Attachment #1 – Excerpt from the 1994 State Implementation Plan

§51.353 Network Type and Program Evaluation

Describe the network type for each JIM area; include the required demonstration if a hybrid program is proposed

Enhanced Program: California passed legislation authorizing implementation of an enhanced hybrid program in March of 1994 (copy attached in Appendix A). California is committed to fulfilling the Memorandum of Agreement (MOA) (Appendix H) between the California Environmental Protection Agency and the U. S. Environmental Protection Agency (USEPA) dated March 21, 1994 including meeting the USEPA's full enhanced I/M performance standard. California will meet these obligations by implementing a hybrid vehicle emissions testing program consisting of a network of test-only testing stations as well as privately operated test and repair type testing stations. The test only network will consist of state contracted or licensed test only stations and in combination with other program features will be of sufficient capacity to meet USEPA's full enhanced I/M performance standard. The Radian Report (one of the products of the MOA) dated March 31, 1995 and entitled "Evaluation of the California Pilot Inspection/Maintenance Program" indicated that the state may need to test up to 36% of the fleet annually in enhanced areas to meet the emissions reductions identified in the SIP. While this report demonstrated equivalency with the USEPA performance standard, it was based on the CALIMFAC model and not on actual performance measurements, and it included provisions for the 50% discount on credit for the test-and-repair portion of the state's I/M program, with which California does not agree.

The test-only network will be phased in starting as early as September 1995 in some enhanced areas. Remaining enhanced areas will be fully implemented as soon as test-only facilities become operational. <u>As described below, certain targeted vehicles due for inspection each year will be required to go to the test only stations. Initially, California will require test-only testing for a minimum of 15% of the fleet due for inspection each year (750,000 vehicles annually). California will (on the basis of a continuing performance evaluation as specified below) adjust the actual number of vehicles required to go to the test-only network to a level sufficient to meet the emissions reductions of the performance standards described above and as specified in Chapter 29 of the Statutes of 1994, Health and Safety Code Section 44010.5(b).</u>

The vehicles required to go to test-only stations for initial tests will consist of: 2% random sample, high mileage fleet vehicles, vehicles for hire, annual testing for 2-5 years for vehicles previously identified as high-emitters, likely high-emitters identified through remote sensing and by test/repair stations, and motorists' voluntarily choosing to go to test-only stations. The remainder of the capacity will be used as necessary to meet the performance standard through likely high-emitters identified with the high-emitter profile (REP). Privately operated test-and-repair stations meeting new program requirements (Le., ASM test equipment and procedures, employment of upgraded state-licensed technicians, etc.) could test any other vehicles subject to the program, including vehicles seeking inspections to comply with vehicle change-of-ownership registration requirements.

Other program features are described below.

California shall reserve the right to consider and, if appropriate, revise its SIP

consistent with formal or informal policy or guidance issued by USEPA for other states. Demonstration of Equivalency for Enhanced Program: As a condition of adopting the hybrid, California and the USEPA agreed that a joint demonstration pilot would be conducted to evaluate the primary hybrid components to determine the amount of effort needed to meet or exceed U. S. EPA performance standards. Pilot study data and results have been submitted to USEPA throughout the process. The draft final report was released on March 31, 1995. (A copy of the Radian report is in Appendix H.) While the pilot demonstrated equivalency, it was based on the CALIMFAC model and not on actual performance measurements. As such, California will commence its test-only program as early as September, 1995, by requiring a minimum of 15% (750,000 vehicles annually) of the fleet due for inspection each year to go to test-only stations in enhanced areas. The test only system will have the capability to adjust its capacity as specified above under the description of the Enhanced Program.
Expansion of the test-only system as performance evaluation dictates will be achieved through one or a combination of the following:

- Expansion through an option to be negotiated as part of any test-only network contracts.

- Licensing of individual test-only stations, as allowed in California statute.

- Operation of test-only stations on an interim basis by the Bureau of Automotive Repair as required by sections 44010.5 (t) and (h) and 44014.5 (g) of the Health and Safety Code. -

The pilot program further demonstrated the effectiveness of a variety of measures that will enable California to continuously monitor and assure that program performance will meet or exceed emissions reductions identified in the SIP. These.
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Attachment #2 - Excerpt from the July 12, 2000 ARB Report

Table VI-5
Potential Emission Reductions from
Directing Additional Vehicles to Test-Only and High-Performing Stations
South Coast Air Basin in 2005[1]

	HC	NOx
Tons per day reductions	0.8	2.5
Additional percent toward SIP target	2%	14%

[1]Assumes full implementation by 2005

3. *More Stringent Inspection Standards*

Description: The SIP assumed that vehicles would be inspected using more stringent inspection standards, or "cut points," than are currently in place. Increasing cut point stringency would increase the number of high emitting vehicles identified and repaired. Some commenters recommended tightening cut points, however others cautioned that California may soon reach the point of diminishing returns – when the emission benefits from failing additional vehicles is outweighed by the large number of vehicles failed.

Implementation of cut points at approximately halfway between the current levels and the final cut points envisioned in the 1994 SIP would provide a significant increase in program effectiveness for controlling NOx emissions. Going to interim cut points would cause a small increase in the vehicle failure rate. This increase is minor because we expect more car owners to pre-inspect and pre-repair their vehicles as cut points are tightened – minimizing the failure rate at smog stations. Increases in failure rates are also likely to increase repair costs by an unknown amount. From a program implementation perspective, this is an easy and low cost option to implement. BAR could reduce cut points electronically in one day. Current regulations allow a 30 percent reduction in the cut points in place now. The interim cut points could be implemented under this regulation. Minor modifications would be needed to implement the final SIP cut points.

More stringent NOx cut points are especially critical to the Sacramento area. Over half of the smog-forming emissions in the Sacramento area are from mobile sources, and the need for NOx emission reductions is acute. With the Smog Check II shortfall, it is particularly difficult for the local transportation plan to show conformity with the NOx budget in the approved SIP. Tighter NOx cut points are critical for the Sacramento area to demonstrate conformity this summer to remain eligible for federal highway funding.

The draft report discussed an alternative way to implement tighter cut points, requiring those vehicles that are failed to be fully repaired. That is, the cut points following repair would be more stringent than the standards used initially to inspect the vehicle. For example, the pass/fail cut points for the *initial test* could be set at the interim cut points described above, but those vehicles that fail the initial inspection could

individual area. As a result, these numbers cannot be compared to the statewide performance numbers presented in the Executive Summary.

Table VI-2
Emission Benefits of Current Smog Check Program
South Coast Air Basin in 2005

	HC	NOx
SIP commitment	32.9	18.0
Tons per day reductions	27.1	14.1
Percent Toward SIP Target	**82%**	**79%**

It is important to note that the year 2005 in the South Coast represents the best scenario for the Smog Check II program. Although the analyses shown in this Section may indicate that implementing a particular group of options will achieve more than 100 percent of the Smog Check II commitment for the South Coast in 2005, that same group of options may still leave other areas short. For example, the Sacramento area has a critical need for NOx reductions and will need all of the options identified, plus additional measures to meet its 2005 attainment demonstration. In addition, the benefits of implementing a combination of options may not be strictly additive – if emissions are lowered by "Option A," then the benefits of "Option B" may be lower than estimated here.

