RESPONSE TO COMMENTS ON THE DRAFT 2003 AIR QUALITY MANAGEMENT PLAN

JUNE 2003

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

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PREFACE

The South Coast Air Quality Management District has prepared the 2003 Air Quality Management Plan (AQMP or Plan). The draft 2003 AQMP was released for review on February 24, 2003.

Six regional workshops were held from March 4 through March 13, 2003 to discuss the Plan and solicit public input. All written and oral comments on the 2003 AQMP were reviewed and where appropriate, revisions were made to the Plan. This document presents the district staff's responses to comments received at both the public workshops and written comments received by March 28, 2003.

Based on comments received, modifications to the draft 2003 AQMP are contained in three documents: (1) Proposed Modifications to the Draft 2003 Air Quality Management Plan containing revisions to the main document, Appendix II, Appendix III, Appendix IV-A, and Appendix V; (2) Proposed Modifications to the Draft 2003 Air Quality Management Plan – Appendix IV-B – Proposed 2003 State and Federal Strategy for the California State Implementation Plan; and (3) Proposed Modifications to Appendix IV-C Regional Transportation Strategy and Control Measures.

LIST OF WRITTEN COMMENT LETTERS

Comment Letter #	Commenter
1	City of Los Angeles
2	Natural Resources Defense Council, Citizens for a Better Environment; Coalition for Clean Air (Dated March 2003)
2-A	Natural Resources Defense Council, Coalition for Clean Air (Dated May 1, 2003)
2-B	Natural Resources Defense Council, Citizens for a Better Environment; Coalition for Clean Air (Dated April 29, 2003)
3	Air Transport Association (ATA)
3-A	Air Transport Association (ATA) (Letter to CARB)
4	Alto Systems
5	Consumer Specialty Products Assoc.(CSPA)
6	Dave Turner
7	Teleflex
8	Pacific Maritime Association
9	Sempra Energy
10	Pacific Propane Service
11	Shield Packaging
12	Ferrellgas (18 Employee Letters)
13	Pacific Merchant Shipping Association
14	Building Industry Association of Southern California
15	Radtech International North America
16	Sherwin Williams Company
17	San Joaquin Valley APCD
18	California Association of Port Authorities (CAPA)
19	Barbara Waycott
20	Ted Johnson Propane
21	County of Orange, John Wayne Airport

Comment Letter #	Commenter
22	California Portland Cement
23	Mutual Propane
24	Duncan McKee
25	American Trucking Association
26	The Port of Long Beach
26-A	The Port of Long Beach (Letter to CARB)
27	National Propane Gas Association
28	Western Propane Gas Association(Weiner)
29	National Aerosol Association
30	Air Improvement Resource, Inc.
31	County Sanitation Districts of Los Angeles County
32	Amerigas
33	Globe Gas Corporation
34	Nissan Motor CO., LTD
35	Suburban Propane (Jones)
36	Harvey Eder
37	Ferrellgas (Wakefield)
38	Western Propane Gas Assoc. (Reynolds)
38-A	Western Propane Gas Assoc. (Reynolds/CARB)
39	Suburban Propane (4 Employee Letters)
40	Ferrellgas (Chesterman)
41	Mr. & Mrs. Carter Spohn
42	Orange County Sanitation Districts
43	IMPCO
44	Construction Industry Air Quality Coalition
45	Department of Transportation
46	Realtors Committee on Air Quality
47	Transportation Corridor Agencies

Comment Letter #	Commenter
48	WSPA
49	Heritage Propane
50	U.S. EPA

COMMENT LETTER NO. 1
CITY OF LOS ANGELES

Response 1-1

The District staff acknowledges the delay in release of Appendix V, and the CEQA and Socio-Economic Documents. Due to the significant policy issues in this Plan, the draft Plan (minus the above mentioned documents) was released for public review on February 25, 2003 as a means of initiating the public review period as early as possible. In addition to the draft Plan, a preview document for the draft Plan was released in January 2003 which introduced the key elements and identified key issues for this revision of the AQMP.

While the deadline to submit written comments was not published in the written notification of the public workshops, it was publicly announced at all six workshops as being March 28, 2003. At the public workshop, in response to similar comments from the public, District staff has acknowledged that there could be additional commenting opportunities following the release of the revision documents. Additional comments have been received after the deadline and will be incorporated for the purpose of preparing a status report to the Governing Board on April 4, 2003. Following the release of the draft Plan on February 25th, two additional draft documents namely Draft Appendix V (Modeling and Attainment Demonstration) and Draft EIR were released on April 4 and April 8, respectively and made available for comments.

The Socio-Economic Document was also released on May 21, 2003. The public and other stakeholders will have an additional 45 days from the release of the Draft EIR to analyze the impacts and provide comments on the Draft EIR. As required by the California Health and Safety Code, written notification on the development and adoption of the 2003 AQMP will be published 45 days prior to the regional 4-county public hearings, upon completion of all supporting documents and proposed modifications to the draft Plan.

COMMENT LETTER NO. 2
NATURAL RESOURCES DEFENSE COUNCIL
COALITION FOR CLEAN AIR
COMMUNITIES FOR A BETTER ENVIRONMENT

Response 2-1

Clean Air Act §182(e)(5) allows an extreme non-attainment area such as the District to rely on the future development of new control technologies or the improvement of existing technologies. There are no limitations placed on the amount of reductions that may be obtained by future control measures[1]. The fact that the relative percentage of 182(e)(5) measures to short term measures has increased is partially a reflection of the District expeditiously implementing short term measures. The District has provided more definition to the remaining long term measures in the 1997/1999 SIP and has moved them to short term measures in the draft 2003 AQMP. The size of the black box emissions has grown for a number of reasons, the most of which is due to improvements in the mobile source emissions inventory. Thus, these emissions were actually in the air in previous AQMPs, and would have been included in the black box if we had known of them. Another reason for the increase in the size of the black box is the selection of a new episode day and improved air quality modeling. U.S. EPA's statement that the amount of black box reductions should not increase was intended to prevent removal of feasible short-term measures, not to prevent the Plan from acknowledging advances in scientific understanding. The District and CARB are working diligently to identify control measures to replace the black box measures and welcome your suggestions on feasible measures that could be identified to reduce the size of the back box.

Response 2-2

In developing the District's short-term measures for the 2003 AQMP, the District: 1) carried over the remaining near-term control measures from the 1997/99 SIP, 2) substituted long-term strategies in the 1997/99 with short-term control measures (i.e., for coating/solvents, fugitive sources, and industrial process operations), and identified new feasible control measures. The eleven new control measures include strategies for achieving additional reductions from stationary sources including the NOx RECLAIM, fugitive dust sources, aggregate and cement manufacturing, ammonia sources, fireplaces and wood stoves, natural gas combustion, large VOC sources. In addition, because of the significant reductions needed for attainment demonstration, for the first time, four new short-term measures targeting mobile sources are introduced in the Plan by the District including truck stop electrification, mitigation fee for federal sources, emission controls for in-use off-road equipment and vehicles, and an emission fee program for port-related mobile sources. It is also important to note that the District has already exceeded its

[1] In response to NRDC and Coalition for Clean Air's comment that the 1994 SIP over-relied on speculative section 182(e)(5) measures, EPA replied "EPA does not believe that the Act provides a quantitative limit on the extent to which the attainment demonstration may rely on new-technology measures." 62 Fed. Reg. 1149, 1178 (1997).

emission target in the 1997/99 SIP (as of Oct 2002) by 42 tons per day because of a number of District rules adopted since 1996. The emission reductions associated with these rules are 158 tons per day of VOC and 12 tons per day of NOx emissions in 2010. The District's short-term control measures in the 2003 AQMP with quantifiable emission reductions are estimated to provide an additional 21.5 tons per day of VOC and 5 tons per day of NOx reductions in 2010. Any excess reductions from these measures as well as from other short-term measures, for which reductions are not quantified yet, will be applied toward the black box emission reductions.

With respect to allocation of the black box reductions (Scenario 1 vs. Scenario 2), staff also concurs with the commenter's assertion that Scenario 1 should be adopted (instead of Scenario 2) since it represents a more equitable assignment of black box reductions by agency (i.e., based on 1997/99 SIP commitments and emission contribution level), and that the responsible agencies need to make commitments and take proper steps now toward achieving these reductions by 2010.

Response 2-3

CAA §182(e)(5) allows for "*Provisions* in an implementation plan that anticipate development of new control techniques or improvement of existing control technologies". Although this provision does not require the plan to contain defined control measures for future technologies, control measure LTM-All which represents the District long-term measure, has been modified to add clarification on the process the District will use to identify new control strategies to reduce the black box. The District plans to establish a process to identify new control strategies which would include annual technology assessment workshops, control strategy working groups, and periodic reviews of control technology studies (e.g., BACT, Emission Fee Billing). Following identification of a feasible control strategy, the District will provide public notification through its annual rule forecast report adopted at the beginning of each year by the District's Governing Board. The District intends to allocate sufficient resources for establishing the identification process.

Response 2-4

The plan contains a schedule for adoption of the CAA §182(e)(5) measures by tons per year on page 4-52.

Response 2-5

The plan contains an explanation of the resources to be utilized in implementing the 182(e)(5) measures. For a complete discussion on the District's commitment to adopt long-term control measures please see Chapter 4 of the Draft 2003 AQMP and revisions to Control Measure LTM-ALL in Appendix IV-A.

Response 2-6

The plan appropriately relies upon and explains the need for the development of future technologies, see Chapter 4

Response 2-7

The plan contains two options for attainment demonstration, with and without reductions from federal sources. The option including emissions reductions from federal sources assumes that U.S. EPA would take on a federal assignment in order to obtain reductions towards future standards. Both options are presented in the Plan to demonstrate attainment with the 2010 standards. In the event that U.S. EPA does not accept any assignment, the other option will be implemented.

Response 2-8

Based on the modeling analysis conducted in the draft 2003 AQMP, the Basin could still demonstrate attainment with the federal 1-hour ozone standard without further reductions from federal sources (i.e., less NOx reductions). Moreover, staff agrees with the commenter that this strategy will jeopardize the attainment of the new standards (i.e., PM2.5 and ozone 8-hour standards) since NOx contributes to formation of both ozone and PM2.5. Therefore, because of the significant contribution of federal sources to emissions (i.e., 34% in 2010), the U.S. EPA must pursue all feasible strategies (e.g., national standards, in-use regulations, fee programs) to achieve the maximum level of reductions achievable from these sources by 2010.

Response 2-9

Staff believes that the CARB's State and Federal Element of the Plan must include all feasible measures for sources under the jurisdiction of state and federal government. The 18 tons of VOC and 68 tons of NOx reductions are attributed to federal sources based on CARB staff's evaluation, including the contribution of these sources to the Basin's emissions inventory in 2010. The State Air Resources Board will develop the control measures in the State control strategy in accordance with its regulatory procedures. All comments made concerning potential state measures will be forwarded to the Air Resources Board staff for consideration.

Response 2-10

Even if U.S. EPA does not accept any assignment or commit to achieve any reductions form federal sources in the Plan, the District and CARB will continue to work closely with U.S EPA to explore and develop strategies for further reducing emissions from federal sources. As mentioned in the response to comment #2-7, the Plan has two options for attainment demonstration: 1) emission reductions from federal sources and 2) excluding reductions from federal sources. Although these reductions may not be

specifically included in the Plan (under Option 2), they would be applied toward the black box reductions once they are adopted and implemented.

