meeting will be included in the Administrative Record.

Executive Order 12291

On March 30, 1992, the Office of Management and Budget (OMB) granted the Office of Surface Mining Reclamation and Enforcement (OSM) an exemption from sections 3, 4, 7 and 8 of Executive Order 12291 for actions related to approval or disapproval of State and tribal abandoned mine land reclamation plans and revisions thereof. Therefore, preparation of a regulatory impact analysis is not necessary and OMB regulatory review is not required.

Executive Order 12778

The Department of the Interior has conducted the reviews required by section 2 of Executive Order 12778 and has determined that, to the extent allowed by law, this rule meets the applicable standards of subsections (a) and (b) of that section. However, these standards are not applicable to the actual language of State and Tribal abandoned mine land reclamation plans and revisions thereof since each such plan is drafted and adopted by a specific State or Tribe, not by OSM. Decisions on proposed State and Tribal abandoned mine land reclamation plans and revisions thereof submitted by a State or Tribe are based on a determination of whether the submittal meets the requirements of Title IV of the Surface Mining Control and Reclamation Act (SMCRA) (30 U.S.C. 1231–1243) and the Federal regulations at 30 CFR Parts 884 and 888.

National Environmental Policy Act

No environmental impact statement is required for this rule since agency decisions on proposed State and Tribal abandoned mine land reclamation plans and revisions thereof are categorically excluded from compliance with the National Environmental Policy Act (42 U.S.C. 4332) by the Manual of the Department of the Interior [5616 DM 6, appendix 8, paragraph 8.4B(29)].

Paperwork Reduction Act

This rule does not contain information collection requirements that require approval by the Office of Management and Budget under the Paperwork Reduction Act, 44 U.S.C. 3507 *et seq.*

Regulatory Flexibility Act

The Department of the Interior has determined that this 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.*). The State submittal which is the subject of this rule is based upon Federal regulations for which an economic analysis was prepared and certification made that such regulations would not have a significant economic effect upon a substantial number of small entities. Hence, this rule will ensure that existing requirements established by SMCRA or previously promulgated by OSM will be implemented by the State. In making the determination as to whether this rule would have a significant economic impact, the Department relied upon the data and assumptions in the analyses for the corresponding Federal regulations.

List of Subjects in 30 CFR Part 914

Intergovernmental relations, Surface mining, Underground mining.

Dated: March 8, 1996.

Allen D. Klein,

Regional Director, Appalachian Regional Coordinating Center.

[FR Doc. 96–6443 Filed 3–15–96; 8:45 am]

BILLING CODE 4310–05–M

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[CA114–1–7280; FRL–5439–8]

Approval and Promulgation of Implementation Plans; California—Ozone

AGENCY: Environmental Protection Agency (EPA).

ACTIONS: Notice of proposed rulemaking.

SUMMARY: EPA proposes to approve revisions to the California State Implementation Plan (SIP) for ozone for 7 nonattainment areas: South Coast, Southeast Desert, Ventura, Sacramento, San Diego, San Joaquin Valley, and Santa Barbara, submitted in order to comply with the November 1994 deadline under the Clean Air Act (CAA). In addition, EPA proposes to approve specific local and statewide air pollution control measures, including the California enhanced motor vehicle inspection and maintenance program.

EPA proposes to approve these revisions to the California SIP under provisions of the CAA regarding EPA action on SIP submittals for nonattainment areas.

EPA proposes to establish a consultative process on the potential for additional mobile source controls that can contribute to attainment in the South Coast.

DATES: Written comments on the proposed EPA actions must be received by EPA at the address below on or before May 2, 1996.

ADDRESSES: Written comments on this proposed action should be addressed to: Regional Administrator, Attention: Office of Federal Planning (A–1–2), Air and Toxics Division, Environmental Protection Agency, Region 9, 75 Hawthorne Street, San Francisco, CA 94105–3901

Copies of the SIP submittal and materials relevant to this rulemaking are contained in Docket No. A–96–13, which is available for viewing during normal business hours at the address shown above.

Copies of the SIP materials are also available for inspection at the addresses listed below:

Environmental Protection Agency, Air Docket (6102), 401 M Street, S.W., Washington, DC

California Air Resources Board, 2020 L Street, Sacramento, California

In addition, copies of the relevant local plan, the State plan (1994 California Ozone SIP), and EPA's technical support documents for this rulemaking are available at the following locations:

Santa Barbara Air Pollution Control District, 26 Castilian Drive B–23, Goleta, California

San Diego Air Pollution Control District, 9150 Chesapeake Drive, San Diego, California

San Joaquin Valley Unified Air Pollution Control District, 1999 Tuolumne Street, Fresno, California

Ventura County Air Pollution Control District, 669 County Square Drive, Ventura, California

Mojave Desert Air Quality Management District, 15428 Civic Drive, Suite 200, Victorville, California

South Coast Air Quality Management District, 21865 E. Copley Drive, Diamond Bar, California

Electronic Availability

This document and EPA's technical support documents are available at Region 9's site on the Internet's World Wide Web at http://www.epa.gov/region09/air/sip/.

FOR FURTHER INFORMATION CONTACT: Julia Barrow, Director, Office of Federal Planning (A–1–2), Environmental Protection Agency, Region 9, 75 Hawthorne Street, San Francisco, CA 94105–3901, (415) 744–2434

SUPPLEMENTARY INFORMATION:

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I. Background

A. Summary

Air pollution remains a significant public health concern in many parts of the country, including many areas in California. The Clean Air Act requires states to develop state implementation plans (SIPs) that lay out how areas will reduce pollution and attain the health-based air quality standards for a number of pollutants, including ground level ozone.

On the Clean Air Act deadline for ozone SIP submittals, November 15, 1994, the California Air Resources Board (CARB) submitted to EPA the State's ozone plans, including State and local measures and regulations, emission inventories, modeling analyses, rate-of-progress (ROP) plans, and attainment demonstrations. This material was followed by several supplementary SIP submissions and technical documentation over the past year, addressing in still greater detail and more completely the critical ozone planning requirements of the Act.

Together these submissions present a road map of how the State of California envisions meeting the health-based ozone air quality standards in 7 distinct geographic areas within the State by the dates specified in the Clean Air Act. The submittals represent the culmination of years of work and collaboration among stakeholders at the local, regional, State, national, and even international level. The plans were carefully tailored to meet the clean air goals of Californians, reflecting the social and economic priorities of each affected area within the State as well as the legitimate concerns of national and international commerce.

In the last 30 years, California has significantly improved air quality in its cities through efforts by businesses and

communities to reduce ground level ozone pollution. California faces additional challenges in its fight for clean air because of rapid growth in population and motor vehicle use as well as meteorological conditions conducive to ozone formation. Nevertheless, there are still several areas where air pollution continues to threaten public health, including Southern California, which violates the standard on almost one out of every three days—25 times more frequently than the next most polluted urban areas. The current plans build on California's pioneering air pollution control efforts to make progress against, and eventually eliminate, one of the most severe and intractable environmental and public health problems in the Country.

The Clean Air Act guarantees to all Americans healthy air to breathe. Unfortunately, approximately one-quarter of Americans nationwide and more than three-quarters of all Californians are currently exposed to health-threatening levels of air pollution. Of the top ten U.S. urban areas with the most violations of the national ambient air quality standard for ozone, nine are located in California.

Ozone is a highly reactive chemical compound which, at ground level, can affect both biological tissues and man-made materials. Ozone exposure causes a range of human pulmonary and respiratory health effects. While ozone's effects on the pulmonary function of sensitive individuals (e.g., asthmatics) are of primary concern, evidence indicates that high ambient levels of ozone can cause respiratory symptoms in healthy adults and children as well. For example, exposure to ozone for several hours at moderate concentrations, especially during outdoor work and exercise, has been found to decrease lung function, increase airway inflammation, increase sensitivity to other irritants, and impair lung defenses against infections in otherwise healthy adults and children. Other symptoms include chest pain, coughing, and shortness of breath.

There are also public health consequences from direct exposure to the two principal pollutants that cause ozone formation: oxides of nitrogen (or NO_X) and volatile organic compounds (or VOCs). Since attainment of the ozone standard requires reductions in these two precursor pollutants, successful implementation of the ozone SIPs will yield additional health benefits. Exposure to nitrogen dioxide (a major component of NO_X) can reduce breathing efficiency and increase lung and airway irritation even in healthy adults; elevated NO_2 levels also increase symptoms of respiratory illness, lung congestion, wheeze, and increased bronchitis in children. VOCs include many air toxics (such as benzene), which can cause respiratory, immunological, neurological, reproductive, developmental, and mutagenic problems. Some VOCs are also probable or known human carcinogens.

Finally, the conversion of NO_X into fine particulate matter is a serious health concern, especially in Southern California. Studies have shown that high concentrations of fine particulate matter are associated with major human health problems, including deleterious effects on breathing and the respiratory system, aggravation of existing respiratory and cardiovascular disease, alternations in the body's defense mechanisms against foreign materials, and damage to lung tissue resulting in fibrosis, carcinogenesis, and premature death.

In addition to impacts on public health, ozone damages vegetation and NO_X emissions, in the form of acid deposition, both harms plants and causes eutrophication of lakes and streams. Estimates based on experimental studies of the major commercial crops in the U.S. suggests that ozone may be responsible for significant agricultural crop yield losses. In addition, ozone causes noticeable leaf damage in many crops, which reduces their marketability and value.

Efforts to clean the air require significant resources, but the benefits are substantial. While it is easier to put a price tag on a regulation to limit air pollution than it is to assign a dollar value to being able to breathe without losing lung capacity or to see mountains that are a few miles away, we know that impacts on individuals' health associated with air pollution have considerable physiological, psychological, and purely financial costs. Similarly, lower crop yields, decreased forest production, and accelerated building deterioration due to air pollution also have financial costs that will be reduced by attainment of the clean air standards.

At the same time, clean air has benefits even beyond healthy breathing. The technologies and industries that will make air pollution a problem of the past can also be the growth industries that bring to California jobs and dollars from markets all around the world. A recent World Bank study projects a $300 billion worldwide marketplace for clean technologies by the year 2000. Innovative technologies offer the promise of continued economic growth in concert with strong environmental protection.

To achieve public health progress over the past 30 years, California has already adopted uniquely stringent controls on a vast array of industrial sources, consumer products, and motor vehicles. As developed by California and Californians, these existing regulations and the SIP's proposed enhancements to them promote technological advances while meeting the economic and environmental needs of the State. The credit for this achievement is shared by the State's air pollution professionals, regulated industry, and citizens, who continue to explore new and innovative ways to minimize pollution associated with their products and activities.

Plan Approvals

When a state submits a SIP to EPA the Clean Air Act requires the Agency to review the plan to determine if it meets the Act's requirements and environmental goals. California's 1994 Ozone SIP included, for both the State and local agencies, fully adopted regulations and control measures for which regulations must be written. Since November 1994, EPA has already completed approval of all but one of the State's fully adopted regulations and most of the State's commitments to adopt regulations in the future. The State submitted its enhanced motor vehicle inspection and maintenance(I/M) regulations on January 22, 1996. EPA is proposing today approval of the I/M regulations, which should help to assure the maximum benefits from the California motor vehicle emissions standards.

EPA believes that this SIP represents an important blueprint for clean air in California. By today's actions, the Federal government signals its intention to concur with these plans. California's commitments, when implemented, will improve air quality and protect public health. Now it is incumbent on California to meet those commitments. EPA is today generally proposing to approve in full the critical components of all of the plans for all of the areas.

EPA is proposing approval of:

- The emission inventories and modeling analyses in all of the affected areas;
- The 15% rate-of-progress plans for the period 1990–1996 in the South Coast (the Los Angeles basin), Ventura, San Joaquin, San Diego, and Santa Barbara;
- The post-1996 rate-of-progress plans in the South Coast, Ventura, Sacramento, San Joaquin, and San Diego;

- The attainment demonstrations for the South Coast, Southeast Desert, Ventura, Sacramento, San Joaquin, San Diego, and Santa Barbara;
- All of the individual local measures included with the plans.

EPA will take action separately on the 15% progress plan for Sacramento and the progress plans for the Southeast Desert.

The South Coast ozone attainment demonstration raises a unique issue. In the SIP, California assumes that EPA will issue specific national mobile source emission reduction rules to help the South Coast reach attainment. While some additional mobile source standards may be feasible and desirable, EPA believes that it is important to examine and discuss these standards because they have far-reaching implications. As new national and international standards are being discussed, EPA commits to support rather than hinder State and local progress in implementing and updating the ozone attainment demonstration for the South Coast.

To achieve this objective and allow for approval of the South Coast attainment demonstration at this time, EPA proposes an approach which the Agency believes is consistent with EPA's guiding principle for implementing its statutory responsibilities: accomplish environmental goals through innovative approaches that are collaborative rather than adversarial, and that provide flexibility while requiring accountability.

The South Coast attainment demonstration is based primarily on those State and local components (enumerated in the text of the notice) that make up the vast majority of reductions needed for attainment in the South Coast. EPA has already approved most of the State and local adopted regulations and many of the State's new commitments made as part of California's 1994 Ozone SIP. EPA proposes in this document to approve the enforceable State and local commitments that make up the remainder of the plan. These State and local regulations and commitments, together with creditable national controls which EPA has promulgated or proposed, account for well over 90% of the reductions needed for attainment.

To address the small remaining shortfall which the State has assigned to the Federal government, EPA proposes to conduct a public consultative process on future mobile source controls. The Agency also commits to undertake rulemaking, after the consultative process, on any controls which are determined to be appropriate for EPA. Finally, EPA is proposing to require that the State submit, before EPA's final action on the South Coast plan, an enforceable commitment to submit a revised South Coast attainment demonstration and gap-filling State or local control measures, if needed, after the consultative process.

In assigning EPA responsibility for issuing Federal emission standards for various mobile sources, the State argued that attainment in Southern California depends upon emission reductions from national and international mobile sources which could not legally or practically be regulated at the State or local level. EPA and the State have been working together for the past several years to evaluate the potential for additional national emission controls on mobile sources. EPA has recently proposed or finalized national emission controls for construction, farm, and lawn and garden equipment; pleasure craft and some categories of marine vessels; and potential new controls on heavy-duty truck emissions. The proposed nationwide heavy-duty truck controls, in fact, are an outgrowth of an EPA-California joint initiative, developed in consultation with heavy-duty engine manufacturers, which also extends to possible future controls on heavy-duty nonroad engines. Other assignments by the State present unique challenges, such as the establishment of stringent engine emission standards for aircraft and ocean-going vessels—sources which are today regulated by treaty principally at the international level.

EPA proposes to continue to consult with the State and other stakeholders to examine the potential for additional mobile source controls that can contribute to attainment in the South Coast. This period provides an opportunity to agree on a set of emission reductions without adverse consequences to the State or the environment, whether those additional reductions come from national and international emission standards or from new State and local measures. At the conclusion of this consultation, in June 1997, EPA expects that the State and local agencies will be able to amend the attainment demonstration appropriately, based on the final mix of national, State, and local mobile source control responsibilities. During the consultative process, the State and local agencies need to proceed aggressively with implementing other parts of the SIP in order to maintain progress towards cleaning the air.

As mentioned, EPA is proposing to approve all of the local agency commitments to adopt and implement rules by scheduled dates to achieve specified emission reductions. In some cases, most notably the South Coast, scheduled adoption dates have already been missed. It is critically important that these adoption schedules be amended, that the local agency staff and governing board's commit themselves to reasonable and aggressive schedules for rule development and adoption, and that the affected agencies proceed successfully with plan implementation to fulfill their public commitments to deliver clean air. EPA will work with the local agencies, the regulated community, and the public to help the government boards and officials to meet their public health obligations. Implementation failures will prolong the unacceptable current levels of pollution and will expose the areas to potential sanctions under the Clean Air Act.

Section 182(e)(5) of the Clean Air Act authorizes inclusion of conceptual, new-technology measures in the attainment demonstration for the South Coast, the Country's only ''extreme'' ozone nonattainment area. In this 1990 amendment, Congress recognized that the South Coast's enormous emission reduction requirements justified giving more time to allow for the completion of research and development phases that must precede the successful commercialization of practically zero-emitting products, industrial processes, and means of transportation. A large portion of the remaining needed reductions in the 1994 South Coast plan is now assigned to conceptual measures. If these measures are to contribute to the solution of the South Coast's ozone problem in later years, all responsible governmental agencies and private industry must now increase their resource commitments and cooperative efforts to develop the clean technologies and innovative market approaches that will be the basis for the area's economic and environmental progress.

EPA is soliciting public comments on the proposed SIP actions. The Addresses section of this document provides information on the public comment process and opportunities to inspect the SIP and related materials. EPA hopes to take final action soon so that California can continue to make progress in implementing the challenging strategies in the plans.

In transmitting the 1994 California Ozone SIP, the Chairwoman of the California Air Resources Board stated that ''The SIP provides a firm guarantee to citizens of California that clean air

goals will be met within the time frames set out in the CAA.'' Indeed, the goal of the sweeping 1990 Clean Air Act Amendments has been not simply to sustain the historic progress in reducing air pollution, but instead to honor the underlying promise of the Act: clean, healthy air for all Americans. We believe that California's achievement in these plans for the most polluted areas of the nation proves that the Clean Air Act is effective when citizens and public officials work together to focus technical expertise and common sense to protect themselves, the health of their children, and the welfare of future generations. The Federal government is committed to playing its part in this final effort to deliver clean air to all Californians.

B. Requirements of the Act

Title I of the 1990 Amendments to the CAA (CAAA) completely revised the Part D nonattainment provisions for areas which had not attained the national ambient air quality standards (NAAQS) for ozone. In addition, Congress made numerous changes governing EPA's processing of SIPs, as well as the repercussions of State failures to meet the various SIP requirements.

Section 110 of Part A of Title I contains general requirements applicable to all SIP revisions. Section 110(k) describes the Agency's actions on SIP revisions, including findings as to whether submissions are complete (section 110(k)(1)), deadlines for EPA actions (section 110(k)(2)), types of actions the Agency may take on complete submittals (110(k) (3) and (4)), and sanctions which may be applied to areas which fail to meet the Act's requirements (sections 179 and 110(m)) or fail to implement approved SIPs (sections 113(a)(5), 173(4), and 179).

The requirements addressed by this proposal are generally those of Part D of Title I, pertaining to nonattainment areas. Such areas are designated under section 107 of the Act (codified at 40 CFR Part 81). While Subpart 1 of Part D (sections 171 to 179 CAA) describes general requirements for nonattainment areas, Subpart 2 (sections 181 to 185B) lists additional provisions added under the 1990 CAAA for ozone nonattainment areas.

Under this subpart, ozone nonattainment areas are classified according to the severity of the nonattainment problem, and become subject to a graduated series of requirements. The classification scheme for ozone nonattainment areas is listed under section 181, which also establishes deadlines for attainment. The nonattainment classifications and applicable attainment deadlines are: marginal (November 15, 1993), moderate (November 15, 1996), serious (November 15, 1999), severe (November 15, 2005 or 2007), and extreme (November 15, 2010). Section 181(a) further provides that the attainment date shall be ''as expeditiously as practicable but not later than'' these deadlines.

EPA has issued preliminary interpretations of the amended Act's provisions applicable to these SIP obligations. See, for example, the ''General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990,'' (57 FR 13498 [April 16, 1992]). In this proposed rulemaking action, EPA is applying these policies to the proposed California ozone SIP, taking into consideration the specific factual issues presented.

The central SIP requirements for ozone nonattainment areas are demonstrations of reasonable further progress (or ''rate of progress'') and attainment. Section 182(b)(1) requires, for areas classified as moderate or above, submission by November 15, 1993 of a SIP revision providing for reasonable further progress, defined as a reduction from 1990 baseline emissions of at least 15% actual emissions of volatile organic compounds (VOC), taking into account growth, during the first 6 years following enactment of the 1990 CAAA (i.e., up to November 15, 1996).

Baseline emissions for calculating the required ROP reduction are defined at section 182(b)(1)(B). Baseline emissions are relative to a particular year for which the ROP reduction is calculated, and differ from the 1990 base year emissions primarily in excluding reductions for certain Federal programs which were already required prior to the 1990 CAAA. Section 182(b)(1)(C) describes a number of exclusions from creditability for the purposes of meeting the ROP requirement.

For moderate areas, section 182(b)(1) requires submission of a plan revision by November 15, 1993, that provides an attainment demonstration including sufficient annual reductions in VOC and NO_X to attain the ozone NAAQS by November 15, 1996. The attainment demonstration requirement can be met through applying EPA-approved modeling techniques.

Section 182(c)(2)(B) requires, for serious and above areas, submission by November 15, 1994, of reasonable further progress and attainment plans. For these areas, the CAA defines reasonable further progress as an additional ROP reduction above and beyond the required 1996 reductions, of 3% per year of baseline VOC emissions, averaged over each consecutive 3-year period from November 15, 1996 until attainment. Section 182(c)(2)(A) also requires attainment plans, based on photochemical grid modeling, to be submitted by November 15, 1994, for serious and above areas.

Section 182(c)(2)(C) allows for actual NO_X emissions reductions (after accounting for growth) that occur after the base year of 1990 to be used to meet post-1996 ROP emission reduction requirements. The reader is referred to section II.C.1.c. below for a discussion of the Agency's NO_X substitution criteria.

Sections 182(g)(3) and 182(g)(5) specify requirements for areas which fail to submit a ROP milestone compliance demonstration under section 182(g)(2) within the required period or if the Administrator determines that the area has not met any applicable milestone. The first ozone ROP milestone compliance demonstration is due April 1997, for the period 1990–1996. Among the options discussed in section 182(g) for curing a ROP shortfall is the use of an economic incentive program (EIP). Under section 182(g)(4)(B), EPA promulgated requirements for EIPs at 40 CFR Part 51, Subpart U (see 40 CFR 51.490 through 40 CFR 51.494—''EIP Rules and Guidance''). These EIP rules also serve as policy guidance to determine the approvability of SIP measures that rely on economic incentives (see 40 CFR 51.490(b)).

Under section 182(b)(4) of the Act, basic motor vehicle inspection and maintenance (I/M) programs are required in all moderate ozone nonattainment areas. Under section 182(c)(3), ozone nonattainment areas designated as serious and worse with 1980 populations of 200,000 or more are required to meet EPA regulations for ''enhanced'' I/M programs. As required by section 182(a)(2)(B) of the Act, EPA published updated requirements for I/M programs on November 5, 1992 (40 CFR part 51, Subpart S, see also 57 FR 52950). On September 18, 1995, EPA issued flexibility amendments to these I/M rules, allowing for an additional, less stringent enhanced I/M performance standard for areas that can meet the ROP and attainment requirements with an I/M program that falls below the originally promulgated enhanced I/M performance standard (see 60 FR 48029). On November 28, 1995, the National Highway System Designation Act (Public Law 104–59) was enacted. Section 348 of this legislation modifies the I/M provisions

of the Clean Air Act, providing a mechanism for approval with full credit for decentralized or test-and-repair enhanced I/M programs under certain circumstances. The legislation also establishes an 18-month evaluation period to verify that the assigned credits have a basis in fact, prior to permanent program approval.

Part D of the Act includes other ozone SIP requirements. EPA has previously acted upon some SIP revisions addressing these requirements; others will be addressed in future actions. Moreover, the ozone ROP and attainment plans depend upon the successful adoption and implementation of well over 100 State and local rules. EPA will approve or disapprove individual rules relating to each local plan after the State submits the rules and EPA deems them complete.

EPA believes that the law requires and the public expects that the responsible California State and local agencies will honor all of their clean air commitments in these ozone plans, and will consistently pursue reasonable and aggressive plan implementation until the clean air goals are reached. Nevertheless, the Act does allow the State to amend the SIPs in the future, both with respect to the technical foundations of the demonstrations and the specific mix of control measures chosen for achieving progress and attainment. State and local agencies have the flexibility to make changes as necessary and appropriate to improve the plans, but EPA will fulfill the Agency's responsibilities under section 110(l) of the CAA, which provides that ''the Administrator shall not approve a revision of a plan if the revision would interfere with any applicable requirement concerning attainment and reasonable further progress * * * or any other applicable requirement of the Act.''

C. Affected Areas

When California's ozone nonattainment areas were first classified under the 1990 CAAA, 9 areas were classified as moderate and above, and therefore subject to the progress and attainment requirements. The San Francisco Bay Area was later redesignated to attainment (60 FR 27028, May 22, 1995). CARB has also submitted a request to redesignate the Monterey Bay Area to attainment. EPA will act on the Monterey redesignation in the near future.

This proposal addresses ROP and attainment plans submitted for all of the remaining nonattainment areas. These areas are the South Coast (classified as extreme), the Southeast Desert (comprising the Mojave, Coachella/San Jacinto, and Antelope Valley areas, severe-17), Ventura (severe-15), Sacramento (severe-15), San Diego (serious), San Joaquin Valley (serious), and Santa Barbara (moderate). The boundaries for these areas are set forth at 40 CFR 81.305.

Since a number of the State's measures apply throughout California and thus contribute both toward attainment and maintenance of the ozone NAAQS, the SIP submittal and EPA's proposed approval actions affect all areas in the State.

D. The California Ozone Plans

1. SIP Submittals

On November 15, 1993, in response to the 15% ROP requirements of section 182(b)(1)(A) of the Act, CARB submitted plans for all of the areas addressed in this notice. These submittals have been superseded by revised ROP plans submitted one year later.

On November 15, 1994, CARB submitted a revision to the ''State of California Implementation Plan for Achieving and Maintaining the National Ambient Air Quality Standards'' (SIP) under cover letter from James Boyd (CARB) to Felicia Marcus (EPA). This SIP revision includes documentation that the public involvement and adoption requirements of the CAA have been met at both the State and local level.

The revision itself consists of: (a) The State's comprehensive ozone plan, including the State's own measures and the State's summaries of, and revisions to, the local plans; (b) the State's previously adopted regulations for consumer products and reformulated gasoline and diesel fuels; and (c) local plans addressing the ozone attainment demonstration and ROP requirements.

The ozone SIP submittal includes the following separate documents:

(a) The State's Comprehensive Ozone Plan

''The 1994 California State Implementation Plan for Ozone,'' volumes I–IV. The November 15, 1994, submittal letter refers to other submittals, described below, as completing the 1994 California Ozone SIP. Volume I provides an overview of the entire submittal; Volumes II and III include the State's measures for mobile sources, consumer products, and pesticides; and Volume IV treats the local plans. On December 29, 1994 and February 7, 1995, the State submitted updates to these documents, incorporating changes made by CARB at the time of adoption, and providing other technical and editorial corrections.

(b) The State's Adopted Regulations

(1) The California Antiperspirants and Deodorants regulations and Consumer Products regulations, as contained in Title 17 of the California Code of Regulations, Sections 94507–94517, adopted on December 27, 1990, August 14, 1991, and September 21, 1992.

(2) The California Diesel Fuel regulations, as contained in Title 13 of the California Code of Regulations, Sections 2281 and 2282, adopted on August 22, 1989, June 21, 1990, April 15, 1991, October 15, 1993, and August 24, 1994.