1. Improve Evaporative Emission Testing

Description: The emission reduction commitments in the 1994 SIP assumed evaporative emission reductions equivalent to U.S. EPA's pressure/purge test. Subsequent evaluation indicated that a complete pressure/purge test can induce evaporative system leaks, thus BAR never implemented the complete pressure/purge test. Instead, BAR implemented a gas cap check (in both Enhanced and Basic areas), however, it is less effective than the pressure/purge test and thus we fall well short of achieving the evaporative emission reductions needed to meet SIP goals. To achieve additional emission reductions, we must improve testing and repair of evaporative emission system failures.

Additional evaporative emission reductions may be achieved through a low pressure test. Arizona has implemented a low pressure test, which may be feasible for California as well. Although the results in Arizona seem promising, ARB and BAR are evaluating the system to determine if induced leaks (due to pinching or damaging of hoses during testing) are a problem. An alternative test that will be evaluated uses smoke injected into the vehicle's evaporative control system. The vehicle is then visually inspected for leaks indicated by escaping smoke.

As discussed in the draft report, the cost and inconvenience associated with a new evaporative emission test could be offset by requiring only vehicles of a certain age (expected to have evaporative system failures based on field studies conducted by

Attachment #4

SMOG CHECK PROGRAM FACT SHEET

Test-Only Directed Vehicles

AUGUST 2003

In order to comply with state law, the California Department of Consumer Affairs/Bureau of Automotive Repair (DCA/BAR) directs a portion of the vehicles registered in Enhanced Smog Check Areas to Test-Only stations. Enhanced Areas are those parts of the state with "serious," "severe," or "extreme" ozone pollution problems.

What is Test-Only? Test-Only facilities are licensed Smog Check stations that, by law, are only allowed to test cars; they cannot repair them. Any needed repairs must be performed elsewhere at either a Smog Check station designated as a Test-Repair or Gold Shield station. To learn more about the various station types, and what station best fits your Smog Check needs, **click here**.

High Emitter Profile - The majority of vehicles directed to Test -Only stations are selected by application of the High Emitter Profile (HEP), which identifies the vehicles most likely to fail their Smog Checks.The High Emitter Profile (HEP) uses data from several different sources. Some of it comes from the state Vehicle Identification Database (VID), which collects data from each Smog Check performed in California. The VID is used by the Department of Motor Vehicles (DMV), BAR, and other government agencies. In addition, general vehicle data such as make, model-year, vehicle miles traveled, and engine size help define the HEP.

This information is used to determine which vehicles are most likely to fail their Smog Checks, especially at Gross Polluter levels—at least two times the emissions level allowed for a particular vehicle. No single factor identifies a vehicle for a Smog Check to be done at a Test-Only station. The data is weighted and vehicles selected using this computer profiling of vehicles most likely to fail their Smog Check. DCA/BAR has gradually increased the number of vehicles directed to Test-Only stations to meet the air quality improvement goals of the State Implementation Plan (SIP). The SIP is a blueprint outlining the methods California will use to meet federal air quality standards.

Two Percent Randomly Selected - As required by State law, two percent of the vehicles in the Enhanced Areas are also directed to Test-Only stations for their Smog Checks. These vehicles are selected randomly to evaluate the overall effectiveness of the Smog Check program.

How Motorists are Notified - The Department of Motor Vehicles (DMV) notifies owners of vehicles that have been selected to have their Smog Checks performed at Test-Only stations. The registration Renewal Notice sent for these vehicles will say "Smog Certification Required at Test-Only Center.".

Consumer Assistance Program - You may qualify for up to $500 in financial assistance to repair your car if it requires a Smog Check at a Test-Only station and fails that test. **Click here** for more information on the Consumer Assistance Program and to obtain an application, or visit our Web site at www.smogcheck.ca.gov.

2. *Send More Vehicles To Test-Only and/or Higher-Performing Test and Repair Stations*

Description: The SIP assumed that 36 percent of vehicles would be directed to Test-Only stations. Currently, about 15 percent of vehicles subject to Smog Check are inspected at Test-Only stations (about 750,000 vehicles per year after being directed by the state for inspection at these stations). Many commenters suggested sending more vehicles to Test-Only stations as a way to improve the benefits of the Enhanced Smog Check program. Existing statutes permit BAR to increase the percentage of vehicles directed to Test-Only stations if emission reductions fail to meet SIP requirements.

A recent BAR report, *"Smog Check Station Performance Analysis"* (dated June 27, 2000), concluded that greater emission reductions are recorded when a vehicle is directed to a Test-Only station for a Smog Check II inspection instead of being allowed to get an inspection at a Test and Repair station. The report shows that for failing vehicles, the emissions after the inspection and repair are 33 percent lower for those vehicles that went to a Test-Only station compared to those that went to a Test and Repair station for initial inspection. (All repairs occur at Test and Repair stations, as Test-Only stations cannot perform emission system repairs.)

From the customer's perspective, Test-Only stations can be inconvenient. If your car fails Smog Check at a Test-Only station, you must then take the car to be repaired, and then return to the Test-Only station to be re-tested and certified. On the other hand, if your car fails at a Test and Repair station, that single location can test, repair, re-test, and certify the vehicle. (Vehicles identified as gross polluters at Test and Repair stations must go to Test-Only stations to be re-tested and certified.) To determine if we could obtain the benefits associated with Test-Only stations while minimizing inconvenience to consumers, BAR also analyzed the roadside data to determine if there were Test and Repair stations that recorded the same emission reduction benefits as Test-Only stations.

BAR developed a methodology for ranking stations by relative performance – using the profile of vehicles tested at each station to develop an "expected" failure rate and then comparing the station's actual failure rate to that "expected" rate. BAR used roadside data to compare the top 25 percent of ranked stations to the performance of Test-Only stations. As shown in Table VI-4, the top 25 percent of the Test and Repair stations (e.g., not necessarily the current Gross Polluter Certification pilot stations) achieve the same emission reductions as the Test-Only stations.

Table VI-4
Comparison of Emissions Measured at Different Types of Stations
ASM 2525 Test for Hydrocarbons; 1980-1991 Vehicles

	Before Smog Check	After Smog Check	% Reduction
All Test and Repair Stations	82 ppm	69 ppm	17%
Top 25% of Test and Repair Stations	98 ppm	55 ppm	44%
Test-Only	98 ppm	57 ppm	42%

[1]The Test-Only number is a weighted average calculated from Table 5 in BAR's station performance report, dated June 27, 2000. The Test and Repair numbers come from Table 7.

If high-performing stations were allowed to perform the same functions as Test-Only stations, it would triple the number of stations eligible to test directed vehicles. Directing more vehicles with suspected high emissions to high performing inspection stations, whether they are Test-Only or the best performing Test and Repair stations, would result in greater emission reductions.

It is not possible to accurately estimate the impact of this program change on reported vehicle failure rates because it is anticipated that many vehicles will be pre-inspected or pre-repaired prior to the official smog inspection. However, more vehicles would be expected to fail the smog inspection and receive better repairs than under the current program. Our assessment of the potential benefits is shown in Table VI-5.

