

1994 California State Implementation Plan Volume I: Overview of the California Ozone SIP

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Executive Summary

Air pollution has been the bane of urban, industrial societies for more than a century. From the earliest coal fires to the latest combustion technology, humankind has struggled to limit the noxious by-products of economic activity. Our collective success thus far is astounding. Unfortunately, the job is not finished. More needs to be done. In some instances much, much more. The United States leads the world in its commitment to clean air. Since the early 1960's, this nation has maintained a vision of healthful air for every citizen. We have invested decades of human effort, at every level of government, and in virtually every business sector. And, we have spent billions of dollars, both directly and indirectly, on pollution control.

The Clean Air Act Amendments of 1990 continued this pledge while making the necessary allowances for the challenges ahead. The revamped statutes provided a new schedule for progress, spurred federal rulemaking on a host of emission sources, established up-to-date performance standards for states' permitting and regulatory programs, and launched a new, comprehensive planning process for attaining national ambient air quality standards.

California has its own, luminous history of air quality management. The Golden State initiated motor vehicle controls before U.S. EPA was created and continues to set the pace of technology advancement. California scientists were first to solve the puzzle of smog formation and they refine their understanding each year. And finally, California is striving to meet more health protective standards than the national norm by the earliest feasible date.

California's leadership tradition has paid enormous dividends. Statewide exposure to unhealthy ozone concentrations has been cut in half since 1980. The frequency and severity of pollution episodes is steadily declining. And statewide emissions are on a downward trend through this century and well into the next decade, due to California's tough, existing regulations. Unfortunately, far too many Californians are still at risk. Our children, the elderly, and people with compromised lungs are suffering from the adverse effects of ozone pollution. Even healthy adults put themselves in harm's way when they exercise out-of-doors during smoggy days -- which is one out of three in the Los Angeles basin.

California's existing air quality program will continue to generate significant improvements. However, our program -- as fine as it is -- simply does not provide the full extent of emission reductions needed to meet the national ozone standard. Additional actions are needed.

California cannot do it alone. Emission sources under federal jurisdiction are consuming an excessive portion of California's air space today and will become increasingly dominant as other sectors are reduced. Thus, healthful air will not be achieved in our state unless the federal government does its full and equal part. Fortunately, the U.S. Environmental Protection Agency (EPA) appreciates California's dilemma and has begun examining national regulatory options. The Clean Air Act requires the last major elements of State Implementation Plans for ozone to be submitted to the U.S. EPA by November 15, 1994. States have already submitted significant portions of the ozone SIPs. In addition, plans have

been submitted for nitrogen dioxide (May 1992) and carbon monoxide (November 1992), where applicable. Particulate matter will be addressed in plans due to the federal government by January 1997.

California has six major areas subject to the 1994 ozone planning requirement. These areas are: the Sacramento Metropolitan area (encompassing five local air control districts), San Diego, San Joaquin Valley, South Coast, the Southeast Desert, and Ventura. Each of these regions currently violates the national ozone standard and has a serious, severe, or extreme classification.

All six nonattainment areas are pursuing a combined precursor control strategy for ozone. Each plan relies upon additional reductions in the emissions of reactive organic gases (ROG) and nitrogen oxides (NOx). The magnitude of necessary reductions varies considerably from area to area, based on the severity of the problem. The timing and stringency of previously adopted controls also affects the variance to some degree. Not surprisingly, the South Coast needs the greatest overall reductions to overcome its extreme ozone problem. Mobile source controls are a vital part of the attainment equation in every case. Serious areas are relying on the foundation of stringent vehicle and fuel measures to meet their 1999 attainment deadlines. Severe areas and the South Coast cannot reach their respective target reductions without effective and expeditious technological controls on new cars, trucks, buses, off-road equipment, and other mobile categories. The responsibility for making that happen falls squarely on the Air Resources Board and the U.S. EPA.

Existing vehicles and engines need substantial attention, too. Some of this is purely the state's responsibility --- the enhanced motor vehicle inspection and maintenance program administered by the California Bureau of Automotive Repair, for example. However, state and local partnerships are needed to significantly increase the rate of vehicle turn-over, scrappage, and fuel conversions. Also, local government leadership is needed for the transportation and land use strategies that coax drivers out of their cars and into less polluting travel modes.

Industrial sources of emissions are an important but diminishing part of California's ozone problem. Stringent permitting rules and aggressive retrofit controls have already achieved substantial reductions in the six affected areas. The South Coast's market-based approach -- the Regional Clean Air Incentives Market or RECLAIM -- is expected to provide even more.

However, there are several categories of sources still needing attention. In addition, some districts are playing "catch up" with the latest technologies. Stationary source measures are almost entirely a local responsibility. The balance of California attainment strategies are directed at diffuse sources of emissions (i.e., "area sources"), such as solvents, paints and other coatings, adhesives, pesticides, and consumer products. The last two categories are under the state's sole jurisdiction (the Department of Pesticide Control and ARB, respectively). All others are subject to local rules.

The 1994 California State Implementation Plan for ozone contains emission control measures (both adopted and proposed) for each of the major categories described above. The

feasibility, reasonableness, and equity of each measure was carefully considered prior to its inclusion by ARB or local districts. The proposed schedules are as expeditious as practicable, and reflect both the anticipated rate of technological development and resource demands of the rulemaking process itself. The California SIP is organized into four separate volumes. Volume I (this document) provides background on the 1994 ozone plans, describes the state's overall attainment strategy, and addresses the legal requirements for approval. Summary emission calculations for each nonattainment area are also provided in Volume I, with further detail contained in Volume IV.

Volume II contains the Air Resources Board's comprehensive plan for further reducing emissions from mobile sources and consumer products. The proposed federal contribution to California's attainment strategy is highlighted in this volume. Two impact analyses are also provided: environmental and economic.

Volume III summarizes the status of SIP elements being prepared by ARB's partner agencies: the Bureau of Automotive Repair (enhanced vehicle inspection and maintenance) and the Department of Pesticide Regulation (pesticide controls). This volume is descriptive, only. The actual regulations are being adopted, separately, by each agency. Once they are completed, ARB will transmit the final regulations to U.S. EPA as a revision to the California State Implementation Plan.

Volume IV describes the ozone attainment strategy for each serious, severe and extreme nonattainment area and discusses special policy issues raised by individual local plans. The summary emission calculations supporting each area's attainment demonstration contained in Volume I are repeated here. Rate-of-progress calculations for 1996, 1999, and every third year thereafter are also included in this volume.

The final California SIP submittal package for November 15, 1994 included Volumes I-IV, and all locally adopted attainment plans. The November 15 SIP submittal also included previously adopted ARB regulations affecting diesel fuel, reformulated gasoline, and consumer products. Finally, the federally required SIP completeness checklist was enclosed. The 1994 package will be considered in conjunction with all ozone SIP revisions provided to the U.S. EPA since the passage of the 1990 Clean Air Act Amendments.