(3) The California Reformulated Gasoline regulations, as contained in Title 13, of the California Code of Regulations, Sections 2250, 2252, 2253.4, 2254, 2257, 2260, 2262.1, 2262.2, 2262.3, 2262.4, 2262.5, 2262.6, 2262.7, 2263, 2264, 2266–2272, 2296, and 2297, initially adopted by CARB on November 17, 1988, and formally adopted on August 22, 1989, June 21, 1990, April 15, 1991, October 15, 1993, and August 24, 1994.

(c) Local Ozone Progress and Attainment Plans

(1) ''1994 Clean Air Plan for Santa Barbara County.'' The submittal letter for this plan is from James Boyd to Regional Administrator Felicia Marcus and is dated November 14, 1994.

(2) ''1994 Ozone Attainment and Rate-of-Progress Plans for San Diego County.''

(3) ''San Joaquin Valley Attainment and Rate-of-Progress Plans.'' On December 28, 1994, the State submitted the ''Rate-of-Progress and Attainment Demonstration Plans for the Kern County Air Pollution Control District,'' applicable to the Kern desert portion of the San Joaquin Valley nonattainment area.

(4) ''Sacramento Area Proposed Attainment and Rate-of-Progress Plans.'' On December 29, 1994, the State replaced this with the ''Sacramento Area Attainment and Rate-of-Progress Plans.''

(5) ''1994 Air Quality Management Plan for Ventura County.''

(6) ''Rate-of Progress and Attainment Demonstration Plans for the Mojave Desert.''

(7) ''1994 Air Quality Management Plan for South Coast Air Basin, Antelope Valley and Coachella/San Jacinto Planning Area.''

On December 29, 1994, the State submitted the ''Rate-of-Progress Plan Revision: South Coast Air Basin &

Antelope Valley & Coachella/San Jacinto Planning Area.'' [1]

On March 30, 1995, CARB submitted revised 1990 base year emission inventories for each of the California ozone nonattainment areas.

On June 30, 1995, CARB submitted descriptive materials relating to the State's motor vehicle inspection and maintenance program, adopted by the California Bureau of Automotive Repair.

On January 22, 1996, CARB submitted the motor vehicle inspection and maintenance regulations adopted by the California Bureau of Automotive Repair.

2. EPA Completeness Findings

On January 30, 1995, EPA issued a finding of completeness under Section 110(k)(1) of the Act for the following portions of the California ozone SIP submittal: Diesel Fuel Regulations; Reformulated Gasoline Regulations; CARB Measures M2, M3, M5, M8, M9, M11, CP–2, CP–3, CP–4, Additional Measures; and SCAQMD Long Term Measures ADV–CTS–01/02, ADV–FUG, ADV–PRC, ADV–UNSP. These elements of the revision were found complete based on EPA's completeness criteria that are set forth in 40 CFR Part 51 Appendix V.[2]

On April 18, 1995 the EPA issued a finding of completeness for the remaining portions of the November and December 1994 submittals with regard to: (1) attainment and post-1996 RFP requirements at section 182(c)(2) of the Act; (2) 15% ROP requirement of section 182(b)(1)(A); (3) attainment requirement for moderate areas (Santa Barbara) as described at Section 182(b)(1)(A); and (4) 1990 base year inventory requirements of section 182(a)(1).

On June 30, 1995, EPA issued a finding of completeness for the State's submittal of revisions to the State's I/M program.

On February 5, 1996, EPA issued a finding of completeness for the State's I/M regulations.

E. Related SIP Approvals

On February 14, 1995, the EPA Administrator signed documents taking the following approval actions relating to the California ozone SIP:

(1) Final approval of the CARB Antiperspirants and Deodorants regulations, Consumer Products regulations, Diesel Fuel regulations, and Reformulated Gasoline regulations, as submitted on November 15, 1994.

(2) Interim final approval of CARB and SCAQMD New-Technology Measures, submitted as part of the South Coast ozone SIP on November 15, 1994. The measures were approved under the provisions of section 182(e)(5) of the CAA, which authorizes the Administrator to approve fully and credit as part of an extreme ozone area SIP conceptual measures dependent upon new control technologies or new control techniques. The specific measures approved are:

(a) CARB Measure M2, Improved Control Technology for Light-Duty Vehicles, for adoption in the year 2000 and implementation in 2004–5.

(b) CARB Measure M9, Off-Road Diesel Equipment, 2.5 grams per brake horsepower-hour (g/bhp-hr) NO_X standard, for adoption in 2001 and implementation in 2005.

(c) CARB Measure CP–4, Consumer Products Advanced Technology and Market Incentives, for adoption in 2005 and implementation in 2009.

(d) CARB Additional Measures, for adoption and implementation by 2009–2010.

(e) SCAQMD Measure ADV–CTS–01, Advance Technology-CTS (Coating Technologies), for adoption in 2003.

(f) SCAQMD Measure ADV–FUG, Advanced Technology-Fugitives, for adoption in 2003.

(g) SCAQMD Measure ADV–PRC, Advance Technology-Process Related Emissions, for adoption in 2003.

(h) SCAQMD Measure ADV–UNSP, Advance Technology-Unspecified, Stationary Sources, for adoption in 2003.

(i) SCAQMD Measure ADV–CTS–02, Advance Technology-CTS (Coatings Technologies).

(3) Proposed approval of CARB's mid-term control measures: Measures M3, Accelerated Ultra-Low Emission Vehicle (ULEV) requirement for Medium-Duty Vehicles, for adoption in 1997 and implementation in 1998; M5, Heavy-Duty Vehicle NO_X regulations, for adoption in 1997 and implementation in 2002; M8, Heavy-Duty Gasoline Vehicles lower emissions standards, for adoption in 1997 and implementation in 1998; M11, Industrial Equipment, Gas and LPG, for adoption in 1997 and implementation in 2000; and CP2, Mid-Term Consumer Products, for adoption in July 1997.

These actions were taken in conjunction with issuance of ozone Federal Implementation Plans (FIPs) for the South Coast, Ventura, and Sacramento, and a carbon monoxide FIP for the South Coast. Prior to publication of the FIP and SIP actions in the Federal Register, legislation was enacted mandating that these FIPs ''shall be rescinded and shall have no further force and effect'' (Public Law 104–6, Defense Supplemental Appropriation, H.R. 889, enacted April 10, 1995).

On August 21, 1995, EPA announced the rescission of the FIPs (60 FR 43468), and reissued the final and interim final SIP approvals (60 FR 43379) and the proposed SIP approvals (60 FR 43421) referenced above. On December 14, 1995 (60 FR 64126), EPA issued the final SIP approval of the State's mid-term control measures (M3, M5, M8, M11, and CP–2).

II. Review of the State Submittal

On October 7, 1994 the State published a public notice regarding its adoption hearings, to begin on November 9, 1994. Those hearings were extended to November 14 and 15, at which time CARB adopted and submitted the documents listed above (section I.C.).

The local elements of the State plan were the product of plan development, public review and adoption processes conducted in each nonattainment area. Following adoption by the local air pollution control boards, the local plans were submitted to CARB, which amended the plans and incorporated them into the overall California Ozone SIP.

This document discusses the State's submittal in terms of 3 broad categories: measures which the State has adopted, or enforceably committed to adopt (section II.A.); measures assigned by the State to the Federal government (section II.B.); and local ROP and attainment plans and measures (section II.C.).

A. State Measures

Statewide elements of the ozone progress and attainment plans include measures to control mobile sources, consumer products, and pesticides. These control measures consist of existing adopted rules, commitments to adopt rules between 1995 and 1997, and long-term measures scheduled for regulatory adoption in the year 2000 or later.

1. Mobile Sources Measures

a. Introduction. According to data from CARB, mobile sources (on-road and non-road) account for more than 60 percent of ozone precursor emissions in California. Therefore, further reductions in mobile source emissions are essential if attainment of the NAAQS for ozone is to be achieved.

[1] Antelope Valley and Coachella/San Jacinto Planning Area are portions of the Southeast Desert Modified Air Quality Management Area under the jurisdiction of the South Coast Air Quality Management District.

[2] EPA adopted the completeness criteria on February 16, 1990 (55 FR 5830) and pursuant to section 110(k)(1)(A) of the CAA, revised the criteria on August 26, 1991 (56 FR 42216).

CARB has an existing statewide control program for mobile source emissions, which is expected to achieve significant reductions in emissions in the ozone nonattainment areas of the State. A key element of this existing control program is the Low-Emission Vehicle/Clean Fuels (LEV) program which was originally adopted in 1990 and has been amended several times since. The LEV program aims to reduce emissions from future light- and medium-duty vehicles. The program contains several categories of vehicle emission requirements. Increasingly stringent fleet average requirements must be met by vehicle manufacturers beginning in 1994. In addition, the LEV program requires manufacturers to introduce increasing percentages of zero-emission vehicles (ZEVs), beginning with two percent in 1998 (Title 13, California Code of Regulations, Section 1960.1).

Other CARB-adopted mobile source control measures include the California Diesel Fuel Regulations and the California Reformulated Gasoline regulations. Both of these fuel regulations were originally adopted in 1989 and frequently amended. As discussed above, EPA approved the diesel and reformulated gasoline regulations on August 21, 1995 (60 FR 43379).

Beginning in 1988, CARB also adopted the following important sets of mobile source regulations:

(1) Emission standards for diesel farm and construction equipment over 175 hp;

(2) revised evaporative emission test procedures;

(3) Phase 2 on-board diagnostics (OBD) provisions;

(4) Revised emission standards for medium-duty vehicles (MDVs) and light-heavy-duty vehicles (LHDVs); and

(5) Requirements for utility engines and off-highway recreational vehicles/engines.

In addition to the adopted measures, the State has committed in the 1994 California Ozone SIP to future adoption of a series of mobile source measures. The commitments fall chronologically into two categories with regard to the adoption schedule: mid-term commitments to be adopted during the 1995–1997 time frame, and long-term measures scheduled for adoption in the year 2000 or later.

The long-term measures are relied upon only in the South Coast Air Basin. The South Coast is the only area in the country classified as extreme for ozone, and is subject to section 182(e)(5) of the Act, which authorizes EPA to credit conceptual measures using new technologies or control techniques if they are not needed for meeting the first 10 years of ROP (see section II.C.7.e.(1).).

The following is a description of the State's mobile source measures, or M Measures, and EPA's approval actions on the measures.

b. Review of Measures

(i) M1—Accelerated Retirement of Light-Duty Vehicles. The SIP commits to adopt this measure in 1996 and implement it from 1996 to 2010. Responsibility for implementing this measure may be shared between CARB and regional air districts. In this measure, CARB commits to the annual retirement (scrappage or removal) of up to 75,000 older, high-emitting vehicles in the South Coast Air Basin only, beginning in 1999. A smaller number of vehicles will be retired between 1996 and 1998 in order to gain experience with the program. CARB estimates that $1,000 per car will be required to cover costs associated with vehicle purchase and program administration. CARB committed in the SIP to secure a financing mechanism for the program by the end of 1995, and legislative efforts to do so have been partially successful. While all critical near-term revenues should be obtained now, the State also should begin to pursue long-term support for the program. CARB must also ensure that implementation and monitoring of the measure prevents double-counting of reduction credits, since scrappage is also a feature of the State's I/M program and emission reduction credits from scrappage may be claimed as emission reduction credits in trading programs.[3]

While M1 is a commitment to implement an accelerated vehicle retirement program only in the South Coast, the SIP states that ''implementation of light-duty vehicle retirement programs in other non-attainment areas will be considered as a means of further reducing emissions'' (Vol. II, p. B–2).

The emission reductions to be achieved in the South Coast by the measure are displayed by year in the table below, labeled ''Reductions from California Mobile Source Measure M1.''

REDUCTIONS FROM CALIFORNIA MOBILE SOURCE MEASURE M1 SOUTH COAST AIR BASIN

[Tons per day]

	1999	2002	2005	2007	2008	2010
ROG	5	8	11	12	13	14
NO_X	4	6	9	10	10	11

(ii) M2—Improved Control Technology for Light-Duty Vehicles. CARB commits to adopt this measure in 2000 and begin implementation in 2004–2005. This measure will achieve emission reductions from LDVs through the use of one or more market-based and/or technology-forcing approaches. Emission reductions may be achieved through: (1) cost-effective gasoline engine control technology to meet or exceed Ultra Low-Emission Vehicle (ULEV) standards in the post-2003 time frame; (2) ZEV sales in excess of the 10% requirement beyond 2003; and/or (3) availability of advanced hybrid electric vehicles with emissions substantially lower than ULEVs. The SIP indicates that market forces (e.g., incentives) and/or emission standards may be used to achieve the emission reductions. Emission reductions associated with this measure are relied upon in the South Coast only. The emission reductions to be achieved in the South Coast by the measure are displayed by year in the table below, labeled ''Reductions from California Mobile Source Measure M2.''

[3] These concerns were expressed in a letter from David P. Howekamp, Director, Air & Toxics Division, USEPA Region 9, to James D. Boyd, Executive Officer, CARB, dated June 15, 1995, on follow-up issues to a June 9, 1995 meeting between CARB, USEPA, and the Western States Petroleum Association (WSPA).

REDUCTIONS FROM CALIFORNIA MOBILE SOURCE MEASURE M2 SOUTH COAST AIR BASIN

[Tons per day]

	1999	2002	2005	2007	2008	2010
ROG	0	0	3	7	6	10
NO_X	0	0	5	9	9	15

On August 21, 1995, EPA approved this measure under the provisions of section 182(e)(5) of the Act.

(iii) M3—Accelerated Ultra-Low Emission Vehicle (ULEV) Requirement for Medium-Duty Vehicles (MDVs). CARB commits in the SIP to adopt regulations for this measure in 1997, with implementation occurring from 1998 to 2002. This measure commits to an increase in the fraction of MDV ULEVs from 10 percent of sales of new MDVs in the 1998 model year to 100 percent in the 2002 and later model years. CARB believes that the emission reductions associated with this measure can be achieved by applying advancements in LDV emission control technologies to the medium-duty fleet. This measure offers some flexibility by allowing other mixes of vehicles and technologies that generate equivalent emission reductions. The emission reductions to be achieved by the measure are displayed by nonattainment area and milestone/attainment year in the table below, labeled ''Reductions from California Mobile Source Measure M3.''

REDUCTIONS FROM CALIFORNIA MOBILE SOURCE MEASURE M3

[Tons per day]

	1999		2002		2005		2007		2008		2010	
	ROG	NO_X	ROG	NO_X	ROG	NO_X	ROG	NO_X	ROG	NO_X	ROG	NO_X
So. Coast	0	1	1	10	2	21	.....	.....	2	27	3	33
SE Desert	0	0.1	0.1	1.4	0.2	3.5	0.3	4.1				
Ventura	0	0	0	0.5	0.1	1.0						
Sacramento	0	0.2	0	1.7	0.4	3.9						
S. Joaquin	0	0.4										
S. Diego	0.9	6.5										

EPA proposed to approve M3 on August 21, 1995, and finalized approval on December 14, 1995 (60 FR 64126).

(iv) M4—Heavy-Duty Diesel Vehicles (HDDV); Early Introduction of 2.0 g/bhp-hr NO_X engines. The SIP commits to implementation of this measure beginning in 1996. CARB and the Districts share responsibility for this measure. M4 is a commitment to increase the use of existing low-emission engines among on-road HDDVs through locally implemented demand-side programs and market incentives. This program is intended to result in a 5% sales penetration of 2.0 g/bhp-hr NO_X engines through the period 1996–1999, and a 10% sales penetration of these engines between 2000 and 2002. Other combinations of penetrations and emission levels that provide equivalent emission reductions could be implemented. The emission reductions to be achieved in the South Coast by the measure are displayed by year in the table below, labeled ''Reductions from California Mobile Source Measure M4.''

REDUCTIONS FROM CALIFORNIA MOBILE SOURCE MEASURE M4 (IN SOUTH COAST AIR BASIN IN TONS PER DAY OF NO_X)

1999	2002	2005	2008	2010
2.17	3.90	2.93	2.34	1.36

(v) M5—Heavy-Duty Diesel Vehicles (HDDVs); Additional NO_X Reductions. The SIP commits to adopt this measure in 1997 and begin implementation in 2002. CARB commits to achieve emission reductions through adoption of a 2.0 g/bhp-hr NO_X emissions standard for new HDDV engines sold in California beginning in 2002, or by implementation of alternative measures which achieve equivalent or greater reductions. Alternatives under consideration include expanded introduction of alternative-fueled and low-emission HDDV engines through demand-side programs and incentives, retrofit of aerodynamic devices, reduced idling, and speed reduction. The emission reductions to be achieved by the measure are displayed by nonattainment area and milestone/attainment year in the table below, labeled ''Reductions from California Mobile Source Measure M5.''

REDUCTIONS FROM CALIFORNIA MOBILE SOURCE MEASURE M5

[Tons per day]

	1999		2002		2005		2007		2008		2010	
	ROG	NO_X	ROG	NO_X	ROG	NO_X	ROG	NO_X	ROG	NO_X	ROG	NO_X
So. Coast	0	0	0.2	1.7	1.8	22.0	.....	.....	3.1	37.6	4.8	56.2
SE Desert	0	0	0	0.2	0.2	3.9	0.4	5.1				
Ventura	0	0	0	0.1	0.1	1.0						
Sacramento	0	0	0	0.2	0.2	2.7						
S. Joaquin	0	0										
S. Diego	0.7	8.3										

This measure is designed to achieve emission reductions prior to the introduction of a potential national 2.0 g/bhp-hr NO_X standard in 2004. The 1994 California Ozone SIP (''Federal Measure'' M6) assigns to EPA responsibility for adopting such a national standard (see discussion in section II.B.).

Significant progress toward fulfilling the M5 and M6 commitments has been made by CARB, EPA, and truck and engine manufacturers. On March 30, 1995, EPA signed a Memorandum of Understanding with CARB to undertake a joint effort to develop a national program for controlling NO_X, PM, and HC emissions from onroad and nonroad heavy-duty engines. This joint effort will involve sharing technology development and information, resources, and expertise.

Further, on July 11, 1995, CARB, EPA, and members of the Engine Manufacturers Association signed a Statement of Principles (SOP) detailing their agreement on future NO_X, HC, and PM standards for heavy-duty engines. The goal of the SOP is to reduce NO_X emissions from onroad HDEs to approximately 2 g/bhp-hr beginning in 2004. This will be achieved by giving manufacturers the flexibility to choose between two options: (1) A combined non-methane hydrocarbon (NMHC) plus NO_X standard of 2.4 g/bhp-hr and (2) a combined NMHC plus NO_X standard of 2.5 g/bhp-hr together with a NMHC cap of .5 g/bhp-hr. Signatories will work to achieve low emissions throughout the life of the engine. EPA expects that this combined standard will result in NO_X reductions comparable to those achieved with a 2 g/bhp-hr standard and significant reductions in HC emissions.

With respect to California standards, the SOP included the following provision: ''Both EPA and California recognize the benefits of harmonizing state and federal regulations. California confirms its intent to notice a public hearing to consider actions to harmonize its regulations * * * with the federal regulations adopted under this SOP, provided such action would not compromise California's obligations to comply with state and federal law including the SIP.''

On August 31, 1995, EPA published the SOP in an Advance Notice of Proposed Rulemaking (ANPRM). The ANPRM invited public comment on national controls for onroad heavy-duty engines consistent with the SOP, and also described EPA's plans to work cooperatively with engine and equipment manufacturers to consider additional reductions from nonroad heavy-duty engines (see 60 FR 45580–45604).

EPA proposed to approve M5 on August 21, 1995, and finalized approval on December 14, 1995 (60 FR 64126).

(vi) M7—Accelerated Retirement of Heavy-Duty Vehicles. CARB commits to adopt this measure in 1996 and begin implementation in the same year. This measure involves the annual retirement (scrapping or removal) of about 1600 of the oldest, high emitting trucks in the South Coast Air Basin, beginning in 1999. A smaller number of trucks would be scrapped in 1996 to 1998 in order to gain experience with the program and determine the impacts on the used truck market. Incentives are expected to be provided to operators of older trucks in return for retirement and purchase of a newer, lower-emitting model. The incentives may take the form of guaranteed low interest loans, subsidies, or both. The SIP commits to secure a financing mechanism for this measure by the end of 1995. While the SIP commits only to implement this measure in the South Coast, the State indicates that consideration is being given to establishing a truck retirement program in Sacramento and other nonattainment areas. The emission reductions to be achieved in the South Coast by the measure are displayed by year in the table below, labeled ''Reductions from California Mobile Source Measure M7.''

REDUCTIONS FROM CALIFORNIA MOBILE SOURCE MEASURE M7 SOUTH COAST AIR BASIN

[Tons per day]

	1999	2002	2005	2007	2008	2010
ROG	0	1	1	1	1	1
NO_X	3	6	7	8	9	10

(vii) M8—Heavy-Duty Gasoline Vehicles (HDGVs), Lower Emission Standards. The SIP commits to adoption of this measure by 1997 and implementation beginning in 1998. This measure generates emission reductions through the adoption of a LEV/ULEV program for HDGV engines to obtain 50% reductions of NO_X and ROG emissions through the application of 3-way catalyst technology. The emission reductions to be achieved by the measure are displayed by nonattainment area and milestone/attainment year in the table below, labeled ''Reductions from California Mobile Source Measure M8.''

REDUCTIONS FROM CALIFORNIA MOBILE SOURCE MEASURE M8

[Tons per day]

	1999		2002		2005		2007		2008		2010	
	ROG	NO_X	ROG	NO_X	ROG	NO_X	ROG	NO_X	ROG	NO_X	ROG	NO_X
So. Coast	0	0	0	0.8	0.1	1.8	.....	.....	0.2	2.3	0.3	3.0
SE Desert	0	0	0	0.1	0	0.3	0	0.4				
Ventura	0	0	0	0	0	0.1						
Sacramento	0	0	0	0.2	0	0.4						
S. Joaquin	0	0										
S. Diego	0.1	0.5										

EPA proposed to approve M8 on August 21, 1995, and finalized approval on December 14, 1995 (60 FR 64126).

(viii) M9—Off-road Diesel Equipment; 2.5 g/bhp-hr No_X Standard, California. CARB commits to adopt this measure in 2001 and begin implementation in 2005. The measure requires CARB to adopt a 2.5 g/bhp-hr NO_X standard effective in the 2005 model year for new off-road industrial equipment diesel engines not primarily used in construction and farm equipment. California is preempted from adopting or enforcing any standard or other requirement relating to the control of emissions from new construction and farm equipment or vehicles which are smaller than 175 hp (see section 209(e) of the Act). The SIP anticipates that this emissions standard can be achieved through the transfer of cost-effective on-road diesel engine control technology to new off-road engines. These control technologies include improved engine design (especially in fuel/air management and delivery), exhaust gas recirculation, and exhaust gas aftertreatment. The technology used to meet the 2.5 g/bhp-hr NO_X standard will also further reduce ROG emissions from post-2005 new engines. The SIP only relies on this measure in the South Coast. The emission reductions to be achieved in the South Coast are displayed by year in the table below, labeled ''Reductions from California Mobile Source Measure M9.''

REDUCTIONS FROM CALIFORNIA MOBILE SOURCE MEASURE M9 SOUTH COAST AIR BASIN

[Tons per day]

	1999	2002	2005	2007	2008	2010
ROG	0	0	0	4	1	3
NO_X	0	0	4	35	14	34

On August 21, 1995, EPA approved M9 under the provisions of section 182(e)(5).

(ix) M11—Industrial Equipment; Gas and LPG-California; 3-way catalyst technology. CARB commits to adopt this measure in 1997 and implement it beginning in 2000. The measure requires CARB to adopt emission standards for new gas and liquid petroleum gas (LPG) engines 25 to 175 horsepower that are not primarily used in construction or farm equipment. As noted above, California is preempted from regulating new farm and construction equipment smaller than 175 hp). The standards will be phased-in 2000 and will be based on the use of closed-loop 3-way catalyst systems. The catalyst systems are expected to reduce ROG emissions by 75% and NO_X by at least 50%.

REDUCTIONS FROM CALIFORNIA MOBILE SOURCE MEASURE M11 SOUTH COAST AIR BASIN

[Tons per day]

	1999	2002	2005	2007	2008	2010
ROG	0	4	9	[ ]	15	23
NO_X	0	2	4	[ ]	8	12

EPA proposed to approve M11 on August 21, 1995, and finalized approval on December 14, 1995 (60 FR 64126).

(x) Additional New Control Technologies. In addition to the new control technologies described above in measures M2 and M9, CARB has committed to the implementation of additional innovative measures to achieve the emission reductions needed in the South Coast to reach attainment by 2010. CARB anticipates that these additional measures will include a combination of market-based and technology-based measures. CARB has committed to adoption of these measures no later than 2006 to ensure the needed emissions reductions are achieved by 2009. Table 5 (on page I–21) of Volume II of the 1994 California Ozone SIP lists the following strategies that may be pursued to meet the emission reduction targets:

A. Possible New Control Technologies

- Introduction in fleets of ultra-low emitting heavy-duty trucks, post-2003

B. Possible Market-Incentive Measures

- Incentives to purchase or produce ''cleaner'' technology/vehicles
- Incentives to encourage retrofits of emission control technology
- Incentives for alternative fuel conversions
- Incentives to promote the development of alternative fuel infrastructure
- Revise tax rate structure to promote investment in low-emission technology
- Provide opportunity for low-interest loans
- Preferred state vendor/contract bid status
- Company emission averages
- Air basin emission averages
- Mobile source emission reduction credit/trading programs

C. Possible Operational Measures Applicable to Heavy-Duty Vehicles

- Longer combination vehicles on selected routes
- Increased gross vehicle weight
- Better enforcement of the 55 mile-per-hour speed limit
- Reduced idling time
- Reexamine trailer package concept for local deliveries
- Aerodynamic devices for all power units and trailers
- Other (intermodal transportation, advanced traffic control/tracking technology, alternative fuel for existing fork lifts)

The SIP states that this list of new control technologies is not exhaustive and indicates that other new control technologies and techniques are possible and will be considered as potential sources of emission reductions. Additional control options mentioned in the SIP include: pricing to affect the amount of travel and related emissions (such as congestion pricing or an emission index based on per mile emissions and VMT); retrofit technologies which reduce emissions; additional use of alternative fuels; and episodic controls such as speed reduction and idling curtailment. CARB has committed to further define and quantify these measures and to adopt them by 2006 for implementation by

2009. On August 21, 1995, EPA approved CARB's additional new control technologies measure under the provisions of section 182(e)(5).

c. EPA Action. As described in section I.D. above, EPA has already approved or proposed to approve many of the State's M Measure commitments. On August 21, 1995, EPA approved the CARB new-technology measures M2, M9, and Additional New Technology Measures (described above), and assigned credit in the South Coast ozone attainment demonstration to the measures. At the same time, EPA proposed approval of the State's control measure commitments for M3, M5, M8, and M11. EPA issued finalized approval of the measures on December 14, 1995 (60 FR 64126). Because EPA was at that time not acting on the State's ROP and attainment demonstrations, EPA's approval of the State's commitments did not include assignment of specific emission reduction credits associated with the measures. As discussed below in section II.C., EPA is here proposing to approve the ROP and attainment demonstrations of California ozone nonattainment area plans, which rely, in part, on the M Measure commitments. Therefore, EPA now proposes to assign credit to the State's enforceable commitments to achieve the specific emission reductions associated with M3, M5, M8, and M11, and displayed in the tables above for each measure.