Responsible Agency	BAR to implement
Regulatory Changes Necessary?	No regulatory changes to direct additional vehicles to Test-Only stations or high performing Test and Repair stations. Regulations needed to establish criteria for high performing Test and Repair stations.
Statutory Changes Necessary?	No
Timing for Implementation	4 months to direct vehicles to Test-Only stations 6-18 months to complete regulations to establish criteria for high performing Test and Repair stations.

Attachment #6

Air Resources Board

Alan C. Lloyd, Ph.D.
Chairman
2020 L Street • P.O. Box 2815 • Sacramento, California 95812 • www.arb.ca.gov

Winston H. Hickox
Agency Secretary

Gray Davis
Governor

August 17, 2000

Ms. Felicia Marcus
Regional Administrator
Region IX
U.S. Environmental Protection Agency
75 Hawthorne Street
San Francisco, California 94105

Dear Ms. Marcus:

This letter documents how and when the State of California will improve the effectiveness of the Enhanced Vehicle Inspection and Maintenance (I/M) program, also known as Smog Check II, for all nonattainment areas required to implement the program. To address transportation conformity in the South Coast, this letter also reiterates the Air Resources Board's (ARB or Board) commitment to achieve all of the emission reductions identified for our measures affecting on-road vehicles in the 1994 State Implementation Plan (SIP) for Ozone and describes the supplemental measures we are currently evaluating as part of this effort. The combination of improving the Enhanced I/M program and adopting supplemental measures will fulfill the State's obligations to achieve on-road motor vehicle emission reductions and enable transportation conformity findings for the Los Angeles area. We also include commitments from all three responsible agencies to adopt and submit a comprehensive ozone SIP revision for South Coast in 2001.

The 1994 Ozone SIP established ARB's enforceable commitment to achieve emission reductions associated with statewide mobile source measures. The Bureau of Automotive Repair (BAR), which operates the Smog Check program, also committed to adopt and implement California's Enhanced I/M in the urbanized portions of the South Coast, Southeast Desert, Ventura, Sacramento Region, San Joaquin Valley, and San Diego. The 1994 SIP identified emission reduction targets for the program in all of these areas, except San Diego (which used Enhanced I/M as a contingency measure). The applicable plan for the South Coast, the 1999 Ozone SIP, continued to rely on reductions from Smog Check II for progress and attainment.

On July 12, 2000, ARB released a report evaluating California's Enhanced I/M program. This report found that although Smog Check II is achieving significant emission reductions, it is not providing all of the benefits anticipated in the Ozone SIP. This shortfall affects the Enhanced I/M commitment in the SIP, the on-road motor vehicle emissions used for transportation conformity purposes, and attainment of the federal one-hour ozone standard.

Improvements to the Smog Check II Program

In our July report, we identified a number of options for improving the Enhanced I/M program. BAR and ARB are now committing to implement a series of near-term improvements, between September 2000 and December 2002, as described in Attachment A, "Improvements to Smog Check II." BAR's commitment is evidenced by the signature of Mr. Douglas Laue, Chief of BAR in Attachment A. These near-term improvements, within BAR's current legal authority, are:

- more stringent inspection standards for oxides of nitrogen (NOx),
- loaded-mode testing for heavy-duty gas trucks,
- improved evaporative emission testing,
- directing more vehicles to Test-Only and/or high-performing stations, and
- use of remote sensing.

These improvements will significantly reduce ozone precursors – reactive organic gases (ROG) and NOx – in each of the six regions, as measured in the inventory currency of the applicable SIP for each area. The table below summarizes the benefits statewide.

Statewide Benefits of Near-Term Smog Check II Improvements
(SIP Emission Reductions in Tons per Day)

2002		2005		2008		2010	
ROG	NOx	ROG	NOx	ROG	NOx	ROG	NOx
4.5	9.3	9.2	12.4	10.4	13.7	9.9	13.2

The near-term Smog Check II improvements that we are committing to make, combined with the benefits from already adopted ARB measures, are sufficient to meet the State's emission reduction obligations for on-road motor vehicles in 2002 and 2005, in most areas. The Sacramento Region was able to demonstrate conformity in its most recent conformity analysis without the benefits of the near-term program improvements. However, the Sacramento Region and the San Joaquin Valley in 2005, and the South Coast in 2008 and 2010 will need further improvements to Smog Check II (or other measures) to meet their progress and attainment needs. We expect the upcoming SIP revision for the San Joaquin Valley will establish new commitments for emission reductions from the Smog Check II program in 2005.

In Attachment A, ARB and BAR also commit to fully satisfy the Smog Check II commitment for Sacramento in 2005, and the South Coast in 2008 and 2010, through either further program improvements or other measures. We are committed to secure these additional emission reductions by 2003, with implementation by 2004 for Sacramento and 2006 for South Coast.

ARB and BAR will work together to evaluate whether there are additional mid-term program improvements within BAR's authority that are feasible to secure the needed emission reductions. Such program improvements may include further tightening of inspection standards for all pollutants. If these emission reductions cannot be secured from within the Smog Check program, ARB will secure them from other mobile source measures. The mid-term program improvements could also be achieved through legislative action to increase the number of vehicles subject to the Smog Check II program by:

- removing the rolling 30-year model year exemption, and
- extending the program beyond the current definition of urbanized area to include all eligible vehicles registered in a nonattainment region subject to Smog Check II. This would help the Sacramento Region and the San Joaquin Valley reach attainment.

Transportation Conformity in the South Coast

One of the most critical concerns resulting from the shortfall in the Smog Check II program, and other State measures, has been the ability of the Southern California Association of Governments (SCAG) to make a positive transportation conformity finding for the South Coast Air Basin this year. To obtain federal transportation funds, the Clean Air Act (Act) requires transportation agencies to find that transportation plans conform to the SIP (i.e., emissions from transportation plans are within the motor vehicle emissions budgets established in the applicable SIP). The emissions budgets in the 1999 South Coast SIP assumed that all vehicle control measures would be fully effective; shortfalls hinder a conformity finding. Even with Smog Check II program improvements, ARB will need to secure additional emission reductions for 2008 and 2010 in the South Coast to fully meet our on-road mobile source SIP commitments.

We are providing information in this letter on the current and future effectiveness of ARB's control measures to aid in the conformity analysis and enable a positive conformity finding. This analysis relies on one federal measure -- a regulation to reduce emissions from heavy-duty diesel trucks nationally -- which U.S. EPA has adopted and will take effect in 2004. Attachment B, "Quantitative Summary of Transportation Conformity Approach," details the mix of strategies that the State is using to meet its on-road motor vehicle commitments for South Coast in the 1999 Ozone SIP. Attachment C, "Adopted Supplemental Measures," identifies measures not explicitly described in the SIP that ARB has already adopted to make up part of the emission reduction shortfalls. Attachment D, "Future Supplemental Measures," describes some of the further strategies we will pursue to complete our emission reduction SIP commitments for 2008 and 2010.