Response 2-11

The adoption schedule for the remaining control measures which were carried over from the 1997/99 SIP is primarily based on the same schedule which was established in the 1997/99 SIP. Of the 16.9 tons per day (t/d) of VOC reductions scheduled for District's adoption in 2003, 8.5 t/d are attributed to architectural coatings measure (phase 3), 6 t/d associated with composting (WST-02) and livestock waste (WST-01) some of which are already achieved through Rule 1133.2 on co-composting operations adopted in 1/2003 as well as relocation of dairy farms and water quality regulations, and the rest of the reductions are based on partial adoption of control measures on coatings/solvents (CTS-10, Phase I) and fugitive sources (FUG-05, Phase II). For 2004, several control measures are also proposed for adoption including: CTS-10 (Phase II), CMB-07 (Refinery Flares), CMB-10 (NOx RECLAIM), BCM-07 (Aggregate and Cement manufacturing operations), BCM-08 (Fugitive Dust), PRC-03 (Restaurants), and PRC-07 (Industrial Process Operations - Phase I). The District SIP commitments for these measures are 2 t/d VOC, 3 t/d NOx, 1.7 t/d PM10, and 2.1 t/d SOx reductions. For 2005, the District's SIP commitments are 6 t/d VOC (short-term and long-term measures) and 2.1 t/d NOx reductions. The district staff has been unable to develop additional control measures that can be adopted in 2004.

As before, during the rule development, each affected source category will be thoroughly evaluated for maximum feasible and cost-effective reductions and any excess reductions (or reductions not previously quantified in some control measures) achieved from these rules will be applied toward the District's long-term emission reduction commitment.

Response 2-12

The District staff disagrees with this comment. We believe the control measures have sufficient specificity. As stated in control measure CTS-07, the proposed control method is reformulation of architectural coatings and solvents to zero or near-zero VOC formulations. The schedule for implementation is listed in Table 7-3 of the draft 2003 AQMP. Some of the control measures such as CMB-07 have two development phases, one being an evaluation phase and the second being an adoption phase

Response 2-13

Thank you for your comment. In fact, the District is proposing the adoption of PR1198 – Intermodal Equipment for reducing emissions from yard hostlers at the ports and other intermodal sites.

Response 2-14

Since the U.S. EPA has indicated that it would be difficult to adopt national rules which are sufficiently stringent enough to achieve the necessary emissions reductions in time to attain the federal ozone standard, control measure FSS-05 seeks to ensure a fair share reduction commitment from federal sources by implementing a mitigation fee program administered by the District and paid for by the U.S. EPA through federal grants or sources subject to exclusive federal regulations imposed by the U.S. EPA. While there are many developmental and implementation difficulties associated with an emission bubble approach, we agree that it may provide a potential control approach Nevertheless, the analyses performed during rule development would reveal which control strategy would be most appropriate in terms of emission reduction potential, cost-effectiveness, potential socioeconomic impacts, potential adverse environmental impacts, and other relevant factors. District staff does plan to add language to the control measure that clarifies how the measure will be implemented and what criteria will be used to determine the fee structure and to select specific emission reduction projects paid for implementation.

Response 2-15

Thank you for supporting the District in developing regulations for in-use vehicles and equipment. Emission reductions from existing on-road sources, which are primarily under state and federal jurisdiction, are addressed in District control measures FSS-05 and FSS-07.

Response 2-16

The District staff is currently researching potential methods to control emissions from fleets of off-road material handling equipment (e.g., yard tractors) at the ports, rail yards, and possibly warehouse/distribution centers. Furthermore, a number of different regulatory approaches are currently being evaluated commensurate with the extent of the District's legal authority (e.g., fleet rules, retrofit requirements, use restrictions). We agree that there are opportunities to reduce the emissions from yard tractors operated at ports and other intermodal facilities. We are currently evaluating the potential emission reductions from the use of diesel particulate filters, diesel oxidation catalysts, emulsified fuels, alternative fuels, and other technologies for PR1198.

Response 2-17

The District staff believes at this time that the 3 tons per day of NOx is a good estimate of what may be achievable from this control measure. Inclusion of an emission reduction target in the control measure does not preclude development of a rule that achieves greater reductions. Any rule development would necessitate a thorough analysis, with input from all stakeholders, of the emission reduction potential, cost-effectiveness and potential socioeconomic impacts, as well as any potential adverse environmental impacts

of a proposed rule. Additional reductions for the NOx RECLAIM Program may be considered if they were found to be feasible.

Thank you for your comment on control measure MSC-05.

Response 2-18

Economic incentive programs such as the Pilot Credit Generation Programs adopted under Regulation XVI undergo intense scrutiny from various stakeholders as well as CARB and U.S. EPA to ensure that the emission reductions generated under the programs meet the guidelines of the federal Economic Incentive Program (EIP). These programs provide short-term flexibility to stationary sources. Following expiration of all emission reduction credits, any emission reductions still occurring after the rule's specific deadline may be credited toward the current and future SIP commitments.

Response 2-19

The comment references the control strategy or specific control measure from the State and Federal Element of the draft Plan. The overall control strategy and control measures specified in the State and Federal Element of the draft Plan have been developed by CARB. CARB staff is more technically qualified to analyze the feasibility and cost of these measures and provide responses to their control measures and the District staff will be forwarding all comments on the State and Federal Element of the draft Plan to CARB for their consideration. CARB staff will be evaluating these comments according to their own public review process prior to their Board adoption hearing. The District has prepared an Environmental Impact Report evaluating environmental impacts of all the draft Plan control measures.

Response 2-20

The emission reductions credited in the draft 2003 AQMP for Transportation Control Measures (TCM) come from the most recent 2001 Regional Transportation Plan (RTP). Two estimates of reductions will be presented in the TCM Appendix. The first will be an estimate of emission reductions from all transportation projects contained in the most current (2001) Regional Transportation Plan (RTP). Based on the current analysis, this is expected to be in the order of about 17 tons per day for VOC, and is presented as the emission reduction benefits from all regional transportation projects. The second will be an estimate of emission reduction benefits from projects specifically designated as Transportation Control Measures in the first two years (fiscally constrained portion) of the most recent (2002) Regional Transportation Improvement Program (RTIP). Based on the current analysis, this is expected to be about 5 tons per day for VOC.

The final Appendix IV-C, Regional Transportation Strategy and Control Measures, will define the TCMs in detail. The most recent RTP will provide the regional emission reductions for on-road mobile sources, while the most recent RTIP will provide the emission reductions attributed to TCMs. This section will also specify the mechanisms

by which the TCM projects will roll-over every two years, each time the RTIP is updated. In the event that a particular TCM project either becomes unimplementable or proves less effective than expected in reducing air pollution, a substitution process will be specified as well.

Response 2-21

In order to estimate emission reductions a region-wide analysis is used. This is because the regional analysis gives a more accurate estimate than estimates based on individual TCMs, by eliminating double-counting reductions. This is both because individual strategies influence one another, in terms of their effectiveness, and also because of overlaping implementation. (Please note: We are not claiming synergistic benefits, only synergistic effects.) Given the constraints of modeling tools available, SCAG does not see any reasonable and reliable way of estimating emission reduction benefits except at the region-wide scale.

The effect of changes in socio-economic and demographic projections in estimating emission reduction benefits will be explained more clearly in the Draft Socioeconomic Assessment for the 2003 AQMP.

Response 2-22

Only the first two years of the six-year biennial RTIP are fiscally constrained. However, there are well established mechanisms in place both to reliably track implementation of these projects and to consistently update this list every two years. As such, SCAG believes that this process is a reasonable compromise between the sometimes conflicting needs for flexibility and for oversight.

Response 2-23

There were five "advanced technology" measures listed in the 1997 AQMP. Two of these were excluded from the 2003 AQMP because they do not meet the definition of TCMs under the Clean Air Act (Zero-emission vehicles and Alternative Fuels).

There is no reasonable way of directly assessing the emission-reduction benefits of particular implemented projects, other than by modeling. However, the formal Conformity Determination process requires that the region demonstrate Reasonable Further Progress with regard to the implementation of the specified TCM projects. The various Federal Agencies—the Federal Highway Administration (FHWA), the Environmental Protection Agency (EPA), and the Federal Transit Administration (FTA)—jointly ascertain that the region's various transportation plans and programs conform to it's efforts to attain the National Ambient Air Quality Standards (NAAQS). The SCAG Region in general, and the South Coast Air Basin (SCAB) in particular, have successfully demonstrated Conformity.

Response 2-24

Similar to the District's commitment in its 1999 Plan Amendment, the District has included a commitment to adopt annual reductions. The plan also includes defined control measures to be adopted in regulatory form by the District unless infeasibility findings are established and equivalent reductions are substituted that will achieve the annual emission reductions. U.S. EPA has in the past accepted enforceable commitments to adopt measures in the future. In this case, large numbers of control measures relied on for baseline emissions have already been adopted. U.S. EPA can allow enforceable commitments to adopt future measures. Substitute control measures will used for measures that do contain commitments to obtain specific reductions which are found to be infeasible or not cost-effectiveness.

Response 2-25

The 2003 AQMP is designed with the primary objective of demonstrating attainment with the federal standards that are currently exceeded in the Basin (i.e., 1-hour ozone and PM10). At the same time, the strategies contained in the Plan would help make expeditious progress toward attainment of the upcoming federal PM2.5 and 8-hour ozone standards. The next plan revisions would be expected to specifically address these standards.

Response 2-26

The changes made to the data inputs for the ozone attainment demonstration are summarized in Appendix V. The results of several sensitivity analyses are incorporated in Appendix V as well.

The current modeling has utilized CARB's latest mobile source emissions model that has resulted in substantial increases in base year VOC and NOx. Base year model performance statistics for the primary modeling day in the target zones meet EPA general criteria for acceptance. While there exists some uncertainty in the emissions estimates, the changes made to the emissions programs has resulted in better overall model performance compared to previous attainment demonstrations.

Appendix V, Table 3-15 lists several UAM sensitivity analyses addressing biogenic emissions. In general, biogenic emissions contribute significantly to observed and future ozone concentrations. The biogenic emissions compete with the anthropogenic emissions in the actual environment leading to a complex scenario where the total ozone resulting from the two sources of emissions are not additive. Doubling the base-year biogenic emissions could result in peak ozone concentrations exceeding 220 ppb. Doubling the biogenic emissions in 2010 would result in a violation of the federal standard. One aspect of this analysis need to be considered: the August 1997 meteorological episode was a very warm period and temperatures in excess of 40 degrees Celsius. The biogenic emissions generated for this episode was essentially maximum and more likely could not

be doubled. Also, future growth may reduce the available land needed for the biogenic emissions.

Response 2-27

Appendix V provides a statistical ranking of the episodes considered for inclusion for the ozone modeling demonstration. The July 16-17, 1998 episode ranked first for a two day episode in terms of severity for the period including 1996 through 2002 (seven years). July 16th ranked 4th for a 1:3.5 probability of occurrence in any individual year. The attainment provision of the 1-hour standard allows for one violation per year over a three year period. The severity of the July episode placed its expected frequency beyond a 1 in three year occurrence. As a consequence, the episode is unique and is not representative of typically observed summer conditions.

Response 2-28

The emissions factors for PM10 used in the draft 2003 PM10 attainment demonstration were developed jointly with the ARB staff. Appendix V documents some of the uncertainties of the emissions estimates and allocation factors.