Staff believes the 1994 California SIP revision meets the federal completeness test. Moreover, staff believe that all of the required elements are eligible for full or conditional approval. However, it must be acknowledged that neither the Act nor available federal guidance resolve all outstanding issues affecting SIP approval. Staff are committed to working closely with U.S. EPA during the plan approval process to quickly resolve any issues which may arise. The Board will be regularly informed of all significant developments.

Upon approval by U.S. EPA, the California SIP will nullify the Federal Implementation Plan (FIP) proposed for Sacramento, South Coast and Ventura, since it accomplishes the same objectives with an equivalent -- or better -- combination of state, local and federal controls. To achieve this outcome, however, U.S. EPA must process the California SIP before the final

FIP is promulgated. California has urged U.S. EPA to move the federal review process as fast as humanly possible. That request will be reiterated in California's final SIP revision package.

The November 1994 California ozone SIP submittal would not have been possible without the concerted efforts of individuals far too numerous to name. The California SIP was, is, and will continue to be, a project of tremendous scope, complexity, and legal import. Yet it is also the product of human hands and minds. Each individual is hereby thanked for his or her contribution.

Today we plan. Tomorrow we must do. We will undoubtedly revise and refine the SIP as we go forward, since this is a dynamic process and there is much to learn. Moreover, the future is change and we will all change along with it. Yet California's commitment to clean air must be unwavering. The 1994 California State Implementation Plan is our best assessment -- at this moment in time -- of what it will take to achieve the national ambient air quality standard for ozone. For now, and for the health of all Californians, it's time to get on with it.

Background

Statutory Requirements

The Clean Air Act, as amended in 1990, requires a comprehensive attainment plan from every ozone nonattainment area classified as serious, severe or extreme. There are six of these areas in California, containing eleven separate air pollution control districts (see Table 1). The ozone plans were due and submitted to the U.S. Environmental Protection Agency on November 15, 1994, as a revision to the California State Implementation Plan (SIP).

Each nonattainment area is assigned a statutory deadline for achieving the national ozone standard. Serious areas must attain by the end of 1999, severe areas by 2005 or 2007 (depending on their peak ozone level), and extreme areas by 2010. Moderate ozone areas -- which do not have to submit additional planning elements in 1994 -- must reach attainment level emissions by the end of 1996. (Editor's note: most all of California's moderate areas already have.)

The Act prescribes certain minimum control measures for each ozone nonattainment area, again based on the severity of the problem. These start with reasonably available controls at the low end, progress through enhanced smog check and ridesharing mandates, and top out with advanced control techniques in the nation's only extreme area: the South Coast Air Basin. In addition, every serious, severe or extreme nonattainment area must define and adopt adequate measures to meet the federal 0.12 ppm standard.

The Act prescribes technical criteria, too. Each ozone plan must contain a current emissions inventory. Each region must collect an adequate quantity of ambient air quality data. And each plan must contain an analysis of future air quality based upon photochemical grid modeling.

To ensure a minimum rate of progress, each plan must meet statutory emission reduction targets for identified milestone years. Specifically, the plans must show a 15% reduction in emissions of reactive organic gases between 1990 and 1996, an additional 9% reduction in ROG by 1999, and 3% reductions per year thereafter, measured in three year intervals. As added insurance, each plan is expected to contain contingency measures sufficient to provide at least 1% of the necessary progress in each milestone year, per federal guidance. Finally, each ozone plan must satisfy federal completeness criteria. Generally, that means sufficient detail and evidence of commitment, legal authority, enforceability, and the requisite funding to carry out emission control measures. However, the completeness criteria also include public participation requirements, including 30-day notice and agency responses to comments received.

Table 1 – California Ozone Nonattainment Areas with A Federal Classification of Serious or Above

Nonattainment Area	District(s)	Classification
Sacramento Metropolitan	Sacramento, Placer Yolo-Solano, El Dorado and Feather River	Serious*
San Diego	San Diego	Severe†
San Joaquin Valley	San Joaquin Valley and Kern County‡	Serious
South Coast	South Coast	Extreme
Southeast Desert	South Coast and Mojave Desert	Severe
Ventura	Ventura	Severe

* Requires bump-up to severe, based on inability to attain before 2005.

† Requesting reclassification to serious, based on rounding error in original data, transport from Los Angeles, and ability to attain by 1999.

‡ Assigned same classification as the San Joaquin Valley originally, though located in a different air basin (Southeast Desert) and now governed by a separate air district.

Effectiveness of Existing Air Quality Program

Due to the foresight of the State Legislature which enacted a comprehensive California Clean Air Act in 1988, and the diligence of California's air quality agencies, this State began the 1994 planning process with an unusually strong base of adopted controls. These controls -- including ARB's landmark rules for low and zero emission vehicles (adopted 1990), reformulated gasoline (adopted 1991), and cleaner diesel fuel regulations (adopted 1988) -- have provided substantial emission reductions already. They will continue to pay off well into the next century.

California's air districts have also been extraordinarily busy. Most districts have completed rulemaking on advanced retrofit controls for electric powerplants, refineries, and most of the remaining, major combustion sources. As a result, California industries are far cleaner than those in other states. The nitrogen oxide reductions from these rules have already begun and will gradually mount over the next ten years. Districts have made significant inroads on evaporative emissions control, too, though generally not enough to halt or reverse future growth.

Local governments and regional transportation agencies have also made progress in providing lower-emitting transportation alternatives. In addition, new attention is being paid to indirect emission sources and the role of land use design in affecting travel behavior. If they can hold the line, and if funding remains stable at the very least, these strategies will pay dividends over the very long term. The combined effect of existing state and local programs is incredibly potent. In some areas, it is virtually sufficient to attain. In others, existing programs are expected to provide more than half of the required emission reductions. The specific effect on each area is summarized below (see Components of California's Attainment Strategy--Summary Attainment Demonstration for Each Area).

Additional Actions Needed to Attain

Despite California's past success in reducing emissions, and despite anticipated improvements, unhealthy ozone lingers in several areas. The South Coast Air Basin faces the most difficult problem and will fall substantially short of clean air goals if no additional measures were implemented. Its downwind neighbors -- San Diego, Mojave Desert, eastern Riverside County, and Ventura -- would suffer in kind. Finally, the Sacramento Metropolitan Area and the San Joaquin Valley, both experiencing rapid population growth, would fall significantly short of the attainment mark.

This outcome can, and legally must, be prevented. However, there is no simple solution. The sheer magnitude of Southern California's ozone problem means that every significant source of emissions must be examined for potential reductions. In addition, the pressure of serious and severe area attainment deadlines means that responsible agencies must act quickly. In order for new technologies to produce sufficient benefits by 1999, 2005, or even 2010, they have to be introduced well in advance of those dates.

Purpose of this SIP Revision

The 1994 California SIP is, first of all, an up-to-date assessment of the State's ozone situation. Volumes I and IV, and the local district plans incorporated by reference, fully detail the ozone problem in each nonattainment area. The emission inventory and its distribution across various categories -- both now and in the future -- is faithfully reported. Air quality data and trends are also described.