In most cases, ARB has already taken initial action to adopt the specific measure described in the original 1994 SIP, and carried over in the 1999 South Coast SIP. If an adopted measure does not achieve the full reductions in the SIP, supplemental measures to achieve emission reductions would complete the commitment. Each of these future supplemental measures described in Attachment D is directly linked to our original SIP commitment – completing one of the 1994 SIP measures.

The conformity regulations allow credit for adopted measures, partially implemented measures (to the extent that implementation is assured), and enforceable SIP commitments. We believe this package meets the requirements of the Act and the conformity regulations to assure credit for actions already taken by the State and future actions that are assured by existing, legally-enforceable SIP commitments. The table below presents our accounting of emission reductions creditable for transportation conformity purposes in the South Coast.

Transportation Conformity Accounting for the South Coast Air Basin
(Emission Reductions in Tons per Day in 1999 SIP Currency)

State and Federal On-Road Motor Vehicle Measures	2002		2005		2008		2010	
	ROG	NOx	ROG	NOx	ROG	NOx	ROG	NOx
Current Smog Check Program	24.9	21.0	25.5	14.2	22.8	8.8	21.6	6.2
Smog Check Improvements	2.1	5.1	4.8	6.2	6.5	5.5	6.7	5.1
Adopted On-Road Measures	18.2	20.7	16.1	48.2	16.5	82.6	17.6	112.7
Future Supplemental Measures	--	--	--	--	6.9	--	9.6	--
Remaining Long-Term Measures (M-17 and Advanced Technology)	--	--	--	4.0	1.0	9.0	37.8	10.0
Creditable On-Road Reductions	45.2	46.8	46.4	72.6	53.7	105.9	93.3	134.0
On-Road Reduction Target	44.3	43.5	44.3	61.9	53.7	78.4	93.3	93.9

As a regulatory agency, ARB has a long history of adopting emission control regulations in a timely and efficient manner. Whether our obligations are contained in a clean air plan such as the 1994 SIP, or a lawsuit settlement, the Board and its staff take these obligations seriously and have demonstrated both a commitment and an ability to meet those responsibilities. The Board has adopted at least twenty new measures since 1994 to fulfill its obligations, along with multiple amendments to existing regulations.

2001 Comprehensive Ozone SIP Revision for South Coast Air Basin

We commit to reconcile changes made to the emission reduction strategy for the South Coast in an upcoming, comprehensive ozone SIP revision. The SIP revision will also incorporate the latest emission inventory estimates and new modeling based on the data collected during the 1997 Southern California Ozone Study. It will reassess the emission reductions needed to attain the federal one-hour ozone standard in the South Coast in 2010 based on this updated information, and it will include enforceable commitments to achieve those emission reductions.

Each of the agencies responsible for SIP preparation in this region – the South Coast Air Quality Management District, the Southern California Association of Governments, and the Air Resources Board has committed in writing to develop, adopt, and submit this SIP to U.S. EPA in 2001, with local adoption by October 2001. Attachment E, "2001 Comprehensive Ozone State Implementation Plan Revision for the South Coast Air Basin," documents these commitments.

In its Resolution 00-4, adopted on January 27, 2000, with the 1999 SIP for the South Coast Air Basin, the Air Resources Board said:

> *"Be it further resolved, that the Board directs the Executive Officer to ensure that the comprehensive SIP revision for the South Coast is developed and brought to the Board for approval and submittal to U.S. EPA in 2001."*

We intend to meet this directive from our Board. ARB staff has already begun development of the state measures component of the 2001 SIP, along with the joint agency technical work on inventory and air quality modeling.

Conclusion

This letter and its attachments lay out a workable, legally-valid approach to fulfill the State's SIP commitments to reduce on-road motor vehicle emissions, from the Smog Check II program and other measures. U.S. EPA and federal transportation agencies should consider the commitments and strategy descriptions contained herein as ample evidence of the State's intent, authority, and ability to implement measures to support a positive conformity finding for the South Coast.

Attachment #6

If you have any questions or need further information, please call me at (916) 445-4383 or contact Ms. Cynthia Marvin, Chief, Air Quality and Transportation Planning Branch, at (916) 322-7236.

Sincerely,

/s/

Michael P. Kenny
Executive Officer

Attachments

cc: See next page.

cc: (all with Attachments)

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Attachment #6

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ATTACHMENT A
IMPROVEMENTS TO SMOG CHECK II

In the 1994 California State Implementation Plan (SIP) for Ozone, the State committed to adopt and implement an Enhanced Vehicle Inspection and Maintenance (I/M) Program in the urbanized portions of the South Coast, Southeast Desert, Ventura, Sacramento Region, San Joaquin Valley, and San Diego. The SIP also identified specific emission reduction targets -- in each milestone and attainment year for reactive organic gases (ROG) and nitrogen oxides (NOx) -- that the program must achieve in all of these areas, except San Diego (which relied on Enhanced I/M as a contingency measure only). The California Department of Consumer Affairs' Bureau of Automotive Repair (BAR) then adopted regulations in 1995 and 1996 to implement this program, which is currently underway. The U.S. Environmental Protection Agency approved the 1994 SIP for all six areas, plus a subsequent 1999 SIP revision for the South Coast Air Basin that continued to rely on this inspection and maintenance program.

A July 12, 2000 report by the Air Resources Board (ARB) entitled "Final Evaluation of California's Enhanced Vehicle Inspection and Maintenance Program (Smog Check II)," quantified the effectiveness of the current Smog Check II program and found that the program was not achieving the full emission reductions anticipated in the SIP. The report also identified a series of potential options to increase the effectiveness of the program. Since the release of that report, the State has determined which options it will implement to improve Smog Check II in the near-term. Further mid-term improvements are still being evaluated.

Near-Term Smog Check II Improvements

BAR will implement the following near-term program improvements, which require no statutory changes, on the schedule outlined below.

- **Lower nitrogen oxides (NOx) cut points.** Implement more stringent NOx inspection standards, by decreasing "cut points" to interim levels (approximately half way between the current cut points and the final levels envisioned in the SIP). Tighter cut points will increase the identification of high emitting vehicles and the level of repair.

  Implementation Schedule:

  Implement interim cut points September - December 2000

- **Loaded mode testing for heavy-duty gas trucks.** Test compatible gas-powered heavy-duty trucks with a gross vehicle weight over 8,500 pounds under loaded-mode conditions on a dynamometer. To implement this option, ARB and BAR will need to develop criteria for determining vehicle compatibility with the

test equipment, cut points and a test protocol. BAR will also need to adopt regulations and coordinate with the Department of Motor Vehicles (DMV) to begin directing these heavy-duty trucks to loaded-mode tests.

Implementation Schedule:

Develop test protocol and select cut points	March 2001
Adopt regulations and update test equipment	August 2001
Implement heavy-duty testing	December 2001

- **Improved evaporative emission testing, including a test for liquid leaks.** We will add two elements to the evaporative testing program. First, we will implement a new visual inspection test for liquid leaks. BAR has already taken the first step, inspecting vehicles for liquid leaks as part of the existing roadside test program. We will evaluate whether these inspections are sufficient to identify and repair liquid leaks. If not, a more rigorous test will be developed and implemented. We believe further evaporative emission reductions may be achieved through a low pressure test, and we will add such a test for evaporative systems to identify and repair excess ROG emissions. There are several technical issues to be resolved before this second element of the evaporative testing program improvements can be implemented. These include evaluating how to design the test to avoid inducing failures (due to pinching or damaging of hoses during testing). Therefore, this element will be phased-in over a longer time frame.