Response 2-29

The adoption schedule and the implementation period of all control measures are included in Chapter 7 of the main AQMP document. The emissions reductions for the District's measures (with quantifiable emission reductions) are also provided for the milestone years in Appendix IV-A. The CAA Rate-Of-Progress in the 2003 AQMP is demonstrated to be achieved based on existing District and CARB regulations which are incorporated in the projected baseline emissions. For the CARB's proposed measures, emission reductions were only provided for 2010 for VOC and NOx by CARB for modeling purposes, although reductions prior to 2010 are also committed to in the revised Proposed 2003 State and Federal Strategy for the California State Implementation Plan released on May 12, 2003. This level of detail is sufficient for adequate monitoring.

The commenter is also referred to the response to comment #2-19.

Response 2-30

A list of all adopted regulations (as of October 2002) by the District, CARB, and U.S. EPA along with their corresponding emission reductions is provided in Tables 1-2 (for District rules) and Table 1-3 (for state and federal rules). The reductions associated with these measures are already reflected in baseline emissions. The majority of these rules have already been SIP-approved by U.S. EPA and the remaining rules are also expected to be approved soon. Rules which have been approved by U.S. EPA will be specifically identified in Tables 1-2. For the remaining rules, staff is committed to continue implementing these rules and if necessary, adopt rule amendments to correct any possible

SIP deficiency identified by U.S. EPA within an appropriate timeframe of the notification from U.S. EPA.

Response 2-31

The District has identified all feasible contingency measures. However, we welcome any additional suggestions on specific measures by the commenter. The District staff believes that in an extreme non-attainment area, where the attainment demonstration relies on development of future technology, the CAA does not contemplate that contingency measures are in regulatory format at the time of plan submittal. The U.S. EPA has approved the 1999 SIP without regulatory contingency measures.

COMMENT LETTER NO. 2-A
NATURAL RESOURCES DEFENSE COUNCIL
COALITION FOR CLEAN AIR
(DATED MAY 1, 2003)

Response 2-A-1

The District staff agrees that the ports represent a significant emission source and there are additional opportunities for control. In regards to implementing a requirement for cold ironing, the commenter is correct in that the District pursued such a requirement in 1987 under Proposed Rule 1165 – Emission of Oxides of Nitrogen from Ships at Berth. However, due to technical feasibility, safety, and cost-effectiveness (i.e., >$28,000 per ton of NOx), the rule was never adopted. While implementation issues still exist, it appears that the technology feasibility may no longer be as much of a constraint and that this control strategy could be considered as a possible long-term strategy. In fact, cold ironing is one of the strategies proposed by CARB (under the State and Federal Element for the California SIP) to be considered for implementation by U.S. EPA. As the commenter notes the Port of Los Angeles has recently committed to voluntarily introducing this control strategy at several terminals within their operation.

The District staff agrees that the retrofit of yard tractors (used to move containers at the ports) represents an effective emission reduction strategy. As a result, the District is currently proposing to develop a fleet rule for yard tractors at ports and rail yards (i.e., PR 1198 – Intermodal Equipment). Although, the exact number of yard tractors is unknown at this time, the Ports are currently conducting studies to develop the population and activity data for yard tractors. The District also has plans to adopt a fleet rule for yard tractors used at distribution centers in the Basin pending a more complete evaluation of the population and activity data of yard tractors at these sites.

Control Measure FSS-07 – Emission Fee Program for Port Related Mobile Sources is being proposed by the District to help mitigate the emission impacts associated with port-related mobile sources. Diesel trucks entering and exiting the ports would be covered under this proposal. In implementing this control measure, the District will provide an alternative to paying the fee by allowing sources to reduce their emissions accordingly. Retrofit controls on trucks would also be further evaluated during the rule development phase. Presently, the District does not have the authority to require retrofits of on-road trucks.

The District staff is aware that the large gantry-type cranes operate on electric power. However, there are rubber-tired gantry cranes that operate on diesel power. Crane engines not used to provide motive power would be subject to the District's stationary source control rules. However, the District staff would need to evaluate whether electrification of these cranes is feasible. Studies conducted by the Ports are expected to provide more up to date information on these cranes.

The use of low sulfur fuel for ships is already being proposed by CARB as a potential control concept for U.S. EPA to implement (MARINE-3). Under MARPOL Annex VI, the International Maritime Organization (IMO) established NOx emission standards for engines installed on new ocean-going vessels. In addition, U.S. EPA recently released their final rule on large marine vessel engines installed on ocean-going vessels in January, 2003.

To the extent that switcher locomotives at rail yards are operated by the two railroads covered under the Railroad Memorandum of Understanding (MOU) signed in 1998 between CARB and the railroads, switcher locomotives will be part of the fleet-wide emissions average program beginning in 2005. Engines not covered under the MOU are still subject to the new and remanufactured engine emission standards adopted by U.S. EPA. However, the District has included these sources in their mobile source control measures FSS-05 and FSS-07.

The "bubble" concept for ports may have some merit and will be further evaluated as a potential strategy to achieve additional reductions and reduce the size of the black box. An airport bubble concept was evaluated by District staff during the U.S. EPA's 1994 Federal Implementation Program (FIP) process but was not pursued because of significant issues related to establishing baselines, District's legal authority over federal sources, airport's authority of their tenants, and annual emission reduction targets.

Response 2-A-2

The District staff agrees that the fleet rules should be expanded to private fleets. In regards to yard tractors, the concept will be considered under a fleet rule for yard tractors (i.e., PR 1198 – Intermodal Equipment).

Response 2-A-3

The District staff agrees that mandatory retrofit rules are needed to reduce emissions from existing on-road trucks which are under the primary jurisdiction of CARB and U.S. EPA. This concept is already included in CARB's Control Measure ON-RD HVY-DUTY-3.

Response 2-A-4

The electrification of ground service equipment (GSE) is currently subject to an MOU between the air carriers, CARB, and U.S. EPA. However, Control Measure FSS-06 of the 2003 AQMP would evaluate the possibility of retrofitting existing off-road equipment such as GSE with additional controls.

Because of significant issues related to establishing baselines, District's legal authority over federal sources, airport's authority of their tenants, and annual emission reduction targets implementation and jurisdictional issues, the airport "bubble" concept was determined to be infeasible and will not be considered for this Plan revision.

Response 2-A-5

Control Measure CMB-10 establishes a target reduction goal of 3 tons per day of NOx by 2010. Like all sources, the RECLAIM universe is a candidate for periodic reviews of the potential for additional emission reductions. As was noted to stakeholders during the development of the draft 2003 AQMP, RECLAIM sources as a whole are one of the top seven source categories of NOx emissions in 2010, accounting for approximately 5% of the NOx emissions inventory in 2010. The extent of the air pollution problem dictates an initial look at all potential control options. RECLAIM facilities represent a large portion of the overall emission inventory and further evaluation of these sources for control is warranted. The specific means to achieve additional reductions from these sources will be further evaluated during rule development. It is unclear at this time whether additional reductions would be feasible. However, if the commenter knows of specific additional control technologies other than what is presented, the District staff could be interested in getting further information.

Response 2-A-6

A discussion on the process to identify future new strategies has been added to Control Measure LTM-ALL in Appendix IV-A. This process will consist of several mechanisms which are likely to include the development of an annual technology assessment workshop process which would act as a means to bring together ideas that would identify the latest technology improvements and process changes resulting in feasible control strategies. A Subcommittee of the AQMP Advisory Group was established in April 2003 and will be identifying additional control strategies on an on-going basis in order to reduce the size of the black box. In addition, studies conducted as part of implementing the Annual Emissions Reporting Program could be used to identify new emission reduction strategies as a way of reducing annual emission fees. Periodic BACT updates can also be used to identify new emission reduction strategies that may result from add-on controls or process changes. Future evaluations on VOC reactivity of various compounds may also provide a basis for establishing control strategies that substitute highly-reactive VOCs with low reactive VOCs. Following identification of a feasible control strategy, the District will provide public notification through its annual rule forecast report adopted at the beginning of each year by the District's Governing Board. In order to develop this control measure, the District will allocate sufficient resources for establishing the identification process. Chapter 4 of the draft 2003 AQMP and Control Measure LTM-ALL provide additional details on the process used to identify and implement new long-term control strategies. Detailed data on the remaining VOC emissions by source is available upon request. However, this information was already provided to the commenter.

Response 2-A-7

The District staff agrees with the comment and will continue to seek limited authority to regulate consumer products. In our comments to CARB on the State and Federal Element of the South Coast SIP, we have stressed the need to achieve additional VOC

reductions from consumer products. Possible control strategies recommended by the District staff are: (1) apply Regulation XI VOC limits to applicable consumer products (e.g., brake cleaners); (2) phase-out high emitting product forms in favor of low-VOC alternatives; and (3) assess an emission fee based on VOC content of product.

Response 2-A-8

The District staff agrees that the early retirement of old light and medium-duty vehicles would go a long way to reducing the size of the "black box". In our comments to CARB on the State and Federal Element of the South Coast SIP, District staff has recommended that CARB accelerate the existing fleet turnover by expanding car scrappage programs and adding tax incentives for retiring older cars or purchasing clean vehicles.

COMMENT LETTER NO. 2-B
NATURAL RESOURCES DEFENSE COUNCIL
COALITION FOR CLEAN AIR
COMMUNITIES FOR A BETTER ENVIRONMENT
(DATED APRIL 29, 2003)

Response 2-B-1

The District has increased the sampling frequency at selected sites to address the concerns of the 6-th day sampling schedule. Rubidoux is one of the sites currently under the enhanced sampling schedule. With this enhanced schedule in 2002, no exceedances of the federal 24-hour PM10 standard were observed at Rubidoux. In addition, no exceedances were observed anywhere in the Basin in 2002. In 2001, two high wind events contributed to exceedances of the federal standard at Banning and at Ontario. While no natural events plan is currently in place for the Basin, the District plans to submit a plan to natural events action plan to EPA in the future to enable the exclusion of high wind generated PM10.

Response 2-B-2

EPA has not issued model performance guidance for particulate modeling in support of an attainment demonstration. The performance criteria used in the draft 2003 AQMP were the same as those used for the 1997 AQMP. The calculation of prediction error in the 1997 technical report is designed to provide an overall appraisal of the model performance as a whole. For ozone modeling, estimates of bias and error are normalized over the modeling region to provide an analogous estimation of performance. While the individual component and station error may exceed the prescribed 30 percent bound, the average of all stations provides the model's capacity to recreate observations.

Evaluation of the UAMAERO-LT model performance indicates that sulfate elemental carbon component species are under predicted with mean errors beyond the 30 percent criteria. It is important to note that the absolute contributions of each of those components to the total PM10 mass are small and the average under prediction of the mass is on the order of 1 to 2 µg/m3 for each species. The greatest uncertainty in the model performance occurs in the primary category. While every attempt to allocate the primary emissions (e.g. fugitive dust) has been made there does exist a large degree of uncertainty between grid cells. The simulation for Rubidoux is under predicted for the base year however, the simulation over predicts mass at Ontario and Norco. This suggests that the total regional emissions are correct but the surrogates used to spread the emissions, in particular primary dust, require refinement. The 1995 PM10 at Rubidoux also reflects an approximate 3 µg/m3 contribution to the primary category from a high wind day which cannot be accurately simulated.

The 2006 simulation did not account for reductions in background concentrations of NOx and VOC. As a consequence, ammonium, nitrate, and organic carbon concentrations for

2006 are most likely over predicted. Little change is projected in the primary category since the emissions do not change significantly between 1995 and 2006. Linear rollback calculations of the non-primary species based on the annual average PM10 suggest a similar (but slightly higher) rate of PM10 improvement as demonstrated by the regional modeling.