EPA is also proposing to approve, under sections 110(a)(3) and 301(a) of the Act, and assign credit to measures M1, M4, and M7 as part of the ROP and attainment demonstrations for appropriate nonattainment areas, as shown in the tables above. EPA believes that CARB is making significant progress toward the development and adoption of regulations to fulfill the M measure commitments. In several cases, regulations have already been adopted or are expected to be adopted prior to EPA's final action on the ozone SIPs. EPA therefore proposes to approve and credit CARB's enforceable commitments to the M measures under sections 110(k)(3) and 301(a) of the Act, as part of the demonstrations of ROP and attainment in the California ozone nonattainment areas.

2. I/M

a. Review of Program. CARB submitted its motor vehicle inspection and maintenance (I/M) program, known as the Smog Check program, as a revision to its SIP on June 30, 1995. The submittal was made to fulfill EPA's requirements for basic and enhanced I/M programs as set forth in 40 CFR Part 51, Subpart S. EPA found the submittal complete on June 30, 1995. A supplemental revision to the SIP was submitted by the State on January 22, 1996 and found complete on February 5, 1996. Section 348 of the National Highway System Designation Act (Public Law 104–59), hereafter referred to as the Highway Act, which was enacted on November 28, 1995, modified EPA's I/M regulation. In this notice EPA is proposing approval of California's basic program as meeting the requirements of 40 CFR, Part 51, Subpart S as amended (see 60 FR 48029, September 18, 1995) and approval of California's enhanced I/M program as meeting the requirements of 40 CFR Part 51, Subpart S, as amended and section 348(c) of the Highway Act.

The table labeled ''California I/M Program Coverage by County'' shows for every county in the State whether the I/M program is implemented as enhanced or basic, or is required only upon change of ownership. For many counties, the type of I/M program in effect varies depending upon air quality designations and whether the area is urbanized. The State has established these I/M program boundaries within counties based upon ZIP code. The reader may contact the Bureau of Automotive Repair (BAR) to obtain specific program applicability information by ZIP code.

CALIFORNIA I/M PROGRAM COVERAGE BY COUNTY

County	Enhanced	Basic	Change of ownership
Alameda		X	
Alpine			X
Amador			X
Butte		X	
Calaveras			X
Colusa		X	
Contra Costa		X	
Del Norte			X
El Dorado		X	X
Fresno	X	X	
Glenn		X	
Humboldt			X
Imperial			X
Inyo			X
Kern	X	X	
Kings		X	
Lake			X
Lassen			X
Los Angeles	X		
Madera		X	
Marin		X	
Mariposa			X
Mendocino			X
Merced		X	
Modoc			X
Mono			X
Monterey		X	
Napa		X	
Nevada		X	
Orange	X		
Placer	X	X	X
Plumas			X

CALIFORNIA I/M PROGRAM COVERAGE BY COUNTY—Continued

County	Enhanced	Basic	Change of ownership
Riverside	X	X	X
Sacramento	X	X	.....
San Benito	.....	X	.....
San Bernardino	X	X	X
San Diego	X	X	X
San Francisco	.....	X	.....
San Joaquin	X	X	.....
San Luis Obispo	.....	X	.....
San Mateo	.....	X	.....
Santa Barbara	.....	X	.....
Santa Clara	.....	X	.....
Santa Cruz	.....	X	.....
Shasta	.....	X	.....
Sierra	.....	.....	X
Siskiyou	.....	.....	X
Solano	X	X	.....
Sonoma	.....	X	X
Stanislaus	X	X	.....
Sutter	.....	X	.....
Tehama	.....	X	.....
Trinity	.....	.....	X
Tulare	.....	X	.....
Tuolumne	.....	.....	X
Ventura	X	X	.....
Yolo	X	X	.....
Yuba	.....	X	.....

The SIP revision submitted to EPA by CARB includes the laws and regulations relating to California's I/M program which is comprised of pertinent sections of the California Business and Profession Code, the Civil Code, the Health and Safety Code, the Penal Code, the Revenue and Taxation Code, the Welfare and Institutions Code, the Vehicle Code, and the Code of Regulations. Included in the supplemental submittal are final regulations for the mandatory exhaust emissions inspection standards and test procedures for the enhanced program and for the licensing of I/M stations and technicians which became legally effective on December 1, 1995 and December 5, 1995, respectively. Other documents in the submittal are: the Request for Conceptual Design for Test-only Networks and Referee Services; the BAR–90 Test Analyzer System Specifications (June 1995); the California Smog Check Inspection Manual; the Quality Assurance Operations Manual, Chapter 27 of the Department of Motor Vehicles Manual of Registration Procedures; the Smog Check Diagnostic and Repair Manual; the Request for proposal for On-Road Emissions Measurement Systems Services, and the Radian Report entitled ''Evaluation of the California Pilot Inspection/Maintenance (I/M) Program.''

EPA's I/M regulation establishes minimum performance standards for basic and enhanced I/M programs as well as requirements for the following: network type and program evaluation; adequate tools and resources; test frequency and convenience; vehicle coverage; test procedures and standards; test equipment; quality control; waivers and compliance via diagnostic inspection; motorist compliance enforcement program oversight; quality assurance; enforcement against contractors, stations and inspectors; data collection; data analysis and reporting; inspector training and licensing or certification; public information and consumer protection; improving repair effectiveness; compliance with recall notices; on-road testing; SIP revisions; and implementation deadlines. The performance standard for basic I/M programs remains the same as it has been since initial I/M policy was established in 1978, pursuant to the 1977 amendments to the Clean Air Act. The high performance standard for enhanced I/M programs is based on high-technology loaded mode exhaust testing for HC, CO, and NO_X and testing of the integrity and performance of the evaporative control system.

California's basic program is a test-and-repair program utilizing two-speed idle testing. California's enhanced program is a hybrid program in which 15% of the dirtiest vehicles, based upon high-emitter profile and remote sensing results as well as other factors, are targetted for test-only inspection. All vehicles in the enhanced areas will be subject to loaded mode testing. More stringent requirements apply to technicians licensed in the enhanced areas. The two programs are essentially the same in all other respects, excepting that frequency of enforcement related activities such as remote sensing will be much greater in the enhanced areas. (A more detailed discussion of how the elements of California's I/M programs address the requirements of EPA's I/M regulations is contained in the TSD for this notice.) The SIP submittal includes modeling which demonstrates that the program design for California's basic program will meet EPA's performance standard for basic programs. EPA is, therefore, proposing to approve this revision to California's SIP for the basic I/M program.

The Highway Act prohibits the Administrator from disapproving or applying an automatic discount of emission reduction credits to a SIP revision because the I/M program is decentralized or a test-and-repair program. The Highway Act directs the Administrator to propose approval of the program for the full credit proposed by the state if the proposed credits reflect good faith estimates by the state and the revision is otherwise in compliance with the Clean Air Act. The approval remains effective for up to 18 months after the date of final rulemaking. After the 18-month period,

permanent approval of the SIP revision based on the credits proposed by the state shall be granted if the data collected on the operation of the program demonstrates that the credits are appropriate and the program is otherwise in compliance with the Act.

EPA issued guidance regarding approval of I/M plans under the Highway Act on December 12, 1995. EPA believes that at least six months of program operation are needed in order to evaluate the performance of the program. Thus programs must start no later than 12 months after EPA takes final rulemaking action. EPA proposes that if the State fails to start its program on this schedule, the approval granted under the provisions of the Highway Act will convert to a disapproval after a finding letter is sent to the state. As mentioned above, the Highway Act specifies that EPA grant approval if good faith estimates of credits are made. The Conference Report states that good faith estimates may be based on previous I/M program performance, remote sensing programs, or other evidence relevant to effectiveness of I/M programs. EPA has further suggested that good faith estimates could be based on innovative program designs. In order to evaluate the program EPA believes that a continuous sample collection technique should provide sufficient data to determine program effectiveness. Samples may be taken in a variety of ways including roadside pullovers and randomized call-in programs. EPA plans to issue detailed guidance on data collection and analysis after consultation with states and other experts. At the end of the 18-month approval period, EPA will take action to make the approval of the I/M program permanent, if the program evaluation data collected by the state demonstrates that the I/M program is achieving the emission reduction credits claimed in the SIP.

According to the schedule submitted by California test-only inspection began in Sacramento in August 1995. The program is expected to be fully operational in Fresno, Bakersfield and San Diego by the fall of 1996, and in the South Coast areas in early 1997. California has made a good faith estimate that its hybrid enhanced I/M program will meet EPA's high performance standard based on the California Pilot Program and innovative program features including an electronic transmission program, a high visibility remote sensing program, and stringent licensing and training requirements.

The pilot program conducted as part of the Memorandum of Agreement between EPA and California provided data on the effectiveness of targetting high emitting vehicles through the use of the high-emitter profile (HEP) and remote sensing combined with the HEP, and the use of Acceleration Simulation Mode (ASM) testing. The vehicles required to go to test-only facilities for inspection will be comprised of likely high-emitters as identified through use of the HEP and remote sensing, previously identified high emitters which must undergo annual testing for 2 to 5 years, high emitters identified by test-and-repair stations, high mileage fleet vehicles, vehicles for hire, a 2% random sample, and motorists voluntarily choosing to go to test-only stations.

California's program includes an electronic transmission program. A central Vehicle Information Database will be created and an electronic network enabling the test analyzer system units to connect automatically to the database will be established. The central database will be able to restrict the issuance of certificates under certain circumstances, e.g., if a test-only inspection is required, when the vehicle is identified as a high emitter, or when an enhanced test is required. The database will also furnish a real-time communications link to vehicle emissions data which will provide information to BAR enforcement teams to help immediately identify illicit activity. The database will also be used to develop a trigger program to identify shops that are performing improper inspections and to track the location and performance of licensed smog check technicians.

The State will also be phasing in a high-visibility remote sensing program. California plans to identify as least 200,000 high emitting vehicles annually in the enhanced program areas. Data collected from the program will be use as a target parameter for the enforcement program. The program will also serve as a visible reminder to both motorists and test-and-repair stations that improper inspections and/or program avoidance may be detected. Stringent licensing and training requirements are being required for test-and-repair stations and repair technicians, respectively.

California has committed to performing quarterly evaluations of its program to determine if EPA's performance standard is being met and the credits taken for the program are being achieved. California plans to adjust the number of vehicles sent to test-only stations based on these evaluations. EPA will work with California to further define California's data collection protocols and analysis as EPA's guidance on program evaluation is developed.

b. Emissions Reductions. The emission reductions to be achieved by the measure are displayed by nonattainment area and milestone/attainment year in the table below, labeled ''Reductions from California I/M Program.''

REDUCTIONS FROM CALIFORNIA ENHANCED I/M PROGRAM

[Tons per pay]

	1999		2002		2005		2007		2008		2010	
	ROG	NO_X	ROG	NO_X	ROG	NO_X	ROG	NO_X	ROG	NO_X	ROG	NO_X
So. Coast	34.8	32.4	40.3	35.5	32.5	33.0	.....	.....	30.2	34.8	26.2	31.1
SE Desert	2.4	2.3	3.0	2.6	2.9	2.8	2.6	2.8				
Ventura	1.6	1.9	1.8	2.0	1.4	1.9						
Sacramento	5.4	5.7	6.3	6.5	5.1	6.4						
S. Joaquin	4.3	4.9										
S. Diego	0	0										

c. EPA Action. EPA is proposing to approve the California I/M regulations submitted on January 22, 1996, under sections 110(k)(3) and 301(a) of the Act as strengthening the SIP and contributing specific emission reductions toward the progress, attainment, and maintenance requirements of the Act.

EPA is also proposing to approve under sections 110(k)(3) and 301(a) of the Act the California I/M program submitted on June 30, 1995, and the I/M regulations submitted on January 22, 1996, as meeting the requirements of section 182(b)(4) of the Act for basic I/M in applicable areas of the State classified as moderate for ozone.

Finally, under section 348(c) of the Highway Act, EPA is proposing to grant approval for a period of 18 months to the California I/M submittals of June 30, 1995, and January 22, 1996, as meeting the requirements of section 182(c)(3) of the CAA for enhanced I/M in applicable areas of the State classified as serious and above for ozone. Section 348(c)(3) of the Highway Act provides that EPA will take regulatory action to make the approval permanent if, at the expiration of the 18-month period or at an earlier time, the data collected on the operation of the State program demonstrates that ''the credits are appropriate and the revision is otherwise in compliance with the Clean Air Act.''

If the State fails to start its program within 12 months of approval, EPA proposes to have the approval convert to a disapproval after a finding letter is sent to the State. If the required State demonstration is not completed within 18 months or does not show that the credits are appropriate and that the program is otherwise in compliance with the CAA, EPA will take regulatory action to disapprove the program for purposes of compliance with the enhanced I/M requirements of section 182(c)(3). In that event, the SIP will no longer meet the specific requirements of the Act relating to enhanced I/M, but the State's regulations will continue in the SIP as contributing to progress, attainment, and maintenance of the NAAQS.

3. Consumer Products

a. Introduction. ''Consumer products'' are a variety of products generally purchased from a retail establishment for household use by the end user. These products include: cleaning products, insecticides, toiletries, aerosol paints (non-architectural paints are not considered consumer products under California environmental law), adhesives, air fresheners, cooking sprays, disinfectants, and other common household articles that contain volatile organic compounds (VOCs) and are considered ''consumption goods''. The term does not refer to consumer electronics, furniture, appliances, cooking or serving utensils, furnishings, or other items that are considered ''durable goods'', nor does the term refer to food items (except cooking sprays), beverages, or tobacco products.

In its 1994 ozone SIP submittal, CARB presents a discussion of the State's current and anticipated measures for controlling the VOC content of consumer products, and sets forth the claimed emissions reductions. CARB classifies the emissions reductions resulting from regulations on consumer products regulations into 3 main categories: near-term, mid-term, and long-term with regard to date of promulgation and implementation.

CARB's near-term measures are comprised of rules adopted prior to May 1995. The existing consumer products regulations, antiperspirant and deodorant regulations, and the 1996 and 1999 VOC content standards of the recently adopted aerosol paints rule comprise the near-term measures.

CARB's mid-term measures consist of anticipated regulations from categories of consumer products for which regulations had not yet been adopted at the time of the submittal. These reductions are expected to be adopted by July 1, 1997 and implemented by the year 2005, and will cover 150 consumer product categories which are currently not regulated by the State of California. These mid-term measures are needed for attainment demonstrations in the Sacramento Metropolitan and Ventura County air basins. In the SIP, CARB asserts that these measures, like the near-term measures, rely on available technology.

CARB has committed to obtaining further reductions (as compared to the near- and mid-term measures) from consumer products after 2000. These reductions would not rely on available technology, but would currently be considered technology forcing. These long-term measures would be enforced on a statewide basis, but only the South Coast plan relies on the emissions reductions to demonstrate attainment.

CARB has further categorized their emission reduction commitments into 4 classifications, or ''measures'': CP–1, CP–2, CP–3, and CP–4. These measures are either adopted rules or commitments to adopt rules to reduce VOC emissions from consumer products and aerosol paints. A description of each of these measures follows.

b. Adopted Consumer Products Rules

i. Measure CP–1. Measure CP–1 is comprised of two rules, both adopted prior to November 1994, that are designed to control VOC emissions from commercial products. One rule controls VOC emissions from antiperspirants and deodorants; the other rule controls emissions from household products, such as air fresheners, shaving cream, and hairsprays. Both rules were submitted to EPA on November 15, 1994. EPA approved these rules into the SIP on August 21, 1995 (see 60 FR 43379).

ii. Measure CP–3 (Aerosol Paints). Measure CP–3 is a near term commitment to adopt and implement VOC content standards in aerosol paints. Regulations meeting these commitments were adopted in mid-1995. These regulations limit the VOC content of aerosol paints by establishing sets of VOC content standards for various coating types. These standards establish the maximum percentage of VOC by weight allowed in the various types of aerosol coatings. The coating standards are divided into two phases. In the first phase, which is due to take effect January 1, 1996, aerosol coatings' VOC content will have limits that range from 60 percent to 95 percent, depending on the coating.

In the second phase, currently due to take effect December 31, 1999, aerosol coatings' VOC content limits will range from 30 percent to 80 percent, depending on the type of coating. Before the second phase of content limits can be implemented, CARB must conduct a public hearing to determine if the limits are commercially and technologically feasible. If the Board determines that they are not feasible, the implementation of some or all of the limits may be postponed for up to 5 years. However, CARB may not submit the 1999 limits to EPA as a SIP revision until after the Board has determined that they are technologically and commercially feasible, and is prohibited from doing so by section 41712(f)(3) of the California Health and Safety Code.

EPA approval action on both phases of the aerosol paint rules will be taken in separate rulemakings following SIP submittal of the rules.

c. Mid-Term Committal Measure CP–2. Measure CP–2 is a mid-term commitment to adopt additional regulations prior to 1997 to further reduce VOC emissions from household consumer products. These reductions are anticipated to result from the further regulation of new categories of consumer products through technology that is currently feasible and commercially viable. EPA proposed to approve CP–2 on August 21, 1995, and finalized approval on December 14, 1995 (60 FR 64126).

d. Long-Term Committal Measure CP–4. Measure CP–4 is a long-term measure to further reduce emissions after measures CP–1, CP–2, and CP–3 are implemented. The control strategies committed to in CP–4 depend on

advancement of manufacturing technology for consumer products and aerosols. On August 21, 1995, EPA approved CARB's Measure CP–4 as meeting the requirements of section 182(e)(5).

e. Alternative Compliance Plans (ACPs). In order to provide industry with flexibility in meeting the VOC content limits for aerosol paints, CARB has adopted regulations that will allow manufacturers to meet the VOC standards on an average basis. The regulations, CARB's Alternate Control Plan (ACP) for consumer products and aerosol coatings, require that manufacturers carefully track sales and VOC content of all products being averaged together in order to determine total VOC emissions from their products and compliance with the rule. EPA will act on the ACP regulations following submittal by the State.

f. Emission Reductions. The following table describes the ROG emission reductions in terms of tons per day, as identified in the SIP submittal. Credits for near-term consumer products (CP–1) are not included, since they were presumed in baseline emissions projections as adopted regulations. The ROP and attainment demonstrations for San Diego, San Joaquin Valley or Santa Barbara do not rely on reductions from the consumer products measures, although real reductions will occur in those areas. Credits for consumer products and aerosol paints (near-term and long-term) are combined. Credit for CP–4 is claimed only for South Coast.

REDUCTIONS FROM CALIFORNIA CONSUMER PRODUCTS AND AEROSOL PAINT PROGRAM

[Reductions beyond those achieved by CP–1] [tons per day of ROG]

	1999	2002	2005	2007	2008	2010
South Coast	0	8	39.2	.....	42.2	89.2
SE Desert	0	0.4	3.5	4.0		
Ventura	0	0.4	2.2			
Sacramento	0	1.1	5.6			
San Joaquin	0					
San Diego	16.6					

g. EPA Action. As discussed above, EPA has already fully approved all of the State's consumer products rules and committal measures with the exception of CP–3 (Aerosol Paints). EPA is now proposing to approve CP–3 under sections 110(k)(3) and 301(a) of the Act, and assign credit to this measure, as well as to the previously approved consumer products measures, as part of the ROP and attainment demonstrations for appropriate nonattainment areas. EPA will take regulatory action on the recently adopted ACP and Aerosol Paints regulations themselves in separate rulemakings.

4. Pesticides

a. Review of Measure. California's 1994 SIP submittal includes a commitment to reduce VOC emissions from the application of agricultural and structural pesticides. The submittal describes relevant authority in Section 6220 of Title 3 of the California Code of Regulations that has been granted to the California Department of Pesticide Regulation (DPR). However, since CARB has overall responsibility for developing the SIP, California's pesticide commitment is described in a letter from DPR to CARB,[4] which CARB then submitted to EPA with the balance of the 1994 SIP. In May 1995, California used a similar mechanism to clarify technical details of the pesticide commitment.[5] This clarification is considered part of California's SIP.

b. Emission Reductions. As described in the SIP, California has committed to adopt and submit to U.S. EPA by June 15, 1997, any regulations necessary to reduce VOC emissions from agricultural and commercial structural pesticides by specific percentages of the 1990 base year emissions,[6] by specific years, and in specific nonattainment areas as listed in the table labeled, ''Reductions from 1990 Pesticide Emissions Baselines.'' The table labeled ''Reductions from Pesticides Measure'' shows reductions counted toward the ROP milestones and attainment in each area.

REDUCTIONS FROM 1990 PESTICIDE EMISSIONS BASELINES

Ozone nonattainment area	1996 (percent)	1999 (percent)	2002 (percent)	2005 (percent)
Sacramento Metro	8	12	16	20
San Joaquin Valley	8	12	16	20
South Coast	8	12	16	20
Southeast Desert	8	12	16	20
Ventura	8	12	16	20

REDUCTIONS FROM PESTICIDES MEASURE

[Tons per day of ROG]

	1999	2002	2005	2007	2008	2010
South Coast	1.5	1.6	1.3	.....	1.6	1.7
Southeast Desert	0	0	1.2	1.5	.....	.....

[4] James Wells (DPR) to James Boyd (CARB), dated November 15, 1994.

[5] May 9, 1995 letter from Wells to Boyd under a May 11, 1995 cover letter from Boyd to Felicia Marcus (EPA).

[6] In a March 31, 1995 letter from Wells to David Howekamp (EPA), California clarified its commitment to limit future VOC emissions from pesticides to the target percentages of the 1990 base year emissions, regardless of future growth in emissions that might otherwise occur. ''Therefore, the proposed 20 percent reduction goal could be considered to be greater than 20 percent if one includes growth in pesticidal VOC emissions.'' (March 31 letter, page 2.)

REDUCTIONS FROM PESTICIDES MEASURE—Continued

[Tons per day of ROG]

	1999	2002	2005	2007	2008	2010
Ventura	0	0	2.4	.....	.....	.....
Sacramento	0	0	2.7	.....	.....	.....
San Joaquin	13	.....	.....	.....	.....	.....
San Diego	0.2	.....	.....	.....	.....	.....

The pesticide component of California's SIP also describes education and outreach programs intended to achieve these emission reductions voluntarily. EPA strongly encourages these programs, and hopes to work with DPR and the affected industries to make them successful. In the event, however, that additional control strategies are needed, California's commitment to adopt and submit any necessary pesticide regulations is sufficient to ensure those emission reductions described in the table labeled, ''Reductions from 1990 Pesticide Emissions Baselines.'' [7]

c. EPA Action. EPA is proposing to approve the Pesticides measure under sections 110(k)(3) and 301(a) of the Act, and assign credit to the measure as part of the ROP and attainment demonstrations for appropriate nonattainment areas. EPA will take regulatory action on the State's Pesticides regulations, if any regulations are required and are submitted, in separate rulemakings.

B. Federal Assignments

1. State Approach

In addition to, and in association with, the State's mobile source control measures, the 1994 California Ozone SIP sets forth a group of 7 specific mobile source control measures that the State would not be responsible for adopting and implementing.

These new ''Federal assignments'' and the adoption and implementation dates in the California SIP are as follows:

M6—Heavy-Duty Diesel Vehicles: a national standard of 2.0 g/bhp-hr, to be adopted in 1997 and implemented in 2004. M10—Off-Road Diesel Equipment: a national standard of 2.5 g/bhp-hr, to be adopted in 2001 and implemented in 2005. M12—Industrial Equipment, Gas and LPG: a national standard reflecting application of three-way catalyst systems, to be adopted in 1997 and implemented from 2000 to 2004.

M13—Marine Vessels: national and international standards to reduce NO_X emissions from new engines by 30 percent, and operational controls, including shipping lane changes and vessel speed reduction, to be adopted in 1996 and implemented from 1998 to 2001.

M14—Locomotives: national standards for new and rebuilt locomotive engines, along with provisions to ensure that by 2010 locomotive fleets in the South Coast Air Basin will emit on average no more than the 2005 emission level for new locomotives, to be adopted in 1995 and implemented from 2000 to 2010.

M15—Aircraft: national standards to effect a 30 percent reduction in ROG and NO_X emissions, to be adopted in 1999 and implemented in 2000.

M16—Pleasure Craft: national standards (both Phase I and II).

CARB's decision to place responsibility on the Federal government for these controls rests on the State's conclusion that: (1) State and local agencies lack the legal authority or practical ability to control these source categories; (2) the reductions contributed by the new Federal assignments are essential for progress and attainment in California; and (3) there are no feasible alternative sources of reductions that are available to the State, given the stringent level of control of all other source categories reflected in the SIPs.

2. EPA Action

While EPA does not believe that the CAA authorizes a state to assign responsibility to the Federal government for meeting SIP requirements, the Agency agrees that it has both the authority and responsibility under the Act for regulating certain national sources of air pollution. The 1990 Clean Air Act Amendments, in fact, extended EPA's authority to regulate nonroad vehicles and engines and expressly required EPA to evaluate nonroad engine emissions, determine whether these emissions contribute significantly to ozone or CO in areas which have failed to attain the ozone or CO NAAQS, and regulate these emissions categories if found to be significant. Under this authority, EPA completed a Nonroad Engine and Vehicle Emission Study and issued an affirmative determination of significance (59 FR 31306, June 17, 1994). EPA has also proposed, and in some cases finalized, rules for various nonroad vehicles and engines, including several of the California SIP ''Federal measure'' source categories. The current status of EPA's actions on each of the ''Federal measure'' categories is summarized in the Appendix to this document.

EPA recently established a new policy that allows States to incorporate into their ROPs and attainment demonstrations the estimated emission reductions associated with court-ordered or statutorily-mandated measures prior to final promulgation of the Federal regulations.[8] Consistent with this policy, EPA is proposing to assign to the California Ozone SIPs emissions reduction credit for nonocean-going marine vessels, locomotives, and pleasure craft, based on EPA's current estimates of the reductions that will be achieved by these national measures. These credits are sufficient, in conjunction with those attributed by California to the State and local measures, to demonstrate progress and attainment of the ozone NAAQS in all of the California ozone nonattainment areas except for the South Coast.

Additionally, EPA has been evaluating other potential future ''Federal measures,'' including controls for most categories of mobile sources. These measures have significance in the

[7] Note that for purposes of ROP and attainment demonstrations in the SIPs, California has not claimed emission reduction credit for the 8% pesticide emission reductions planned for 1996.

[8] This policy (January 30, 1996 memorandum from Mary Nichols, Assistant Administrator for Air & Radiation, to EPA Regional Administrators, on ''SIP Credits for Federal Nonroad Engine Emissions Standards and Certain Other Mobile Source Programs'') supersedes EPA's prior policy, expressed in a November 23, 1994 memorandum from Mary Nichols on the same subject. The earlier memorandum allowed SIP credit for national mobile source measures required but not yet promulgated ''provided states also commit to adopt gap-filling measures to account for any shortfalls, identified later, between currently anticipated and actual final rule benefits.'' EPA is now eliminating the requirement for state commitments. If the final national measure delivers less than credited in the SIP, EPA may issue a call for plan revision under section 110(k)(5) if the SIP for an area becomes, as a result, substantially inadequate to comply with any requirement of the Act, including the provisions relating to demonstrations of ROP and attainment.