The SIP is, secondly, a prescription for correcting outstanding problems. Photochemical modeling has been applied to gauge each region's responsiveness to emission reductions. Modeling was also employed to test a wide variety of attainment strategies. This assists state and local policy makers in making the most cost-effective, initial choices. Modeling results and additional modeling runs will also be used to refine attainment strategies in the future.

Most importantly, the California SIP is a call to action. The SIP marshals the resources of state and local agencies and provides a clear, systematic approach to attainment. In addition, California's plan enlists the U.S. EPA in the ongoing effort to achieve clean air.

Upon submittal to the U.S. EPA, the California SIP established the reference emission budgets for conformity purposes. Once fully or conditionally approved, the SIP will become a legally enforceable -- though still substantially flexible -- document. State and local agencies (with ARB concurrence) may amend the California SIP at any time, provided the resulting change does not adversely affect any region's attainment demonstration or its rate-of-progress performance.

Relationship of California SIP to the Federal Implementation Plan (FIP)

The California SIP achieves the same objective as the proposed FIP for Sacramento, South Coast and Ventura with a different combination of state, local, and federal measures. Therefore, it will nullify the FIP upon approval by the U.S. EPA. However, to achieve this outcome without substantial and unwarranted penalty to the State, the U.S. EPA must process and approve the California SIP before the FIP is promulgated or, alternatively, before any of the individual FIP regulations are actually implemented. California has requested an 18-month stay in FIP implementation to give U.S. EPA sufficient time for SIP review.

The FIP resulted from litigation under the 1977 Clean Air Act. Environmental groups and a private citizen sued the U.S. EPA for failing to reject plans from five California nonattainment areas that did not demonstrate attainment by December 1987 (the previous federal deadline). When Congress amended the Clean Air Act in 1990 providing extensions to 1996, 1999, 2005 and 2010 (depending on each area's severity classification), two of the five FIP lawsuits were voided by prior agreement with the plaintiffs. The U.S. EPA then asked the Court to dismiss the remaining three. The trial court agreed but was reversed on appeal. In a surprising two-to-one vote, the Appellate Court ruled that the 1990 Amendments preserved EPA's pre-1990 FIP obligation. The U.S. EPA then appealed to the U.S. Supreme Court which, unfortunately, refused to hear the case.

A draft FIP was issued by U.S. EPA on February 14, 1994 and must be finalized within one year. This schedule was negotiated with the plaintiffs in Sacramento, South Coast and Ventura, then approved and ordered by the District Court. The schedule cannot be changed without the agreement of every party and the Court's concurrence.

The content of the FIP was left to U.S. EPA's discretion. As the world now knows, U. S. EPA proposed an initial strategy that, if finalized, would place extraordinary and damaging burdens on California's business and transportation sectors. Moreover, the draft FIP shied away from national regulations, emphasizing California-only rules instead -- despite their higher costs, anti-competitive impacts, questionable enforceability, and lower overall effectiveness. The U.S. EPA has received extensive comments on the proposed FIP, including those of Governor Wilson, the California Environmental Protection Agency, ARB, the Department of Food and Agriculture, the Governor's Office of Planning and Research, the California Trade and Commerce Agency, and scores of California business and interest groups. Most of the public comments were unfavorable. Most urged the federal government to pursue national standards in lieu of draft FIP measures, and to let state and local agencies define the remaining strategy. Most commenters held the view that California should have the opportunity to develop its own clean air strategy, via the SIP process and without premature intrusions, like every other state.

The U.S. EPA is currently weighing its options. Unless the law changes or the plaintiffs agree to delay, the FIP must be promulgated on February 14, 1995. This leaves little time for reviewing California's SIP and even less time for a fundamental rewrite of federal measures. The latest indications are that U.S. EPA intends to promulgate a partially amended FIP in February. More substantial changes may be proposed simultaneously for public review and comment.

To date, U.S. EPA has been consumed with meeting its FIP obligation. The Agency has only begun thinking through the SIP approval/FIP substitution mechanism. To facilitate the process and to prevent later confusion or delays, ARB has recommended several administrative steps. These include but are not limited to comprehensive approval of the SIP rather than piecemeal actions, use of the latest emissions inventories and most recent modeling results, and reliance on the submitted SIP versus the FIP for emission budgeting and conformity purposes.

Components of California's Attainment Strategy

New Policy Directions

In July of this year, the Air Resources Board initiated a series of policy symposia to discuss the future of air quality management in California. These full day sessions -- oriented toward emission sources under the State's regulatory jurisdiction -- set the stage for actions considered by the Board in November.

Four themes became evident through these proceedings. First, that California's tradition of technological innovation with regulatory flexibility should be continued. Support for existing programs is widespread and is directly related to this confluence. Second, the Board was urged to concentrate its future energies on heavy duty vehicles, off-road equipment and other mobile categories. As one commentator remarked, "it's what's left to do." Achieving greater economic efficiency through market-based strategies was the third major theme, emphasized by almost every participant. Finally, the necessity of effective federal regulations was underscored by several parties.

The plan for reducing emissions from mobile sources and consumer products, set forth in Volume II, is predicated on these four major themes. The plan builds on California's extensive foundation of performance-based standards and alternative compliance mechanisms -- extending ARB's historic approach to new arenas. Regarding emphasis, the plan puts high priority on heavy-duty engine control, in every mobile source category where such engines are utilized. In addition, market-based measures are now a vital part of California's long term attainment strategy and will receive increasing attention in the years ahead. Finally, a full and equal share of responsibility has been assigned to the U.S. EPA.

The policy directions represented in the 1994 California SIP set the context for the next 10 to 15 years of effort. Like the strategies themselves, these policies are not immutable but, rather, will continue to evolve as California approaches its goal of cleaner, healthful air.

State, Federal and Local Responsibilities

California air quality is dependent upon the actions of multiple state, federal and local agencies. Many of these agencies are directly responsible for emission control; others support air quality objectives through related plans, policies, programs and investments (see Table 2). The 1994 California SIP implicitly claims credit for these existing partnerships to the extent they affect emission trends in a quantifiable way. For example, the California Energy Commission's energy conservation programs are reflected in future year forecasts of electricity demand and powerplant emissions. Likewise, "fiscally constrained" (i.e., funded) transportation projects are reflected in baseline assumptions about future congestion relief and the usage of alternative transportation modes in each region.