The primary model validation was conducted using the speciated data observed in 1995 form the PTEP sampling program. The PTEP sampling program was discussed extensively in the 1997 AQMP and through several peer review publications. The program has become a prototype for similar monitoring programs conducted elsewhere in the US. The SSI comparative performance demonstration was included as a weight of evidence demonstratin that the model was able to recreate the regional pattern of observed PM10.

Response 2-B-3

The attainment demonstration for 24-hour averaged maximum PM10 was based on a speciated rollback calculation of a peak observed PM10 observation from 1995. The rollback calculation incorporated emissions reductions projected from 1995 to 2006. The projected VOC, NOx, SOx, and PM emission reductions combine both mobile and stationary source categories. Estimates of the emissions reductions from the mobile source category are based on ARB's EMFAC2002 and Offroad models. The stationary source emission reductions are projected based on implementation of District rules. Of the emission reductions projected from 1997 to 2006, 74 percent of VOC and 89 percent of NOX emissions reductions are achieved by mobile sources. SOx and PM emissions are projected to increase over the period. The District rule implementation accounts for one quarter of the VOC emissions reductions and only 11 percent of the NOx reductions. The PM10 attainment demonstration assumes that the mobile source compliance effectiveness is incorporated in the EMFAC and Offroad assumptions. Stationary source emissions reductions have a smaller role in the total emissions reductions by 2006. While the assumption of 100 percent effectiveness is used in the analysis, the assumption applies to less than 25 percent of the emissions reductions, thus minimizing the potential impact of uncertainty in the estimation of rule effectiveness to future projected air quality.

In addition, the only days observed exceeding the federal 24-hour PM10 standard in the Basin since 1997 occurred during high wind "natural events." Using the 1995 episode as the base case for rollback provides a conservative estimate of worst-case conditions. Since the implementation of Phase II fuel reformulation, PM10 24-hour exceedances of the 24-hour standard due to non-wind events have been virtually eliminated. The December 1995 episode was characterized by very high concentrations of nitrate, sulfate and ammonium at levels not observed in the Basin since. Use of this day for the attainment demonstration, and the likelihood that it will not be repeated provides a measure of confidence that the 2006 projected maximum non-wind event PM10 predicted peak should be well below the federal standard and that uncertainty in rule effectiveness

for less than 25 percent of the total emissions will not impact the attainment demonstration.

Response 2-B-4

The PM10 modeling analyses presented in the 2003 Draft AQMP have been focused on demonstrating attainment to the federal standards. As in the case of PM10 there exists a significant difference between the health-based California and federal standards. The annual state standard is 40 percent of the federal standard while the 24-hour average California standard is one third of its federal counterpart. The primary task of the analysis was to show attainment to the federal standard and to provide projections of future PM10 air quality for 2010 and beyond. This is consistent with demonstrating progress to attain the California standards. The future year analyses project PM10 concentrations with all identified controls implemented as well as emissions reductions that have yet to be identified.

Additional reductions of PM, VOC, SOx and NOx emissions beyond those identified in the draft document will be required to bring the Basin into compliance with the California standards. Rollback projections of the maximum annual average PM10 for 2020 indicate that primary emissions would be required to be reduced by more than 90 percent from 1997 levels in addition to the estimated emission reductions of VOC, NOx, and SOx, to achieve the California PM10 standard.

COMMENT LETTER NO. 3
AIR TRANSPORT ASSOCIATION

Response 3-1

The District disagrees with the commenter that the District is preempted from imposing fees on federal sources. Although the District is prohibited from establishing emission standards on some federal sources, the District is not entirely preempted from regulating these sources. The district has the ability to establish in-use restrictions for these sources or to establish fleet rules affecting the sources and to adopt indirect source regulations and fees. Therefore, the District has the ability to charge fees to support these programs or to provide alternatives to such regulations. Furthermore, for those sources that are preempted, the District measure would call for the collection of grant monies from EPA, or for EPA to impose fees on those preempted sources and to dedicate those funds to South Coast for achieving emission reductions in and around airports.

Response 3-2

The Clean Air Act (CAA) does not preempt the fee measure. While the CAA may preempt the District from establishing standards on certain categories of sources (e.g., new nonroad engines) which EPA or the State of California have regulated, it is well established that state and local political subdivisions have the ability to establish in-use standards including restricting hours of operation, imposing idling restrictions and capping emissions. See, e.g. 59 Fed. Reg. 31306 (1994) *EMA v. U.S. EPA*, 88 F.3d 1075, 1094 (D.C. Cir. 1996) and Attachment C to the ATA letter. Therefore, it would follow that the District has the ability to collect fees to administer these programs, and, in the alternative, allow sources to pay fees to substitute for such regulations.

Federal Aviation Law does not independently preempt state and local measures on many sources occurring at airports. The ATA's citations pertain to measures that regulate aircraft once they left the gate. The District is not proposing measures that regulate the flight of aircraft, rather to obtain emission reductions from sources at airports. U.S. EPA's approval of the Statement of Principles to the GSE MOU in South Coast indicates U.S. EPA's belief that states and local entities may regulate many airline activities.

The Federal Aviation Act of 1958 regulates noise and the flow of aircraft into and out of the airport. The District Control Measure would only regulate emissions from sources at airports.

The regulation of emissions from these sources is not in conflict with Airline Deregulation Act (ADA). Although the regulation of emissions may have an indirect effect on the prices that carriers charge, that effect is too tenuous, remote or peripheral to be preempted by the ADA. The control measure does affect routs or services at all.

Response 3-3

The fee measure will meet its objective by using fees from sources that can be regulated by various agencies to purchase emission reductions from sources in and around the airport in lieu of developing source specific regulations. The District seeks additional reductions from sources applicable under the proposed mitigation fee program beyond what would be provided from the GSE MOU.

COMMENT LETTER NO. 3-A
AIR TRANSPORT ASSOCIATION

Response 3-A-1

The comment references the control strategy or specific control measure from the State and Federal Element of the draft Plan. The overall control strategy and control measures specified in the State and Federal Element of the draft Plan have been developed by CARB. CARB staff is more technically qualified to analyze the feasibility and cost of these measures and provide responses to their control measures and the District staff will be forwarding all comments on the State and Federal Element of the draft Plan to CARB for their consideration. CARB staff will be evaluating these comments according to their own public review process prior to their Board adoption hearing. The District has prepared an Environmental Impact Report evaluating environmental impacts of all the draft Plan control measures.

The District would like to see the GSE MOU included in the SIP to become a federally enforceable commitment, also subject to citizen suits. However, we believe that an enforceable backstop measure must be included in order to take up-front SIP credit for the measure.

COMMENT LETTER NO. 4
ALTO SYSTEMS

Response 4-1

The comment references the control strategy or specific control measure from the State and Federal Element of the draft Plan. The overall control strategy and control measures specified in the State and Federal Element of the draft Plan have been developed by CARB. CARB staff is more technically qualified to analyze the feasibility and cost of these measures and provide responses to their control measures and the District staff will be forwarding all comments on the State and Federal Element of the draft Plan to CARB for their consideration. CARB staff will be evaluating these comments according to their own public review process prior to their Board adoption hearing. The District has prepared an Environmental Impact Report evaluating environmental impacts of all the draft Plan control measures.

COMMENT LETTER NO. 5
CONSUMER SPECIALTY PRODUCTS ASSOCIATION (CSPA)

Response 5-1

The comment references the control strategy or specific control measure from the State and Federal Element of the draft Plan. The overall control strategy and control measures specified in the State and Federal Element of the draft Plan have been developed by CARB. CARB staff is more technically qualified to analyze the feasibility and cost of these measures and provide responses to their control measures and the District staff will be forwarding all comments on the State and Federal Element of the draft Plan to CARB for their consideration. CARB staff will be evaluating these comments according to their own public review process prior to their Board adoption hearing. The District has prepared an Environmental Impact Report evaluating environmental impacts of all the draft Plan control measures.

The District staff disagrees that further emission reductions from consumer products should not be considered in the black box. Because of the significant size of black box reductions needed and the short timeframe until the Basin demonstrates attainment, feasible control strategies for all source categories, including consumer products, should be considered for black box emission reductions.

Response 5-2

In regard to reactivity, it is acknowledged that the reactivity of VOCs does have a role in ozone formation and that both aerosol and non-aerosol products contain VOCs with differing reactivities. It is also acknowledged, however, that for products with comparable reactivity, the use of the aerosol product would generally result in greater emissions since their use would typically result in greater mass emissions than that of a non-aerosol product. Mass emissions are typically greater since aerosol products must contain a propellant to disperse the solids portion of the product such that they typically contain less solids per equal size container than non-aerosol products. Further, the propellants used in the aerosol products are generally VOCs which are emitted along with the active ingredient.

CARB has previously adopted consumer product regulations that include both mass emission and/or photochemical reactivity limits and will consider these issues in future rulemakings. As part of the California SIP, CARB is proposing to adopt new limits for addressing emissions growth from consumer products. CARB staff plans to target previously unregulated categories or regulated categories that staff has not evaluated for further emissions reductions during the last five years. As with previous regulations, additional reductions may be achieved through both mass-based and reactivity-based limits.

The comment references the control strategy or specific control measure from the State and Federal Element of the draft Plan. The overall control strategy and control measures specified in the State and Federal Element of the draft Plan have been developed by CARB. CARB staff is more technically qualified to analyze the feasibility and cost of these measures and provide responses to their control measures and the District staff will be forwarding all comments on the State and Federal Element of the draft Plan to CARB for their consideration. CARB staff will be evaluating these comments according to their own public review process prior to their Board adoption hearing. The District has prepared an Environmental Impact Report evaluating environmental impacts of all the draft Plan control measures.

The modeling conducted for the draft 2003 AQMP utilizes different emission baselines and meteorology than that used for the studies by CSPA. As a result, the modeling conducted for the draft 2003 AQMP showed that significant VOC emission reductions are needed from all categories, including consumer products, to demonstrate attainment with the federal ozone standard.

Response 5-3

Because of the size of the "black box" and the short period of time to demonstrate attainment, significant emission reductions must come from all source categories at the earliest date practical.

Response 5-4

The District staff agrees that because of the need to achieve additional VOC reductions for ozone attainment demonstration, reformulation based on lower reactive compounds need to be evaluated and considered in future rulemakings for coatings and solvents in order to provide a viable compliance option. Further study would also be required to evaluate the reactivity of different compounds under various meteorological conditions. To that end, the District and CARB have introduced and coordinated research efforts with the University of California in Riverside to explore the reactivity of a number of different chemicals and solvents. The results of these efforts will be used in designing future reactivity-based regulatory approaches.

COMMENT LETTER NO. 6
DAVE TURNER

Response 6-1

The comment references the control strategy or specific control measure from the State and Federal Element of the draft Plan. The overall control strategy and control measures specified in the State and Federal Element of the draft Plan have been developed by CARB. CARB staff is more technically qualified to analyze the feasibility and cost of these measures and provide responses to their control measures and the District staff will be forwarding all comments on the State and Federal Element of the draft Plan to CARB for their consideration. CARB staff will be evaluating these comments according to their own public review process prior to their Board adoption hearing. The District has prepared an Environmental Impact Report evaluating environmental impacts of all the draft Plan control measures.