South Coast. EPA's evaluation of these possible national controls has been ongoing from the period of FIP preparation through the present, and has evolved into a consultative process.

In the area of onroad controls, EPA's heavy-duty vehicle initiative, developed in cooperation with CARB, is one aspect of this process. This consultative initiative, which is consistent with the State's measure M6, has already shown success and recently culminated in a Statement of Principles (SOP) signed by EPA, individual members of the heavy-duty engine industry, and CARB regarding future national standards for on-highway heavy-duty engines. The goal of the SOP is to reduce NO_X emissions from on-highway heavy-duty engines to levels approximating 2.0 g/bhp-hr beginning in model year 2004, while also achieving reductions in HC. For further details on the SOP and initiative, see EPA's Advance Notice of Proposed Rulemaking (60 FR 45580, August 31, 1995). EPA is also engaged in cooperative efforts with the State of California to discuss with affected industry a similar heavy-duty nonroad initiative.

As discussed more fully in section II.C.7.e., below, setting forth EPA's proposed approval of the South Coast attainment demonstration, EPA agrees with the State that national and international mobile source emissions are increasingly significant contributors to ozone pollution, particularly in the South Coast. EPA also agrees with the State that CARB and EPA share responsibility for controlling new mobile sources. To address this challenge cooperatively, the CARB Board, in its resolution of adoption of the 1994 California Ozone SIP, included specific direction to the CARB Executive Officer to continue to meet and confer with EPA regarding the federal assignments (CARB Resolution No. 94–60, November 15, 1994).

Following adoption of the 1994 California Ozone SIP, EPA and CARB have discussed the affected mobile source control categories and, while the agencies have not reached consensus on difficult issues of jurisdiction and responsibility, the two agencies share a strong mutual interest in further consultation on and collaboration in identifying and developing the most effective and least disruptive approaches to achieving further reductions in air emissions from the various categories of mobile sources.

Building on this interagency cooperation, EPA proposes to continue and expand the ongoing consultative process with California and other appropriate parties to examine the potential for additional mobile source controls that can contribute to progress and attainment, and that are compatible with other important regulatory considerations, including those associated with interstate and international commerce. EPA proposes that this consultative process conclude in June 1997 with a decision on those additional measures that are appropriate for each party to pursue. EPA further proposes to make an enforceable commitment to undertake rulemakings, after the consultative process, on control measures needed to achieve the emission reductions which are determined to be appropriate for EPA.

Finally, EPA proposes to approve the South Coast attainment demonstration if CARB submits, before EPA's final action, an enforceable SIP commitment to adopt and submit as a SIP revision: (a) by December 31, 1997, a revised attainment demonstration for the South Coast as appropriate after the consultative process; and (b) by December 31, 1999, enforceable emission limitations and other control measures needed to achieve the emission reductions which are determined to be appropriate for the State.

C. Local ROP and Attainment Plans and Measures

1. Introduction and Common Elements

This section discusses the progress and attainment plans for each area, including local, state and Federal measures, and describes EPA's proposed action on those plans with regard to the ROP requirements of sections 182(b)(1)(A) and 182(c)(2)(B), and the attainment requirements of sections 182(b)(1)(A) and 182(c)(2)(A).

As described earlier, following local adoption of the plans, the State took further action on the plans, adding a statewide measure component and, in some cases, modifying the locally adopted plan. Volume IV of the 1994 California Ozone SIP presents CARB's adjustments to the local plans, and summarizes the ROP and attainment demonstrations. CARB also supplied detailed spreadsheets delineating projected emissions reductions in each area, by State measure and milestone year, to complete the technical documentation of each area's ROP and attainment demonstrations.

a. Emission Inventories.

(1) 1990 Base Year Inventories

Section 182(a)(1) of the CAA requires that a comprehensive, accurate, and current base year inventory of actual emissions be submitted to EPA as a SIP revision for each area designated as nonattainment and classified marginal and higher for ozone. The 1990 emissions inventory is defined as the base year inventory and provides a benchmark for ROP and attainment planning.

Annual and ozone season weekday inventories of actual emissions are required for VOC, NO_X, and CO for each ozone nonattainment area. These inventories detail emissions for all categories of stationary point sources, area sources, onroad vehicles, offroad engines, and biogenics (for VOC). The inventories use the best available emission factors and activity indicators representative of the ozone season.

The 1990 base year inventories were initially submitted by CARB in November 1992 and improved inventories were submitted again as part of the 1994 California Ozone SIP. On March 30, 1995, CARB submitted revised 1990 base year inventories which further refined the inventory estimates. EPA is proposing approval of the March 30, 1995, inventory submittal.

Annual emission inventory estimates are adjusted to represent the ozone season weekday inventory (the ''planning inventory''). Seasonal throughput, seasonal activity factors, and temperature considerations are used, as appropriate, to develop the planning inventory. Although EPA recommends a 3 month peak ozone season as the basis for the planning inventory estimates, because of the persistence of ozone violations in California from May through October, the CARB uses a 6 month average operating day emissions estimate.

Stationary sources are broadly grouped into point and area sources. Point sources typically include permitted equipment located at a fixed, identifiable establishment (e.g., a refinery). Actual emissions are reported annually to local air pollution agencies as a part of an ongoing operating permit renewal and emission statement processes. Operating permit requirements generally pertain to sources emitting at least 10 tons per year, with lower limits in some areas. This information is used by the local air district to periodically update inventory estimates for stationary sources.

Area sources generally include small point sources (e.g., gasoline dispensing facilities) and ubiquitous emissions not associated with a permit (e.g., consumer products). CARB and the local air pollution control districts share the responsibility for calculating emissions from the over 200 area source categories. The emission and activity factors used

to develop area source inventories are described in CARB guidance.[9]

Mobile source estimates are divided into on-road and off-road categories. On-road emissions are estimated by vehicle class, roadway type and vehicle age. Caltrans, CARB, local government agencies, and the Department of Motor Vehicles supply the data necessary to estimate emissions from on-road mobile sources. On-road mobile source emissions inventories for SIP purposes are generally developed using the latest version of MOBILE, EPA's mobile source emission factor model, but in California, CARB has developed its own on-road mobile source emission factor model, EMFAC. Together with CARB's WEIGHT model, which estimates accumulated mileage and activities by vehicle year, and BURDEN model, which estimates vehicle trips and vehicle miles travelled by vehicle type, CARB develops the on-road mobile source emissions inventories for the nonattainment areas. The version of EMFAC used for the November 15, 1994 and March 30, 1995 submittals was EMFAC7F version 1.1.

The off-road mobile source inventory includes emissions from categories ranging from lawn mowers to ocean-going vessels. Emission estimates are a function of emission factors, activity rates, and control factors. Emission factors and methodologies used to calculate emissions are based on information compiled by EPA, CARB, and the local districts.

The CARB base year inventory includes biogenic emission estimates. EPA's biogenic emission estimation software, Biogenic Emission Inventory System, was used in conjunction with temperature inputs representative of the area of concern, consistent with EPA guidance. This software is used to estimate emissions from natural sources (e.g., trees, crops, etc.). Although biogenic emissions represent an uncontrollable source, these potentially significant emissions are included in the attainment demonstration modeling.

Because the CARB inventories represent actual emissions, the inventories already reflect excess, noncompliant emissions and, consistent with EPA's guidance [10], they do not require further adjustment by the 80% rule effectiveness discount.

While CAA requirements and EPA guidance are stated in terms of VOC, some California District plans estimate their inventories in terms of either Reactive Organic Gases (ROG) or Reactive Organic Compounds (ROC). The Santa Barbara, San Joaquin Valley, and Sacramento area plans use ROG while Ventura uses ROC. The only difference between VOC and ROG/ROC is the inclusion of ethane in the ROG/ROC inventory estimates.

EPA has concluded that the VOC, NO_X, and CO inventories of actual emissions for the ozone nonattainment areas satisfy the requirements of the Act and EPA's associated approval criteria. Therefore, under section 182(a)(1) of the Act, EPA is proposing to approve the 1990 base year inventories for each of the ozone nonattainment areas addressed in this document.

(2) Inventory Projections

Future year inventories are needed to estimate milestone and attainment year inventories. These estimates are then used in projecting and calculating ROP and attainment. Future year inventories are developed using base year inventory estimates adjusted using growth and control factors. Growth factors are developed using socioeconomic forecasts (i.e., population, housing, employment, and motor vehicle activity) and Standard Industrial Classification data. Growth rates for motor vehicles consider projected changes in vehicle miles traveled, trips, and vehicles in use. Control factors are used to adjust future year inventory estimates to account for reductions from adopted and scheduled measures. EPA proposes to approve the inventory projections for each of the nonattainment areas, since the projections meet all applicable requirements.

b. ROP Targets. The CAA outlines and EPA guidance details the method for calculating the ROP requirements for the milestone years. Section 182(b)(1)(A) requires a 15% VOC reduction by November 15, 1996, from the adjusted 1990 base year inventory (i.e., 3% per year reduction from 1990 to 1996). Section 182(c)(2)(B) requires that after 1996, an additional 3% per year VOC (or NO_X equivalent) emission reduction be achieved (in 3 year increments) until the attainment date. The percent reduction requirements by milestone year and by area classification are shown below in the table labeled ''ROP Requirements.''

ROP REQUIREMENTS

Classification	Year	Reduction (percent)
Moderate and above	1996	15
Serious and above	1999	24
Severe I and above	2002	33
	2005	42
Severe II and above	2007	48
Extreme	2008	51
	2010	57

Section 182(b)(1) requires that ROP reductions: (1) Be in addition to those needed to offset any growth in emissions between the base year and the milestone year; (2) exclude emission reductions from 4 prescribed Federal programs (i.e., the Federal motor vehicle control program (FMVCP), the Federal Reid vapor pressure (RVP) requirements, any Reasonably Available Control Technology corrections previously specified by EPA, and any I/M program corrections necessary to meet the basic I/M level); and (3) be calculated from an ''adjusted'' baseline relative to the year for which the reduction is applicable. The adjusted ROP base year inventory excludes the emission reductions from fleet turnover between 1990 and 1996 and from Federal RVP regulations promulgated by November 15, 1990 or required under section 211(h) of the Act.

The net effect of these adjustments is that states are not able to take credit for emissions reductions that would result from fleet turnover of current Federal standard cars and trucks, or from already existing Federal fuel regulations. However, the SIP can take full credit for the benefits of any new (i.e., post-1990) vehicle emissions standards, as well as any other new Federal or State motor vehicle or fuel program that will be implemented in the nonattainment area, including Tier I exhaust standards, new evaporative emissions standards, reformulated gasoline, enhanced I/M, California low emissions vehicle program, transportation control measures, etc.

When compared to the national tailpipe and fuel standards promulgated by EPA, California has had more stringent standards for some time. The methodology used in the November 1993 15% ROP submittals was not necessarily the most appropriate way to model the exclusions, in light of the effects of these differing standards. Therefore, CARB recalculated the exclusions for Federal RVP and FMVCP for its adjusted base year inventories and submitted revised ROP plans in November 1994. The resulting ROP targets conform to applicable requirements and EPA proposes to

[9] *Methods for Assessing Area Source Emissions in California* (CARB, September 1991 and updates).

[10] EPA policy memorandum from OAQPS to Regional Air Division Directors (April 27, 1995).

approve them as part of the approval of the ROP demonstrations.

c. NO_X Substitution. Section 182(c)(2)(C) allows for NO_X reductions (after accounting for growth) which occur after 1990 to be used to meet the post-1996 ROP emission reduction requirements, provided that such NO_X reductions meet the criteria outlined in EPA's NO_X substitution guidance.[11] The criteria require that: (1) the sum of all creditable VOC and NO_X reductions must meet the 3% per year ROP requirement; (2) substitution is on a percent-for-percent of adjusted base year emissions for the relevant pollutant; and (3) the sum of all substituted NO_X reductions cannot be greater than the cumulative NO_X reductions required by the modeled attainment demonstration. While the Act and the guidance do allow use of 1990–1996 NO_X reductions for substitution in the post-1996 period, the amount of NO_X reductions available for substitution is subject to the same creditability exclusions described above. As discussed below in the review of the individual plans, the California ozone areas relying on NO_X substitution in post-1996 ROP demonstrations (San Joaquin, San Diego, Sacramento, and Ventura) meet applicable requirements pertaining to NO_X substitution.

The term ''VOC equivalents'' is used in the ROP tables for the areas relying on NO_X substitution. This term was taken from CARB's November 1994 SIP. VOC equivalents is not meant to imply that NO_X reductions were substituted for VOC reductions on a one-for-one basis. The amount of NO_X substitution was determined by calculating the VOC shortfall percentage, and then converting the percentage into an equivalent reduction of NO_X. For the areas relying on NO_X substitution, CARB and the districts have demonstrated that the NO_X reductions are creditable and not in excess of what is necessary for attainment. A companion EPA technical support document provides a more detailed description of the calculations and amount of NO_X reduction used to represent the VOC equivalents.

d. Modeling.

(1) Introduction

An attainment demonstration is a key part of a State Implementation Plan: using air quality modeling, it shows that the proposed emission control measures are sufficient for the NAAQS to be attained by the applicable deadline. For ozone nonattainment areas classified serious, severe, or extreme, section 182(c)(2)(A) requires an attainment demonstration based on photochemical grid modeling, for which the Urban Airshed Model (UAM) is the EPA-approved model. (See Appendix W of 40 CFR Part 51.)

The modeling portions of the SIP submittals were generally reviewed in terms of technical accuracy, and for consistency with EPA modeling guidelines. The guidelines are the Guideline for Regulatory Application of the Urban Airshed Model (EPA, 7/91), Guideline for Regulatory Application of the Urban Airshed Model for Areawide Carbon Monoxide (EPA, 6/92), and Guidance on Urban Airshed Model (UAM) Reporting Requirements for Attainment Demonstration (EPA, 3/94). Thus, the review covered the appropriateness of data sources, appropriateness of technical judgements and procedures followed in input preparation, performance of quality assurance and diagnostic procedures, adequacy of model base case performance, consistency of control measure simulation inputs with the submitted control measures, adequacy of the demonstration of attainment of the NAAQS, and consistency and completeness of documentation. EPA's confidence in the conclusions reached in the review is enhanced because of EPA's participation in technical committees and meetings for each area, and other communications with State and local technical staff, as the model applications were being developed.

The UAM model uses an inventory of pollutant emissions, together with air quality and meteorological data, as input to a system of algorithms incorporating chemistry and dispersion, in order to simulate an observed pollution episode. Once a ''base case'' is developed that meets the minimum performance criteria, projected future emissions are used as input to simulate air quality in the attainment deadline year. Various combinations of geographically uniform emission reductions are simulated to determine approximate attainment reduction targets. Planners design a control strategy to meet these targets, and then simulate it with UAM, including the spatially and temporally varying effects of the selected controls. Attainment is demonstrated when the modeled air quality with emission controls in effect is below the NAAQS throughout the geographical modeling domain.

(2) Uncertainty and Model Performance

A modeling attainment demonstration is subject to several uncertainties. The meteorological and air quality inputs have their own associated uncertainties, both in measurement and in representativeness. In addition, not all variables can be measured for all hours, so default and interpolated values must be used. Processes such as chemical reaction and advection necessarily appear in the model in simplified form. The selected episodes may not represent all conditions conducive to high pollutant levels. Finally, base case and projected emissions are uncertain. Biogenic emission inventory methodologies are in a state of flux. In spite of these sources of uncertainty, photochemical grid modeling is the best tool that is available for determining the emission reductions that are needed for NAAQS attainment. The Guideline procedures are meant to ensure that inputs are set in a scientifically sound manner, and to uncover compensating errors that can be present even when the model predicts ozone well.

As explained in the Guideline, episodes are chosen for modeling based on their high ozone levels, data availability, and other criteria. Generally, episodes should be chosen that are approximately as severe as the area's design value, which is based on the historical ozone highs. During a particular episode, the observed ozone peak may be higher or lower than the design value; but as long as it is relatively close, that episode can be accepted for use in an attainment demonstration. See also the discussion of the attainment test, below.

Once an episode is chosen, modelers attempt to simulate it with UAM. Various performance statistics and diagnostic tests are available to gauge their success. Three of the statistics are presented in the table in this notice. The most commonly stated one is the peak accuracy, since it is the ozone peak that is ultimately to be reduced to the NAAQS level. However, it uses only one place and time out of all those simulated. In judging model performance to be acceptable, predictions at many places and times are examined. Also, the overall pattern of ozone and other chemical species are evaluated, in light of the changing emissions and meteorology occurring during the episode. Sometimes a lengthy process of diagnostic testing and refinement of inputs is required. Thus, the finally accepted base case may show some bias (e.g., simulated ozone peak not matching the observed), and yet be fully adequate as a simulation of the episode, and for use in an attainment demonstration. Except where noted, all of the submitted California modeling

[11] ''NO_X Substitution Guidance,'' OAQPS, USEPA, December, 1993; ''Guidance on the Post-1996 Rate-of Progress Plan and the Attainment Demonstration,'' EPA–452/R–93–015, OAQPS, USEPA, January, 1994.

episodes had acceptable performance, meeting EPA Guideline criteria.

(3) Number of Episodes

The Guideline calls for a minimum of 3 primary episode days to be modeled. EPA elected to allow areas to use just two if they were based on a field study, since this provides substantially more complete data, and so more confidence in model development procedures and results. The tradeoff of higher quality modeling for fewer episodes is deemed by EPA to be a reasonable one. Unfortunately, due to problems of model performance or transport, some areas were only able to develop modeling for a single ozone episode. The Guideline is silent on what should be done in cases where, in spite of an area's best effort, the model simply cannot be made to perform for a given ozone episode. EPA is electing to accept the California efforts as adequate.

(4) Attainment Test

Recently, questions have arisen over what test an area has to meet to demonstrate attainment; this has been thought of as showing that every geographical point within the model domain is reduced to .12 ppm ozone for every hour, for every episode modeled. However, the statistical nature of the ozone NAAQS allows each point in space to have one NAAQS exceedance per year (3 year average). Adding this to the uncertainties in model inputs and in the model itself, the above test may be overly conservative. In borderline cases, the overall weight of evidence of modeling, emissions and meteorological characteristics of an area may provide a useful adjunct to the attainment test, though this was not used in the California SIP submittal.

(5) Transport

Pollutant transport between areas is an issue of continuing concern for the areas of Sacramento, San Diego, San Joaquin Valley, Santa Barbara, South Coast, and Ventura. For Sacramento and for the portions of southern California downwind of South Coast, attainment has not been demonstrated under transport conditions. The ozone episodes modeled either did not include high levels of transported pollutants, were found to be dominated by transport and then abandoned as not representative, or the model did not perform particularly well. Ideally, upwind and downwind areas would be included within a single modeling domain; this was done in the SARMAP study centered on the San Joaquin Valley, but thus far the model does not perform well for the Sacramento area. Only a limited number of episodes have so far been modeled, some of them having little transported pollution.

Nevertheless, EPA accepts the modeling done so far as adequate, because it is the best modeling available, and does show attainment of the NAAQS for locally generated days. However, the emission reductions indicated as required by the modeling to date must be viewed as valid for this stage of planning only; additional reductions may be necessary in these nonattainment areas or in other areas upwind (such as the San Francisco Bay Area) to guarantee attainment of the NAAQS. EPA expects that this will be determined by the modeling additional transport episodes over the next few years; this effort was not feasible for the November 15, 1994 deadline because of constraints on available data, funds and staff. In part because of the California Clean Air Act with its more stringent ozone standards, modeling will continue in these areas; for example, a Southern California Transport study is currently being planned. SIP revisions may become necessary should such future modeling indicate the need for additional emissions controls.

EPA proposes to approve the modeling in all of the ozone plans acted on in this notice, as meeting the requirements for attainment demonstrations in sections 182(b)(1)(A) and 182(c)(2)(A).

2. Santa Barbara

a. Identification of Plan. On November 3, 1994, the Santa Barbara County Air Pollution Control Board adopted Santa Barbara's 1994 Clean Air Plan (CAP). On November 14, 1994, CARB submitted the plan to EPA to comply with ROP and attainment demonstration requirements of the Act.[12]

b. 1990 Base Year Inventories. The SIP provides detailed estimates of the actual VOC and NO_X emissions that occurred in Santa Barbara in 1990. These base year inventories are summarized in the table labeled ''1990 Santa Barbara SIP Inventories.'' [13] A discussion of these inventories and of EPA's proposed action on them can be found in section II.C.1.a. of this notice.

[12] November 14, 1994 letter from James Boyd (CARB) to Felicia Marcus, EPA, forwarding the Santa Barbara SIP and CARB Executive Order No. G–125–163 approving the Santa Barbara Plan. The Santa Barbara submittal includes a November 3, 1994 letter from Douglas Allard (SBAPCD) to James Boyd (CARB) forwarding the 1994 Santa Barbara CAP.

[13] More detailed summaries of this inventory can be found in the 1994 CAP, Table 3–3.

1990 SANTA BARBARA SIP INVENTORIES

[tons per summer day]

Category	ROG	NO_X
Stationary	32	12
Mobile	25	36
OCS	6	22
Total	63	70

c. SIP Control Measures.

(1) Description

The submittal describes a series of rules that have been adopted in order to reduce ROG and NO_X emissions in Santa Barbara. Chapters 4 and 5 of the CAP describes the control measures relied upon for demonstrating compliance with the Act's progress and attainment requirements. With the exception of contingency measure T–21, Enhanced Inspection and Maintenance Program, all required measures identified in Chapters 4 and 5 of the CAP have been adopted. Because the Santa Barbara area will not achieve attainment of the ozone NAAQS by November 1996 with currently adopted controls, as described later under section II.C.2.f., EPA expects that measure T–21 will be adopted in 1996 and implemented in 1997 as described in the CAP. Reductions of approximately .6 tons per day (tpd) of ROG and NO_X are expected from the implementation of T–21.

Table 5–1 describes the plan's transportation control measures (TCMs), which, collectively, supersede the TCM list in the previously approved 1982 Air Quality Attainment Plan (AQAP). The TCMs are projected to result in net emissions reductions for the 1996 target attainment year of .3 tpd ROG and .2 tpd NO_X.

(2) EPA Action

EPA proposes to approve, under sections 110(k)(3) and 301(a) of the Act, the control measures portion of the plan, including the enforceable commitment to adopt contingency measure T–21.

EPA approval of the applicable State and local fully-adopted and SIP-submitted regulations either has already occurred or will be completed in separate rulemaking in the future. As requested by the State, EPA also proposes to delete from the current SIP the 1982 transportation control measures.

d. ROP Provisions.

(1) ROP Emission Targets

The submittal describes the ROG emission reductions needed to meet

ROP requirements based on Santa Barbara's adjusted 1990 base year inventories. The SIP also provides emission estimates for 1996, the only applicable ROP milestone year, by determining the impacts of the control strategy and calculating anticipated changes in emissions resulting from projected levels of population, industrial activity, motor vehicle use, etc. A summary of the ROP targets and the projected ROG emissions is provided below in the Table labeled ''Santa Barbara ROP Forecasts and Targets'' (see 1994 CAP, Tables 9–2 and 9–5). The plan provides for achievement of the ROP target emission levels for 1996, the only applicable milestone year for a moderate ozone area.

SANTA BARBARA ROP FORECASTS AND TARGETS [14]

[In tons of ROG per summer day]

1990 Base Year Inventory	57
1996 Projections (Adopted Measures)	41
1996 ROP Target	42

[14] For the ROP determination, OCS emissions were not included.

(2) ROP Control Strategy

In general, only adopted measures may be relied upon in meeting the 15% ROP requirement. This requirement is met, since the plan relies only on adopted regulations to achieve the required ROP reductions. A detailed description of Santa Barbara's 15% ROP demonstration is provided in Chapter 9 of the CAP.

(3) EPA Action

The Santa Barbara 1994 CAP meets the ROP requirements of the Act, including the requirement to achieve by 1996 a minimum of 15% of creditable VOC emission reductions from the 1990 base year. EPA therefore proposes to approve Santa Barbara's ROP plan under section 182(b)(1) of the Act.

e. Demonstration of Attainment. Santa Barbara is classified as a moderate nonattainment area for ozone. As a result, the SIP must contain adequate control measures and commitments to demonstrate attainment of the ozone NAAQS by 1996.

(1) Control Strategy

The control strategy for Santa Barbara's SIP attainment demonstration incorporates all of the measures identified in Chapters 4 and 5 of the CAP. The demonstration presumes the measures, which are already fully adopted as regulations, will be implemented as shown in the plan, resulting in the emission reductions indicated in the CAP.

(2) Modeling and Attainment Demonstration

The 1994 SIP describes urban airshed modeling analysis performed to demonstrate that the control strategy identified above will result in NAAQS attainment. A summary of the emission reductions needed to attain the standard is provided below in the table labeled ''Emission Reductions Needed in Santa Barbara,'' which is derived from information in the 1994 CAP.

EMISSION REDUCTIONS NEEDED IN SANTA BARBARA

[Tons per summer day]

	ROG	NO_X
1990 Baseline Emissions Inventory	63	70
Carrying Capacity	44	56
Reductions Needed	19	14

A summary of the emission reductions projected from the SIP control strategy is provided below in the table labeled ''Santa Barbara Attainment Demonstration,'' which is derived from the information in the 1994 CAP.

SANTA BARBARA ATTAINMENT DEMONSTRATION

[Tons per summer day]

	ROG	NO_X
Reductions from adopted measures	19	14
Committed local measures	0	0
Committed State measures	0	0
Total	19	14

The Santa Barbara area was classified as a moderate ozone nonattainment area based on a design value of .14 ppm, recorded at the Carpenteria site. This was based on 1987–1989 data. The attainment demonstration for Santa Barbara is based on Urban Airshed Modeling even though use of photochemical modeling is not a specific Clean Air Act requirement for a moderate area. Modeling for the Santa Barbara area is discussed in two documents: the ''Santa Barbara County Photochemical Modeling Investigation (May, 1994)'' and in the 1994 CAP (Chapter 7 and Appendix D: Photochemical Modeling Documentation).

In the Santa Barbara County Photochemical Modeling Investigation, a county-wide assessment of the July 29–31, 1991 episode was analyzed. The peak ozone concentration measured during this period was .13 ppm at the Paradise Road Monitoring station. The model performance statistics did not meet EPA performance requirements as the peak ozone concentrations were underpredicted by approximately 50%. Because of the lack of performance, an attainment demonstration was not performed with this episode.

Santa Barbara APCD and Ventura County APCD collaborated on a joint modeling effort to satisfy the attainment demonstration requirements of the Clean Air Act. This collaborative effort is summarized in the 1994 CAP. Two 1984 episodes were selected for the joint modeling effort: September 5–7 and September 16–17. The episodes and modeling statistics are discussed further in the accompanying technical support document. Using 1996 emission forecasts, the photochemical modeling demonstrated attainment of the ozone standard, although attainment for the September 5–7 episode required removal of the in-transit shipping channel emissions.

Although the modeling does not fully meet EPA's performance criteria, EPA believes that the modeling is sufficient to propose approval of the attainment plan.

(3) EPA Action

EPA believes that the Santa Barbara attainment demonstration satisfies CAA requirements. EPA therefore proposes to approve Santa Barbara's attainment demonstration under section 182(b)(1)(A) of the Act.

f. Overall EPA Action. EPA proposes to approve fully the Santa Barbara ozone SIP with respect to the Act's requirements for emission inventories, control measures, and demonstrations of ROP and attainment.