Table 2 – Agencies Involved in Air Quality Management (partial list)

Directly Responsible for Emissions Control	Supporting Plans, Programs, Etc.
California Air Resources Board	California Energy Commission
California Bureau of Automotive Repair	California Dept. of Transportation
California Dept. of Pesticide Regulation	Metropolitan Planning Organizations
U.S. Environmental Protection Agency	Federal Highway Administration
California Air Pollution Control Districts	County Transportation Commissions
California Cities and Counties	

The California 1994 SIP is explicit about individual agencies' responsibilities for carrying out future, yet to be adopted measures. This is because the law requires clear evidence of legal authority, intent, and funding for the emission reduction measures contained in each plan. Yet even more importantly, it clarifies who is expected to do what, and in what timeframe, for the benefit of policymakers, affected interest groups, and the general public. A brief review of state and federal responsibilities for new measures is presented in Tables 3 and 4, respectively. For a thorough discussion of these elements, please refer to Volumes II and III. The local control measures for each region are too numerous to list effectively here. However, their cumulative emissions impact is described in the summary attainment demonstrations below, and comprehensive lists of local emission control measures can be found in both Volume IV of this submittal and in locally adopted plans.

Table 3 – New Control Measures to Be Implemented by California State Agencies

Agency	Measure(s)	Adopt/Implement
ARB	Light-Duty Vehicle Measures -- Scrappage program -- Improved control technology Accelerated ULEV for Med. Duty Vehicles Heavy Duty Truck Measures (diesel) -- Introduction of low emission engines -- Additional NOx reductions in California -- Scrappage program Heavy-Duty Truck Standard (gasoline) Off-road Diesel Equipment Industrial Equipment (3-way catalyst) Market-incentive measures Operational measures for trucks Consumer Products -- Aerosol paints -- Unregulated categories -- Advanced controls	1996/1996-2010 2000/2004-2005 1997/1998-2002 NA [§] /1996-2002 1997/2002 1996/1996-2010 1997/1998-2002 2001/2005 1997/2000-2004 2006/2009** to be determined 1995/1998 1997/2000-2005 2005/2009
BAR	Enhanced Vehicle I/M	1995/1995-2000
DPR	Pesticide Controls	1995/††

[§] Based initially on local fleet rules and state incentives (e.g., low interest loans offered through the California Air Pollution Control Financing Authority; backed with regulations should that prove necessary.

** Final deadline to satisfy legal conditions for section 182(e)(5) approval; will actually be implemented continuously, beginning as early as 1995.

†† As needed to achieve target reductions for attainment.

The assignments in Tables 3 and 4 represent the most equitable, and the only feasible, means for achieving the national ozone standard in California's serious, severe and extreme nonattainment areas. Without effective State and federal actions, mobile sources will continue to dominate California's emissions inventory and will prevent the achievement of public health mandates.

Summary Attainment Demonstrations for Each Area

As lead agency for the California SIP, the ARB must ensure there is a complete attainment demonstration for each affected area. This can be demonstrated initially with emission calculations for each area, showing attainment year emissions at or below each region's pollutant carrying capacity. (Editor's note: carrying capacity is the maximum emissions level the regional atmosphere can absorb without producing a violation of the federal ozone standard.) The actual control measures have also been run through photochemical modeling simulations to ensure they are fully effective in reducing regional ozone concentrations. Table 5 presents the summary emission calculations for the South Coast Air Basin, Ventura County, the Sacramento Metropolitan Area, San Joaquin Valley, and San Diego County. These are repeated with several annotations -- including the list of credited measures -- in Volume IV of this submittal. The table also shows the source of the emission reductions credited in the attainment demonstrations -- the existing program or new measures to be adopted by local, state, or federal agencies. Table 6 further identifies the reductions from new state measures.

A special three-part attainment demonstration for the San Joaquin Valley (addressing northern, central and southern subregions) is contained in Volume IV, along with the attainment demonstrations for the Southeast Desert (Los Angeles/Riverside and Mojave Desert) and the non-unified portion of Kern County.

Table 5 – Summary of Attainment Demonstrations (tons per day)

	South Coast (2010)		Ventura (2005)		Sacramento (1999)		San Joaquin Valley (1999)		San Diego (1999)	
	ROG	NOx	ROG	NOx	ROG	NOx	ROG	NOx	ROG	NOx
Projected Inventory (in attainment year)	1054	932	56	57	167	124	461	503	232	175
1990 Base Year Inventory	1517	1361	87	81	222	164	581	710	313	238
Carrying Capacity	323	553	45	40	137	98			232	175
Reductions Needed to Attain (from 1990 levels)	1194	808	42	41	85	66			81	63

	South Coast (2010)		Ventura (2005)		Sacramento (1999)		San Joaquin Valley (1999)		San Diego (1999)	
	ROG	NOx	ROG	NOx	ROG	NOx	ROG	NOx	ROG	NOx
Reductions From: Existing Program	463	429	30	24	55	40	177	248	81	63
New Local Measures -- 182(e)(5) ^{vii}	273 180	43 0	5	1	17	7	84	143		
New State Measures -- 182(e)(5) ^{vii}	117 114	157 70	6	4	15	14	19	5		
New Federal Measures -- 182(e)(5) ^{vii}	39 8	61 48	1	13	3	5	0	0		
Total Reductions	1194	808	42	42	90	66	280	396	81	63

^{vii} The subcategory of 182(e)(5) measures for the South Coast refers to the Clean Air Act provision that allows extreme areas to rely on commitments for new or evolving technology measures.

Table 6 – Emission Reductions from New State Measures

	South Coast (2010)		Ventura (2005)		Sacramento (1999)		San Joaquin Valley (1999)	
	ROG	NOx	ROG	NOx	ROG	NOx	ROG	NOx
Mobile (excluding Enh I/M) -- 182(e)(5) ^{§§}	46 68	126 70	<1	2	1	8	0	1
Enhanced I/M	26	31	1	2	5	6	4	4
Pesticides	2	0	3	0	3	0	15	0
Consumer Products --182(e)(5) ^{§§}	43 46	0 0	2	0	6	0	0	0
Total	231	227	6	4	15	14	19	5

^{§§} The subcategory of 182(e)(5) measures for the South Coast refers to the Clean Air Act provision that allows extreme areas to rely on commitments for new or evolving technology measures.

Legal Analysis of SIP Approvability

Introduction

Under the Clean Air Act as amended in 1990, California is under specific obligations to revise the state implementation plan (SIP) by November 15, 1994. This submittal comprises the revisions necessary to meet requirements for ozone attainment demonstrations and post-1996 rate-of-progress demonstrations. The Act requires California to demonstrate that the SIP, as revised, (1) provides for attainment of the national ambient air quality standard (NAAQS) for ozone in all areas of the state by the dates specified in the Act (§181(a) and §182(c)(2)(A)) and (2) will result in reasonable further progress (RFP) toward attainment beyond the 15 percent reduction mandated for the period from 1990 to 1996 of at least three percent per year or that a lesser amount reflects implementation of all feasible measures in the area (§182(c)(2)(B)).

This chapter discusses issues related to the approval of the California SIP revisions contained in this submittal, including a description of the legal authority to adopt the rules and other measures that comprise the plan revisions. This chapter also discusses the appropriate reliance on commitments in the SIP revisions, including commitments to pursue measures based on advanced technology, and voluntary reclassification to demonstrate attainment.