COMMENT LETTER NO. 7
TELEFLEX

Response 7-1

The comment references the control strategy or specific control measure from the State and Federal Element of the draft Plan. The overall control strategy and control measures specified in the State and Federal Element of the draft Plan have been developed by CARB. CARB staff is more technically qualified to analyze the feasibility and cost of these measures and provide responses to their control measures and the District staff will be forwarding all comments on the State and Federal Element of the draft Plan to CARB for their consideration. CARB staff will be evaluating these comments according to their own public review process prior to their Board adoption hearing. The District has prepared an Environmental Impact Report evaluating environmental impacts of all the draft Plan control measures.

COMMENT LETTER NO. 8
PACIFIC MARITIME ASSOCIATION

Response 8-1

The emission reductions for Control Measures FSS-06 and FSS-07 are not quantified. Control Measure FSS-06 includes various categories of off-road vehicles and equipment such as construction/industrial equipment, utility engines, lawn and garden equipment, off-road recreational vehicles, recreational marine and other non-highway mobile equipment. Control measure FSS-07 includes port-related mobile sources such as ships, trains, trucks, and off-road equipment. Although, there is overlap between the types of off-road equipment subject to control measures FSS-06 and FSS-07, during rule development, these overlaps will be taken into account to ensure that the same categories are not subject to multiple requirements. In order to address these potential overlaps, the control measures will be revised to indicate that staff will conduct further analysis during rule implementation to identify the most feasible control strategy for each source category (e.g., reduction controls, mitigation fee).

Response 8-2

The commenter is also referred to the response to comment #8-1. Due to the severity of the emissions from surrounding port-related activities, it is necessary to have a separate control measure affecting port-related mobile sources.

Response 8-3

Because of the significant size of the black box and the short timeframe for the Basin to demonstrate attainment with the federal standards, all categories of emission sources need to be considered for further controls, including in-use off-road vehicles and equipment, which continues to represent a significant portion of the emissions in the Basin due to slow turn-over rates of these vehicles. The emissions inventory for control measure FSS-06 was based on CARB's Off-Road Model for the Basin. For a complete description of CARB's Off-Road Model the commentor is referred to CARB's website where the pertinent documents can be downloaded.

Response 8-4

The combined VOC and NOx percent contribution for off-road mobile vehicles and equipment was determined by taking the ratio of the combined VOC and NOx emissions inventory for off-road mobile vehicles and equipment shown in the summary table of the control measure to the total combined VOC and NOx basin-wide emissions inventory for all sources shown in Table B-11 of Appendix III (i.e., [83.7 + 143.6 tpd]/[628.8 + 740 tpd]).

Response 8-5

The District staff is aware of the current emission studies by the ports and is eagerly anticipating the resulting emissions inventories. As previously mentioned, the draft 2003 AQMP emissions inventory for in-use off-road vehicles and equipment is based on CARB's Off-Road Model which reflects the best information to date.

Response 8-6

The District staff does not consider control measures FSS-06 and FSS-07 to be redundant since FSS-06 is applicable to all types of off-road vehicles and equipment regardless of where they are used, while FSS-07 only covers mobile sources traveliing in or out of ports, or used exclusively at port facilities. Although, there is overlap between the types of off-road equipment subject to control measures FSS-06 and FSS-07, during rule development, these overlaps will be taken into account to ensure that the same categories are not subject to multiple requirements. However, it is not the intent of the control measures to charge a mitigation fee for fleets of off-road equipment used at ports and also require retrofit controls under control measure FSS-06. In order to address these potential overlaps, the control measures will be revised to indicate that staff will conduct further analysis during rule implementation to identify the most feasible control strategy for each source category (e.g., reduction controls, mitigation fee). The commenter is also referred to the response to comment # 8-1.

Response 8-7

The three Pilot Credit Generation Programs the commentor refers to include Rule 1612.1 – Mobile Source Credit Generation Pilot Program, Rule 1631 – Pilot Credit Generation Program for Marine Vessels, and Rule 1632 – Pilot Credit Generation Program for Hotelling Operations. These three voluntary rules provide opportunities to generate NOx mobile source emission reduction credits (MSERCs) to be used as RECLAIM Trading Credits (RTCs) in the RECLAIM program. All recently adopted Pilot Credit Generation Programs have gone through a rigorous development process with numerous stakeholders to ensure that the credits produced meet CARB and U.S. EPA guidelines for approvability. One approvability criteria was to ensure that the emissions reductions would not have occurred anyway through the funding of projects using public monies such as the Carl Moyer Program. Any emission reduction projects completed by the Ports or other entities receiving public monies would not meet the approvability criteria established by the state and federal government.

Response 8-8

During rule development, District staff will consider the implementation of voluntary measures by port terminal operators. In order for these reductions to be credited toward SIP commitments, they have to be federally enforceable through a District rule.

Response 8-9

The purpose of the draft 2003 AQMP is to demonstrate attainment with the ambient air quality standards. The Plan demonstrates a need for additional reductions from all sectors. The District staff agrees that the on-going emissions inventory study on the port's activities will provide valuable information and data necessary for a through understanding of the emission impacts of the ports. However, staff disagrees that it is premature to consider future control strategies for the sources at the ports. There is sufficient information already available to indicate that the port-related activities constitute a major source of emissions and need to be addressed.

Response 8-10

The District staff is currently evaluating the extent of the District's legal authority to regulate the emissions from the ports through an emissions fee program. However, this evaluation does not preclude proposing such a strategy and including it in the Plan. The District staff believes that at minimum, the District may adopt indirect source rules and use limitations and may adopt fee regulations as an alternative to such limitations.

Response 8-11

The District staff considers the need to develop additional mobile source control strategies in the Plan to be significant because of the significant level of emission reductions required to demonstrate attainment with the 1-hour ozone standard by 2010. The actual specific design on how a mitigation fee for port-related sources would be structured is beyond the scope of the control measure write-up. The details of such a program would be thoroughly evaluated and analyzed during the rule development process. However, the control will be revised to include criteria for establishing the emissions fee and for selecting emission reduction projects.

Response 8-12

A thorough discussion of CARB's off-road model is beyond scope of the control measure write-up; however, a brief description of the off-road model is included in Appendix III (page 1-118) of the draft 2003 AQMP. For a complete description of CARB's off-road model the commentor is referred to CARB's website where the pertinent documents can be downloaded at http://www.arb.ca.gov/msei/off-road/pubs.htm.

Response 8-13

Proposed Rule 1198- Off-Road Intermodal Equipment is a newly proposed rule developed pursuant to Environmental Justice Program Initiative Enhancement #III-1. The proposed rule will apply to fleets of off-road material handling equipment such as yard hostlers used at ports, rail yards, and possibly distribution centers. District Staff is still evaluating the control strategies for this proposed rule and exact requirements are currently not defined.

Response 8-14

California Health and Safety Code 40440(d) is not applicable to a control measure in the Plan. California Health and Safety Code 40440(d) applies when the District adopts or amend rules and regulations. The control measures FSS-05, FSS-06, and FSS-07 in the draft 2003 AQMP, are proposed control strategies without an emission reduction commitment that may or may not eventually result in a specific rule or regulation. The District staff will conduct a thorough cost analysis during the rule development phase of each control measure included in the Plan.

COMMENT LETTER NO. 9
SEMPRA ENERGY

Response 9-1

Proposed control measure MSC-07 – Natural Gas Fuel Specifications, is intended to limit an increase in emissions from natural gas combustion due to combustion of "hot gas." "Hot gas" is typical of associated gas production (i.e., natural gas produced along with crude oil) since associated gas tends to have greater percentage of ethane, propane, and other hydrocarbons which elevate the heating value of the gas. According to the California Energy Commission, nearly three-quarters of total natural gas produced in California is associated gas. Associated gas is generally produced in Southern California while non-associated gas is produced in Northern California. Approximately 96 percent of California Division of Oil & Gas District 4 (Kern, Tulare, Inyo) production is associated gas.

The District has the legal authority to set natural gas specifications. SCAQMD Rule 431.1 (Sulfur Content of Gaseous Fuels) restricts the transfer, sale or offer for sale natural gas containing sulfur compounds (calculated as H_2S) in excess of 16 parts per million by volume for use in the jurisdiction of the District. As noted in the control measure, while the California Public Utilities Commission (PUC) General Order 58-A (Standards for Gas Service in the State of California) sets standards for the heating value and purity of natural gas, it does not specify an average, minimum, or maximum heating value. Similarly, while the Southern California Gas Company's Rule 30 (Transportation of Customer-Owned Gas) sets a maximum heating value, the rule applies only to customer-owned gas and sets the maximum heating value at 1150 Btu (gross) per dry standard cubic foot (dscf) which is considered "hot gas."

The District sponsored two test projects to evaluate the effect of varying blends of natural gas to quantify the effects on emissions. The University of California, Riverside performed analyses of gas composition and boiler emissions from a 250,000 Btu per hour gas-fired boiler; the University of California, Irvine tested a 60-kW microturbine generator. The results show that "hot gas" can increase stationary source NOx emissions by greater than 20 percent. Even "hot gas" at only 1100 Btu/dscf had significantly higher NOx emissions.

The potential secondary impacts asserted by the commenter are speculative at this time. It should be noted that the control measure as proposed does not specify an emission reduction target and, thus, the one-hour ozone attainment demonstration is not dependent on this measure. Nevertheless, additional NOx emission reductions are necessary to achieve the eight-hour ozone and PM2.5 standards and the District will continue to research the air quality effects associated with "hot gas" combustion to determine if rule development is warranted. Rule development would necessitate a thorough analyses of emission reduction potential, cost-effectiveness, potential socioeconomic and adverse environmental impacts, and other impacts (e.g., constraints on fuel supply). Such

analyses would be performed with input from all stakeholders and be presented to the District Governing Board prior to their consideration of a proposed rule.

Response 9-2

Like all sources, the RECLAIM universe is a candidate for periodic reviews of the potential for additional emission reductions. As was noted to stakeholders during the development of the draft 2003 AQMP, RECLAIM sources as a whole are one of the top seven source categories of NOx emissions in 2010, accounting for approximately 5% of the NOx emissions inventory in 2010. As discussed in response to comment 9-1, any rule development would necessitate a thorough analysis, with input from all stakeholders, of the emission reduction potential, cost-effectiveness and potential socioeconomic impacts, as well as any potential adverse environmental impacts of a proposed rule.

The draft Plan sets forth a comprehensive strategy to demonstrate attainment that focuses on all emission sources – stationary as well as mobile sources. Furthermore, District staff is also recommending that the emission reductions required as part of the long-term strategy be assigned among the respective agencies based on the contribution of the sources' emissions as well as the agencies commitments in the 1997/1999 SIP (i.e., Scenario 1 in Chapter 4). By recommending Scenario 1, District staff seeks to ensure that all emission sources contribute a fair share toward the attainment demonstration requirements set forth under federal and state law.

Response 9-3

Staff recognizes that the 1997 baseline emissions (based on the 1996/97 Annual Emissions Report) may not reflect the current emission levels and that some facilities may have chosen to use default factors for certain categories to represent their emissions. Therefore, in implementing the proposed control measure and establishing a baseline emission level, facilities will have the opportunity to update their emissions in order to correct any reporting errors, if any, including the use of available source test data applicable to the specific reporting period. If actual emissions (substantiated by source test data) are less than the baseline emissions, the corresponding reductions could be credited toward facility's overall reduction target. Furthermore, the objective of this measure is to seek reductions that are technically feasible and cost-effective. Therefore, development of facility-specific emission reduction plans will take into consideration facility's specific source categories as well as any controls already implemented.