The November 14, 1994, SIP submittal included an ozone redesignation request and maintenance plan for the Santa Barbara nonattainment area. During 1994–5, however, the Santa Barbara area recorded a number of exceedances of the ozone standard. This will prevent the area from attaining the ozone standard in 1996, since attainment of the ozone NAAQS requires no more than three exceedances over a three year period.

On July 18, 1995, the State agreed to withdraw its request for EPA action on the redesignation request and the maintenance plan. As a result, EPA is not taking action on the redesignation request and maintenance plan at this time. However, even though the 1994–5 exceedances will prevent Santa Barbara from achieving the ozone standard by 1996, EPA is proposing to approve Santa Barbara's 1994 CAP. If

the Santa Barbara area experiences no more than one exceedance during the 1996 ozone season and the state has complied with all requirements and commitments in the Santa Barbara SIP, section 181(a)(5) of the Act authorizes EPA to grant a one-year extension of the attainment date upon request by the State. Up to two extensions can be granted. Therefore, disapproval of the 1994 CAP and a reclassification of the area to serious for failure to attain is not yet warranted.

3. San Diego

a. Identification of Plan. On November 1, 1994, the Board of the San Diego Air Pollution Control District (SDAPCD) adopted the ''1994 Ozone State Implementation Plan Revision''. On November 15, 1994, CARB adopted the SIP revision as the local element of the 1994 California Ozone SIP, which CARB then submitted to EPA [15] to comply with ROP and attainment demonstration requirements.

b. 1990 Base year Inventories. The SIP provides detailed estimates of the actual VOC and NO_X emissions that occurred in San Diego in 1990. These base year inventories are summarized in the table below, labeled ''1990 San Diego SIP Inventories.'' A more specific breakdown of 1990 base year emissions can be found on page 9 of the plan, and further inventory information is provided in the appendices to the plan. A discussion of these inventories and of EPA's proposed action on them can be found in section II.C.1.a., above.

1990 SAN DIEGO SIP INVENTORIES

[Tons per summer day]

Category	VOC	NO_X
Stationary	100.0	28.0
Mobile	212.5	209.9
Total	312.5	237.9

c. SIP Control Measures.

(1) Description

The plan lists the VOC and NO_X control measures relied upon for demonstrating compliance with the Act's progress and attainment requirements, all of which had been adopted at the time of the plan submittal (see Table 4, ''1999 Attainment Demonstration Control Measures'' on p. 29 of the SIP).

(2) EPA Action

EPA proposes to approve, under sections 110(k)(3) and 301(a) of the Act, the control measures portion of the plan. EPA approval of the adopted regulations has already occurred or will be completed in separate rulemakings in the future.

d. ROP Provisions.

(1) ROP Emission Targets

The 1994 SIP describes the VOC emission reductions needed to meet ROP requirements based on San Diego's adjusted 1990 base year inventories (see pp. 33 and 35). The SIP also provides emission estimates for the ROP milestone years by projecting the impacts of the control strategy and of anticipated changes in population, industrial activity, and other socio-economic factors. A summary of the ROP VOC targets and the projected VOC emissions is provided below in the table labeled ''San Diego ROP Forecasts and Targets.''

As the table shows, VOC reductions alone were not projected to be sufficient to meet the ROP target levels for milestone years after 1996. Section 182(c)(2)(C) of the Act and EPA guidance allows reductions in NO_X emissions to be substituted for post-1996 VOC reductions so long as certain conditions are met (see discussion above in section II.C.1.c.). The San Diego plan meets those conditions and the corresponding NO_X reductions as substituted for VOC reductions are also shown in the table. EPA concludes that the plan provides for achievement of the ROP target emission levels for all years.

SAN DIEGO ROP FORECASTS AND TARGETS

[Tons per summer day]

Milestone year	1996	1999
1990 Base Year VOC Inventory	312.6	312.6
VOC Projections (Adopted Measures)	236.1	232.0
ROP VOC Target	241.2	212.2
VOC Shortfall	0	19.8

SAN DIEGO ROP FORECASTS AND TARGETS—Continued

[Tons per summer day]

Milestone year	1996	1999
NO_X Substitution in VOC Equivalents [16]	0	19.8

[16] The term ''VOC equivalents'' is not meant to imply that NO_X reductions were substituted for VOC reductions on a one-for-one basis. The amount of NO_X substitution was determined by calculating the VOC shortfall percentage, and then converting the percentage into an equivalent reduction of NO_X. CARB and the district have demonstrated that the NO_X reductions are creditable and not in excess of what is necessary for attainment. A companion TSD provides a more detailed description of the calculations and amount of NO_X reduction used to represent the VOC equivalents.

(2) ROP Control Strategy

In general only adopted measures may be relied upon in meeting the 15% ROP requirement in section 182(b)(1) of the Act. Since the plan relies only on adopted regulations, this requirement is met. According to the submitted plan, the post-1996 ROP control strategy includes all those VOC measures relied upon for the 15% ROP demonstration, as well as fully adopted NO_X regulations.

(3) EPA Action

The San Diego SIP meets the CAA requirements for ROP. EPA therefore proposes to approve San Diego's 15% and post-1996 ROP plans under sections 182(b)(1) and 182(c)(2) of the Act.

e. Demonstration of Attainment. San Diego County is classified as a serious nonattainment area for ozone (see 40 CFR 81.305). As a result, the SIP must contain adequate control measures to demonstrate attainment of the ozone NAAQS by 1999.

(1) Control Strategy

The San Diego SIP attainment demonstration includes all of the measures described earlier. The demonstration presumes the measures will continue to be implemented, resulting in the emission reductions shown.

(2) Modeling and Attainment Demonstration

The 1994 SIP describes urban airshed modeling analysis performed to demonstrate that the control strategy described in above will result in NAAQS attainment. A summary of the emission reductions needed to attain the standard is provided below in the table labeled ''Emission Reductions Needed in San Diego,'' which is taken from the

[15] November 15, 1994 letter from James Boyd (CARB) to Felicia Marcus, EPA, forwarding the San Diego component of the SIP and CARB Board Resolution No. 94–63 approving the San Diego plan revision. The San Diego submittal includes a November 3, 1994 letter from Richard Sommerville (SDAPCD) to James Boyd (CARB) forwarding the 1994 San Diego plan and the SDAPCD Board Resolution approving the SIP revision.

1994 California Ozone SIP, Volume IV, Table F–1.

EMISSION REDUCTIONS NEEDED IN SAN DIEGO

[Tons per summer day]

	VOC	NO_X
1990 Baseline Emissions Inventory	313	238
Carrying Capacity	232	175
Reductions Needed	81	63

A summary of the emission reductions projected from the SIP control strategy is provided below in the table labeled ''San Diego Attainment Demonstration,'' which is taken from the 1994 California Ozone SIP, Volume IV, Table F–2.

SAN DIEGO ATTAINMENT DEMONSTRATION

[Tons per summer day]

	VOC	NO_X
Reductions from Adopted Measures	81	63
Committed Local Measures	0	0
Committed State Measures	1	1
Total	82	64

The San Diego area was originally classified as a severe ozone nonattainment area based on a rounded 1987–1989 design value of .19 ppm, recorded at the Del Mar station. This was later changed to serious, since the actual value was .185 ppm, which is within 5 percent of the cutoff for serious (.180 ppm), as allowed under section 181(a)(4) of the Act (see 60 FR 3771, January 19, 1995). Exceedances of the ozone NAAQS typically occur in the San Diego area more than 20 times per year. Most of these exceedances are classified by the SDAPCD as due to transport of pollutants from the South Coast. Locally generated ozone episodes are more in the neighborhood of .15 ppm.

In order to simulate air quality for the SIP and other planning needs, San Diego contracted with Radian Corporation to conduct the San Diego Area Air Quality Study (SDAQS) study during the summer of 1989, and to perform subsequent modeling (summarized in draft report, November 1991). That work was later extended by SDAPCD staff, with participation by CARB. The field study involved a network of air quality and meteorological instruments, including airplanes, to measure ozone and its precursors and the meteorological inputs needed for UAM.

Two episodes were selected for modeling from among those recorded during the field study. The August 28–29, 1989 episode had a monitored maximum of .154 ppm, at Alpine. After diagnostic simulations and refinement of model inputs, a base case was developed for the August episode, representing a locally generated ozone exceedance. The model performance statistics were within the goals set in EPA guidance, and the episode simulation was judged adequate for determining emission reduction targets.

A second episode, September 20–22, 1989, having a .156 ppm peak, was strongly affected by upper air transport of pollutants from the Los Angeles area. Only limited data was available on this transported pollution. While the model's performance for NO_X was poor, and the expected phenomenon of a transported ozone cloud aloft mixing down to the ground was not simulated well, the model met EPA statistical performance goals for ozone.

Significant uncertainties remain, but the modeling does show the beneficial effect on San Diego of the upwind Los Angeles area's emissions reductions. EPA expects that additional study of transport, to be conducted over the next few years, may result in the revisiting of San Diego's air quality problems. The District is an active participant in the planning of this study. Since San Diego has demonstrated that such high levels are due primarily to pollutants transported from the South Coast, additional San Diego emission reductions are not required for attainment (see 60 FR 3771–2). Finally, the impact of adopted State and SCAQMD reductions in the 1999 attainment year further support assumptions that transport of ozone and ozone precursors into the San Diego area will decline significantly in future years.

Using 1999 boundary conditions and a projected emission inventory including the effect of already-adopted local and state emission control measures, the ozone peaks were simulated to be .111 ppm and .116 ppm for the August and September episodes, respectively, thus demonstrating attainment of the ozone NAAQS.

(3) EPA Action

EPA believes that the San Diego component of the 1994 SIP fulfills the CAA attainment demonstration requirements. EPA is therefore proposing to approve the San Diego attainment demonstration under section 182(c)(2)(A) of the Act.

f. Overall EPA Action. EPA proposes to approve fully the San Diego ozone SIP with respect to the Act's requirements for emission inventories, control measures, and demonstrations of ROP and attainment.

4. San Joaquin Valley

a. Identification of Plan. On November 14, 1994, the Board of the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) adopted the Ozone Attainment Demonstration Plan for the San Joaquin Valley. On November 15, 1994, CARB modified the plan and adopted it as the local element of the 1994 California Ozone SIP, which CARB then submitted to EPA to comply with the ROP and attainment demonstration requirements of the Act.[17]

b. 1990 Base year Inventories. The SIP provides detailed estimates of the actual VOC and NO_X emissions that occurred in San Joaquin in 1990. These base year inventories are summarized in the table below, labeled ''1990 San Joaquin Valley SIP Inventories.'' A discussion of the inventories and of EPA's proposed action on them can be found in section II.C.1.a. of this notice.

SAN JOAQUIN VALLEY 1990 SIP INVENTORIES

[In tons per summer day]

Category	VOC	NO_X
Stationary	325.64	382.56
Mobile	218.28	327.80
On-Road	170.86	228.53
Non-Road	47.44	99.28
Total	543.9	710.4

c. SIP Control Measures.

(1) Description

The State of California and SJVUAPCD have already adopted many measures which will contribute to the necessary emissions reductions for meeting 15% ROP, post-1996 ROP and attainment requirements. In addition, the SIP describes a series of rules that SJVUAPCD has recently adopted or committed to adopt in order to reduce VOC and NO_X emissions (SJVUAPCD Attainment Demonstration Plan, table 4–1 & 1994 California Ozone SIP,

[17] November 15, 1994 letter from James Boyd (CARB) to Felicia Marcus, EPA forwarding the San Joaquin Valley Ozone Attainment Demonstration Plan and CARB Board Resolution no. 94–65 approving the San Joaquin Valley revised 1993 Rate-of-Progress Plan, Post-1996 Rate-of-Progress Plan and the Attainment Demonstration Plan as revisions to the SIP. The San Joaquin Valley submittal includes a November 14, 1994 letter from David Crow (SJVUAPCD) to James Boyd (CARB), forwarding the San Joaquin Valley Ozone Attainment Demonstration Plan and the SJVUAPCD Board Resolution (94–11–02a) approving the plan.

Volume IV, Table G–9. The table labeled ''San Joaquin Local Control Measures'' indicates the dates of rule adoption and implementation and the emission reductions presumed to occur by 1999. No reductions from local measures are assumed in the 15% ROP plan for 1996.

SAN JOAQUIN LOCAL CONTROL MEASURES

Rule No.	Control measure title	Implementing agency	Adoption date	Implementation date	Reductions	
					VOC	NO_X
1999 Emission Reductions						
4403 (VOC)	Components Serving Gas Production	SJVUAPCD	2Q/91	2Q/91	4.55	
4703	Stationary Gas Turbine Engines	SJVUAPCD	3Q/94	3Q/2000		11.92
4653	Adhesives	SJVUAPCD	1Q/94	1Q/95	1.3	
4623	Organic Liquid Staorage	SJVUAPCD	2Q/91	2Q/96	13.2	
	TCMs		Ongoing	Ongoing	1.8	1.5
4601	Architectural Coatings	SJVUAPCD	1Q/96	1Q/98	1.51	
4692	Commercial Charbroiling	SJVUAPCD	2Q/96	2Q/98	0.39	
4354	Glass Melting Furnaces	SJVUAPCD	1Q/96	4Q/99		2.87
4607	Graphic Arts	SJVUAPCD	4Q/95	4Q/97	0.84	
4642	Landfill Gas Control	SJVUAPCD	1Q/95	4Q/99	1.41	
4412	Oil Workover Rigs	SJVUAPCD	2Q/96	2q/98		0.87
4623	Organic Liquid Storage	SJVUAPCD	3Q/95	3q98	3.0	
4662	Organic Solvent Degreasing	SJVUAPCD	1Q/96	1Q/98	2.44	
4663	Organic Solvent Waste	SJVUAPCD	2Q/96	2Q/98	0.19	
4306	Small Boilers, Process Heaters and Steam Generators	SJVUAPCD	3Q/95	3Q/99		7.6
4611	Smaller Printer Operations	SJVUAPCD	4Q/95	4Q/97	0.30	
4702	Stationary IC Engines	SJVUAPCD	2Q/95	4Q/99		12.44
4621 & 4622	Stationary Storage Tanks/Fuel Transfer into Vehicle Tanks	SJVUAPCD	2Q/96	2Q/98	0.41	
	Waste Burning	ND	ND	ND		
4411	Well Cellars	SJVUAPCD	2Q/96	2Q/98	0.56	

(2) EPA Action

According to the State's submissions, these measures are relied upon in meeting the ROP and attainment requirements of the Act. Accordingly, and because the measures strengthen the SIP, EPA proposes to approve, under sections 110(k)(3) and 301(a) of the Act, the enforceable commitments to adopt and implement the control measures by the dates specified to achieve the emission reductions shown. EPA also proposes to assign credit to the measures for purposes of ROP and attainment. EPA approval of the adopted regulations will be completed in separate rulemakings in the future.

d. ROP Provisions.

(1) ROP Emission Targets

The SIP describes the VOC emissions to meet the ROP target and the VOC emissions with plan reductions (see the 1994 California Ozone SIP, Table G–7). Additional information regarding the ROP provisions is presented in the 1994 San Joaquin Valley Ozone Attainment Demonstration Plan, Table 2–1. A summary of the ROP VOC targets and the projected VOC emissions is provided below in the table labeled ''San Joaquin Valley ROP Forecasts and Targets.''

As the table shows, VOC reductions alone were not projected to be sufficient to meet the ROP target levels for milestone year 1999. Section 182(c)(2)(C) of the Act and EPA guidance allows reductions in NO_X emissions to be substituted for post-1996 VOC reductions so long as certain conditions are met (see discussion above in section II.C.1). The San Joaquin Valley plan meets those conditions and the corresponding NO_X reductions as substituted for VOC reductions are also shown in the table.

SAN JOAQUIN VALLEY ROP FORECASTS AND TARGETS

[Tons per summer day]

Milestone year	1996	1999
VOC Emissions to Meet ROP Target	433	383
VOC Emissions with Plan Reductions	430	430
NO_X Substitution in VOC Equivalents [18]	0	47

[18] See footnote 16.

The SIP includes a separate ROP analysis for the Kern District portion of the San Joaquin Valley.

SAN JOAQUIN VALLEY (KERN DISTRICT) ROP FORECASTS AND TARGETS

[Tons per summer day]

Milestone year	1996	1999
VOC Emissions to Meet ROP Target	13.2	11.7
VOC Emissions with Plan Reductions	13.2	13.3
NO_X Substitution in VOC Equivalents	0	1.6

(2) 15% ROP Control Strategy

In general, only adopted measures may be relied upon in meeting the 15% ROP requirement. The San Joaquin Valley control strategy for the 15% ROP requirements, therefore, excluded all committed control measures listed in the table labeled ''Control Strategy for San Joaquin Valley.'' The description of adopted measures relied upon in providing for this requirement is in the San Joaquin Valley Ozone Attainment Demonstration Plan in Tables 4–1 and 3–2.

(3) Post-1996 ROP Control Strategy

According to the submitted plan, the post-1996 ROP control strategy includes all those measures relied upon for the 15% ROP demonstration, plus any measures for which emissions reductions are shown for milestones occurring after 1996, excluding

projected reductions from Federal measures.

(4) EPA Action

The San Joaquin Valley SIP meets the CAA requirements for 15% ROP and post-1996 ROP, including the requirement that the plan provide for achievement of the ROP target emission levels for all years. EPA therefore proposes to approve San Joaquin Valley's 15% ROP and post-1996 ROP plans under sections 182(b)(1) and 182(c)(2) of the Act.

e. Demonstration of Attainment. The San Joaquin Valley is classified as a serious nonattainment area for ozone (see 40 CFR 81.305). As a result, the SIP must contain adequate control measures to demonstrate attainment of the ozone NAAQS by 1999.

(1) Control Strategy

The San Joaquin Valley attainment demonstration includes all of the measures described earlier. The demonstration presumes the measures will be adopted and implemented as scheduled, resulting in the emission reductions shown.

(2) Modeling and Attainment Demonstration

The 1994 SIP describes the urban airshed modeling analysis performed to demonstrate that the control strategy described above will result in attainment. The attainment analysis is based on the model developed as part of the San Joaquin Valley Air Quality Study, and divides the nonattainment area into three subregions, and the Kern District portion. CARB notes that the model is being further refined and appropriate changes in the SIP may be made in the future.

The area was classified as serious based on a design value of .17 ppm, recorded at the Edison site. This was based on 1987–1989 data.

CARB applied the SARMAP Air Quality Model to develop the attainment demonstration for the San Joaquin Valley SIP. The SARMAP model is a nonhydrostatic version of the Regional Acid Deposition Model, with several modifications. The EPA approved UAM version IV was also applied to the domain for performance comparison. The SARMAP field study, conducted during the summer of 1990, provided an enhanced database of air quality and meteorological data, both at the surface level and aloft.

The model has been applied to one episode from the study period, August 5–6, 1990. The episode was chosen because it represents a typical regime conducive to relatively high ozone peaks. The peak ozone concentration for the episode was .16 ppm, compared to the design concentration of .17 ppm.

The EPA recommended statistical criteria for ozone were met for the episode using the SARMAP model. The predicted peak for the episode for the southern portion of the domain was .14 ppm, as compared to the measured concentration of .16 ppm, an underprediction of 13%. The predicted peak for the central portion of the domain was .152 ppm, compared to the predicted peak of .131 ppm, an overprediction of 16%. For the northern portion of the domain, a value of .137 ppm was predicted compared to the measured value of .150 ppm, an underprediction of 9%.

A summary of the emission reductions needed to attain the standard is provided below in the table labeled ''Emission Reductions Needed in the San Joaquin Valley,'' which is taken from the 1994 California Ozone SIP, Volume IV, Tables G–1, G–3, and G–5.

EMISSION REDUCTIONS NEEDED IN THE SAN JOAQUIN VALLEY

[Tons per summer day]

	North		Central		South	
	ROG	NO_X	ROG	NO_X	ROG	NO_X
1990 Baseline Emissions Inventory	129	124	126	115	217	367
Carrying Capacity	>129	>124	88	90	145	165
Reductions Needed	.....	.....	38	25	72	202

CARB's preliminary attainment calculations for the 3 subregions are provided below in the table labeled ''San Joaquin Valley Attainment Demonstration,'' which is taken from the 1994 California Ozone SIP, Volume IV, Tables G–2, G–4, and G–6.

SAN JOAQUIN VALLEY ATTAINMENT DEMONSTRATION

[Tons per summer day]

	North		Central		South	
	ROG	NO_X	ROG	NO_X	ROG	NO_X
Reductions from Adopted Measures	15	8	27	9	58	164
Committed Local Measures	5	.....	8	6	22	20
Committed State Measures	8	2	4	2	3	1
Total	28	11	39	16	83	185

For purposes of the attainment demonstration, the Kern District portion of the San Joaquin Valley was not separately modeled, under the assumption that attainment in this area should result primarily from upwind reductions achieved in the South San Joaquin sub-region.

(3) EPA Action

EPA believes that the San Joaquin Valley component of the 1994 SIP fulfills the CAA attainment demonstration requirements. EPA is therefore proposing to approve the San Joaquin attainment demonstration under section 182(c)(2)(A) of the Act.

f. Overall EPA Action. EPA proposes to approve fully the San Joaquin ozone SIP with respect to the Act's

requirements for emission inventories, control measures, and demonstrations of ROP and attainment.

5. Sacramento

a. Identification of Plans. The Sacramento Metropolitan Area nonattainment area includes 6 counties (whole and in part) and jurisdiction is divided among 5 local air pollution control agencies: the Sacramento Metro Air Quality Management District (SMAQMD), the Yolo-Solano Air Pollution Control District (YSAPCD), the Feather River Air Quality Management District (FRAQMD), the Placer County Air Pollution Control District (PCAPCD), and the El Dorado County Air Pollution Control District (ECAPCD). Each local air pollution control agency adopted and submitted the Sacramento Area Regional Ozone Attainment Demonstration Plan which was transmitted to CARB. On December 29, 1994, CARB then submitted the plan to EPA.

SACRAMENTO OZONE SIP ADOPTIONS

Agency	Date of adoption	Resolution No.
SMAQMD	Dec. 1, 1994	94–0014
YSAPCD	Dec. 14, 1994	94–28
FRAQMD	Dec. 12, 1994	1994–13
PCAPCD	Dec. 20, 1994	94–07
ECAPCD	Dec. 13, 1994	321–94

b. 1990 Base Year and Projected Inventories. The Sacramento Area ozone attainment plan provides detailed estimates of 1990 emissions from all VOC and NO_X sources in the Sacramento nonattainment area in 1990. These base year inventories are summarized in the table labeled ''1990 Sacramento Area SIP Inventories.'' [19] A discussion of these inventories and of EPA's proposed action can be found in section II.C.1.c. of this notice.

1990 SACRAMENTO AREA SIP INVENTORIES

[Tons per summer day]

Category	ROG	NO_X
Stationary	88	12
Mobile	134	151
On-road	110	118
Off-road	24	34
Total	222	164

c. SIP Control Measures.

(1) Description

The State of California and the local air districts in Sacramento Area have already adopted many measures which will contribute to the necessary emissions reductions for meeting 15% ROP, post-1996 ROP, and attainment requirements. In addition, the 1994 SIP describes a series of rules that the Sacramento Area air pollution control districts have committed to adopt in order to reduce VOC and NO_X emissions in the Sacramento Area. The table labeled ''Sacramento Local Control Measures'' describes the dates by which the plans presume adoption and implementation, and the emission reductions presumed to occur by each milestone, from 1999 through the attainment year (2005), to the extent that information was available in the submitted plan.

SACRAMENTO LOCAL CONTROL MEASURES

[Tons per day]

VOC control measure title	Implementing agency	Adoption date	Implementation date	Emission reductions		
				1996	2002	2005
ROG Control Measures						
Adhesives	ECAPCD	2/95	1996	1.2	1.3	1.4
	PCAPCD	2/95				
	SMAQMD	5/95				
	YSAPCD	Adopted '94				
Architectural Coatings	ECAPCD	Adopted	1996	0.9	1.3	1.6
	PCAPCD	4/95				
	Amendment to existing rule SMAQMD.	Adopted				
	YSAPCD	3/95				
Auto Refinishing	ECAPCD	Adopted '94	1996	2.1	2.6	3.2
	PCAPCD	Adopted '94				
	SMAQMD	5/95				
	YSAPCD	Adopted '94				
Fugitive HC Emissions	ECAPCD	4/95	1999	1.4	1.4	1.4
	PCAPCD	Adopted				
	SMAQMD	Adopted				
	YSAPCD	Adopted 5/94				
Graphic Arts	ECAPCD	Adopted 9/94	June 1995	0.4	0.5	0.5
	PCAPCD	11/94				
	SMAQMD	'81, '93				
	YSAPCD	Adopted 5/94				

[19] More detailed summaries of this inventory can be found in the 1994 Sacramento Area Regional Ozone Attainment Demonstration, tables C–1 and C–2.

SACRAMENTO LOCAL CONTROL MEASURES—Continued

[Tons per day]

VOC control measure title	Implementing agency	Adoption date	Implementation date	Emission reductions		
				1996	2002	2005
Landfill Gas Control	ECAPCD	12/94	1996	1.2	1.2	1.2
	PCAPCD	Adopted	1996.			
	SMAQMD	2/95	1997.			
	YSAPCD	Adopted	1996.			
Pleasure Craft Coating Operations	ECAPCD	4/96	1996–1999	0.2	0.2	0.2
	PCAPCD	12/94				
	SMAQMD	1998				
	YSAPCD	Adopted				
Pleasure Craft Refueling	ECAPCD	3/98	1999	0.1	0.1	0.2
	PCAPCD	3/98				
	SMAQMD	3/98				
	YSAPCD	3/98				
Polyester Resin Operations	ECAPCD	2/96	1997	0.2	0.2	0.2
	PCAPCD	1/96	1997.			
	SMAQMD	1998	1999.			
	YSAPCD	Adopted '93				
Semiconductor Mfg	PCAPCD others?.	2/95	1996	0.1	0.2	0.2
SOCMI Distillation/Reactors	SMAQMD others?.	9/95	1997	1.4	1.5	1.6
Surface Preparation and Cleanup	ECAPCD	2/95	1996	3.0	3.3	3.6
	PCAPCD	2/95				
	SMAQMD	2/95				
	YSAPCD	Adopted 5/94				
Vents on Underground Gasoline Storage Tanks	SMAQMD	2/95	1995	0.1	0.2	0.2
	YSAPCD	1/95 (Both amend current rules).				
Wood Products Coatings	ECAPCD	2/95	1996	0.5	0.5	0.5
	PCAPCD	Adopted 11/94	1996.			
	SMAQMD	Adopted 11/94	1996.			
	YSAPCD	Adopted 11/94				
Regional NO_X Control Measures						
Boilers and Steam Generators	ECAPCD	Adopted '94	1996–1997	0.8	0.9	1.0
	PCAPCD	Adopted '94				
	SMAQMD	2/95				
	YSAPCD	Adopted '94				
Gas Turbines	PCAPCD	Adopted 10/94	1997	0.2	0.3	0.3
	SMAQMD	2/97				
	YSAPCD	5/94				
Internal Combustion Engines	ECAPCD	Adopted '94	Phased in 1997.	0.3	0.4	0.5
	PCAPCD	12/95				
	SMAQMD	2/95				
	YSAPCD	Adopted '94				
Residential Water Heaters	ECAPCD	1996	1995–1997	0.3	0.4	0.5
	PCAPCD	12/95				
	SMAQMD	1996				
	YSAPCD	Adopted 11/94				
Woodwaste Boilers	PCAPCD	5/95	???	???	?	?
Mobile NO_X Measures:						
1. Off-Road Heavy Duty Vehicles	All	12/95	1/97	2.0	3.0	5.0
2. On-Road Heavy Duty Vehicles						

(2) EPA Action

According to the State's submissions, these measures are relied upon in meeting the post-1996 ROP and attainment requirements of the Act. Accordingly, and because the measures strengthen the SIP, EPA proposes to approve, under sections 110(k)(3) and 301(a) of the Act, the enforceable commitments to adopt and implement the control measures by the dates specified to achieve the emission reductions shown. EPA also proposes to assign credit to the measures for purposes of post-1996 ROP and attainment. EPA approval of the adopted regulations will be completed in separate rulemakings in the future.

d. Rate of Progress.