  Implementation Schedule:

Liquid leak test:	
Develop liquid leak test protocol	September 2000
Adopt regulations and notify stations	February 2001
Implement program	September 2001
Low pressure test:	
Develop and evaluate test protocol	June 2001
Adopt regulations and update test equipment	December 2001
Implement test	June 2002

- **Direct more vehicles to Test-Only or other high-performance stations.** The SIP assumed that up to 36 percent of vehicles would be directed to Test-Only stations. Currently, about 15 percent of vehicles subject to Smog Check are inspected at Test-Only stations. BAR studies have shown that greater emission reductions are achieved when vehicles are directed to a Test-Only station rather than a Test and Repair station. BAR has also evaluated station performance data that show that the top 25 percent of Test and Repair stations (based on relative performance) achieve similar emission reductions to Test-Only stations.

We have begun increasing the vehicles sent to Test-Only stations and will achieve further emission reductions by directing more vehicles to Test-Only stations, or if necessary other higher performing stations. In the near-term, we will increase the number of vehicles directed to Test-Only stations to 20 percent of the updated vehicle population for 2000. We will also evaluate the need to develop criteria for selecting certain Test and Repair stations as "higher performing stations" (i.e., stations that achieve emission reductions sufficiently similar to Test-Only). We will then increase the number of vehicles directed to Test-Only and/or high performing Test and Repair stations, as described below.

Implementation Schedule:

Direct 20 percent of vehicles to Test-Only based on updated vehicle population estimates beginning with January 2001 renewals	September 2000
Adopt regulations to set criteria for high performing stations (if necessary)	September 2001
Direct 30 percent of vehicles to Test-Only (or high performing stations, if necessary)	December 2001
Direct 36 percent of vehicles to Test-Only (or high performing stations, if necessary)	December 2002

- **Use remote sensing to help identify high-emitting cars.** ARB and BAR will pursue a pilot study to evaluate how we can potentially use remote sensing as part of the Smog Check program to identify high emitters for an off-cycle inspection and/or identify "clean" vehicles which could be exempted from their next inspection. Remote sensing may also be used to evaluate the efficacy of the program in future years. Because of the great interest in adding a remote sensing component to the program, we will allow sufficient time in designing the pilot program to solicit input from the public and interested stakeholders.

  Implementation Schedule:

Complete pilot program design	March 2001
Start pilot program	September 2001

ARB has quantified the emission benefits of the program improvements described above. The following table shows the current Smog Check II program and projected benefits from this suite of near-term improvements in each of the six regions, using the appropriate emission inventory in the area's applicable SIP. The reductions from the current program include the benefits of BAR's new vehicle scrappage program, based on the funding provided in this year's budget. Because we are not sure how remote sensing will ultimately be incorporated into the program, no emission benefits are ascribed to that component yet.

Attachment #6

Benefits of Smog Check II with Near-Term Improvements

(Emission reductions in tons per day in appropriate SIP currency)

Note: Italicized numbers indicate that there was no specific SIP commitment for reductions in that year.

2002	Target		Reductions from Current Program		Reductions from Improvements		Total Reductions	
	ROG	NOx	ROG	NOx	ROG	NOx	ROG	NOx
South Coast	32.5	25.8	24.9	21.0	2.1	5.1	27.0	26.1
Ventura	1.8	2.0	1.2	1.3	0.2	0.3	1.4	1.7
Sacramento	6.3	6.5	4.0	3.5	0.5	1.0	4.5	4.5
San Joaquin	*5.1*	*5.7*	4.3	3.5	0.5	1.1	4.8	4.6
Antelope	0.6	0.5	0.4	0.3	0.1	0.1	0.4	0.4
Coachella	2.4	2.1	1.5	1.1	0.2	0.3	1.7	1.4
San Diego	*11.3*	*8.1*	7.5	5.5	1.0	1.4	8.5	6.9
Total	**60.1**	**50.9**	**43.9**	**36.3**	**4.5**	**9.3**	**48.4**	**45.6**

2005	Target		Reductions from Current Program		Reductions from Improvements		Total Reductions	
	ROG	NOx	ROG	NOx	ROG	NOx	ROG	NOx
South Coast	31.0	18.1	25.5	14.2	4.8	6.2	30.4	20.4
Ventura	1.4	1.9	1.1	1.2	0.3	0.5	1.3	1.7
Sacramento	5.1	6.4	3.7	3.4	0.9	1.5	4.6	5.0
San Joaquin	*4.2*	*4.6*	4.2	3.4	0.9	1.8	5.1	5.1
Antelope	0.5	0.4	0.4	0.3	0.1	0.1	0.5	0.4
Coachella	2.1	2.4	1.5	1.1	0.4	0.5	1.9	1.6
San Diego	*9.6*	*7.7*	7.4	5.2	1.8	1.9	9.2	7.0
Total	**53.9**	**41.5**	**43.7**	**28.8**	**9.2**	**12.4**	**52.9**	**41.2**

2008	Target		Reductions from Current Program		Reductions from Improvements		Total Reductions	
	ROG	NOx	ROG	NOx	ROG	NOx	ROG	NOx
South Coast	29.3	11.8	22.8	8.8	5.3/6.5*	5.5	28.1/29.3*	14.2
Ventura	*1.2*	*2.0*	0.9	1.2	0.2	0.6	1.1	1.8
Sacramento	*4.9*	*7.0*	3.3	3.4	0.9	2.0	4.3	5.4
San Joaquin	*4.0*	*6.4*	3.3	3.5	1.5	2.4	4.8	5.9
Antelope	*0.5*	*0.4*	0.3	0.3	0.1	0.1	0.5	0.4
Coachella	*2.1*	*2.3*	1.4	1.1	0.4	0.6	1.8	1.7
San Diego	*9.1*	*8.2*	6.7	5.0	1.8	2.4	8.6	7.4
Total	**51.2**	**38.1**	**38.8**	**23.3**	**10.4/11.5***	**13.7**	**49.2/50.4***	**36.9**

2010	Target		Reductions from Current Program		Reductions from Improvements		Total Reductions	
	ROG	NOx	ROG	NOx	ROG	NOx	ROG	NOx
South Coast	28.3	8.8	21.6	6.2	5.3/6.7*	5.1	26.9/28.3*	11.3
Ventura	*1.1*	*1.8*	0.8	1.0	0.2	0.6	1.0	1.6
Sacramento	*4.2*	*6.4*	3.0	2.9	0.7	2.0	3.7	5.0
San Joaquin	*4.8*	*5.9*	4.2	3.2	1.8	2.4	6.0	5.6
Antelope	*0.4*	*0.4*	0.3	0.2	0.1	0.1	0.4	0.4
Coachella	*1.9*	*2.2*	1.3	1.0	0.3	0.7	1.6	1.7
San Diego	*8.1*	*7.1*	6.1	4.2	1.5	2.3	7.6	6.5
Total	**48.8**	**32.6**	**37.3**	**18.7**	**9.9/11.2***	**13.2**	**47.2/48.6***	**32.0**

* Second number following "/" reflects benefits of near-term plus mid-term improvements for South Coast. The mid-term improvements do not depend upon legislative changes.

