2006 (90 days after the milestone date), they have also committed to a "mid-course review that will include an evaluation of the modeling from CRPAQS and the latest technical information (inventory, data, monitoring, etc.) to determine the level of PM-10 and PM-10 precursor emission reductions needed to attain the federal PM-10 annual and 24-hour standards. The mid-course review will also include a complete reassessment of all Plan elements including the attainment demonstration and control measures * * *. The District commits to adopt and submit by March 31, 2006 a SIP revision based on this mid-course review." (SJVUAPCD Governing Board, June 19, 2003, Resolution, No. 03-06-07, paragraph 12.) EPA believes this mid-course review commitment is a critical component in addressing the quantitative milestone requirement.

V. Summary of Proposed Action

EPA is proposing to approve pursuant to CAA section 110(k)(3) the following elements of the 2003 PM-10 Plan as meeting the CAA requirements applicable to serious PM-10 nonattainment areas that have failed to meet their attainment date:

(1) EPA is proposing to approve the emissions inventories as meeting the requirements of section 172(c)(3).

(2) EPA is proposing to approve the RACM/BACM demonstration for all significant PM-10 and NO_x sources in the SJV as meeting the requirements of sections 189(a)(1)(C) and 189(b)(1)(B). Final approval of this demonstration with respect to fugitive dust sources regulated by SJVUAPCD Regulation VIII would terminate all sanction, FIP, and rule disapproval implications of our February 26, 2003 action. 68 FR 8830.

(3) EPA is proposing to approve, as meeting the requirements of sections 179(d)(3) and 189(d), (a) the attainment demonstration and associated motor vehicle budgets; (b) commitments to adopt and implement new, identified stationary, area and mobile source

BACM to reduce PM-10 and NO_x emissions; (c) a commitment for the Indirect Source Mitigation Program (d) a commitment for 10 tpd of NO_x and 0.5 tpd of PM-10 reductions from State mobile source measures; (e) and the commitment to submit a SIP revision by March 31, 2006 based on a mid-course review that will include an evaluation of the modeling from the CRPAQS and the latest technical information (inventory data, monitoring, etc.) to determine whether the level of emission reductions in the 2003 PM-10 Plan is sufficient to attain the PM-10 standards.

(4) EPA is proposing to approve under section 110(k)(3) and 301(a) as strengthening the SIP the commitments to adopt and implement VOC and SO_x measures.

(5) EPA is proposing to approve the NO_x and PM-10 emissions levels necessary to meet the 5% annual reduction requirement in section 189(d).

(6) EPA is proposing to approve the reasonable further progress demonstration as meeting the requirements of section 172(c)(2) and 189(c)(1).

(7) EPA is proposing to approve the Plan as meeting the quantitative milestones requirement in section 189(c)(1).

VI. Statutory and Executive Order Reviews

Under Executive Order 12866 (58 FR 51735, October 4, 1993), this proposed action is not a "significant regulatory action" and therefore is not subject to review by the Office of Management and Budget. For this reason, this action is also not subject to Executive Order 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use" (66 FR 28355, May 22, 2001). This proposed action merely proposes to approve state law as meeting Federal requirements and imposes no additional requirements beyond those imposed by state law. Accordingly, the Administrator certifies that this proposed rule will not have a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*). Because this rule proposes to approve pre-existing requirements under state law and does not impose any additional enforceable duty beyond that required by state law, it does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104-4).

This proposed rule also does not have tribal implications because it will not have a substantial direct effect on one or

more Indian tribes, on the relationship between the Federal Government and Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes, as specified by Executive Order 13175 (65 FR 67249, November 9, 2000). This action also does not have Federalism implications because it does 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 (64 FR 43255, August 10, 1999). This action merely proposes to approve a state plan implementing Federal standards, and does not alter the relationship or the distribution of power and responsibilities established in the Clean Air Act. This proposed rule also is not subject to Executive Order 13045 "Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997), because it is not economically significant.

In reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the Clean Air Act. In this context, in the absence of a prior existing requirement for the State to use voluntary consensus standards (VCS), EPA has no authority to disapprove a SIP submission for failure to use VCS. It would thus be inconsistent with applicable law for EPA, when it reviews a SIP submission, to use VCS in place of a SIP submission that otherwise satisfies the provisions of the Clean Air Act. Thus, the requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) do not apply. This proposed rule does not impose an information collection burden under the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*).

List of Subjects in 40 CFR Part 52

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

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

Dated: January 27, 2004.

Wayne Nastri,

Regional Administrator, Region IX.

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