(1) ROP Emission Targets

The 1994 SIP describes the VOC emission reductions needed to meet ROP requirements based on Sacramento's adjusted 1990 base year

inventories.[20] The SIP also provides emission estimates for the ROP milestone years by projecting the impact of the control strategy and of anticipated changes in population, industrial activity, and other socio-economic factors. A summary of the ROP VOC targets and the projected VOC emissions is provided below in the table labeled ''Sacramento ROP Forecasts and Targets.''

As the table shows, VOC reductions alone were not projected to be sufficient to meet the ROP target levels for milestone years after 1996. As discussed earlier (section II.C.1.c.), the Clean Air Act allows substitution of reductions in NO_X emissions for VOC reductions so long as certain conditions are met. The Sacramento Area plan meets those conditions and the corresponding NO_X reductions are also shown in the table below labeled ''Sacramento ROP Forecasts and Targets.''

SACRAMENTO ROP FORECASTS AND TARGETS

[Tons per summer day]

Milestone year	1996	1999	2002	2005
1990 Base Year VOC Inventory	211	211	211	211
VOC Inventory Projection	175	167	163	159
ROP VOC Target	162	142	124	107
Preliminary VOC Shortfall	13	25	39	52
VOC Reductions from Committal Measures	0	19	23	14
Total VOC Shortfall	13	6	16	38
NO_X Substitution in VOC Equivalents[21]	13	6	16	38

[21] See footnote 16.

(2) 15% ROP Control Strategy

On November 15, 1993, CARB submitted to EPA a ROP plan intended to demonstrate that VOC emissions would be reduced by 15% by 1996. EPA determined that this ROP plan was incomplete because it relied on controls not yet adopted in regulatory form. Appendix G of the 1994 SIP submittal updates Sacramento's 1993 ROP plan. EPA has deemed this plan complete. EPA will act on the Sacramento Area's 15% ROP submittal in separate rulemaking.

(3) Post-1996 ROP

Appendix G of the Sacramento Area Regional Ozone Attainment Plan provides detailed information on the ROP emissions reductions from 1996 to 2005. The following summary can be found at Table G–1 of the Sacramento Area Regional Ozone Attainment Plan and provides a general summary of how the expected ROP reductions will be met.

(4) EPA Action

EPA believes that the Sacramento area component of the 1994 SIP meets the CAA requirements for post-1996 ROP. EPA is, therefore, proposing to approve the Sacramento area's post-1996 ROP plan under section 182(b)(2) of the Act. EPA will act on Sacramento's 15% ROP Plan in separate rulemaking.

e. Attainment of the Ozone NAAQS. The Sacramento Area is classified as a severe nonattainment area for ozone. As a result, the SIP must contain adequate control measures and commitments to demonstrate attainment of the ozone NAAQS by 2005.

(1) Control Strategy

The control strategy for the Sacramento Area's SIP attainment demonstration includes all of the State measures and the local measures identified in the Table labeled ''Sacramento Local Control Measures.'' The demonstration presumes the measures will be adopted and implemented by the dates shown, resulting in the emission reductions shown.

(2) Modeling and Attainment Demonstration

The 1994 SIP describes urban airshed modeling analysis performed to demonstrate that the control strategy will result in ozone NAAQS attainment. A summary of the emission reductions needed to attain the standard is provided below in the table labeled ''Emission Reductions Needed in Sacramento,'' taken from Table D–1 in Volume IV of the 1994 California Ozone SIP.

EMISSION REDUCTIONS NEEDED IN SACRAMENTO

[Tons per summer day]

	ROG	NO_X
1990 Baseline Emissions Inventory	222	164
Attainment Inventory	137	98
Reductions Needed	85	66

A summary of the emission reductions projected from the SIP control strategy is provided below in the table labeled ''Sacramento Attainment Demonstration,'' which is based on Table D–2 from Volume IV of the 1994 California Ozone SIP.

SACRAMENTO ATTAINMENT DEMONSTRATION

[Tons per summer day]

	VOC	NO_X
Reductions from Adopted Measures	55	40
Committed Local Measures	17	7
Committed State Measures	15	14
Reductions from National Measures[1]	1.6	4.3
Total	88.6	65.3

[1] Credit shown is EPA's estimate of reductions from statutorily-mandated national rules.

Based on the Sacramento Area's classification as a severe ozone nonattainment area and the results of an Urban Airshed Modeling analysis, Sacramento must reduce its 2005 emissions inventory to 137 tons per day of VOC and 98 tons per day of NO_X in order to demonstrate attainment of the NAAQS. The expected emissions reductions from the combination of adopted measures and commitments to adopt measures listed above and in the Sacramento's 1994 Regional Ozone Attainment Plan will achieve the necessary reductions to meet the attainment targets.

The Sacramento area was classified as a serious ozone nonattainment area based on a design value of .16 ppm, recorded at the Folsom station. This was based on 1987–1989 data; the 1990–1992 value was also .16 ppm. Exceedances of the ozone NAAQS occur in the Sacramento area about 6 to 10 times per year.

[20] See the Sacramento Area Regional Ozone Attainment Plan, Tables G–1, G–2 and G–3 for ROP targets and lists of measures included in meeting those targets.

In order to simulate air quality for the SIP and other planning needs, CARB and the Sacramento local agencies started planning the Sacramento Area Ozone Study (SAOS) early in 1989, with intensive data collection performed during the summer of 1990. This involved an extended network of air quality and meteorological instruments, including on airplanes, to measure ozone and its precursors and the meteorological inputs needed for UAM. The Sacramento Modeling Advisory Committee (SMAC) was established for technical oversight of the modeling effort, and included regulatory, industry, and environmental group participants. CARB and its contractor, Systems Applications International, prepared a modeling protocol which was accepted by EPA as meeting EPA Guideline requirements.

Two episodes were selected for modeling from those recorded during the field study. Ozone maxima occurred in the Interstate 50 and in the Interstate 80 corridors, downwind (east and northeast) of Sacramento. While the observed ozone peaks were less than the design value of .16 ppm, they were high enough to meet EPA guidelines for episode selection, especially considering the excellent database available for analysis. They had features typical of urban ozone episodes, including temperatures exceeding 100 °F, low wind speeds, and a temperature inversion that tended to trap pollutants near the ground. After extensive diagnostic simulations and refinement of model inputs, a base case was developed for the July 11–13, 1990 episode. While not outstanding, the model performance statistics were well within the goals set in EPA's Guideline. This episode's performance was judged adequate for determining emission reduction targets.

A second episode, August 8–10, 1990, was strongly affected by upper air transport of pollutants into the area. Only limited data was available on this transported pollution, so it was difficult to set boundary conditions for the model. In addition, the source areas were not certain; the San Francisco Bay Area, the San Joaquin Valley, and recirculation from Sacramento itself are all possible sources for the pollutant influx. For these reasons, an attainment demonstration using this episode would be of little value and, after consultation with EPA, the State did not pursue it.

Sacramento and the San Francisco Bay area are included within the modeling domain of the SARMAP study, conducted for the San Joaquin Valley nonattainment area. Ideally, modeling of transport should be performed with both upwind and downwind areas in the same modeling domain, as was the case here. Although the SARMAP episodes were not chosen with a Sacramento attainment demonstration in mind, there is significant transport to Sacramento in the San Joaquin Valley modeling. Since that modeling showed attainment throughout the whole domain, including Sacramento, EPA deems that attainment under transport conditions has been addressed for Sacramento. Should additional information analyses be performed for these areas, the issue of transport to Sacramento will need to be revisited.

Using 2005 and boundary conditions and a projected emission inventory without additional emission controls, the ozone peak was simulated to be .134 ppm. Additional controls, giving reductions relative to the 1990 baseline of 34% VOC and 40% NO_X, brought emissions under the carrying capacity of 137 tpd of VOC and 98 tpd of NO_X, and brought the ozone peak down to .124 ppm, thus demonstrating attainment of the ozone NAAQS.

(3) EPA Action

EPA believes that the Sacramento Area component of the 1994 SIP fulfills the CAA attainment demonstration requirements. EPA is therefore proposing to approve, under section 182(c)(2)(A) of the Act, the Sacramento Area attainment demonstration.

f. Overall EPA Action. EPA proposes to approve fully the Sacramento Area ozone SIP with respect to the Act's requirements for emission inventories, control measures, and demonstrations of post-1996 ROP and attainment. EPA will take action separately on Sacramento's 15% ROP provisions.

6. Ventura

a. Identification of Plan. On November 8, 1994, the Ventura County Air Pollution Control District (VCAPCD) adopted Ventura's 1994 Air Quality Management Plan (AQMP). On November 15, 1994, CARB modified the AQMP and adopted it as the local element of the 1994 California Ozone SIP, which CARB then submitted to EPA to comply with ROP and attainment demonstration requirements of the Act.[22]

b. 1990 Base Year Inventories. The SIP provides detailed estimates of the actual VOC and NO_X emissions that occurred in Ventura in 1990. These base year inventories are summarized in the table below, labeled ''1990 Ventura SIP Inventories.'' A more specific breakdown of 1990 base year emissions can be found in Tables 9–3 and 9–4 of the 1994 AQMP. A discussion of these inventories and of EPA's proposed action on them can be found in section II.C. of this notice.

1990 VENTURA SIP INVENTORIES

[Tons per summer day]

Category	ROG	NO_X
Stationary	44	18
Mobile	41	55
Outer Continental Shelf[23]	2	8
Total	87	81

[23] OCS emissions are included because they are included in the modeled attainment demonstration.

c. SIP Control Measures.

(1) Description

The 1994 AQMP (Tables 6–1 and 6–2) and 1994 California Ozone SIP (Volume IV, Table E–6) describe a series of rules that the VCAPCD has adopted or committed to adopt in order to reduce ROG and NO_X emissions in Ventura. Control measures not already adopted at the time of the plan submittal are listed below in the table labeled ''Ventura Local Control Measures.'' The table describes not only the dates by which the plans presume adoption and implementation, but the emission reductions presumed to occur by each milestone, to the extent that information was available in the submitted plan. The information contained in the table below reflects revisions in Ventura's recently adopted 1995 Air Quality Management Plan, adopted on December, 19, 1995. The 1995 Plan slightly revised adoption dates, implementation dates, and reductions for numerous district measures already contained in the 1994 SIP. These revisions will have no adverse impact on ROP or attainment. Although these revisions have not been formally submitted from CARB to EPA at this time, CARB has indicated to EPA that they intend to submit the revised adoption and implementation dates prior to EPA's final action on the plan.

[22] November 15, 1994 letter from James Boyd (CARB) to Felicia Marcus, EPA, forwarding the Ventura AQMP and CARB Board Resolution No. 94–62 approving the Ventura plan. The Ventura submittal includes a November 8, 1994 letter from Richard Baldwin (VCAPCD) to James Boyd (CARB) forwarding the 1994 Ventura AQMP and the VCAPCD Board Resolution approving the AQMP.

VENTURA LOCAL CONTROL MEASURES

[Tons per day]

Rule No.	Control measure	Adoption date	Implementation date	ROG/NO_X reductions [1]			
				1996	1999	2002	2005
N–101	Gas Turbines	3/95	4/97	0.0	0.45	0.47	0.49
N–102	Boilers, Steam generators, Heaters, <1 mmbtu.	6/96	1/97	0.0	0.05	0.06	0.06
R–105	Glycol Dehydrators	12/94	7/96	0.41	0.73	0.65	0.57
R–317	Clean-up Solvents and Solvent Wastes	12/95	7/96	1.45	1.57	1.67	1.76
R–322	Painter Certification	6/97	12/97–12/98	0.0	0.48	0.51	0.53
R–324	Screen Printing Operations	6/96	6/97	0.0	0.29	0.30	0.31
R–327	Electronic Component Manufacture	6/96	7/97	0.0	0.07	0.07	0.08
R–403	Vehicle Gas Dispensing—Phase II	5/95	1/96	0.24	0.22	0.22	0.23
R–410	Marine Tanker Loading	6/96	7/97	0.0	0.0	0.0	0.0
R–419	Tank Degassing Operations	11/94	3/95	0.04	0.03	0.03	0.02
R–420	Pleasure Craft Fuel Transfer	6/97	7/98	0.0	0.08	0.08	0.08
R–421	Utility Engine Refueling Operations	9/96	9/97	0.0	0.19	0.20	0.20
R–424	Gasoline Transfer/Dispensing	5/95	1/96	0.01	0.03	0.04	0.04
R–425	Enhanced Fugitive I/M Program	12/95	5/97	1.45	1.21	1.07	0.95
R–606	Soil Decontamination	9/95	9/95	0.10	0.10	0.10	0.11

[1] "R" refers to ROG control measures, "N" refers to NO_X control measures. The reduction estimates were taken from the 1994 Ventura County AQMP (Tables 11–1 and 11–2). The reductions do not reflect the most recent estimates in the 1995 AQMP revision. In addition, the table does not include measure R–303, Architectural Coatings. Overall, the revised reduction estimates do not negatively impact ROP or attainment. If a SIP revision with the revision reduction estimates and measure R 303 is submitted before EPA's final action, EPA proposes to approve it without further opportunity for public comment.

(2) EPA Action. According to the State's submissions, these measures are relied upon in meeting the ROP and attainment requirements of the Act. Accordingly, and because the measures strengthen the SIP, EPA proposes to approve, under sections 110(k)(3) and 301(a) of the Act, the enforceable commitments to adopt and implement the control measures by the dates specified to achieve the emission reductions shown. EPA also proposes to assign credit to the measures for purposes of ROP and attainment. EPA approval of the adopted regulations will be completed in separate rulemakings in the future.

d. ROP Provisions.

(1) ROP Emission Targets

The 1994 AQMP (Chapter 11) and Volume IV of the CA SIP (Table E–3) describe the VOC emission reductions needed to meet ROP requirements based on Ventura's adjusted 1990 base year inventories. The SIP also provides emission estimates for the ROP milestone years by projecting the impacts of the control strategy and of anticipated changes in population, industrial activity, and other socio-economic factors. A summary of the ROP VOC targets and the projected VOC emissions is provided below in the table labeled "Ventura ROP Forecasts and Targets." [24]

The VOC reductions alone were not projected to be sufficient to meet the ROP target levels for milestone years after 1996. As discussed earlier (section II.B.1.b.iii.), reductions in NO_X emissions may be substituted for VOC reductions so long as certain conditions are met. The Ventura plan meets those conditions and the corresponding NO_X reductions substituted for VOC reductions are also shown in the table.

VENTURA ROP FORECASTS AND TARGETS

[Tons per summer day]

Milestone year	1996	1999	2002	2005
1990 Base Year VOC Inventory	85	85	85	85
VOC Inventory after Adopted Measures	64	61	58	56
ROP VOC Target	69	60	53	46
VOC Inventory Including Committals	64	61	58	56
VOC Shortfall	0	1	5	10
NO_X Substitution in VOC Equivalents [25]	0	1	5	10

(2) 15% ROP Control Strategy

In general only adopted measures may be relied upon in meeting the 15% ROP requirement. The Ventura control strategy for the 15% ROP requirement, therefore, excluded all committed control measures listed in the table above labeled "Ventura Local Control Measures." The description of adopted measures relied upon in providing for this requirement is in the 1994 AQMP in Tables 6–1, 6–2, 11–1, and 11–2.

(3) Post-1996 ROP Control Strategy

According to the submitted plan, the post-1996 ROP control strategy includes all those measures relied upon for the 15% ROP demonstration, plus any measures for which emissions reductions are shown for milestones after 1996.

(4) EPA Action

EPA believes that the Ventura component of the 1994 SIP meets the CAA requirements for 15% ROP and post-1996 ROP. EPA is, therefore, proposing to approve Ventura's ROP plan under sections 182(b)(1) and 182(c)(2) of the Act.

e. Demonstration of Attainment. Ventura County is classified as a severe nonattainment area for ozone. As a result, the SIP must contain adequate control measures and commitments to demonstrate attainment of the ozone NAAQS by 2005.

(1) Control Strategy

The control strategy for Ventura's SIP attainment demonstration includes the State and local measures identified above. The demonstration presumes the measures will be adopted and implemented by the dates shown, resulting in the emission reductions shown.

[24] See 1994 SIP, Tables 11–3 through 11–14, and California Ozone SIP, page IV–33.

[25] See footnote 16.

(2) Modeling and Attainment Demonstration

The UAM analysis described below demonstrates that the control strategy discussed above will result in attainment of the ozone NAAQS. A summary of the emission reductions needed to attain the standard is provided below in the table labeled ''Emission Reductions Needed in Ventura,'' derived from the 1994 California Ozone SIP, Volume IV, Table E–1. Since the November 1994 submittal, additional modeling refinements and technical clarifications have resulted in a revised estimate of the reductions needed for attainment. These technical clarifications to the 1994 SIP were submitted to EPA by CARB on February 6, 1996.[26] The summary table below reflects the revised reductions needed for attainment.

EMISSION REDUCTIONS NEEDED IN VENTURA

[Tons per summer day]

	ROG	NO_X
1990 Baseline Emissions Inventory	87	81
Attainment Inventory	45	52
Reductions Needed	42	29

A summary of the emission reductions projected from the SIP control strategy is provided below in the table labeled ''Ventura Attainment Demonstration,'' taken from the 1994 California Ozone SIP, Volume IV, Table E–2. As described above, the table below reflects the revised estimate of the reductions needed.

VENTURA ATTAINMENT DEMONSTRATION

[In tons per summer day]

	ROG	NO_X
Reductions from Adopted Measures	30	24
Committed Local Measures	5	1
Committed State Measures	6	4
Reductions from National Measures[1]	1	1
Total	42	30

[1]Credit shown is EPA's estimate of reductions from statutorily-mandated national rules.

The Ventura area is classified as a Severe ozone nonattainment area based on a design value of .174 ppm, recorded at the Simi Valley and based on 1987–1989 data.

Ventura's photochemical modeling analysis was based on two episodes, September 5–7, 1984 and September 16–17, 1984. The episodes were selected from the period for which an enhanced database was available from the 1984 South Central Coast Cooperative Aerometric Monitoring Program. The peak measured concentration for the September 5–7 episode was .18 ppm, measured at the Casitas Pass site. The episode was representative of widespread, high ozone. The peak measured concentration for the September 16–17 episode was .14 ppm, also measured at Casitas Pass. The episode represents an episode with less transport of ozone and precursors from the South Coast Air Basin.

For the 1994 AQMP, VCAPCD and their contractor used the UAM Version IV for the photochemical modeling exercise. The Diagnostic Wind model was used to generate meteorological input to the model. A discussion of the modeling can be found in Chapter 10 of the 1994 AQMP. The modeling was submitted as part of the November 1994 SIP.

In 1994–5, CARB staff refined the modeling application by reviewing and modifying the input files to better reflect the most accurate information for the Ventura nonattainment area. These refinements and improvements are detailed in CARB's report, ''Revisions to the Base Case and Future Year Urban Airshed Model Simulations for Ventura County in Support of the 1994 State Implementation Plan.'' The report reflects improvements made to the previous modeling submitted as part of the 1994 SIP. The modeling improvements were submitted by CARB on February 6, 1996. The TSD contains information regarding the performance of the improved model application for the peak days of the episode. The performance of the model meets EPA criteria.

The revised model application predicted peak ozone concentrations in the year 2005 of .12 ppm for the September 5–7 episode and .11 ppm for the September 16–17 episode.

(3) EPA Action

EPA has determined that the Ventura attainment demonstration meets CAA requirements. EPA is therefore proposing to approve the Ventura modeling and attainment demonstration under section 182(c)(2)(A) of the Act.

f. Overall EPA Action. EPA proposes to approve the Ventura ozone SIP with respect to the Act's requirements for emission inventories, control measures, modeling, and demonstrations of 15% ROP and post-1996 ROP and attainment.

7. South Coast

a. Identification of Plans. On September 9, 1994, the SCAQMD Governing Board adopted the South Coast 1994 Air Quality Management Plan (AQMP). On November 15, 1994, CARB modified the AQMP and adopted the ozone attainment, ozone ROP, and particulate matter (PM–10) Best Available Control Measures (BACM) component of the AQMP, which CARB then submitted to EPA to comply with ROP, attainment demonstration, and other requirements of the Act.[27] On December 9, 1994, CARB submitted further revisions to the 15% ROP plan.[28]

b. 1990 Base Year Inventories. The SIP provides detailed estimates of the VOC and NO_X emissions that occurred in the South Coast in 1990. These base year inventories are summarized in the table below labeled, ''1990 South Coast SIP Inventories.'' [29] A discussion of these inventories and of EPA's proposed action on them can be found in section II.C.1.a. of this notice.

[26] Prior to the February 6, 1996 CARB letter, EPA, CARB, and Ventura County APCD agreed on the need to clarify the attainment demonstration and federal assignments in the 1994 SIP submittal. This clarification was necessary because of two principle factors. Recent modeling indicated that moving the shipping channel was no longer essential for attainment of the ozone NAAQS in Ventura County and, on December 19, 1995, Ventura County adopted revisions to their AQMP which removed the measure requiring movement of the shipping channel.

[27] November 15, 1994 letter from Jacqueline Schafer, CARB, to Felicia Marcus, EPA, forwarding 1994 California SIP. The SIP includes a November 15, 1994 letter from James Boyd (CARB) to Felicia Marcus, EPA, forwarding the South Coast AQMP component of the SIP and CARB Board Resolution No. 94–61 approving the South Coast component. The South Coast component includes an October 6, 1994 letter from James M. Lents (SCAQMD) to James Boyd (CARB) forwarding the 1994 South Coast AQMP and the SCAQMD Board Resolution 94–36 approving the AQMP.

[28] On November 15, 1993, CARB submitted to EPA a rate-of-progress plan intended to demonstrate that 1990 VOC emissions would be reduced by at least fifteen percent by 1996 pursuant to Section 182(b)(1) of the Act. On April 13, 1994, EPA determined that this ROP plan was incomplete because it relied on controls not yet adopted in regulatory form. The 1994 SIP updates South Coast's 1993 ROP plan in order to correct this deficiency.

[29] More detailed summaries of this inventory can be found in Appendices III–A and III–B of the 1994 AQMP.

1990 SOUTH COAST SIP INVENTORIES

[Tons per summer day]

Category	VOC	NO_X
Stationary	666	245
Mobile	851	1116
Total	1517	1361

c. SIP Control Measures.

(1) Description

The State of California and the South Coast have already adopted many measures which will contribute to the necessary emissions reductions for meeting the 15% ROP and post-1996 ROP and attainment requirements. In addition, the 1994 SIP describes a series of rules that the South Coast has committed to adopt in order to reduce VOC and NO_X emissions in the area. The table labeled ''South Coast Local Control Measures'' describes the dates by which the plan presumes adoption and implementation, and the emission reductions presumed to occur by each milestone, every 3 years from 1996 through the attainment year (2010), to the extent that information was available in the submitted plan.[30] No reductions from local measures are assumed in the 15% ROP plan for 1996. The SCAQMD committed to adopt specific enforceable measures by the date specified in the table, or within 1 year after the date of approval of the ozone plan, whichever is earlier.

[30] 1994 CARB Ozone SIP, Volume IV, Table A–5; CARB Ozone SIP Emission Reductions for South Coast; 1994 AQMP, Appendix I–C, Post-1996 Federal Clean Air Act Requirements—Detailed Calculations.