Mid-Term Smog Check II Improvements or Further Measures

The near-term Smog Check II improvements that we are committing to make, combined with the benefits from already adopted ARB measures, are sufficient to meet the State's emission reduction obligations for on-road motor vehicles in 2002 and 2005, in most areas. The Sacramento Region was able to demonstrate conformity in its most recent conformity analysis without the benefit of the near-term program improvements. However, the Sacramento Region and the San Joaquin Valley in 2005, and the South Coast in 2008 and 2010 will need further improvements to Smog Check II (or other measures) to meet their progress and attainment needs. We expect the upcoming SIP revision for the San Joaquin Valley will establish new commitments for emission reductions from the Smog Check II program in 2005.

ARB and BAR remain committed to fully satisfy the Smog Check II commitment for Sacramento in 2005, and the South Coast in 2008 and 2010. We are committed to secure these additional emission reductions by 2003, with implementation by 2004 for Sacramento and 2006 for South Coast.

ARB and BAR will work together to evaluate whether there are additional mid-term program improvements within BAR's authority that are feasible to implement to secure the needed emission reductions. Such improvements might include further tightening of inspection standards for all pollutants. If these emission reductions cannot be secured from within the Smog Check program, ARB will secure them from other mobile source measures that will enhance our existing SIP commitments. Based on our experience implementing California's inspection and maintenance program, we believe that additional improvements to the Smog Check II program can achieve the needed emission reductions for Sacramento in 2005 and the South Coast in 2008 and 2010. For conformity purposes, we are relying solely on program improvements within the existing authority of BAR.

The mid-term program improvements could also be achieved through legislative action to increase the number of vehicles subject to the Smog Check II program. There is time for legislative proposals to be developed, approved, and implemented. Such proposals may include:

- Removing the rolling 30-year model year exemption. In 1997, the Legislature modified the Smog Check II program to exempt pre-1974 vehicles from the program. Beginning in January 2003, this legislation exempts motor vehicles 30 or more model-years old from all Smog Checks. Because older vehicles contribute a disproportionate amount of emissions (despite their relatively low numbers and use) excluding older vehicles from the program reduces the effectiveness of the Smog Check program. Eliminating the 30-year rolling exemption in order to keep all 1974 and newer vehicles in the program would achieve additional emission reductions in future years.

- Extending the program to all eligible vehicles registered in a nonattainment region already subject to Smog Check II. Because only urbanized areas of 50,000 or more are now subject to Smog Check II, not all vehicles in nonattainment areas are directed to loaded-mode testing. This creates inequities within the nonattainment area, particularly if many vehicles registered in the non-urbanized region commute into urban centers on a daily basis. This situation is particularly acute in the Sacramento Region because although the SIP assumed that 100 percent of the vehicles are subject to Smog Check II, in reality only the 79 percent within the Sacramento urbanized area are directed to loaded-mode testing. The other area that would significantly benefit from this proposal would be the San Joaquin Valley. Currently only 69 percent of the vehicles in the San Joaquin Valley nonattainment area are directed to loaded-mode testing.

In addition to the program improvements listed above, ARB and BAR are in the process of addressing a number of administrative loopholes, through which vehicles could evade the program, thereby reducing the benefits of the program. These loopholes, which include vehicles with incorrect ZIP codes, mismatched vehicle identification numbers, and incorrect Smog Check due dates in the DMV database, result in vehicles not being directed to obtain the proper Smog Check inspections. ARB and BAR are working closely with DMV to identify and correct these administrative loopholes.

The Bureau of Automotive Repair and the Air Resources Board will work together to ensure that the near-term improvements to the Smog Check II program are implemented on the schedule described in this attachment. We will also secure the remaining emission reductions needed to satisfy the Smog Check commitment for Sacramento in 2005, and South Coast in 2008 and 2010, through either mid-term program improvements or other measures.

/s/ 8/17/00

Douglas Laue, Chief
Bureau of Automotive Repair

Date

/s/ 8/17/00

Michael P. Kenny, Executive Officer
Air Resources Board

Date

Attachment #6

ATTACHMENT B

QUANTITATIVE SUMMARY OF TRANSPORTATION CONFORMITY APPROACH

(South Coast Air Basin in 1999 SIP Currency)

State and Federal SIP Commitments								
On-Road Mobile Source Measures*	Emission Reductions (TPD)							
	2002		2005		2008		2010	
	ROG	NOx	ROG	NOx	ROG	NOx	ROG	NOx
Smog Check II	32.5	25.8	31.0	18.1	29.3	11.8	28.3	8.8
Light-Duty: M1 Scrap M2 LEVII	11.8	5.9	13.3	8.7	17.6	13.4	19.4	17.1
Heavy-Duty Diesel: M4 Incentives M5 State Standard M6 Federal Standard	--	11.8	--	31.1	5.8	44.2	7.8	51.7
Long-Term Commitments:								
M17 Heavy-Duty Diesel Reductions	--	--	--	4.0	1.0	9.0	1.0	10.0
Advanced Technology	--	--	--	--	--	--	36.8	6.3
TOTAL ON-ROAD COMMITMENT	**44.3**	**43.5**	**44.3**	**61.9**	**53.7**	**78.4**	**93.3**	**93.9**

Reductions Creditable Toward State and Federal SIP Commitments								
Adopted SIP Measures								
-- Smog Check II	24.9	21.0	25.5	14.2	22.8	8.8	21.6	6.2
-- Light-Duty: M1 Scrap M2 LEVII	0	0	0.4	4.4	2.5	26.1	4.1	42.9
-- Heavy-Duty Diesel: M4 Incentives M5 State Standard M6 Federal Standard	4.7	5.5	5.3	26.6	5.8	43.4	5.9	55.9
-- Subtotal for Adopted SIP Measures	*29.6*	*26.5*	*31.2*	*45.2*	*31.1*	*78.3*	*31.6*	*105.0*
Adopted Supplemental Measures								
-- Cleaner Gasoline (3 measures)	13.5	15.2	10.4	17.2	7.9	13.1	6.6	10.7
-- Motorcycles	0	0	0	0	0.3	0	0.8	0.2
-- Urban Transit Buses	NQ**	NQ	NQ	NQ	NQ	NQ	0	2.0
-- National Heavy-Duty Gas Standards	--	--	NQ	NQ	NQ	NQ	0.2	1.0
-- Subtotal for Adopted New Measures	*13.5*	*15.2*	*10.4*	*17.2*	*8.2*	*13.1*	*7.6*	*13.9*
Smog Check Improvements + Future Supplemental Measures								
-- Smog Check Improvements***	2.1	5.1	4.8	6.2	6.5	5.5	6.7	5.1
-- Future Supplemental Measures	--	--	--	--	6.9	NQ	9.6	NQ
-- Subtotal	*2.1*	*5.1*	*4.8*	*6.2*	*13.4*	*5.5*	*16.3*	*5.1*
Long-Term Measures								
-- M17 Heavy-Duty Diesel Reductions	--	--	--	4.0	1.0	9.0	1.0	10.0
-- Advanced Technology	--	--	--	--	--	--	36.8	0
-- Subtotal	--	--	--	*4.0*	*1.0*	*9.0*	*37.8*	*10.0*
TOTAL CREDITABLE REDUCTIONS**	**45.2**	**46.8**	**46.4**	**72.6**	**53.7**	**105.9**	**93.3**	**134.0**
SHORTFALL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

*Measures M-3 and M-8 are not shown because they are baseline measures in the South Coast's 1999 SIP. Measures M-3 and M-8 have shortfalls in some years relative to the commitments in the 1994 SIP.