Legal Authority

Legal authority to regulate sources of air pollution in California is found in both federal and state law. At the federal level, the Clean Air Act calls for a two or three partner endeavor involving federal, state and, where permitted by state law, local authorities. The Act directs the U.S. Environmental Protection Agency to undertake a national effort to improve air quality. To carry out this directive, U.S. EPA is directed to establish national ambient air quality standards to protect the public health and welfare (§109).

The primary tool to be used in the effort to attain national standards is a plan to be developed by any state with one or more nonattainment areas which provides for implementation, maintenance and enforcement of the standards --- the state implementation plan or SIP (§110(a)(1)). Section 110(a)(2)(A) broadly authorizes and directs states to include in their SIPs:

"...enforceable emission limitations and other control measures, means, or techniques (including economic incentives such as fees, marketable permits, and auctions of emissions rights), as well as schedules and timetables for compliance, as may be necessary or appropriate to meet the applicable requirements of the Act."

While the Act requires states to develop SIPs, and clearly intends that they bear primary responsibility attaining the national standards (§101(a)(3)), it also provides U.S. EPA with two significant roles in this process. As a partner in the effort to attain and maintain the standards, U.S. EPA is authorized and directed to adopt measures to control emissions from various sources, such as consumer products, motor vehicles, nonroad engines and vehicles, and aircraft (§§183(e)(3), 202, 213 and 231). Additionally, U.S. EPA has ultimate authority and responsibility to intervene with direct federal action if the SIP is inadequate, incomplete or not properly implemented by the state (§§ 110(c)(1) and 113).

Similarly, state law generally divides responsibility for meeting the requirements of the Clean Air Act (as well as separate, comprehensive state requirements related to air quality) between the Air Resources Board and local air pollution control or air quality management districts (districts). However, other state or local agencies have authority under state law to undertake regulation of certain pollutant emitting sources or activities. For example, the State's motor vehicle inspection and maintenance program is primarily the responsibility of the Bureau of Automotive Repair (BAR) in the Department of Consumer Affairs, and the Department of Pesticide Regulation (DPR) has primary authority to regulate the pesticidal use of pesticides. Legal authority for state and local efforts to improve air quality is contained primarily in the

California Health and Safety Code, Division 26, Air Resources, although authority for some programs is located elsewhere in the state codes.

Pursuant to these codes, the ARB is charged with coordinating state, regional and local efforts to attain and maintain both state and national ambient air quality standards. The direct statutory link between the ARB and the mandates of the CAA is found in §39602 of the Health and Safety Code. Pursuant to this section--

"The state board is designated the air pollution control agency for all purposes set forth in federal law.

The state board is designated as the state agency responsible for the preparation of the state implementation plan required by the Clean Air Act (42 U.S.C., Sec. 7401, et seq.) and, to this end, shall coordinate the activities of all districts necessary to comply with that act.

Notwithstanding any other provision of this division, the state implementation plan shall only include those provisions necessary to meet the requirements of the Clean Air Act."

In directing the California approach to improving air quality, state law divides control activities into vehicular and nonvehicular sectors (§§39002 and 40000). The control of vehicular sources is the responsibility of the ARB, while primary responsibility for nonvehicular controls falls to the local air districts. However, the ARB has comprehensive oversight authority to undertake nonvehicular source control activity if local air districts fail to perform satisfactorily (§§39002, 41500, 41502, 41503, 41504, 41505 and 41652).

The Clean Air Act requires that SIP provisions be legally enforceable. A tiered system of authority for enforcement exists which parallels the authority to develop and implement the SIP. ARB has authority to enforce vehicular controls. (See, e.g., §§41510, 41511 and 41513, §§43012, 43016 and 43017, §§43100, 43105, 43106, 43204-43212 and Vehicle Code §§27156, 38390 and 38391.) Primary responsibility for nonvehicular enforcement is vested in the local air districts. (See, e.g., §§41510, 41511 and 41513, and §42300 et seq.) However, if the ARB finds that a district is not taking reasonable action to enforce applicable air pollution control statutes, rules and regulations, the ARB may, after a public hearing, take over the district's enforcement powers and enforce these laws (§41505). U.S. EPA has similar authority to assume enforcement jurisdiction if a state fails to enforce SIP provisions (CAA §113).

Within the framework of state and local shared responsibility for air pollution control, with ultimate air district accountability to the ARB, the State Board has the necessary statutory authority to assure compliance with the requirements of §110 of the Clean Air Act relating to the attainment of national standards and the post-1996 rate-of-progress demonstrations, assuming that U.S. EPA concomitantly fulfills its obligation to reduce emissions from national sources.

State Elements of the SIP

Mobile Source Element

Motor vehicles and other mobile sources comprise the most significant single source of ozone precursor emissions in the State. The ARB's Mobile Source Element of California's SIP includes numerous measures to reduce mobile source emissions at the state level and is a central component of the State's 1994 SIP revisions. The measures include reductions to be realized from actions taken or to be taken at both the federal and state level.

National Mobile Source Controls: If all areas of the State are to demonstrate attainment by the specified deadlines, a critical part of the overall strategy to reduce mobile source emissions in California must be U.S. EPA's fulfillment of the Act's promise for regulation of national sources pursuant to §§202(a)(2)(B), 213 and 231. While U.S. EPA has not yet provided complete information regarding what regulatory actions will be undertaken pursuant to these authorities (or how reductions from these actions should be accounted for in the SIP), ARB anticipates --- and attainment of the ozone NAAQS in California requires --- adoption of national standards for sources states are preempted from regulating, i.e., new nonroad engines used in farm and construction equipment under 175 horsepower, new locomotives and aircraft; and sources ARB cannot regulate as effectively as a practical matter, i.e., new heavy-duty diesel trucks registered in other states and marine vessels. There is no question that California will be unable to attain the national ozone standard without federal regulation of these national sources. The federal implementation plan (FIP) currently proposed for California by U.S. EPA explicitly acknowledges the reality of this conclusion and includes measures directed at these sources. Under these circumstances, U.S. EPA has an obligation under the Clean Air Act to promulgate standards for these unregulated or underregulated national sources.

Certainly, U.S. EPA has the authority to adopt standards for national sources in order to assist states in achieving the NAAQS. U.S. EPA's authority derives from a number of provisions of the Clean Air Act which authorize or require the promulgation of various types of control measures. The scope of U.S. EPA's authority under many of these provisions is broadly defined. For example, §202 directs the Administrator of the U.S. EPA to establish emission standards for new motor vehicles and §231 directs the Administrator to establish aircraft emission standards. Both of these sections direct the Administrator to promulgate regulations in order to control emissions:

"which, in [her] judgement, cause or contribute to air pollution which may reasonably be anticipated to endanger public health and welfare ..." (CAA §§202(a) and 231(a)(2)).