SOUTH COAST LOCAL CONTROL MEASURES

[Tons per day of VOC/NO_X]

Control measure No.	Control measure title	Implementing agency	Adoption date	Implementation dates	1996	1999	2002	2005	2008	2010
CTS–01	VOC RECLAIM	SCAQMD	1995	1998–2010						
CTS–02	Emission Reductions from Solvents and Coatings at Non-RECLAIM Sources.	SCAQMD	1997	1998–2005	0/0	25.0/0	58.1/0	80.9/0	88.3/0	92.8/0
CTS–03	Consumer Product Labeling Program	SCAQMD		1998–2005	0/0	0/0	0/0	0/0	0/0	0/0
CTS–04	Public Awareness/Education Programs—Area Sources	SCAQMD		1997–1997	0/0	0/0	0/0	0/0	0/0	0/0
CTS–05	Further Emission Reductions from Perchloroethylene Dry Cleaning Operations.	SCAQMD	1994	1996–1996	2.14/0	2.49/0	2.73/0	2.9/0	2.99/0	2.99/0
CTS–07	Further Emission Reductions from Architectural Coatings (Rule 1113).	SCAQMD	1997	2001–2006	0/0	0/0	27.49/0	40.5/0	60.65/0	62.26/0
FUG–01	Emission Reductions from Organic Liquid Transfer	SCAQMD	1995	1996–1996	4.42/0	4.96/0	5.11/0	5.01/0	4.98/0	4.98/0
FUG–02	Emission Reductions from Active Draining of Liquid Products	SCAQMD	1995	1996–1996	5.08/0	5.52/0	5.73/0	5.49/0	5.05/0	4.76/0
FUG–03	Further Emission Reductions from Floating Roof Tanks	SCAQMD	1996	1998–1998	0/0	0/0	0/0	0/0	0/0	0/0
FUG–04	Further Emission Reductions of Fugitive Emissions	SCAQMD	1997	2000–2010	0/0	0/0	.75/0	.75/0	.75/0	.75/0
RFL–01	Emission Reductions from Utility Engine Refueling Operations	SCAQMD	1997	2000–2010	0/0	0/0	.04/0	.04/0	.05/0	.06/0
RFL–02	Further Emission Reductions from Gasoline Dispensing Facilities.	SCAQMD	1995	1996–1997	1.96/0	4.94/0	5.06/0	5.2/0	5.44/0	5.58/0
RFL–03	Emission Reductions from Pleasure Boat Fueling Operations	SCAQMD	1995	1996–1996	.74/0	.77/0	.80/0	.83	.86/0	.88/0
CMB–01A	Control of Emissions from Miscellaneous Combustion	SCAQMD	1997	1998–2000	0/0	0/.75	0/.79	0/.87	0/.89	0/.97
CMB–01B	Control of Emissions from Small Boilers and Process Heaters	SCAQMD	1997	1998–2000	0/0	0/.12	0/.26	0/.26	0/.28	0/.28
CMB–01C	Control of Emissions from Curing and Drying Ovens	SCAQMD	1997	1998–2000	0/0	0/.45	0/.47	0/.52	0/.53	0/.57
CMB–01D	Control of Emissions from Afterburners	SCAQMD	1997	1998–2000	0/0	0/0	0/.52	0/.55	0/.60	0/.65
CMB–01E	Control of Emissions from Metal Melting Furnaces	SCAQMD	1997	1998–2000	0/0	0/0	0/.06	0/.06	0/.06	0/.08
CMB–01F	Further Emission Reductions from Internal Combustion Engines	SCAQMD	1997	1998–2008	0/0	3.36/4.91	3.79/4.64	4.31/3.78	4.71/2.46	4.81/1.4
CMB–02A	Control of Emissions from Miscellaneous Combustion	SCAQMD	1997	1998–2000	0/0	0/3.87	0/4.21	0/4.56	0/4.92	0/5.16
CMB–02B	Control of Emissions from Small Boilers and Process Heaters	SCAQMD	1997	1998–2000	0/0	0/1.34	0/2.98	0/3.19	0/3.40	0/3.55
CMB–02C	Control of Emissions from Curing and Drying Ovens	SCAQMD	1997	1998–2000	0/0	0/1.11	0/1.08	0/1.15	0/1.21	0/1.26
CMB–02F	Further Controls of Emissions from Internal Combustion Engines.	SCAQMD	1997	1998–2008	0/0	1.52/6.83	1.74/6.62	1.99	2.19	2.29/2.20
CMB–03	Area Source Credits for Commercial and Residential Combustion Equipment.	SCAQMD	1995	1997–2000	0/0	0/0	0/0	0	0	0
CMB–04	Area Source Credits for Energy Conservation	SCAQMD	1995	1997–2000	0/0	0/0	0/0	0	0	0
CMB–05	Clean Stationary Fuels	SCAQMD	1995	1996–2008	0/0	1.22/1.01	2.27/1.76	3.53	3.99	4.09
CMB–06	Emission Standard for New Residential and Commercial Water Heaters.	SCAQMD/ local govts	1994	1996–2002	0/.56	0/2.28	0/7.21	0	0	0
CMB–07	Emission Reductions from Petroleum Refinery Flares	SCAQMD	1997	1999–1999	0/0	0/0	0/0	0	0	0
CMB–10	Emission Reductions from Glass Melting Furnaces (Non-RECLAIM).	SCAQMD	1995	1998–1998	0/0	0/.41	0/.42	0	0	0
CMB–11	Emission Reductions from Non-RECLAIM Incinerators	SCAQMD	1995	1996	0/.64	0/.72	0/.68	0	0	0
MSC–01	Promotion of Lighter Color Roofing and Road Materials and Tree Planting.	SCAQMD/ local govts		1996–1998	0/0	0/0	0/0	0/0	0/0	0/0
MSC–02	In-Use Compliance Program for Air Pollution Control Equipment.	SCAQMD	1996	1997–1997	0/0	0/0	0/0	0/0	0/0	0/0
PRC–02	Further Emission Reductions from Bakeries	SCAQMD	1996	1998–2001	0/0	.24/0	.64/0	.68/0	.72/0	.75/0
PRC–03	Emission Reductions from Restaurant Operations	SCAQMD	1994	1996–2001	1.23/0	8.55/0	10.77/0	11.14/0	11.49/0	11.7/0
PRC–04	Emission Reductions from Rubber Products Manufacturing	SCAQMD	1996	1997–1997	0/0	.13/0	.13/0	.13/0	.13/0	.13/0
PRC–05	Emission Reductions from Malt Beverage Production Facilities and Wine or Brandy Making Facilities.	SCAQMD	1996	1997–1997	0/0	0/0	0/0	0/0	0/0	0/0
SIP–01	SIP Amendments—for Miscellaneous Sources	SCAQMD	(1)	1998–1998	0/0	.06/0	.06/0	.06/0	.05/0	.05/0
WST–01	Emission Reductions from Livestock Waste	SCAQMD	1995	1996–2003	5.63/0	8.39/0	8.86/0	9.31/0	9.77/0	10.07/0
WST–02	Emission Reductions from Composting of Dewatered Sewage Sludge.	SCAQMD	1997	1998–2000	0/0	0/0	0/0	0/0	0/0	0/0
WST–03	Waste Burning		1996	1998–1998	.7/0	.7/0	.7/0	.6/0	.06/0	.06/0
WST–04	Disposal of Materials Containing Volatile Organic Compounds		1996	1998–2001	0/0	.8/0	2.12/0	2.21/0	2.31/0	2.37/0
TCM–01	Transportation Improvements	SCAG	1997	2000–2010	0/0	0/0	0/0	0/0	0/0	0/0
ISR–01	Special Event Centers (SCAG Measure TCM #10)	SCAQMD/ local govts	1995	1997–2010	.9/1.03	.77/.84	1.4/1.67	1.07/1.43	.81/1.26	1.33/2.27

SOUTH COAST LOCAL CONTROL MEASURES—Continued

[Tons per day of VOC/NO_X]

Control measure No.	Control measure title	Implementing agency	Adoption date	Implementation dates	1996	1999	2002	2005	2008	2010
ISR–02	Shopping Centers (SCAG Measure TCM #11)	SCAQMD/ local govts	1996	1997–2010	0/0	1.36/1.5	2.30/2.73	1.75/2.35	1.34/2.07	1.69/2.89
ISR–03	Registration and Commercial Vehicles (SCAG Measure TCM #12).	SCAQMD	1995	1997–2000	0/0	0/0	0/0	0/0	0/0	0/0
ISR–04	Airport Ground Access (SCAG Measure TCM #13)	SCAQMD/ local govts	1997	1999–2010	0/0	.38/.42	.77/.92	.59/.79	.45/.7	.38/.65
ISR–05	Trip Reduction for Schools (SCAG Measure TCM #14)	SCAQMD/ local govts	1995	1997–2010	0/0	.21/.24	.47/.63	.46/.72	.35/.64	.38/.74
ISR–06	Enhanced Rule 1501 (SCAG Measure TCM #15)	SCAQMD/ local govts	1996	1997–2000	0/0	2.86/3.15	3.01/3.59	2.30/3.08	1.75/2.72	1.48/2.51
ISR–07	Parking Cash-Out (SCAG Measure TCM #16)	SCAQMD/ local govts	1995	1995–1997	.2/.22	.17/.17	.13/.14	.10/.12	.08/.11	.06/.1
MON–01	Emission Reduction Credits for Low-Emission Retrofit Fleet Vehicles.	SCAQMD/ CARB	1996	1996–2010	0/0	0/0	0/0	0/0	0/0	0/0
MON–02	Eliminate Excessive Car Dealership Vehicle Starts; Educational	SCAQMD/ local govts	.....	.....	0/0	0/0	0/0	0/0	0/0	0/0
MON–04	Eliminate Excessive Curb Idling; Educational	SCAQMD/ local govts	.....	.....	0/0	0/0	0/0	0/0	0/0	0/0
MON–05	Emissions Reduction Credit for Heavy-Duty Buses	SCAQMD	1995	1995–2010	0/0	0/0	0/0	.12/.65	.11/.65	.11/.65
MON–06	Emissions Reduction Credit for Heavy-Duty Trucks	SCAQMD	1995	.....	0/0	0/0	0/0	0/0	0/0	0/0
MON–07	Emission Reductions for High Emitters	SCAQMD	1995	1996–1999	25.54/0	5.15/0	0/0	0/0	0/0	0/0
RME–01	Regional Mobility Adjustment	.....	.....	.....	2.37/0	11.3/1.15	15.98/6.58	18.5/13.74	20.64/21.77	22.26/27.67
MOF–03	Emission Reduction Credits for Leaf Blowers	SCAQMD/ local govts	1995	1996–2010	0/0	0/0	0/0	0/0	0/0	0/0
MOF–04	Off-Road Mobile Source Emission Reduction Credit Programs	SCAQMD	1995	1996–2010	0/0	0/0	0/0	0/0	0/0	0/0
ATT–01	Telecommunications	SCAQMD/ SCAG/ local govts	.....	1995–2010	0/0	0/0	0/0	0/0	0/0	0.0
ATT–02	Advanced Shuttle Transit	SCAQMD/ SCAG/ local govts	.....	1995–2010	0/0	0/0	0/0	0/0	0/0	0/0
ATT–03	Zero Emission Vehicle/Infrastructure	Partnership	.....	1995–2010	0/0	0/0	0/0	0/0	0/0	0/0
ATT–04	Alternative Fuel Vehicles/Infrastructure	Partnership	.....	1995–2010	0/0	0/0	0/0	0/0	0/0	0/0
ATT–05	Intelligent Vehicle Highway Systems	SCAQMD/ SCAG/ local govts	.....	1995–2010	0/0	0/0	0/0	0/0	0/0	0/0
MKT–01	Emission/VMT	SCAG	.....	2008–2010	0/0	0/0	0/0	0/0	0/0	0/0
MKT–02	At-the-Pump Fee	SCAG	.....	2008–2010	0/0	0/0	0/0	0/0	0/0	0/0
FSS–01	Stage I Episode Plans	SCAQMD	.....	2005–2010	0/0	0/0	0/0	0/0	0/0	0/0
ADV–CTS–01	Advanced Technology—Coating Technologies	SCAQMD	.....	.....	0/0	0/0	0/0	0/0	14.35/0	23.88/0
ADV–FUG	Advanced Technology—Fugitive Emission Controls	SCAQMD	.....	.....	0/0	0/0	0/0	0/0	14.13/0	23.11/0
ADV–PRC	Advanced Technology—Process Related Emissions	SCAQMD	.....	.....	0/0	0/0	0/0	0/0	7.55/0	12.27/0
ADV–UNSP	Advanced Technology—Unspecified Stationary Source Controls	SCAQMD	.....	.....	0/0	0/0	0/0	0/0	39.45/0	66.97/0
ADV–CTS–02	Advanced Technology—Coating Technologies	SCAQMD	.....	.....	0/0	0/0	0/0	0/0	0/0	54.69/0

[1] Various.

(2) EPA Action

EPA proposes to approve, under sections 110(k)(3) and 301(a) of the Act, the control measures, including the commitment of the SCAQMD to adopt and implement rules by scheduled dates to achieve specified emission reductions. EPA action on the SCAQMD's adopted regulations will be taken in separate rulemakings following their submittal as SIP revisions.

The SCAQMD is currently considering adoption of a revised regulatory agenda that shifts to 1996 all rule adoption dates that have lapsed. In the final action on the South Coast SIP, EPA intends to approve substitute dates if adopted by the SCAQMD and submitted as a SIP revision before EPA's final action on the ozone SIP. The amended schedule must be accompanied by a demonstration that this revision would not interfere with any applicable requirement of the Act. Unless the amended schedule and demonstration are submitted, EPA cannot approve and credit the measures whose adoption dates have passed.

EPA wishes to encourage the SCAQMD to pursue the most aggressive possible implementation of the AQMP, which remains an otherwise valid and critically important blueprint for progress and eventual attainment of the ozone NAAQS. EPA emphasizes that the failure of the SCAQMD to adopt most of the rules scheduled for adoption in 1995 is not evidence either that the AQMP is impractical or that the SCAQMD has failed in meeting its overall commitment to air quality progress. The AQMP needs amendment at this time only to replace the initial AQMP adoption dates with an updated timetable for rule adoption.

d. ROP Provisions.

(1) ROP Emission Targets

The 1994 SIP describes the VOC emission reductions needed to meet ROP requirements based on South Coast's adjusted 1990 base year inventories.[31] The SIP also provides emission estimates for the ROP milestone years by projecting the impacts of adopted control measures and of anticipated changes in population, industrial activity, and other socio-economic factors. A summary of the ROP VOC targets and the projected VOC emissions is provided below in the table labeled, ''South Coast ROP Forecasts.'' [32]

SOUTH COAST ROP FORECASTS

[In tons per summer day]

	1996	1999	2002	2005	2008	2010
VOC emissions to meet ROP target	1074.4	976.6	846.6	732.2	617.6	544.1
VOC emissions with plan reductions	1066.4	976.6	846.6	732.2	470.0	312.8

(2) 15% ROP Control Strategy

In general only adopted measures may generally be credited towards the 15% ROP requirement. In addition, pre-1990 Federal motor vehicle emission controls, Federal RVP limits on gasoline, and several other existing measures cannot be credited in ROP plans. The control strategy for the 15% ROP requirement, therefore, includes all VOC control measures listed above, except for those showing no emission reductions in the 1996 column.

(3) Post-1996 ROP Control Strategy

The post-1996 ROP control strategy includes all those measures listed in above, except for those showing no emissions for the ROP milestone years. As discussed, the SIP identifies no surplus measures for the post-1996 ROP requirements. Therefore, all of the VOC emission reductions in the post-1996 ROP control strategy are needed to meet the post-1996 ROP requirements.

(4) EPA Action

EPA believes that the South Coast component of the 1994 SIP meets the CAA requirements for ROP. EPA is, therefore, proposing to approve South Coast's 15% ROP and post-1996 ROP plans under sections 182(b)(1) and 182(c)(2) of the Act.

e. Demonstration of Attainment. The Los Angeles-South Coast Air Basin Area is classified as an extreme nonattainment area for ozone. As a result, the SIP must contain adequate control measures and commitments to demonstrate attainment of the ozone NAAQS by 2010.

(1) Control Strategy

The control strategy for South Coast's SIP attainment demonstration includes all of the State and local measures identified above. Among those measures are several ''new-technology'' measures, which are needed to achieve reductions beyond what could be accomplished with existing control technologies or control techniques.

The 1990 Amendments to the Act added section 182(e)(5), which applies exclusively to extreme ozone areas. This provision authorizes the State to use conceptual, as yet unadopted measures for its ozone attainment demonstration and ROP after the year 2000, if these measures anticipate new or improved technology or control techniques, the measures are not needed to meet the progress requirements for the first 10 years, and the State commits to submit contingency measures to be implemented if the anticipated technologies do not achieve planned reductions.

CARB and the SCAQMD included with their new-technology measures commitments to submit contingency measures and a demonstration that reductions from the CARB and SCAQMD new-technology measures are not needed to achieve the first 10 years of required progress. Because the section 182(e)(5) approval criteria are met by both the CARB and SCAQMD submittals, EPA issued final approval of the new-technology measures on August 21, 1995. See 60 FR 43379 for further details on the new-technology control measures and EPA's action on them. EPA has therefore already approved and credited the following SCAQMD and CARB new-technology provisions.

Because much of the needed reductions in the 1994 South Coast plan is now assigned to these conceptual measures, air quality progress in future years requires substantial State and local staff and resource investment at this time to lay the foundations for the necessary advances in control technology or control techniques. EPA urges both CARB and the SCAQMD to set out the timing and stages of projected control measure development, and to involve the public and the

[31] See 1994 AQMP, Appendix I–C.

[32] See 1994 AQMP, Appendix I–C, Table 3–4, and Attachment A. The AQMP also calculates a ROP target for NO_X and computes ROP emissions reductions for NO_X, but the AQMP depends upon NO_X substitution only for the 1999, 2002, and 2005 ROP milestones.

regulated community in a process by which they can understand and contribute to the Agency's steady progress in developing the control approaches. The SCAQMD's annual report to the California Legislature is one mechanism for displaying the District's technology advancement projects and ensuring that necessary resource needs are identified.

Finally, EPA also encourages both CARB and the SCAQMD to reduce the dimensions of the section 182(e)(5) component of the plan by substituting near-term control regulations as soon as these controls can be identified, developed, and adopted. Such action not only comports with the Act's requirements for attainment ''as expeditiously as practicable'' (see, for example, section 181(a)(1)) but also accelerates air quality progress in the interim, both within the SCAB and in downwind nonattainment areas.

SCAQMD New-Technology Measures

Advance Tech–CTS (Coating Technologies), ADV–CTS–01, adoption 2003, 23.9 tpd ROG;

Advanced Tech-Fugitives, ADV–FUG, adoption 2003, 23.1 tpd ROG;

Advance Tech-Process Related Emissions, ADV–PRC, adoption 2003, 12.3 tpd ROG;

Advance Tech-Unspecified, Stationary Sources, ADV–UNSP, adoption 2003, 67 tpd ROG;

Advance Tech–CTS (Coatings Technologies), ADV–CTS–02, 54.7 tpd ROG.

CARB New-Technology Measures

Improved Control Technology for LDVs, M–2, adoption 2000, implementation 2004–5, 2010 emission reductions—10 tpd ROB, 15 tpd NO_X;

Off-road diesel equipment—2.5 g/bhp-hr NO_X standard, M–9, adoption 2001, implementation 2005, 2010 emission reductions—3 tpd ROG, 31 tpd NO_X;

Consumer products advanced technology and market incentives measures, CP–4, adoption 2005, implementation 2009, 2010 emission reductions 46 tpd ROG;

Additional measures, 2010 emission reductions 79 tpd ROG, 60 tpd NO_X. The measures include possible market-incentive measures and possible operational measures applicable to heavy-duty vehicles.

(2) Modeling and Attainment Demonstration

The 1994 SIP describes urban airshed modeling analysis performed to demonstrate that the control strategy described above will result in NAAQS attainment. A summary of the emission reductions needed to attain the standard is provided below in the table labeled, ''Emission Reductions Needed in South Coast.''

EMISSION REDUCTIONS NEEDED IN SOUTH COAST

[Tons per summer day]

	VOC	NO_X
1990 Baseline Emissions Inventory	1517	1361
Carrying Capacity	323	553
Reductions Needed	1194	808

A summary of the emission reductions projected from the SIP control strategy is provided below in the table labeled, ''South Coast Attainment Demonstration.''

SOUTH COAST ATTAINMENT DEMONSTRATION

[Tons per summer day)

	VOC	NO_X
Reductions from Adopted measures	463	429
Committed Local measures	453	43
Committed State measures	231	227
Assigned Federal measures	47	109
Total	1194	808

The SIP attainment demonstration was based on a modeling simulation of 4 episodes of high ozone from the 1987 intensive air quality study. In addition, one episode of very high ozone (.36 ppm) on June 5–7, 1985 was selected. The September 5–7, 1987 episode represents typical high ozone episode, with a peak concentration of .33 ppm. The Urban Airshed Model was used to model air quality. The wind field were generated using the EPA Diagnostic Wind Model.

The model application does not meet all EPA performance criteria with the unadjusted mobil source inventory. The base case indicates a bias of -25% to -71%, indicating that the model tends to underpredict the peak ozone concentration. In the sensitivity analysis with the motor vehicle emission inventory increased by a factor of two, the model performance is enhanced. The model predicts higher ozone values for both the base and future years. Under the proposed emission reduction strategy but with the grown motor vehicle inventory, the model still predicts attainment of the standard by 2010.

Key uncertainties in the modeling analysis include mobile source and biogenic emission inventory uncertainties. A 1997 field study designed to study air quality in the Southern portion of the state of California should improve the performance of the model. The model inputs and performance are discussed in greater detail in the TSD.

(3) EPA Action

Despite the stringent existing State and local regulations and the ambitious commitments by CARB and SCAQMD, the ozone attainment demonstration for the SCAB is insufficient as submitted by the State since, without any fall back State commitments, it depends upon additional reductions, stemming from assignments to EPA to establish specific future controls on national and international mobile sources and EPA is not obligated by statute or court order to do so. As discussed above, EPA has concluded that, while credit may be taken for those national rules that are statutorily mandated, EPA does not propose to credit the California SIP with Federal controls that are discretionary. With respect to the South Coast SIP, the table titled ''Federal Assignments in the California SIP for the South Coast'' indicates what emission reductions are assigned by the State to EPA for discretionary rules.

FEDERAL ASSIGNMENTS IN THE CALIFORNIA SIP FOR THE SOUTH COAST

[Reductions from discretionary national measures]

SIP measure	SIP 2010 reductions	
	ROG	NO_X
M6—heavy-duty diesel vehicles (2.0 g/bhp-hour NO_X standard)	1.5	15.5
M10—nonroad diesel equipment (2.5 g/bhp-hour NO_X standard)	5.3	44.2
M12—industrial equipment, gas and LPG	25.1	12.6
M13—marine vessels [1]	0	1.7
M14—trains [2]	0	7.2
M15—planes	2.7	4.1
Total Reductions	34.6	85.3

[1] SIP Measure M13 includes both the statutorily-mandated ship controls and discretionary controls on ocean-going ships. The emissions reductions shown are those beyond what EPA estimates from the statutorily-mandated ship controls, which were proposed on November 9, 1994 (59 FR 55930).

[2] The SIP includes in Measure M14 both the statutorily-mandated national locomotive emission standards and additional reductions to be achieved in the South Coast through a provision that requires that by 2010 the locomotive fleet in the SCAB will emit on average no more than the 2005 emissions level for new locomotives. The emission reductions shown are those specific to the South Coast, in excess of reductions that would result from the national standards alone.

The unusually high emissions associated with these sources in the SCAB is in part a reflection of the South Coast's dominant role as a Pacific Rim trade center, heavily dependent upon every form of goods transportation. For example, the Ports of Long Beach and Los Angeles, now the busiest ports in the nation, annually move goods valued at almost $150 billion, using a complex intermodal network of ships, trains, trucks, airplanes, and every variety of loading and handling equipment.

While stationary, area source, and light- and medium-duty vehicle emissions are projected to decline very significantly as a result of State and local control measures applicable in the SCAB, emissions from the remaining mobile source categories are predicted to increase substantially through the attainment year in the absence of further controls.

EPA and CARB are already engaged in a cooperative process involving engine manufacturers and other stakeholders to review the potential for establishing standards for new heavy-duty motor vehicle engines, heavy-duty nonroad engines, and controls or prohibitions on fuels and fuel additives, in accordance with the terms of EPA's authority in sections 202(a)(3), 213, and 211(c) of the Act. This process of evaluating the appropriateness of new national standards and issuing standards in formal rulemaking is not expected to be concluded until mid-1997.

Moreover, international standard setting is now in progress under the jurisdiction of the International Maritime Organization and the International Civil Aviation Organization relating to ocean-going ships and commercial aircraft, respectively. Again, by mid-1997 greater certainty is expected regarding any new international emissions control standards and the degree to which these standards would affect predicted levels of SCAB emissions in 2010.

In view of the unique relevance to the SCAB of these ongoing standard-setting projects, EPA believes that it is appropriate to examine further the extent to which specific additional mobile source controls might contribute to ozone attainment in the SCAB. Through June 1997, EPA will continue to engage in a consultative process with CARB, the SCAQMD, and other stakeholders to examine the potential for additional mobile source controls that can contribute to progress and attainment. This review will focus not only on unilateral Federal controls but also on the potential for cooperative and community-based controls that reconcile, to the greatest extent practicable, State/local interests and the legitimate concerns of interstate and international commerce. EPA expects that the Agency and the State entities will continue to work cooperatively to identify additional measures that are appropriate and feasible for each party to pursue. As discussed above in section II.B.2., EPA proposes to make an enforceable commitment to undertake rulemakings, after the consultative process, on control measures needed to achieve the emission reductions which are determined to be appropriate for EPA.

EPA proposes to approve the South Coast attainment demonstration if CARB submits, before EPA's final action, an enforceable SIP commitment to adopt and submit as a SIP revision:

(a) A revised attainment demonstration for the South Coast as appropriate after the consultative process. This SIP revision would be due December 31, 1997; and

(b) Enforceable emission limitations and other control measures needed to achieve the emission reductions which are determined to be appropriate for the State. This SIP revision would be due no later than December 31, 1999.

EPA believes that this gap-filling commitment and schedule for additional SIP submissions for the SCAB is a reasonable application of the Clean Air Act requirements for SIP submissions to the current circumstances. EPA is mindful of the requirement in Clean Air Act section 182(c)(2)(A) for submission of an attainment demonstration by November 15, 1994. The SCAB has submitted modeling coupled with SIP measures and commitments that provide the great bulk of reductions needed for attainment. Granting additional time, as described above, for the remaining measures is consistent with the statutory scheme because the time delays are brief, in the context of the SCAB attainment process, and EPA intends to ensure that there will be no adverse impact on progress, attainment, or any other Part D requirement as a result of the extended deadlines. EPA wishes to emphasize that the South Coast attainment demonstration is clearly dependant on the ability of the State and local agencies to faithfully adhere to their rule adoption schedule. Their failure to do so will clearly jeopardize the attainment demonstration no matter what resolutions are achieved through the consultative process.

The South Coast attainment demonstration relies, in part, on reductions from a fully-enhanced I/M program. As discussed in EPA's proposed approval of California's enhanced I/M program (see section II.A.2.c.), credits associated with this control measure will become permanent following the State's submission of the required analysis demonstrating that the enhanced I/M program is achieving the emission reductions claimed in the attainment demonstration. At that point, EPA's approval of the South Coast attainment demonstration will also become permanent.

EPA believes that the current modeled attainment demonstration is valid insofar as it projects attainment by the statutory attainment date. EPA proposes to approve the modeling analysis at this time.

f. Overall EPA Action. EPA proposes to approve the South Coast ozone SIP with respect to the Act's requirements for emission inventories and demonstrations of 15% ROP and post-1996 ROP. EPA also proposes to approve the State and local control measures and the modeling analysis. With respect to the attainment demonstration, EPA proposes to approve the attainment demonstration portion of the SIP if the State submits, before EPA's final action on the ozone SIP, a commitment to adopt a revised attainment demonstration and gap-filling measures, if any are necessary after EPA's consultative process.

8. Southeast Desert

a. Identification of Plans. The Southeast Desert Modified Air Quality Maintenance Area (''Southeast Desert'') is classified as a severe-17 area based on a .24 ppm ozone design value measured in Banning. Section 181(a)(2) of the Act

establishes a severe-17 classification for severe areas with a 1988 ozone design value between .19 ppm and .28 ppm, allowing these areas 17 years (rather than 15 years) to attain the ozone NAAQS. The Southeast Desert covers the Victor Valley/Barstow region in San Bernardino County (''Mojave''), the Coachella Valley/San Jacinto region in Riverside County (''Coachella''), and the Antelope Valley region in Los Angeles County (''Antelope''). The first of these areas is the responsibility of the Mojave Desert Air Quality Management District (MDAQMD). The second and third areas are the responsibility of the SCAQMD. Separate ROP and attainment demonstrations were prepared for each of the areas. Air quality in all three areas is overwhelmingly impacted by transport of ozone and ozone precursors from the South Coast Air Basin.

On September 9, 1994, the SCAQMD Governing Board adopted the 1994 Air Quality Management Plan for the Coachella-San Jacinto Planning Area (Appendix I–B of the South Coast 1994 AQMP) and the 1994 Air Quality Management Plan for Antelope Valley (Appendix I–A of the South Coast 1994 AQMP).[33] On October 26, 1994, the MDAQMD Board adopted the post-1996 Attainment Demonstration and Reasonable Further Progress Plan for the San Bernardino County Portion of the Southeast Desert AQMA, and the Rate-of-Progress Plan for the San Bernardino County Portion of the Southeast Desert AQMA.[34]

b. 1990 Base Year Inventories. The SIP provides detailed estimates of the actual VOC and NO_X emissions that occurred in 1990 in each of the three portions of the Southeast Desert. These base year inventories are summarized in the table labeled ''1990 Southeast Desert SIP Inventories.'' More detailed inventory breakdowns appear in Chapter 3 of Appendix I–B of the South Coast 1994 AQMP (Coachella), Chapter 3 of Appendix I–A of the South Coast 1994 AQMP (Antelope), and Appendix A of the Mojave RFP Plan.