**NQ = not quantified.

***Smog Check improvements do not depend on legislative changes.

****Creditable reductions beyond these SIP commitments are needed to cover shortfalls in State/federal measures for other categories or sources that do not affect transportation conformity.

ATTACHMENT C
ADOPTED SUPPLEMENTAL MEASURES

Since development of the 1994 California State Implementation Plan (SIP) for Ozone, the Air Resources Board (ARB or the Board) has adopted eleven measures specifically described in that plan. The Board has also adopted many supplemental measures to reduce emissions from on-road and off-road mobile sources, including their fuels. We summarize the adopted supplemental measures below, including one promulgated at the national level, but not yet made enforceable by the State. Measures that reduce on-road vehicle emissions reflected in the applicable SIP baseline and are currently credited in conformity assessments are described in the first section. The second section discusses additional measures, which are not creditable for conformity, but illustrate ARB's ability to develop and adopt continuing regulatory enhancements on a timely and efficient basis.

Measures Creditable for Transportation Conformity

- **Control of gasoline combustion chamber deposits.** When oil refiners began producing Phase 2 cleaner-burning gasoline in 1996, they included deposit control additives to reduce combustion chamber deposits. These additives were not required by State regulation, but resulted in a decrease in NOx emissions from light and medium-duty vehicles. In 1998, the Board adopted regulations to require deposit-control additives in cleaner-burning gasoline, and assure the benefits of reduced combustion chamber deposits.

- **In-use benefits of Phase II cleaner burning gasoline***.* Legislation signed in 1999 (SB 989, Sher) effectively "locks-in" the benefits of 1998 in-use fuel. Studies by ARB staff indicated that California gasoline in 1998 and 1999 was much cleaner than assumed in the 1994 SIP. Refiners certified cleaner gasoline blends than required, and produced cleaner fuels than certified.

- **Phase III cleaner burning gasoline regulations***.* In 1999, the Board adopted Phase III gasoline regulations, beginning in 2003. The regulation enables refiners to produce gasoline without MTBE while providing additional air quality benefits.

- **On-road motorcycle emission standards***.* In 1998, ARB adopted regulations for larger on-road motorcycles. Since ARB's adoption of the original motorcycle regulations in 1975, technological advances have shown that additional, cost-effective emission reductions are now possible. The regulations will result in a substantial reduction in hydrocarbons and, for the first time, set a standard for NOx emissions from these vehicles. The new standards will be phased-in over two tiers, with Tier 1 standard beginning in 2004 and a tighter Tier 2 beginning in 2008.

- **Emission standards for heavy-duty gasoline engines**. In 2000, the U.S. Environmental Protection Agency (U.S. EPA) adopted more stringent emission standards for new heavy-duty gasoline engines, beginning with the 2005 model year. ARB will make these standards enforceable -- in the same timeframe -- as part of our proposal for more stringent emission standards for 2007 and later model year heavy-duty diesel engines.

- **Emission standards for urban transit buses**. In 2000, the Board approved a public transit bus fleet rule and emissions standards for new urban buses beginning in 2002. This regulation requires a progressively cleaner fleet through retrofits for existing buses and tighter standards for new buses, including the introduction of zero-emission buses into the fleet by the end of the decade.

Measures Not Creditable for Transportation Conformity

- **Control of emissions from aggressive driving and air-conditioner usage.** In 1997, ARB adopted regulations to control emissions that occur when a vehicle is operated outside the Federal Test procedure, beginning in 2001. This procedure is a narrowly defined test used in certifying new vehicles to exhaust emission standards. Two supplemental test procedures -- a high-speed, high-acceleration test and an air conditioner test -- are used to control excess emissions that occur during “off-cycle” operation.

- **Marine pleasurecraft.** In 1998, ARB adopted emission standards for outboard marine and personal watercraft engines beginning in 2001. In addition to air quality benefits, these standards help avoid water contamination problems by significantly reducing the amount of unburned fuels released into the water.

- **Portable fuel containers.** In 1999, the Board approved a regulation requiring that new portable fuel containers be spill-proof and less permeable beginning in 2001. These new containers, used to refuel lawn and garden equipment, motorcycles, and watercraft, will employ an automatic shut-off feature to eliminate spillage.

- **Enhanced vapor recovery program.** In 2000, the Board adopted more stringent standards and new equipment specifications for vapor recovery systems beginning in 2001. These improvements will reduce spillage and evaporation from gasoline nozzles, make vapor recovery systems compatible with the on-board vapor recovery systems on motor vehicles, and require monitoring to ensure vapor recovery equipment systems work in the field.

ATTACHMENT D
FUTURE SUPPLEMENTAL MEASURES

The Air Resources Board (ARB or Board) will develop further supplemental measures to complete our emission reduction commitments and address remaining shortfalls for defined State strategies in 2008 and 2010 for the South Coast. We will adopt these measures between 2000 and 2003, for implementation by 2006.

In most cases, ARB has already taken initial action to adopt each specific measure described in the original 1994 SIP. If an adopted measure does not achieve the full reductions in the SIP, supplemental measures would complete the emission reduction commitment. Based on our experience developing, adopting, and implementing mobile source control measures for the State of California, we believe that further supplemental measures can deliver the emission reductions needed to complete our emission reduction commitments.

We intend to reconcile changes made to the emission reduction strategy for the South Coast in an upcoming, comprehensive ozone SIP revision. The SIP revision will also incorporate the latest emission inventory estimates and new modeling based on the data collected during the 1997 Southern California Ozone Study. It will reassess the emission reductions needed to attain the federal one-hour ozone standard in the South Coast in 2010 based on this updated information, and it will include enforceable commitments to achieve those emission reductions.

Following a description of the original SIP measure, we identify some of the supplemental measures we will pursue to fulfill remaining, defined State commitments for emission reductions from on-road mobile sources.

1. LIGHT-DUTY VEHICLES (SIP Measures M-1 and M-2)

A. Description of SIP Measures

The SIP included two ARB measures aimed at reducing emissions from new and in-use light-duty vehicles. Although the SIP commitments focused on passenger cars and light-duty trucks, the vehicle category also includes on-road motorcycles. Measure M-1 called for accelerated retirement of cars and light trucks. ARB has adopted implementing regulations for this program, however we must secure additional emission reductions to meet the SIP target. Measure M-2 called for improved control technology for new light-duty vehicles. ARB adopted the initial Low-Emission Vehicle II (LEV II) regulations under M-2 in September 1998, two years earlier than envisioned in the SIP. Although the LEV II program provided greater than anticipated NOx benefits, we must secure additional emission reductions to meet the SIP target for ROG.