Under §213, the Administrator is required to determine whether ozone precursor or carbon monoxide emissions from nonroad engines or vehicles (other than locomotives) "cause, or significantly contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare" and to regulate the sources that in her judgment "cause, or

contribute to, such air pollution." That section also directs the Administrator, by 1995, to adopt emission standards for new locomotives that

"achieve the greatest degree of emission reduction achievable through the application of technology which the Administrator determines will be available for the locomotives or engines to which such standards apply, giving appropriate consideration to the cost of applying such technology within the period of time available to manufacturers and to noise, energy and safety factors associated with the application of such technology." (CAA §213(a)(5).)

Federal law preempts individual states from adopting emission standards for most of these sources (§§209 and 233). California has concurrent authority to regulate some nonroad engines or vehicles including marine vessels, and California can obtain a waiver of federal preemption to adopt emission standards for other national source categories, e.g. heavy-duty trucks. However, as a practical matter adoption of separate, California-only standards for national transportation sources, e.g., heavy-duty trucks or marine vessels, is not a fully effective means of controlling emissions from these sources.

If California is to attain the national ozone standard by the deadlines established in the Act, the essential emission reductions necessary from these sources must be fully realized through timely promulgation of all feasible standards for national sources by U.S. EPA under the authorities provided in the Act. Without such federal control of preempted and national transportation sources, California cannot provide the required attainment demonstrations because it is not possible to obtain sufficient emission reductions solely from sources under local and state jurisdiction to offset uncontrolled or undercontrolled emissions contributed by national sources subject to federal control.

National standards for these sources are feasible. Certainly, U.S. EPA would not have proposed stringent standards for these sources in California if the agency did not believe the requisite technology was available or could be timely developed. In many cases, however, reductions beyond (or different than) those U.S. EPA has proposed in the FIP are feasible and necessary if California is to attain the national ozone standard by the applicable deadlines. These measures are described in ARB's Mobile Source Element of the California SIP (Volume II of this submittal). Furthermore, while California may present the worst case and, therefore, have the greatest need for such standards, there are many other long-term ozone nonattainment areas in other states that will benefit from the adoption of such standards. It is not even subject to debate that Congress intended U.S. EPA to participate in states' efforts to attain national air quality standards by regulating these sources.

The very broad language of the Clean Air Act authorizes and directs the Administrator to establish appropriate standards for national sources in order to effectively address emissions from these sources in California and other states. Such standards are necessary and technologically feasible; therefore, U.S. EPA has an obligation to promulgate these standards without delay. The agency's failure to exercise its national standard setting authority fully places burdens on California never envisioned by Congress, and the lack of these emission

reductions cannot be made up by additional state measures because the state and local air districts already must extract the maximum emission reductions possible from all source categories under their control.

California Mobile Source Controls: The ARB has broad authorities under state law to regulate motor vehicles. These authorities empower the board to adopt the regulations and other measures that comprise the mobile source element of the 1994 SIP revisions. Health and Safety Code §43013(a) provides that

"The state board may adopt and implement motor vehicle emission standards, in-use performance standards, and motor vehicle fuel specifications for the control of air [pollutants] and sources of air pollution which the state board has found to be necessary, cost-effective, and technologically feasible to carry out the purposes of this division, unless preempted by federal law."

Further--

"The state board shall endeavor to achieve the maximum degree of emission reduction possible from vehicular and other mobile sources in order to accomplish the attainment of the state standards at the earliest practical date." (Health & Safety Code §43018.)

To carry out these directives the board is directed to

"... adopt and implement emission standards for new motor vehicles [or new motor vehicle engines] for the control of emissions therefrom, which standards the state board has found to be necessary and technologically feasible to carry out the purposes of this division. Prior to adopting such standards, the state board shall consider the impact of such standards on the economy of the state, including, but not limited to, their effect on motor vehicle fuel efficiency." (§43101.)

Each of these sections must be read in the context of Health and Safety Code §39600, which provides that *"The state board shall do such acts as may be necessary for the proper execution of the powers and duties granted to, and imposed upon, the state board by this division and by any other provision of law."*

Pursuant to these authorities the ARB has adopted the world's most stringent standards for passenger cars, light-duty trucks and medium-duty vehicles, including the Low Emission Vehicle/Clean Fuels Program requiring the introduction of zero emission vehicles by 1998. (13 Cal. Code Regs. §1960.1.) The ARB has also adopted regulations establishing standards for heavy-duty vehicles that are at least as protective as the comparable federal standards applicable elsewhere in the nation. (13 Cal. Code Regs. §1956.8.)

In addition to the emission reductions to be achieved from implementation of existing ARB mobile source regulations, further progress toward attainment will result from regulations for medium and heavy-duty vehicles to be adopted by ARB within the next 30 months, as well as additional mid-term measures to be adopted in the following years.

The mobile source element also includes advance technology measures that rely on new or evolving technology. These measures are slated for adoption over the next several years to provide emission reductions necessary to show attainment and meet milestones in the South Coast Air Basin in the period from 2000 to 2010. These measures will be adopted pursuant to CAA §182(e)(5).

A complete description of the existing regulations, near and mid term measures and measures relying on new technologies that comprise the mobile source component of the SIP revisions, and the associated emission reductions are set out in the Mobile Source Element (Volume II of this submittal).

Consumer Product Element

Consumer products comprise a significant portion of the nonvehicular emissions of volatile organic compounds (VOC) in the State. The ARB's Consumer Products Element of the California SIP (Volume II of this submittal) is therefore an important component of the 1994 ozone SIP revisions, particularly in the South Coast Air Basin.

The ARB has broad authorities under state law to regulate consumer products and these authorities empower the board to adopt and commit to adopt regulations that comprise the consumer product element of the 1994 SIP revisions. Specifically, Health and Safety Code §41712(a) provides that:

"The state board shall adopt regulations to achieve the maximum feasible reduction in reactive organic compounds emitted by consumer products, if the state board determines that adequate data exists for it to adopt the regulations." (See also Health & Saf. Code §39600.)

Pursuant to these authorities the ARB has already adopted standards for 27 categories of consumer products, which represent a significant reduction in emissions from these products. (17 Cal. Code Regs. §94500 et seq.) The ARB will continue to develop and adopt regulations that limit the amount of VOC emissions from consumer products. Current scheduling calls for regulation of several as yet unregulated categories of consumer products no later than June of 1997.

Additional reductions as necessary in the South Coast Air Basin in the 2000 to 2010 time frame rely on new and evolving technologies, as well as measures requiring complex analyses, and decision making and coordination among a number of government agencies. These measures are described in Appendix A of the Consumer Product Element. These advanced technology measures are authorized under Clean Air Act §182(e)(5).

A complete description of the existing regulations, near and mid term measures and measures relying on new technologies that comprise the consumer product component of the state plan, and the associated emission reductions are set out in the Consumer Product Element (Volume II of this submittal).