Response 9-4

Staff agrees with the commentor that CARB and U.S. EPA should commit to a greater level of emission reductions from state and federal sources, which represent about 80% of the VOC and NOx emissions in 2010. In fact, under the proposed Scenario 1 of the draft 2003 AQMP control strategy, recommended by District staff, most of the emission reductions needed for attainment are attributed to CARB and U.S. EPA. The proposed Control Measure FSS-04 is, however, a federal requirement under the Clean Air Act

(Section 185) for extreme non-attainment areas such as the South Coast Air Basin in the event that this region does not demonstrate attainment by 2010. Under this requirement, emission fees (i.e., $5,000 per ton) from the largest stationary VOC sources will be collected and used to achieve additional emission reductions toward the attainment target.

Response 9-5

Thank you for your comment. The District staff has on-going discussions with other stakeholders to discuss possible control strategies to reduce the size of the "black box".

COMMENT LETTER NO. 10
PACIFIC PROPANE SERVICE

Response 10-1

The comment references the control strategy or specific control measure from the State and Federal Element of the draft Plan. The overall control strategy and control measures specified in the State and Federal Element of the draft Plan have been developed by CARB. CARB staff is more technically qualified to analyze the feasibility and cost of these measures and provide responses to their control measures and the District staff will be forwarding all comments on the State and Federal Element of the draft Plan to CARB for their consideration. CARB staff will be evaluating these comments according to their own public review process prior to their Board adoption hearing. The District has prepared an Environmental Impact Report evaluating environmental impacts of all the draft Plan control measures.

COMMENT LETTER NO. 11
SHIELD PACKAGING

Response 11-1

The commenter is also referred to the response to comment #5-2.

The comment references the control strategy or specific control measure from the State and Federal Element of the draft Plan. The overall control strategy and control measures specified in the State and Federal Element of the draft Plan have been developed by CARB. CARB staff is more technically qualified to analyze the feasibility and cost of these measures and provide responses to their control measures and the District staff will be forwarding all comments on the State and Federal Element of the draft Plan to CARB for their consideration. CARB staff will be evaluating these comments according to their own public review process prior to their Board adoption hearing. The District has prepared an Environmental Impact Report evaluating environmental impacts of all the draft Plan control measures.

COMMENT LETTER NO. 12
FERRELLGAS – 18 EMPLOYEE LETTERS

Response 12-1

The comment references the control strategy or specific control measure from the State and Federal Element of the draft Plan. The overall control strategy and control measures specified in the State and Federal Element of the draft Plan have been developed by CARB. CARB staff is more technically qualified to analyze the feasibility and cost of these measures and provide responses to their control measures and the District staff will be forwarding all comments on the State and Federal Element of the draft Plan to CARB for their consideration. CARB staff will be evaluating these comments according to their own public review process prior to their Board adoption hearing. The District has prepared an Environmental Impact Report evaluating environmental impacts of all the draft Plan control measures.

COMMENT LETTER NO. 13
PACIFIC MERCHANT SHIPPING ASSOCIATION (PMSA)

Response 13-1

The control measures in the Plan contain sufficient detail to meet the requirements of the CAA. Control Measure FSS-05 proposes a mitigation fee program for federal sources which would be implemented by U.S. EPA (in terms of fee collection) and the monies collected used by the District to fund emission reduction projects. This program would be developed as an alternative to stringent national rules so as to achieve a fair-share reduction from federal sources to address unique local needs. The District staff is aware that there are implementation issues related to this control measure. However, the District staff have added language to the control measure that clarifies how the measure will be implemented and what criteria will used to fund emission reduction projects paid for by the fees collected. Estimated costs and emission reductions will be evaluated during the rule development phase of the control measure.

The impetus for this and other District mobile source control measures is due to the size of the "black box" and the short period of time to demonstrate attainment with the federal ozone standard. Therefore, significant emission reductions must be achieved from all sources including federal sources such as trains, planes, and ships by 2010. This control measure is necessary if the U.S. EPA does not adequately reduce emissions from federal sources.

Issues such as competitive disadvantage of U.S. flagged vessels versus foreign flagged vessels will be evaluated during the rule development phase of the measure.

Response 13-2

As noted by the commentor, the marine vessel emissions inventory in the 2003 AQMP is based on the ARCADIS report, completed in 1999. The draft report was released for review to stakeholders including the California Air Resources Board (ARB), the ports, and the Pacific Merchant Shipping Association (PMSA). In general, most comments received from PMSA and other stakeholders at that time were supportive and endorsed the overall results of this report. In fact, the PMSA consultant (Seaworthy System) regarded the report as "excellent."

The ARCADIS report currently represents the best available information on ship emissions for the South Coast Air Basin. The ARCADIS report provides an inventory study that is sufficiently accurate to support balance planning and an appropriate consideration of control strategies. The extreme ozone non-attainment status of the South Coast Air Basin and the significant contribution from maritime operations in South Coast waters warrants the evaluation of possible control strategies to reduce emissions from this source category.

District staff recognizes that the ARCADIS report uses a modified version of a formula designed for calculating power requirements in ship design as a classification scheme to estimate the average rated power of ships that call and operate within South Coast waters. However, District staff disagrees that the use of the modified equation invalidates the emissions inventory for this source category. As stated in the report, the deadweight tonnage was used as a surrogate for the displacement tonnage because a strong correlation was found between these two values and also because of the unavailability of the displacement weight data for a large fraction of ships. Since displacement tonnage is typically larger than the deadweight tonnage, as noted by the commentor, it could also be inferred that power requirements based on displacement tonnage would be larger than the when deadweight tonnage is used. Therefore, the emission inventory may be potentially underestimated using deadweight tonnage instead of displacement weight.

District staff recognizes that refinements to the marine vessel inventory are certainly possible (e.g., updated methodology and activity data) which would be considered during rule development. However, the overall inventory for marine vessels is not expected to be significantly different than the current estimates and the marine vessels would still represent one of the largest under-controlled emission source categories. District staff welcomes the participation of PMSA and other stakeholders in refining the emissions inventory for this source category, in the future.

Response 13-3

District staff disagrees with this comment. The ARCADIS report is based on sound engineering judgment and was reviewed by stakeholders including PMSA. Based on general comments received, the report was perceived as an adequate emissions inventory report that provided an acceptable estimation of emissions from ships operating within South Coast waters. The design category equation provides a system for classification of ships and the 10,000 constant value was applied to produce smaller numbers than would otherwise be calculated. This does not affect the emission inventory since the equation is used for classification purposes only. Please also see response to comment 13-2.

Response 13-4

The marine vessel emissions inventory study included 1991, 1993, and 1995 data from the Lloyd's Marine Exhaust Emissions Research Programme and also used the 1998 data from Mercer Management and Standard & Poor. In addition, the study considered and evaluated the emissions limits finalized in 1997 by the International Maritime Organization (IMO) and changes in NOx emission rates due to IMO standards were incorporated into the emissions forecast.

District staff recognizes that refinements including data and methodology improvements may be warranted in future updates to the marine vessels emissions inventory and welcomes the participation of all stakeholders including, the ports and PMSA.

Response 13-5

Please see response to comment 13-4

Response 13-6

Please see response to comment 13-4

Response 13-7

Please see response to comment 13-4

Response 13-8

Please see response to comment 13-4

Response 13-9

Please see response to comment 13-4

Response 13-10

District staff disagrees with this comment. The 1999 ARCADIS report did not ignore fuel consumption as a factor of emissions calculations. This was a specific methodology change from the 1996 emission inventory study and was intended to improve the analysis by eliminating the need to estimate fleet-average fuel efficiencies. The 1999 ARCADIS report calculates energy consumption instead of fuel consumption. Both methodologies are valid and have precedent in emissions inventory calculations. However, the energy consumption method was chosen because NOx emissions may better be indicated by energy rather than fuel consumption. The fuel consumption method requires estimates of fleet-average fuel efficiency in future years which are difficult to project. The energy consumption method avoids the need for such projections. Also please refer to response to comment 13-4.

Response 13-11

Please see response to comments 13-4 and 13-10.

Response 13-12

The U.S. Navy and Coast Guard vessels as well as vessels calling at El Segundo were included in the emissions inventory for the marine vessels category (i.e., 1996 and 1999 reports). Although contribution of there vessels is relatively small (approximately 2%), these vessels are also covered under Control Measure FSS-05 (i.e., mitigation fees).

Response 13-13

The District staff recognizes that there may be potential emission reductions realized as part of future voluntary cold ironing programs. However, these programs will be further evaluated and considered during the rule development process.

Response 13-14

Based on the 1996/1999 ARCADIS Report, the fishing vessels would contribute to about 6.3 tons per day of NOx in 2010, representing a significant portion of emissions. The 1999 ARCADIS Report did not update these emissions (except for fuel sulfur content) because of the limited scope of this study. Given the high variability of activity data for fishing vessels, improvements to the inventory can be made in the future once more refined and up-to-data activity data becomes available.

Response 13-15

The 1999 ARCADIS Report relied upon the updated hotelling and maneuvering times provided by Marine Exchange and ports.

Response 13-16

Data used to develop the hotelling emissions included port surveys, marine exchange data, as well as the 1989 report prepared by TRC Environmental Consultant entitled "Ship Emissions Control Study for the Ports of Long Beach and Los Angeles," referenced in the 1996/1999 ARCADIS Reports.

Response 13-17

Please see response to comment 13-4.

Response 13-18

The commenter is referred to the response for comment #13-1.

In regards to Rule 2009.1, there are no connections between ocean going vessels which are mobile sources and Rule 2009.1 which applies to stationary sources.

Response 13-19

There is no connection between the two commitments.

Response 13-20

The emission reductions for Control Measures FSS-05 and FSS-07 are not quantified. Control measure FSS-05 includes all federal sources such as ships, planes, trains, 49-state vehicles, and certain off-road equipment. Control measure FSS-07 includes port-related mobile source such as ships, trains, trucks, and off-road equipment. Although, there is overlap between the types of off-road equipment subject to control measures FSS-05 and FSS-07, during rule development, these overlaps will be taken into account to ensure that the same categories are not subject to multiple requirements. In order to address these potential overlaps, the control measures will be revised to indicate that staff will conduct further analysis during rule implementation to identify the most feasible control strategy for each source category (e.g., reduction controls, mitigation fee).

Response 13-21

A socioeconomic report on the draft 2003 AQMP was released on May 21, 2003. A more thorough cost analysis will be conducted at the time the port-related measures are adopted. Emission reductions and cost-effectiveness for the port-related measures are not quantified at this time because of the uncertainties associated with the proposed method of controls and the jurisdictional and implementation issues surrounding mitigation fee programs. In addition, Health and Safety Code 40440 (c) applies to rulemaking only, not Plan development, and as such does not require a socioeconomic analysis be completed.

Response 13-22

The emission fees collected as a result of establishing mitigation fee programs for federal and port-related sources will be used to fund emission reduction projects throughout the basin, although port-related projects will be given high priority. Local environmental justice issues will be one of the criteria used to decide where the projects will be located. The District will seek to fund projects that offer the greatest emission reduction potential and benefit to the local community. To that end, local areas (environmental justice communities, ports, East Alameda Corridor zone) will be given high priority.

Response 13-23

The commenter is referred to the response to comments #8-1 and 8-2.