B. Supplemental Measures

- **Enhancements to the Low Emission Vehicle II Program for light-duty vehicles.** ARB will evaluate the feasibility and pursue potential emission benefits from reducing in-use running loss evaporative emissions from passenger cars and trucks. This approach would rely on the improved control technology envisioned in Measure M-2. This supplemental measure would require ARB regulatory action within the Board's authority.

- **Evaporative emission controls for on-road motorcycles.** ARB will evaluate the feasibility and pursue potential emission benefits from reducing evaporative emissions from motorcycles. This approach would rely on the improved control technology envisioned in Measure M-2. This supplemental measure would require ARB regulatory action within the Board's authority.

2. MEDIUM-DUTY VEHICLES (SIP Measure M-3)

A. Description of SIP Measure

Measure M-3 was based on accelerated implementation of tighter emission standards for new medium-duty vehicles. ARB adopted the measure, but additional emission reductions would help meet the original 1994 SIP target due to a calculation error that overestimated the benefits of this strategy.

B. Supplemental Measure

- **Enhancements to the Low Emission Vehicle II Program for medium-duty vehicles.** ARB will pursue aligning the LEV II standards with the federal Tier II motor vehicle standards for several sub-categories of medium-duty vehicles where the federal standards are being phased-in faster than California standards. This approach would rely on accelerated implementation of emission standards for new medium-duty vehicles as described in Measure M-3. This supplemental measure would require ARB regulatory action within the Board's authority.

3. HEAVY-DUTY GASOLINE TRUCKS (SIP Measure M-8)

A. Description of SIP Measure

Measure M-8 anticipated tighter emission standards for new heavy-duty gasoline trucks. ARB adopted this measure.

B. Supplemental Measure

- **Further new emission standards for heavy-duty gas trucks.** ARB will pursue lower heavy-duty gas engine emission standards patterned after U.S. EPA's recently signed final rule. This approach would rely on tighter emission standards for new heavy-duty gas trucks as described in Measure M-8. This supplemental measure would require ARB regulatory action within the Board's authority.

4. HEAVY-DUTY TRUCKS AND BUSES (SIP Measures M-4, M-5, M-7/M-17, plus M-6)

A. Description of SIP Measures

Three State measures in the SIP address emissions from heavy-duty trucks and buses. Measure M-4 called for incentives to increase the use of low-emission engines in existing heavy-duty diesel trucks and buses. ARB adopted guidelines for the Carl Moyer incentive program to implement this measure and the California Legislature has provided three years of funding thus far. SIP Measure M-5 describes tighter emission standards for new diesel engines in California or "…implementation of alternative measures which achieve equivalent or greater reductions." [Measure M-6 described the expected benefits of the same tighter national emission standards.] ARB and U.S. EPA have both adopted emission standards and settlement agreements with engine manufacturers that are consistent with Measures M-5 and M-6.

ARB withdrew the third State measure, M-7, which anticipated an accelerated retirement program for heavy-duty diesel engines. We replaced M-7 with the Board's commitment for new measure M-17 and submitted these changes to U.S. EPA in 1998 as revisions to the SIP. Measure M-17 is a longer-term commitment to reduce emissions from heavy-duty diesel engines through in-use compliance programs and further incentives.

B. Supplemental Measures

- **Emission reductions from school buses.** ARB will develop guidelines for implementing a program designed to encourage school districts to replace older school buses with new, lower-emitting school buses or install particulate matter retrofits on existing buses. The Governor has included $50 million in the FY 2000-2001 budget for this program. This approach relies on incentives to increase the use of low-emitting engines and control technologies in the existing school bus fleet, consistent with the incentive programs described in Measure M-4. This supplemental measure will require ARB to adopt guidelines for use of the funds, which is within the Board's authority. The program will be a cooperative effort between the California Energy Commission, ARB, and the local air districts.

- **Retrofit in-use diesel engines with particulate filters.** Use of low-sulfur diesel fuel opens up the opportunity to reduce emissions from existing diesel engines through in-use controls such as particulate filters. ARB will pursue measures for implementation after the introduction of low-sulfur diesel fuel. This approach is consistent with the incentive programs described in Measure M-4 and the "alternative measures" described in Measure M-5 for these sources. This supplemental measure would likely require ARB regulatory action; such action is within the Board's authority.

- **Cleaner diesel fuel.** U.S. EPA has proposed to require cleaner diesel fuel nationwide starting in 2006, and expects to promulgate the regulation by the end of 2000. ARB will adopt the specifications for use in California. This approach is consistent with the "alternative measures" described in Measure M-5. This supplemental measure would require ARB regulatory action that is within the Board's authority.

- **Diesel truck standards.** U.S. EPA has proposed lower emission standards for 2007 and later heavy-duty diesel trucks, and expects to promulgate the regulation by the end of 2000. ARB will adopt these standards for new engines sold in California. This approach would rely on tighter State and national emission standards for new heavy-duty diesel trucks, as described in Measures M-5 and M-6. This supplemental State measure would require ARB regulatory action that is within the Board's authority.

- **Limit heavy-duty diesel truck idling.** ARB will pursue restrictions on truck idling to reduce ROG and NOx emissions, as well as particulate matter. This approach is consistent with the "alternative measures" described in M-5 for these sources. This supplemental measure would require ARB regulatory action that is within the Board's authority to regulate toxic air contaminants, and would also provide reductions of criteria pollutants.

ATTACHMENT E
2001 COMPREHENSIVE OZONE STATE IMPLEMENTATION PLAN REVISION FOR THE SOUTH COAST AIR BASIN

California has previously stated its intent to develop a major revision to the ozone State Implementation Plan (SIP) for the South Coast Air Basin. This SIP revision will incorporate the latest emission inventory estimates and new modeling based on the data collected during the 1997 Southern California Ozone Study. It will reassess the emission reductions needed to attain the federal one-hour ozone standard in the South Coast in 2010 based on this updated information, and it will include enforceable commitments to achieve those emission reductions. We intend to submit this comprehensive revision to the U.S. Environmental Protection Agency before the end of the 2001 calendar year.

This attachment includes documentation from the agencies responsible for SIP preparation in this region -- the South Coast Air Quality Management District, the Southern California Association of Governments, and the Air Resources Board. Each agency has committed in writing that we will collectively develop, adopt, and submit the comprehensive ozone SIP revision for the South Coast in 2001, with local adoption in October 2001. The following documents are included:

- August 11, 2000 letter from Barry R. Wallerstein, D.Env, Executive Officer of the South Coast Air Quality Management District to Michael Kenny, Executive Officer of the Air Resources Board

- August 16, 2000 letter from Mark Pisano, Executive Director of the Southern California Association of Governments to Felicia Marcus, Regional Administrator, U.S. Environmental Protection Agency - Region IX

- January 27, 2000 Air Resources Board Resolution 00-4