Enhanced Vehicle Inspection & Maintenance Program

The 1994 ozone attainment and post-1996 rate-of-progress demonstrations must include an enhanced vehicle inspection and maintenance (I/M) program for all serious, severe and extreme ozone nonattainment areas. The California Bureau of Automotive Repair is responsible for implementing I/M in California -- also known as the Smog Check program. The laws providing for the implementation and enforcement of an enhanced I/M program are found at Health and Safety Code §44000 et seq. These statutes were amended in 1994 to provide authority to establish an acceptable program under U.S. EPA guidance (Assembly Bill 2018, Stats. 1994; Senate Bill 521, Stats. 1994, c. 29; and Senate Bill 198, Stats. 1994, c. 28). The final regulations implementing California's enhanced I/M program will be submitted separately by ARB early next year, following their completion by the Bureau of Automotive Repair. See Volume III of this submittal for a detailed status report.

Pesticide Element

Pesticide use in California results in significant levels of VOC emissions. The State Implementation Plan for Agricultural and Commercial Structural Pesticides is included as a component of the 1994 ozone SIP revisions to address these emissions. This plan revision was adopted by the California Department of Pesticide Regulation (DPR) and transmitted to the ARB for inclusion as part of the SIP submission. The DPR has broad authorities under state law to control the use of pesticides for the purposes of protecting human health and the environment, including improving air quality. (Food & Agriculture Code §§14102, also §§12781, 12824-12828, 12976-12977, 12991-12995, 12996-12999, 13101 and 13102.)

Pursuant to these authorities the DPR approved, on November 15, 1994, a plan to institute and monitor a voluntary VOC reduction program, together with a commitment to adopt regulations to require reductions in VOC emissions from pesticide use if the voluntary program does not produce specified reductions in accordance with a schedule approved as part of the pesticide element of the plan. The amount of reductions to be mandated by regulation depends on the level of voluntary reductions achieved as specified in the plan. See Volume III of this submittal for additional detail.

Local Air District SIP Revisions

Local air districts derive their general authority and structure from §§40000 through 40002 of the Health and Safety Code. Health and Safety Code §40000 provides that local and regional authorities in California "have primary authority for control of air pollution from all sources, other than emissions from mobile vehicles." Local air districts are directed to adopt and enforce orders, rules and regulations, including transportation control measures, as necessary to control air pollution to meet national and state ambient air quality standards, and to enforce all applicable provisions of state and federal law (H&SC §§40001, 40702 and 40717). These authorities have been used extensively by districts to adopt regulations to control air pollution, rules that taken together comprise by far the most comprehensive and effective air quality programs in any other state or local area.

Pursuant to these authorities each of the local air districts in California required to submit 1994 ozone attainment and post-1996 ROP demonstrations have adopted or committed to adopt numerous rules for a wide variety of stationary sources to reduce the nonvehicular source contributions to ozone precursor emissions.

Approval of the 1994 California SIP Revision

As revised by this submittal, the California SIP contains all the emission reductions necessary to attain the national ozone standard. These include reductions sufficient to offset any increases due to projected population growth, industrial activity, motor vehicle use and other factors. The SIP includes a significant number of measures to control emissions from a wide variety of sources including motor vehicles and non-road engines, consumer products, pesticide use, and industrial and commercial sources of all types. A high percentage of these measures are in the form of fully adopted rules and regulations. The SIP also includes regulations currently under development and scheduled for adoption in the near-term, i.e., no later than June 1997. These measures are augmented by various measures that will be finalized as fully adopted regulations or implemented through other final action in the following years. Finally the SIP contains a special class of advance technology measures necessary to contribute to rate of progress and attainment in the SCAB after the year 2000. The approvability of each of these classes of measures is discussed below.

Existing Regulations: A significant portion of the required emission reductions are represented by fully adopted rules or regulations of the ARB, local air districts and other agencies as appropriate. These measures are fully approvable under Clean Air Act §§110(k)(1)(B) and (3).

Additionally, the State's enhanced vehicle inspection and maintenance (I/M) program is currently in the process of being finalized in accordance with the agreement between U.S. EPA and the State (MOU) reached in March of this year. The legislation implementing the MOU and binding the State to create an I/M program meeting specific objective criteria was enacted and signed into law that same month.

The regulatory changes necessary to implement enhanced I/M have not yet been finalized. In accordance with the MOU and implementing legislation, this cannot be done until sometime after the first of the year in 1995. The MOU calls for a Pilot Demonstration Study to be completed by December 31, 1994. The results of this study will be used by U.S. EPA to make certain determinations about the State's approach, which will then be incorporated into final regulations to be adopted by BAR. The State plans to have these regulations in final form for submittal to U.S. EPA as a formal SIP revision by February 15, 1995.

The State is working diligently to carry out each component of the MOU (see discussion of the Pilot Demonstration Study in Volume III of this submittal), and is in full compliance with the terms of that agreement. Under these circumstances, equity and fair dealing require that this measure be considered to be fully implemented for purposes of reviewing SIP completeness and, if final action comes before June 1995, approvability.

Near and Mid Term Measures: California has worked diligently to complete all measures that comprise the SIP. However, an attainment plan with 100% fully adopted rules for in every area is impossible -- if for no other reason, because the necessary national control measures have not been adopted. Nevertheless, this submittal is entitled to a completeness finding and is approvable as a SIP revision under CAA §110(k)(1)(B) and §110(k)(3) or (4) and applicable case law and written guidance from U.S. EPA regarding 1994 ozone SIP submittals. Specifically, U.S. EPA's November 1994 Submittal Policy (September 1, 1994 Memorandum from John S. Seitz, Director, Office of Air Quality Planning and Standards, to Directors, Regions I-X, hereinafter U.S. EPA's SIP Submittal Policy) states:

"The SIP submittals that provide for a modeling demonstration, a high percentage of the required reductions, and an explanation for relying on commitments for the remainder of the reductions constitute a 'substantive' submittal worthy of at least consideration for conditional approval."

The memorandum further states that U.S. EPA nominally considers 80% to be an acceptable percentage for application of this policy.

The California SIP is complete and approvable since a high percentage of the required reductions are from fully adopted rules or regulations.

From California's point of view, 80% is arbitrary. Several other rates of adoption can and do represent "a high percentage." California also believes that U.S. EPA must consider the prior regulatory actions of each state when applying its SIP submittal policy. States which adopted aggressive programs prior to 1990 have fewer options for further reducing emissions and, in many cases, must chart completely new regulatory territory. Adopting controls where none now exist, and without precedent in any other state, takes a considerable amount of analysis, public dialogue, and time. California faces this situation in at least two of its ozone nonattainment areas: the Sacramento Metropolitan Area and Ventura County. (South Coast is even more challenging, yet is permitted to rely on advanced technology measures as defined in §182(e)(5) of the Clean Air Act.)

Nonetheless, the California SIP contains a very high percentage of adopted controls as compared to the total quantity of necessary reductions. In San Diego, adopted regulations account for all of the required emission reductions. In the South Coast Air Basin, the combination of adopted controls and advanced technology measures produces 83% of the attainment strategy. In the Sacramento Metropolitan Area and the San Joaquin Valley and Ventura, adopted measures account for 82% of the necessary reductions. Finally, in Ventura, 79% of the combined precursor reductions are derived from existing regulations. These percentages improve when reductions from reasonable national standards are also counted - as they should be for the reasons stated below.