Response 13-24

The emissions inventory for control measure FSS-06 was based on CARB's off-road model for the Basin. The commenter should refer to the model's details for the assumptions used and is available through CARB. For a complete description of CARB's off-road model the commentor is referred to CARB's website where the pertinent documents can be downloaded at http://www.arb.ca.gov/msei/off-road/pubs.htm.

Response 13-25

The commenter is referred to the response to comment #8-9.

Response 13-26

The District staff agrees that the ideal strategy would be to propose the same control method on mobile sources throughout the state. However, the current state of the Basin's air quality and estimated size of the "black box" requires the current Plan to consider far reaching control strategies. In addition, the commenter is referred to the response to comment #8-10. It is not the intent of the control measure to keep unregulated sources from entering the Basin, but to address the emissions from in-use off-road vehicles and equipment from captive fleets (i.e., those that stay within the boundaries of the district). The implementation details of FSS-06 will be further developed during the rulemaking phase.

Response 13-27

As indicated in the previous response, the size of the "black box" and the fact that there are only seven years remaining for the attainment demonstration, presents a significant challenge to the District and any reasonable strategy should be included for consideration. There are sufficient details in the control measure description to convey the proposed strategy of an emissions fee program for sources operating in and around the ports. However, the District staff has added additional language to the control measure which describes possible implementation strategies and how the fee will be established as well as the selection criteria for emission reduction projects.

Response 13-28

A socioeconomic report on the draft 2003 AQMP was released in May 2003. However, the commenter is reminded that the Health and Safety Code 40440 (c) applies to rulemaking only, not Plan development, and as such does not require a socioeconomic analysis be completed.

Response 13-29

The emissions inventory for theses sources is contained in Appendix III. However, the emissions inventory for control measure FSS-07 (i.e., for sources operating in and around ports) is difficult to estimate and will be determined during the rule development process. Industry studies currently conducted by the ports will be considered. No emission reduction estimates are included for this control measure.

Response 13-30

The commenter is referred to the response to comment #8-13.

Response 13-31

The design and implementation of this control measure still needs to be evaluated and will be determined during the period when the control measure is being considered for adoption. Establishing the baseline is one of the issues that would need to be further evaluated.

Response 13-32

The commenter is referred to the response to comment #8-22.

COMMENT LETTER NO. 14
BUILDING INDUSTRY ASSOCIATION

Response 14-1

As described in the AQMP Appendix IV-A, the intent of this control measure (CM #2003 BCM-07) is to achieve further reductions in PM10 emissions from fugitive dust sources (e.g., construction activities, paved and unpaved road travel, etc.) in order to ensure that the PM10 standard will be achieved. Potential program enhancements would be based on recently adopted most stringent fugitive dust control measures included in other PM10 non-attainment areas (e.g., San Joaquin Valley, and Clark and Maricopa Counties) to the extent they are applicable and effective in reducing emissions in the region. A summary of these potential program enhancements is mentioned in the control measure writeup and included in the recently adopted 2002 Coachella Valley PM10 State Implementation Plan and can be viewed at http://www.aqmd.gov/aqmp/fcvsip.html.

During the rule development process, District staff will evaluate the effectiveness of the most stringent fugitive dust control measures beyond existing AQMD rule requirements. This evaluation will include information on estimated emission reductions and the cost-effectiveness of proposed program upgrades.

Response 14-2

Control measure MSC-01 has been carried over from previous AQMPs and District staff still considers it to have potential to reduce emissions by addressing the urban heat island effect. Though there have been several studies supporting the potential air quality improvement with reduction in ambient temperatures around major metropolitan areas, no emission reductions or costs are assigned to this strategy because the District staff considers this program to be best implemented using incentive or promotion programs which are voluntary in nature.

Response 14-3

Proposed control measure MSC-06 – Emission Reduction from Wood Burning Fireplaces and Wood Stoves, is primarily intended to reduce emissions of PM10, though its implementation would also be expected to reduce emissions of CO, VOC, NOx, SOx, and hazardous air pollutants associated with the incomplete combustion of wood. The control measure as proposed does not specify an emission reduction target and, thus, the PM10 or ozone attainment demonstrations are not dependent on this measure. Nevertheless, the severity of the air pollution problem in the Basin dictates that the District investigate all emission sources and the potential for emission reduction. The emissions inventory for wood fireplaces and stoves is over six tons per day in 2006 which is not insignificant. Thus, District staff will continue to research the potential for cost-effective emission reductions from this source to determine if rule development is warranted. As with any proposed rule, a thorough analysis of emission reduction

potential would be performed with input from all stakeholders and be presented to the District Governing Board prior to their consideration of a proposed rule. It should be noted that numerous air districts in California and other states have adopted rules regulating wood fireplaces and stoves and control measure MSC-06 is modeled on these existing regulations. Any proposed rule development would consider the effectiveness of these existing regulations as well as any conditions unique to Southern California. The control measure has been revised to remove specific control suggestions; the revised control measure indicates that District staff will investigate the effectiveness of the control strategies adopted by other air districts and those suggested by CARB as part the rulemaking process.

Response 14-4

Control measure FSS-06 was included in the 2003 AQMP because of the significant need to seek additional emission reductions from existing mobile sources including off-road vehicle and equipment. The District is aware of a currently available CARB verified retrofit system for off-road equipment that consists of a diesel oxidation catalysts (DOC) and the use of emulsified diesel fuel (PuriNOx). Although not a retrofit system, PuriNOx alone is also CARB verified. Other systems that are currently being evaluated but not yet verified are diesel particulate filters (DPFs) with low sulfur fuel. In some cases such as for two-stroke engines and engines with low exhaust temperatures there may be back pressure and loading problems. However, this technology should be compatible with construction equipment having four-stroke engines and those capable of handling the increased back pressure. In addition, DOCs combined with a crankcase vapor recovery system called Spiricle is on the horizon for off-road retrofits. This system is designed to reduce HC, CO, and PM. Also the Cleaire system which consists of a lean NOx catalyst and DPF and has been verified with CARB for on-road engines may also have the potential for off-road applications. Since this control measure is not scheduled for adoption until 2005 and implemented in the 2007-2010 timeframe, the District is confident that there is sufficient lead time for more retrofit systems to undergo verification by CARB for off-road equipment. In addition, the control measure's designation (i.e., FSS) does stand for Further Study Strategy.

Response 14-5

The District staff does not consider the control measure to be speculative. The proposed method of control (e.g., mowing instead of disking) is readily available and feasible. Control measure CTY-14 is a contingency measure that would be implemented in the event that the District fails to either achieve interim emission reduction goals or maintain adequate progress towards attainment of ambient air quality standards. Control measure CTY-14 has been carried over from previous plans as a contingency measure and the District staff has no basis for changing its designation. An evaluation of the affected properties, options, and cost-effectiveness will be conducted prior to implementation.

Response 14-6

The risk of a conformity lapse is real and should not be minimized. Implementation of the assumptions, listed in Appendix IV-C and referenced in the comment, is necessary to keep the region in conformity. A formal substitution process--for individual TCM projects that are found inadequate or are otherwise deemed unimplementable, as well as for the periodic replacement of TCM projects each time the biennial RTIP is updated--will be established in Appendix IV-C of the 2003 AQMP.

Response 14-7

All comments have been noted and the text in this section has been amended to provide clarification. As previously stated, mobile source emission estimates are based on a regional land use forecast developed by SCAG. This forecast consists of allocating regional population growth and employment growth total among zones, based on existing factors that can shape development. Land use policies and programs do impact the allocation of population and employment growth and are reflected in the regional land use forecast, and therefore in the mobile source emission estimates.

Response 14-8

The list has been substantially revised to include the TCM projects in the 2002 RTIP in collaboration with the County Transportation Commissions.

Response 14-9

The District staff agrees that the AQMP has to be practical and achievable and should be designed in a manner that maximizes the air quality benefits while minimizing economic job impacts. The district staff is looking forward to working with you and others interested stakeholders to achieve that goal.

The impacts on housing, jobs, wages, and other socioeconomic issues by the draft 2003 AQMP as well as CEQA alternatives were carefully analyzed in the Socioeconomic Report of the 2003 AQMP which was released in May 2003.

COMMENT LETTER NO. 15
RADTECH INTERNATIONAL NORTH AMERICA

Response 15-1

The section referenced by the commentator is a discussion of radiation-curing technologies in general and includes the specific examples of the commonly used forms of radiation – ultraviolet light and electron beam. Thus, District staff believes the existing heading is appropriate and should remain. Since the first sentence of the section is intended to describe the physical characteristics of radiation-curing products, rather than their VOC emission potential, it will not be changed. However, a sentence will be added to the paragraph that states that the radiation-curing process typically results in significantly lower VOC emissions as compared to solvent-based products. Additionally, based on the information in the comment letter, the last sentence of the section will be replaced with the following: "However, these technologies have registered exceptional progress toward alleviating previous limitations for field applications. UV applications are also making headway in automotive field repair, and efforts are underway for applying this technology for aerospace and military field uses."

Response 15-2

Due to the numerous variations in printing and coating operations, the District typically does not promote a specific emission reduction technology for these sources, but rather sets emission limitations such that regulated sources can choose between various compliance options. Nevertheless, as discussed by the commentator, the District has recognized the emission reduction potential of UV/EB technology through a Rule 219 permit exemption and BACT/LAER designations.

COMMENT LETTER NO. 16
SHERMAN WILLIAMS COMPANY

Response 16-1

In general, aerosol products are low solids/high VOC as compared to non-aerosol products. Thus, in general, aerosol products are expected to have greater emissions per applied product than non-aerosols.

In regard to reactivity, it is acknowledged that the reactivity of VOCs does have a role in ozone formation and that both aerosol and non-aerosol products contain VOCs with differing reactivity. It is also acknowledged, however, that for products with comparable reactivity, the use of the aerosol product would generally result in greater emissions since their use would typically result in greater mass emissions than that of a non-aerosol product.

The comment references the control strategy or specific control measure from the State and Federal Element of the draft Plan. The overall control strategy and control measures specified in the State and Federal Element of the draft Plan have been developed by CARB. CARB staff is more technically qualified to analyze the feasibility and cost of these measures and provide responses to their control measures and the District staff will be forwarding all comments on the State and Federal Element of the draft Plan to CARB for their consideration. CARB staff will be evaluating these comments according to their own public review process prior to their Board adoption hearing. The District has prepared an Environmental Impact Report evaluating environmental impacts of all the draft Plan control measures.

COMMENT LETTER NO. 17
SAN JOAQUIN VALLEY APCD

Response 17-1

The control options for the reduction of VOC and ammonia emissions from livestock facilities as described in WST-01 currently include composting, anaerobic digesters and increased out-of-Basin disposal. These control options are currently being researched by the District staff. Due to the development of composting and anaerobic digester facilities in the Basin combined with further relocations of dairies out of the Basin, the District staff believes that the emissions impact of manure sent to the San Joaquin Valley will not be significant. Basin manure is currently used to fertilize crops in the San Joaquin Valley (about 15% of Basin manure is currently shipped out of the Basin). The District staff would evaluate the effect of any rules adopted by SJVAPCD during implementation of this control measure.

A portion of the Control Measure WST-02 was adopted in January 2003 as Rule 1133.2 - Emission Reductions from Co-Composting Operations. This rule establishes emission reduction requirements for existing and new co-composting operations which can be achieved through a combination of composting and control methods and is not expected to result in shipping additional waste out of the Basin. The second phase of the control measure will focus on greenwaste and foodwaste composting which is expected to be implemented by establishing requirements based on best management practices.