1990 SOUTHEAST DESERT SIP INVENTORIES

[Tons per summer day]

Category	Coachella		Antelope		Mojave	
	VOC	NO_X	VOC	NO_X	VOC	NO_X
Stationary	12.4	3.1	15.7	1.9	20.0	51.6
Mobile	36.9	41.1	19.2	26.2	26.5	62.0
Total	49.4	44.3	34.9	28.1	46.5	113.6

c. SIP Control Measures.

(1) Description

The SCAQMD's existing rules and committal measures apply not only throughout the South Coast Air Basin but also in the SCAQMD's portions of the Southeast Desert. The SIP includes the State measures and a subset of the SCAQMD measures discussed above in sections II.A. and II.C.7., but does not add to that list any unique State or local controls for the Coachella and Antelope regions. The MDAQMD included in the Mojave Plan the measures listed below as well as several mobile source measures taken from EPA's Federal Implementation Plan (FIP) for the South Coast. CARB eliminated the FIP measures from the State's submittal.

MOJAVE SIP CONTROL MEASURES AND VOC/NO_X REDUCTIONS

[In Tons/day for 1996]

MDAQMD measure	VOC	NO_X
Rule 1113 Architectural Coatings	0.92	.....
Rule 1160 Internal Combustion Engines	0.23	6.08
Rule 461 Gasoline Transfer Dispensing	3.74	.....

(2) EPA Action

EPA proposes to approve the control measures portion of the Mojave plan under sections 110(k)(3) and 301(a) of the Act as strengthening the SIP.

d. ROP and Attainment Provisions.

(1) ROP and Attainment Emission Targets

CARB's summary of ROP targets in Volume IV of the 1994 California Ozone SIP identifies the following 15% ROP targets for the three subregions within the Southeast Desert: Coachella 38 tpd VOC, Antelope 29 tpd VOC, Mojave 36 tpd VOC. CARB did not provide similar information with respect to post-1996 ROP or attainment.

(2) State Approach

The SIP submittal for the three subregions includes detailed information relating to compliance with the 15% ROP plan requirements. With respect to the post-1996 ROP requirements, CARB and the SCAQMD requested a waiver from the requirements for the Coachella and Antelope subregions, based on the provisions of section 182(c)(2)(B)(ii) of the Act, which allows the Administrator to approve post-1996 ROP plans that achieve less than the 3% per year required reductions if the State demonstrates that the plan includes all measures that can be feasibly implemented in the area, including all measures achieved in practice by sources in the same source category in nonattainment areas of the next higher classification. CARB also asserted that

[33] November 15, 1994 letter from Jacqueline Schafer, CARB, to Felicia Marcus, EPA, forwarding the 1994 California Ozone SIP. The SIP includes a November 15, 1994 letter from James Boyd (CARB) to Felicia Marcus, EPA, forwarding the South Coast AQMP component of the SIP and CARB Board Resolution No. 94–61 approving the South Coast component. The South Coast component includes an October 6, 1994 letter from James M. Lents (SCAQMD) to James Boyd (CARB) forwarding the 1994 South Coast AQMP and the SCAQMD Board Resolution 94–36 approving the AQMP. On November 15, 1993, CARB submitted to EPA a rate-of-progress plan intended to demonstrate that 1990 VOC emissions would be reduced by at least fifteen percent by 1996 pursuant to Section 182(b)(1) of the Act. On April 13, 1994, EPA determined that this ROP plan was incomplete because it relied on controls not yet adopted in regulatory form. The 1994 SIP updates South Coast's 1993 ROP plan in order to correct this deficiency.

[34] November 15, 1994 letter from James Boyd (CARB) to Felicia Marcus, EPA, forwarding the MDAQMD portion of the SDMAQMA ozone SIP and CARB Resolution No. 94–64 approving the Mojave Desert Plan. Among other things, this submittal modifies an earlier 15% Reasonable Further Progress Demonstration, adopted on March 23, 1994. EPA deemed this earlier SIP submittal incomplete on April 13, 1994.

the post-1996 ROP requirements should be waived in all three subregions based simply on the overwhelming transport into the Southeast Desert (1994 California Ozone SIP, Volume IV, pp. IV–16 and IV–17).

In submitting the ROP and attainment demonstration plans for the Southeast Desert, CARB asserted that ''the stringency of the NO_X and VOC precursor control strategy necessary for the district to meet the 1994 ozone planning requirements for attainment and rate of progress demonstrations is primarily dependent upon the severity of the problem in the South Coast, as well as the mix and location of sources which contribute to ozone precursor concentrations and the timing and stringency of previously adopted controls in that area.'' (CARB Resolution No. 94–64, ¶ 4)

The three local plans provide further documentation of the overwhelming transport from the South Coast Air Basin. In the case of the Coachella area, ozone and ozone precursors are transported by the prevailing sea breeze through San Gorgonio (or Banning) pass. The Antelope area is impacted by polluted air masses passing northward through the Newhall and Soledad pass. The Mojave portion of the nonattainment area is a vast, sparsely-populated high desert region, at a greater distance from, but still strongly affected by, SCAB emissions to the west and southwest.

CARB and the local agencies believe that the Southeast Desert will attain the NAAQS by the 2007 deadline by virtue of the successful implementation of the South Coast plan. The Mojave plan includes further information to support MDAQMD's conclusion that opportunities for further VOC and NO_X reductions within the area are greatly limited by the absence of significant sources of anthropogenic emissions in the area, and the current degree of control imposed upon those sources.

(3) Modeling and Attainment Demonstration

Photochemical grid modeling was required for the attainment demonstration for the Southeast Desert Basin, because of the area's severe-2 classification. Because of the relatively important role of the western boundary conditions, it was determined that modeling the SEDAB basin along with the South Coast Air Basin was preferable to modeling the SEDAB basin alone.

Therefore, the attainment demonstration was performed by the SCAQMD, using a domain that includes the South Coast Air Basin, much of the Southeast Desert Basin, and Ventura County. The SCAQMD did not enlarge the domain to include the entire Southeast Desert Basin. Ideally, the domain would cover the entire nonattainment area. However, the portions of the nonattainment area not covered by the domain were expected to be below the NAAQS, when the other portions of the area are able to demonstrate compliance with the standard.

The air quality results for the year 2007 projected inventories were determined for the purpose of analyzing the ability of the Southeast Desert to attain by the severe-2 attainment date. Five episodes were modeled for the attainment demonstration. The episode selection process was determined by the availability of an enhanced data base of air quality and meteorological data, generated primarily by the 1987 South Coast Air Quality Study. Since the modeling was performed for the SCAB, the primary criteria for episode selection was the presence of high ozone in the SCAB, rather than high ozone in the Southeast Desert. The highest level of ozone recorded in the Mojave Desert for the five episodes was .15 ppm, compared to a design value of .24 ppm. Because of the high level of resources required to compile the necessary air quality, emissions inventory, and meteorological data for each episode, EPA accepts the decision not to model an additional episode with higher levels of ozone in the Southeast Desert.

Using the emission reductions from proposed control measures, including South Coast Air Basin emission reductions, the modeling results show that peak predicted ozone concentrations for the year 2007 are below the ozone NAAQS.

In order to improve understanding of the formation of ozone in the SCAB and transport between the South Coast, Southeast Desert, Ventura, and San Diego air basins, a joint study is being planned by the local, State, and Federal agencies, as well as the National Weather Service and the Department of Defense. The purpose of the study is to provide an enhanced data base of air quality and meteorological measurements, both at the surface level and aloft, to allow modeling of more recent episodes and a larger domain than is currently possible.

(4) EPA Action

EPA agrees with the State that attainment of the ozone NAAQS in the Southeast Desert is heavily dependent upon reductions in the South Coast. Modeling information, based on the South Coast UAM analysis, supports the State's contention that reductions from the South Coast SIP (along with SIP reductions within the area) will bring the Southeast Desert into attainment by the statutory deadline. EPA therefore proposes to approve the Southeast Desert modeling and attainment demonstration under section 182(c)(2) of the Act.

e. Overall EPA Action. EPA proposes to approve fully the Southeast Desert ozone SIP with respect to the Act's requirements for emission inventories, control measures, and demonstration of attainment. EPA will take action on the 15% ROP and the post-1996 ROP plan elements for the three Southeast Desert subregions in separate rulemakings.

III. Summary of EPA Actions

EPA proposes to approve the following elements of the 1994 California Ozone SIP for the listed areas, as meeting applicable CAA requirements:

(1) Emission Inventories for Santa Barbara, San Diego, San Joaquin, Sacramento, Ventura, South Coast, and Southeast Desert, under section 182(a)(1) of the CAA.

(2) 15% ROP Plans for Santa Barbara, San Diego, San Joaquin, Ventura, and South Coast, under section 182(b)(1).

(3) Post-1996 ROP Plans for San Diego, San Joaquin, Sacramento, Ventura, and South Coast, under section 182(c)(2)(B) of the CAA.

(4) Modeling and Attainment Demonstrations for Santa Barbara, San Diego, San Joaquin, Sacramento, Ventura, Southeast Desert, and South Coast, under section 182(c)(2) of the CAA.

(5) All of the local control measures listed above in section II.C., for each of the nonattainment areas, including the specific emissions reductions for each milestone year, under sections 110(k)(3) and 301(a) of the CAA. In the case of delinquent control measures in the South Coast, EPA proposes approval only if a revised adoption schedule is submitted.

(6) All of the State's control measures contained in the 1994 California Ozone SIP that EPA has not previously approved: M1—Accelerated Retirement of LDVs, M4—Early Introduction of 2g/bhp-hr Heavy-Duty Diesel Vehicles, M7—Accelerated Retirement of HDVs, CP3—Aerosol Paints, and Pesticides). EPA also proposes to assign specific emissions reductions by nonattainment area and milestone year (as displayed in the tables in section II.A.) for all of the State control measures, including those previously approved under sections 110(k)(3), 182(e)(5), and 301(a) of the

CAA. All of these actions are proposed under sections 110(k)(3) and 301(a) of the CAA.

EPA proposes to approve California's I/M regulations under sections 110(k)(3) and 301(a). EPA also proposes to approve the State's basic I/M program under section 182(b)(4) of the CAA and the enhanced I/M program, including the assignment of specific emissions reductions identified in section II.A.2. above, under section 182(c)(3) of the CAA and section 348(c) of the Highway Act.

EPA will take separate regulatory action on the 15% ROP Plans for Sacramento and the Southeast Desert, and the post-1996 ROP Plan for the Southeast Desert.

Nothing in this action should be construed as permitting or allowing or establishing a precedent for any future request for revision to any SIP. Each request for revision to the SIP shall be considered separately in light of specific technical, economic, and environmental factors and in relation to relevant statutory and regulatory requirements.

IV. Regulatory Process

Under the Regulatory Flexibility Act, 5 U.S.C. 600 et seq., EPA must prepare a regulatory flexibility analysis assessing the impact of any proposed or final rule on small entities. 5 U.S.C. 603 and 604. Alternatively, EPA may certify that the rule will not have a significant impact on a substantial number of small entities. Small entities include small business, small not-for-profit enterprises and government entities with jurisdiction over populations of less than 50,000.

SIP approvals under sections 110 and 301 and subchapter I, part D of the Clean Air Act, do not create any new requirements, but simply approve requirements that the State is already imposing. Therefore, because the Federal SIP approval does not impose any new requirements, it does not have a significant impact on any small entities affected. Moreover, due to the nature of the Federal/state relationship under the Act, preparation of a regulatory flexibility analysis would constitute Federal inquiry into the economic reasonableness of state action. The Act forbids EPA to base its actions concerning SIPs on such grounds. *Union Electric Co.* v. *U.S.E.P.A.*, 427 U.S. 246, 256–66 (S.Ct. 1976); 42 U.S.C. 7410(a)(2).

This action has been classified as a Table 3 action for signature by the Regional Administrator under the procedures published in the Federal Register on January 19, 1989 (54 FR 2214–2225), as revised by a July 10, 1995 memorandum from Mary Nichols, Assistant Administrator for Air and Radiation. The Office of Management and Budget has exempted this regulatory action from Executive Order 12866 review.

V. Unfunded Mandates

Under sections 202, 203, and 205 of the Unfunded Mandates Reform Act of 1995 (''Unfunded Mandates Act'') signed into law on March 22, 1995, EPA must undertake various actions in association with proposed or final rules that include a Federal mandate that may result in estimated costs of $100 million or more to the private sector, or to State, local, or tribal governments in the aggregate.

Through submission of these SIP revisions, the State and any affected local or tribal governments have elected to adopt the program provided for under sections 110 and 182 of the CAA. These rules may bind State, local, and tribal governments to perform certain actions and also require the private sector to perform certain duties. To the extent that the rules being approved today will impose any mandate upon the State, local, or tribal governments either as the owner or operator of a source or as a regulator, or would impose any mandate upon the private sector, EPA's action will impose no new requirements; such sources are already subject to these requirements under State law. Accordingly, no additional costs to State, local, or tribal governments, or to the private sector, result from this action. EPA has also determined that this action does not include a mandate that may result in estimated costs of $100 million or more to State, local, or tribal governments in the aggregate or to the private sector.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Carbon monoxide, Hydrocarbons, Incorporation by reference, Intergovernmental relations, Oxides of nitrogen, Ozone, Reporting and recordkeeping requirements, Volatile organic compounds.

Authority: 42 U.S.C. 7401–7671q.

Dated: March 4, 1996.

Felicia Marcus,

Regional Administrator.

Appendix: Status of EPA'S Activities Relating to the ''Federal Measures'' in the California SIP Submittal

The information below represents the current status of EPA's activities, including ongoing rulemaking, with respect to each of the mobile source categories identified as ''Federal Measures'' in the 1994 California Ozone SIP.

Heavy Duty Diesel Vehicles

Measure M6 of the 1994 California Ozone State Implementation Plan (''the SIP'') provides for adoption by EPA of a Federal oxides of nitrogen (NO_X) standard for new heavy-duty diesel on-highway vehicles. The NO_X standard called for in the SIP is 2.0 grams per brake horsepower-hour (g/bhp-hr), to be implemented beginning in 2004. A Federal standard would help reduce emissions from the large number of out-of-state trucks which operate in California.

EPA is fulfilling its commitment to propose tighter NO_X emission standards for Federal on-highway heavy-duty vehicles as part of the NO_X/PM (particulate matter) Initiative. On July 11, 1995, EPA, the California Air Resources Board (CARB), and the leading manufacturers of heavy-duty engines signed a Statement of Principles (SOP) that established a consensus plan to substantially reduce emissions from future trucks and buses on a nationwide basis. The goal of the SOP is to ensure cleaner air in a manner which is both realistic for the heavy-duty engine industry and responds to environmental needs as well. As a result of the SOP, EPA published an Advanced Notice of Proposed Rulemaking (ANPRM) on August 31, 1995. The ANPRM announced plans to propose a non-methane hydrocarbon (NMHC) plus NO_X standard of 2.4 g/bhp-hr, or a combined NMHC plus NO_X standard of 2.5 g/bhp-hr with an NMHC cap of .5 g/bhp-hr. Engines meeting these future standards are expected to be over 80 percent cleaner than pre-control engines. EPA is currently preparing a Notice of Proposed Rulemaking (NPRM) and expects to publish the NPRM late in the spring of 1996. The Final Rule has a target publication date of winter 1996–1997. The new standards would be implemented beginning in 2004 and would apply to all on-highway heavy-duty engines.

CARB played a very important role in the achievement of the Statement of Principles (SOP). In addition, CARB has given EPA tremendous support in the development of the ANPRM and the NPRM. As a result of the SOP and rulemaking processes, EPA and CARB will have harmonized programs for new heavy-duty engines, an advantage for engine manufacturers.

Off-Road Industrial Equipment (Diesel)

Measure M10 of the SIP provides for adoption by EPA of a Federal NO_X standard for, at a minimum, new farm

and construction equipment with diesel engines rated at less than 175 hp (130 kw). These are the engines which California is preempted from regulating under the 1990 Clean Air Act Amendments. The NO_X standard called for in the SIP is 2.5 g/bhp-hr (3.3 g/kw-hr), to be implemented beginning in 2005.

In its 1991 Nonroad Study, EPA determined that nonroad diesel engines rated at 37 kw and more, including those covered in SIP measure M10, emit a substantial portion of the nation's NO_X inventory. In response, EPA set a 9.2 g/kw-hr NO_X standard for these engines in 1994, to be phased-in beginning in 1996. The Agency also expressed its intent to undertake a second tier of standard setting to further control these emissions. The Clean Air Act provides for this as a discretionary effort and contains no requirements or guidance regarding the level or timing of the standards.

Initial work on this second tier of standard setting is currently underway as part of the NO_X/PM Initiative. The NO_X/PM Initiative has been a joint program of both EPA and CARB. EPA and CARB recognize that harmonizing Federal and California standards would help to achieve air quality goals in all states by eliminating the potential for equipment with higher-emitting engines being transported across state borders. Harmonized standards would also have obvious advantages for manufacturers. The participation of CARB staff on this initiative has been invaluable.

At this time, no decisions have been made regarding the level of the second tier of Federal standards. Although substantial NO_X reductions are being pursued, there is no assurance that setting a standard as low as 3.3 g/kw-hr in the 2005 timeframe will be the most appropriate approach nationwide. A number of issues are likely to make it difficult to set standards at such a level. Among these issues is the strong desire by engine manufacturers for harmonization with European nonroad equipment standards which are considerably less stringent than the levels contained in the SIP. Another issue is the effect that significant engine technology changes due to standards could have on equipment designs. In order to fit redesigned engines into their equipment, manufacturers may need to modify many of their products to meet visibility, safety and performance specifications which may require additional leadtime. Regardless of these issues, EPA is committed to pursuing a second tier of standards for the heavy-duty diesel nonroad engines covered by this measure.

Gas and LPG Equipment 25–175 Horsepower

Measure M12 of the SIP provides for adoption by EPA of a Federal program that will implement three-way catalyst technology on new nonroad equipment powered by gasoline or liquefied petroleum gas (LPG) engines rated at between 25 hp (18 kw) and 175 hp (130 kw). The goal of this measure is to reduce NO_X emissions by at least 50 percent and hydrocarbon emissions by 75 percent. This is a complementary measure to measure M10 and much of the discussion of that measure applies here as well.

EPA does not currently have any emission standards for gasoline or LPG engines in this category. However, under a consent decree signed by EPA with the Sierra Club on June 10, 1993, EPA agreed to determine by November 30, 1996 whether or not to regulate large gasoline nonroad engines and, if so, by what schedule. At this time, the Agency is considering setting standards for these engines as part of the NO_X/PM Initiative. However, no decisions have been made regarding the possible level of any standards. Although substantial emission reductions may be pursued, there is no assurance that setting standards as low as those sought by CARB would be the most appropriate approach nationwide. The same issues that are likely to make it difficult to achieve stringent standards for diesel nonroad engines also apply to gasoline and LPG nonroad engines.

Marine Vessels

Measure M13 of the SIP provides for adoption by U.S. EPA and by the International Maritime Organization (IMO) of emissions standards that would reduce NO_X emissions from new diesel engines used in ocean-going vessels by 30 percent. M12 also assumes that EPA will issue standards for non-ocean going vessels that will reduce NO_X emissions by at least 65 percent.

The IMO, a special agency of the United Nations, is developing guidelines for the reduction of NO_X and sulfur oxides (SOx) from ships under a new Annex to the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78). These guidelines would address the control of air pollution from ships. An IMO committee is scheduled to finalize a draft Annex in July 1996. After the committee's action, a diplomatic conference will be held in the spring of 1997 to review and approve the Annex. Each national will then consider the Annex and its associated guidelines for implementation and enforcement on vessels carrying its flag and on vessels entering its waters. Before the Annex could be enforced within US waters, the Congress would have to adopt it and its guidelines and then provide appropriate authority to a government agency.

While it is true that the new Annex is intended to provide for a 30 percent reduction in NO_X emissions, that reduction applies only to ships beginning construction after a certain time (tentatively, January 1998). It should be noted that there is a provision for application to existing ships that undergo a major modification or whose engines' power output is changed by 10 percent or more. Beyond that, the Annex does not address existing engines. Furthermore, achieving the target of 30 percent, would require full implementation of the Annex worldwide.

The NO_X emission requirements in the new Annex would apply to all engines over 100 kW installed on ships over 400 gross tons or which have a total installed power of 1500 kW. The guidelines are composed of two parts: Part A addresses guidelines for the implementation of NO_X limits for marine diesel engines; Part B addresses guidelines for diesel engine test, survey, and certification for compliance with the NO_X emission limits.

Numerous studies are underway to further investigate issues relating to marine vessels and the Santa Barbara channel. EPA is involved in these efforts, along with the United States Navy, the South Coast Air Quality Management District, and CARB.

The United States Navy's ongoing studies are intended to better characterize ship traffic and its impact on ozone exceedances in Ventura County. These include investigating air trajectory and transport mechanisms, inventorying ship traffic, collecting ozone measurement data, and collecting weather parameters for modeling. This on-going study is not complete at this time. Another study, sponsored by SCAQMD, will improve the marine vessel emission inventory and briefly discuss potential control strategies. The SCAQMD study should be completed by June 1996. A third study, the Southern California Transport Study, being led by CARB, is intended to better understand air pollution transport in Southern California. The study will provide an enhanced air quality and meteorological database for Southern California, which will provide the basis for improved modeling. Data will be collected at the surface and aloft, as well as over water.

Collectively, these studies will help the EPA and other interested parties further understand and discuss

potential strategies for reducing emissions from the shipping channel if needed for attainment.

Locomotives

In Measure M14, CARB assumed locomotive emission reductions from two EPA programs. The first of these programs was the statutorily required EPA national regulation for locomotives and locomotive engines, (national locomotive regulation). EPA expects that the planned national locomotive regulation will provide all of the CARB SIP credits with the exception of the 67% reduction in NO_X emissions in the South Coast by 2010.

To address the South Coast's need for further emission reductions EPA has considered a special locomotive program for the South Coast. This program would require that all locomotives operating in the South Coast achieve on average, an emission level equal to EPA national locomotive regulation tier 2 standards. Since these standards are technology forcing, the practical requirement would be to require an accelerated fleet turnover in the South Coast such that only the newest engines meeting the EPA tier 2 standards would operate in the South Coast. This program would provide a 66% reduction in locomotive NO_X emissions in the South Coast by 2010 and result in a NO_X emission level of 12 tons/day in the South Coast. The railroads that operate in the South Coast voluntarily agreed to this program. EPA is continuing to explore innovative approaches to establish the South Coast clean locomotive fleet program as part of the SIP.

Aircraft

Measure M15 calls for U.S. EPA to adopt standards to effect a 30 percent reduction in reactive organic gases (ROG) and NO_X emissions beginning in 2000. M15 apparently applies to new commercial aircraft engines, but also suggests reconsideration of the exempt status of military aircraft.

The Federal Clean Air Act authorizes EPA to establish emission standards for aircraft engines. In recognition of this preemptive authority, the SIP assigns new nationwide emission standards for commercial aircraft engines to EPA that would reduce ROG and NO_X emissions from this source by 30 percent beginning in 2000. The SIP also correctly acknowledges that military aircraft engines are currently exempt from emission standards, which otherwise apply to commercial aircraft engines. In this regard, the SIP recommends that the exempt status of these aircraft be reconsidered.

The International Civil Aviation Organization (ICAO) is the most appropriate forum for establishing commercial aircraft engine emission standards due to the international nature of the aviation industry. EPA has actively participated in considering more stringent NO_X standards as part of ICAO's Committee on Aviation Environmental Protection (CAEP) in the intervening period since the FIP. In December 1995, CAEP recommended a 16 percent increase in stringency for the NO_X standard that applies to medium and large turbine engines used on commercial aircraft. The revised standard would affect newly certified engines (i.e., engine models produced for the first time) beginning in 2000, and all newly manufactured engines (i.e., engines already being produced) in 2008. The revised standard would not affect engines already in air service. No revision of the hydrocarbon emission standard was considered by CAEP at the time, principally because modern turbine engines are considered very ''clean'' in this regard.

The CAEP recommendation will now move through the ICAO hierarchy for consideration. Initially, the ICAO Council will act on the recommendation. If the Council finds it acceptable, the revision moves to the full ICAO Assembly for final action. This process may not be complete until the spring of 1998.

The emission benefits of any new NO_X standard will occur worldwide. These benefits, however, will gradually accrue over an extended period of time. More specifically, the full benefits of the revised standard will not occur until well after 2010, because of the 2008 date for full implementation of the standard and the slow fleet turnover to new, cleaner engines (e.g., aircraft last about 25 years in active service.) Therefore, very few of the potential benefits will be realized by the SIP's attainment date. Turning to the exemption for military engines, EPA agrees with the SIP recommendation that such a blanket exemption should be reconsidered. The Agency is preparing a notice of proposed rulemaking to formally adopt the existing ICAO NO_X and CO standards, and will request comment on the need for and feasibility of applying emission standards to military engines. This notice is currently scheduled for publication during fiscal year 1997, due to competing budgetary priorities.

EPA has also continued to explore other ways to reduce the environmental effects of air travel in California and throughout the nation in the intervening period since the FIP. More specifically, the Agency and the Federal Aviation Administration (FAA) are working cooperatively to encourage continuing progress in reducing emissions from ground service equipment and aircraft auxiliary power units. EPA has sponsored additional work to compile technical data and emission inventory methods. This information will be used by the Federal Aviation Administration to develop an Advisory Circular for use by airlines and airport authorities interested in reducing the emissions from these sources.

Pleasurecraft

Measure M16 assumes that U.S. EPA finalizes proposed national ROG and NO_X standards for various categories of new engines used in watercraft.

EPA has not yet finalized the rulemaking on emission standards for spark-ignition marine engines. The court ordered deadline for signature of the final rulemaking is May 31, 1996. EPA has issued guidance to states on the amount of credit that will be allowed due to this rulemaking. These emission standards will apply to new marine engines beginning in model year 1998. There is no second phase rulemaking planned.

EPA has not yet finalized the rulemaking on emission standards for compression-ignition marine engines. The court ordered deadline for signature of the final rulemaking is May 31, 1996. EPA has not yet issued guidance to states on the amount of credit that will be allowed due to this rulemaking. These emission standards will apply to new marine engines beginning in model year 1999. The emission standards will achieve an approximate 30% reduction in new engine emissions. The inventory will be reduced as the fleet turns over.

[FR Doc. 96–6011 Filed 3–15–96; 8:45 am]
BILLING CODE 6560–50–P

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40 CFR Part 52

[MO–001–1001(b); FRL–5442–3]

Approval and Promulgation of Implementation Plans; State of Missouri

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The EPA proposes to disapprove revisions to the air pollution control State Implementation Plan (SIP) submitted by the state of Missouri. The SIP pertains to the St. Louis vehicle inspection and maintenance (I/M) program. These revisions require the implementation of an enhanced motor vehicle I/M program in the St. Louis