Without federal controls for preempted and other national transportation sources, California is unable to show attainment without using measures of questionable wisdom, enforceability and efficacy, such as no-drive days or one-stop rules for non-California plated long haul trucks. California (and other similarly situated states) cannot be expected to resort to such

measures. The bottom line is that if the federal controls are not provided and credited toward California's attainment demonstration, the State will be unable to submit an implementable SIP revision in any time frame.

This outcome is contrary to the Clean Air Act, which clearly envisions federal controls acting in tandem with state and local measures to reach national air quality standards. This is particularly true with respect to preempted sources, where the state has been stripped of any power to realize the necessary emission reductions. Thus, in order to produce the SIP revisions for ozone nonattainment and post-1996 ROP demonstrations California has, as it must, called on U.S. EPA to act quickly and aggressively to promulgate emission controls for these sources.

The ARB further calls on U.S. EPA to recognize that if a state is unable to produce a complete and approvable SIP revision on a timely basis because the Administrator failed to carry out obligations related to development of the SIP revisions, equity demands that the agency both acknowledge the source of any deficiency and take appropriate action to avoid penalizing the state for matters beyond the State's control. The court in *NRDC v. EPA*, (D.C. Cir. 1994) 22 F.3d 1125 [38 ERC 1481, 1489], found that it was not inappropriate for U.S. EPA to take steps to ameliorate the effects of the agency's failure to take timely action on the issuance of guidance for enhanced inspection and maintenance programs. Similarly, in reviewing this submittal U.S. EPA must take necessary and appropriate steps to avoid finding the California's 1994 ozone SIP submittal deficient, i.e., incomplete or not approvable, where the promulgation of feasible federal standards for national sources would cure the deficiency.

California recognizes that U.S. EPA cannot accept as complete a SIP that contains "no specific remedial measures but merely [a] promise to adopt such measures within a year." (*NRDC v. EPA*, supra, 22 F.3d 1125 [38 ERC 1481, 1484].) However, this submittal meets the criteria set out in *NRDC v. EPA* (id. at 1488) for several reasons. First, it should be noted that many of the near-term measures will be adopted in regulatory form prior to final action on the SIP submittal, and they should be considered as such in the SIP review process.

Second, the remaining commitments, which comprise a portion only of the submittal, are not presented as a means of circumventing the deadline for submitting the SIP revisions, a strategy disapproved by the court in *NRDC v. EPA*. Rather, they are simply one class of components of a substantive plan which includes many far-reaching, specific, enforceable measures resulting from consistent, unflagging efforts on the part of the ARB, local air districts and other state authorities over the last four years to develop and adopt approvable SIP revisions to address all requirements of the 1990 Clean Air Act.

Finally, the measures are specific, enforceable commitments to future action, which the State has been unable to accomplish, thus far, due to a number of circumstances beyond the State's control. For example, determining the proper level of control was delayed due to the time necessary to complete the required modeling. Additionally, the sheer number of measures necessary to incorporate all proven controls and promising new technologies in regulation has been overwhelming, particularly with California's detailed rulemaking

procedures and the need to develop data for regulations predicated on technical advances. Once the SIP is approved by U.S. EPA, these enforceable commitments become mandatory and must be carried out. (*Citizens for a Better Environment v. California* (N.D. Ca. 1990) 731 F.Supp. 1448 [31 ERC 1213, 1218-1220].) Thus, the commitments are not mere promises to take appropriate but unidentified measures in the future, which would be unacceptable under the ruling in *NRDC v. EPA*, but enforceable commitments that compel the State or local air districts to obtain the reductions or to substitute alternative measures by formal revision of the SIP.

New Technologies: The SIP revision for the South Coast Air Basin relies on advanced technologies which will be finalized for implementation between 2000 to 2010. The Clean Air Act §182 sets out requirements for marginal, moderate, serious, severe and extreme ozone nonattainment areas, with each level building on the preceding. As the only extreme area in the nation, South Coast must meet the most strenuous requirements applicable to areas with less intense ozone problems, plus all of the requirements of §182(e)(1) through (3). Under 181(a) of the Act, South Coast has until 2010 to attain the national ozone standard.

As stated by U.S. EPA in the General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990:

"The Act recognizes that extreme areas may have to rely to a certain extent on new or evolving technologies to meet certain of the emissions reduction requirements. The relatively long time between development of the initial SIP and attaining the NAAQS, and the degree of emissions reductions needed to attain the standard, guarantees that some control technologies will not be fully demonstrated by the time of SIP development." (57 Fed.Reg. 13498, 13524.)

To address this concern, Congress enacted §182(e)(5) as part of the 1990 amendments related to attainment planning for extreme ozone nonattainment areas. Specifically §182(e)(5) provides:

"The Administrator may, in accordance with section 110, approve provisions of an implementation plan for an Extreme Area which anticipate development of new control techniques or improvement of existing control technologies, and an attainment demonstration based on such provisions, if the State demonstrates to the satisfaction of the Administrator that—

(A) such provisions are not necessary to achieve the incremental emission reductions required during the first 10 years after the date of the enactment of the Clean Air Act Amendments of 1990; and

(B) the State has submitted enforceable commitments to develop and adopt contingency measures to be implemented as set forth herein if the anticipated technologies do not achieve planned reductions.

Such contingency measures shall be submitted to the Administrator no later than 3 years before proposed implementation of the plan provisions and approved or disapproved by the Administrator in accordance with section 110. The contingency measures shall be adequate to produce emission reductions sufficient, in conjunction with other approved plan provisions, to achieve the periodic emission reductions required by subsection (b)(1) and (c)(2) and attainment by the applicable dates. If the Administrator determines that an Extreme Area has failed to achieve an emission reduction requirement set forth in subsection (b)(1) or (C)(2), and that failure is due in whole or part to an inability to fully implement provisions approved pursuant to this subsection, the Administrator shall require the State to implement the contingency measures to the extent necessary to assure compliance with subsections (b)(1) and (c)(2). "

California's SIP revisions for the South Coast Air Basin rely heavily on application of §182(e)(5) for reductions necessary to provide emission reductions beyond the year 2000. This reliance was intended by the Act and affects both the completeness review and the approval process for the 1994 SIP revisions.

Long term measures that rely on new or evolving technology (including measures requiring complex analyses and decision-making and coordination among numerous government agencies) fall within the coverage of §182(e)(5) (57 Fed.Reg. 13498, 13524) and are approvable as SIP revisions although not in final rule form. Because this section contemplates the use of yet to be developed technology or yet to be completed analyses and decision-making, the rules implementing these measures have not yet been developed or adopted.

Three years before the proposed implementation date the State or the District, as appropriate, will submit enforceable commitments to develop and adopt contingency measures if the advanced technology measures do not achieve planned reductions. For purposes of U.S. EPA's review under §110(k), these measures should be treated in the same way as fully adopted rules because they are fully developed in the manner contemplated by the Act at this point in time.