COMMENT LETTER NO. 18
CALIFORNIA ASSOCIATION OF PORT AUTHORITIES (CAPA)

Response 18-1

Control Measure FSS-06 proposes to establish an emission fee program for all port-related mobile sources such as marine vessels, trains, trucks, and off-road equipment. The emissions inventories for these sources incorporated into the 2003 AQMP reflect the latest available inventories. For ships, the 1999 inventory study provides the most recent emissions data for various ship categories such as ocean-going vessels, tugboats, harbor and fishing vessels, and Navy/Coast Guard vessels for 1997 as well as for future years (i.e., 2010 and 2020) based on available growth forecasts. Although the port-specific inventories for other sources such as trucks, trains and off-road equipment are not specifically identified in the 2003 AQMP, they are included in the overall inventories for these sources. During the rulemaking process, and in establishing an appropriate fee schedule, the emission level for each of the affected sources will be considered and further refined, if necessary. Staff looks forward to work with CAPA and other stakeholders to reflect the latest industry trends in the emissions inventory during the rule development process.

Response 18-2

The emissions benefits and costs associated with the implementation of this measure will depend on the amount of fees collected and specific air quality projects implemented. Because of the magnitude and concentration of emissions in the port area, the emission fees collected are anticipated to be used to subsidize projects to benefit the air quality in the port and surrounding areas and also address environmental justice concerns.

Response 18-3

The implementation of the port-related emission fee program is proposed as an alternative to developing more stringent and needed federal or state regulations. In the event that U.S. EPA or California Air Resources Board do not adopt aggressive standards for both new and in-use on-road and off-road mobile sources, the District will have to exercise its existing authority or seek additional legal authority to develop feasible and cost-effective regulations for these sources. The sheer magnitude of emissions reductions needed for demonstrating attainment with the federal ozone air quality standard necessitates the collaborative effort among all regulatory agencies and stakeholders to achieve the necessary reductions. If adoption of this measure is necessary, the rule will be submitted to U.S. EPA for approval as an amendment to the SIP. Once approved, the rule becomes federally enforceable.

COMMENT LETTER NO. 19
BARBARA WAYCOTT

Response 19-1

The historical context of the region's air pollution and air quality planning, as understood by the commentator, is noted.

Response 19-2

The District, by law, is required to achieve and maintain healthful air quality for residents within its jurisdiction. This is accomplished through a comprehensive program of planning, regulation, compliance assistance, enforcement, monitoring, technology advancement, and public education. To accomplish these efforts, California Health and Safety Code Section 40510 provides authority for the District to adopt a fee schedule for the issuance of permits to cover the cost of evaluation, planning, inspection, and monitoring related to that activity and any fee increases must be tied to the consumer price index. The Health and Safety Code also provides authority for the District to collect other relevant fees, such as fees for emission control plans and areawide or indirect sources, as well as a fee surcharge based on emissions.

Since the District has jurisdiction mainly over stationary emission sources, a significant part of District's revenue comes from fees paid by these sources. However, since motor vehicles account for more than half of this region's pollution problem, a surcharge is included to vehicle registration fees to help fund air pollution control efforts. This surcharge consists of a $4 per vehicle state fee and an additional $1 per vehicle districtwide fee. The $1 fee and 30% of the $4 fee from vehicles registered in our four counties goes to the District to be used for mobile source programs such as those promoting ridesharing and developing clean fuels and mobile source technologies. Forty percent of the $4 fee goes directly to cities for air quality improvements involving mobile sources. The remainder is distributed through an independent panel as grants for programs intended to reduce vehicle emissions.

Response 19-3

The District is the air pollution control agency for the four-county region including Orange County and parts of Los Angeles, Riverside and San Bernardino counties. This area of 12,000 square miles is home to more than 14 million people--about half the population of the State of California. Though faced with this extremely large geographic jurisdiction and population, the District strives to provide robust public outreach programs designed to educate and inform all stakeholders of current air quality, existing and proposed rules regulations and programs, other relevant information, and means of participating in air quality planning. These public outreach efforts include presentations made throughout the region both during and after working hours, attendance at town hall meetings and other local government meetings and public hearings, providing speakers

on various topics to civic or business groups, distributing education materials to schools and consumers, conducting compliance classes for regulated businesses, publishing a monthly newsletter, maintaining a comprehensive, interactive website, as well as a myriad of other public advisory programs. District's public outreach is intended to facilitate the involvement of all stakeholders, including the general public, in the region's clean air effort.

Response 19-4

Staff agrees with the commenter that mobile sources are the largest contributors to smog in our region. However, staff also agrees with the commenter that CARB can be more aggressive in reducing emissions from mobile sources. Further, as implied by the commentator, the cause of increased development (and thus number of vehicles and vehicles miles traveled) is not due to any actions (or inactions) of CARB or the air districts, but is the function of population growth and local land use decisions. Progressively tighter emission standards, coupled with fuel specifications, have put California in the forefront of mobile source emissions control. Because of CARB's mobile source regulations, the new vehicle models are now 99% cleaner compared to the vehicles manufactured 20 years ago.

Over the next decade, CARB expects to see even greater advances through the development, commercialization, and use of zero- and near-zero emission technologies as well as further development of clean and alternative fuels. These emerging technologies hold promise for several reasons: tailpipe, evaporative and fuel marketing emissions eventually could be eliminated, emission control equipment deterioration or failure will be a thing of the past, toxic and greenhouse gas emissions will be substantially reduced, and emissions associated with the traditional fuels infrastructure will be significantly reduced.

CARB's strategy for achieving additional emissions reductions from the mobile source emissions inventory can be grouped into five approaches: (a) set technology-forcing new engine standards; (b) reduce emissions from the in-use fleet; (c) require clean fuels, support alternative fuels, and reduce petroleum dependency; (d) work with U.S. EPA to reduce emissions from federal and state sources; and (e) pursue long-term advanced technologies measures. This strategy is set forth in the State and Federal Element of the draft 2003 AQMP (Appendix IV-B).

In regard to hybrid vehicle technology, California is a leader in the development and use of alternative fuels and advanced vehicle technologies. To continue this leadership, it is acknowledged that state government should operate its own fleet of passenger cars and light-duty trucks using the most efficient fuels possible in vehicles with the most advanced technologies. To this end, Senate Bill 1170 (Sher, Chapter 912, Statutes 2001) directed three agencies to examine strategies to reduce petroleum consumption and introduce cleaner vehicles in the state fleet. As a result of SB 1170 and other state programs, government fleets are continually moving to fuel efficient and alternative fueled vehicles, including hybrids.

To complement CARB's efforts, the District has adopted a number of rules regulating mobile source emissions consistent with its limited authority. These rules require a transition of public (and some private) fleets to low emission or alternative fueled vehicles, reduce mobile source emissions generated from employee commute trips, and provide incentives to replace existing vehicles with low emission or alternative fueled vehicles. Additionally, the District's control strategy in the draft 2003 AQMP includes three new control measures that would expand the District's regulation of mobile source emissions. These control measures target federal mobile sources (e.g., planes, trains, and ships), on-road and off-road mobile sources operating at, and traveling to and from the regional port facilities, and off-road mobile vehicles and equipment in general.

Furthermore, since its inception in 1988, the District's Technology Advancement Office (TAO) has co-funded more than 250 projects involving a wide array of low-emission technologies and clean-fuel applications. TAO co-sponsors such projects with private companies, research institutes, other government agencies and universities and historically has leveraged $4 in co-funding for every $1 provided by the District. Co-funded projects have included emission reduction demonstrations for both mobile and stationary sources of air pollution, although recent legislation now limits the use of funds primarily to mobile sources. Mobile source projects have targeted technological advances in automobiles, urban transit buses, medium- and heavy-duty trucks, and "off-road" equipment, including lawnmowers. The District has funded projects to implement clean fuels -- such as methanol, natural gas, propane and hydrogen -- and the infrastructure needed for them. Specific research has focused on engine design, electric powertrains and vehicle energy systems such as fuel cells and batteries.

The District's TAO program continually seeks lower emitting technologies with potential for commercialization in the region. Overall program direction is based on technology needs identified in the District's AQMP; state and federal rules and regulations; annual research and development coordination meetings with CARB; periodic meetings with various technology, clean fuel, and industry working groups and annual meetings with the Technology Advancement Advisory Group.

Projects are selected for co-funding from competitive solicitations, cooperative agency agreements and unsolicited proposals. Criteria considered in project selection include emission reduction potential, technological innovation, potential to reduce costs of compliance and improve cost effectiveness, contractor experience and capabilities, overall environmental impact or benefit, commercialization and business development potential and level of cost sharing.

Some technologies developed and demonstrated in the District-supported projects are now being commercialized in Southern California, which is the true measure of success for the TAO program.

Response 19-5

During the development of the draft 2003 AQMP, a number of people have suggested to the District and CARB that the agencies pursue labeling programs for consumer products, vehicles, etc. modeled after food labeling programs. Staff agrees that labeling products with emissions information would provide consumers the opportunity to purchase less polluting products. Considering vehicles and consumer products both represent large portions of the emissions inventory, labeling and educations programs may facilitate the penetration of low emission vehicles and consumer products into the marketplace and ultimately increase their use by consumers. The District is currently working to develop such a program.

Response 19-6

The commenter is referred to response to comment 19-3.

COMMENT LETTER NO. 20
TED JOHNSON PROPANE

Response 20-1

The comment references the control strategy or specific control measure from the State and Federal Element of the draft Plan. The overall control strategy and control measures specified in the State and Federal Element of the draft Plan have been developed by CARB. CARB staff is more technically qualified to analyze the feasibility and cost of these measures and provide responses to their control measures and the District staff will be forwarding all comments on the State and Federal Element of the draft Plan to CARB for their consideration. CARB staff will be evaluating these comments according to their own public review process prior to their Board adoption hearing. The District has prepared an Environmental Impact Report evaluating environmental impacts of all the draft Plan control measures.

COMMENT LETTER NO. 21
COUNTY OF ORANGE AS OWNER AND OPERATOR OF JOHN WAYNE AIRPORT

Response 21-1

The 1997 aircraft emissions inventory in the 2003 AQMP is based on the 1999 inventory study by Energy Environment Analysis for the District. The study relied on the 1997 activity data from airport operations of the FAA as well as the U.S. EPA's Emission Dispersion Modeling System (EDMS) model. For future growth, SCAG's projected inventories for commercial airports and growth factors for general aviation airports were utilized. Some of the airport improvements are already considered in the inventory (e.g., airport-specific taxi time). Other improvements which may have air quality benefits, are primarily implemented for operational reasons and need to be further evaluated before SIP emission reduction benefits can be claimed. Nevertheless, in designing future regulatory approaches to reduce emissions form airports, including establishing emission baselines and reduction targets, early and voluntary reductions can be taken into account to ensure fair and equitable treatments of all regulated entities in this source category.

Response 21-2

The emissions projections in the 2003 AQMP are based on demographic growth forecasts incorporated in the 2001 Regional Transportation Plan (RTP) developed by SCAG, which represents the latest available forecasts. Aircraft emissions included in the Plan are also based on the projected aircraft operations in the 2001 RTP. SCAG is currently in the process of developing the 2004 RTP which will also incorporate the impact of the events of September 11, 2001 as well as an updated forecast of the economy. These updated projections will be reflected in the next SIP revision (expected in 2006).

Response 21-3

The preliminary projections of aircraft operations, which take into account the recent economical conditions as well as the impact of September 11, 2001, indicate the overall passenger travel (i.e., millions of air passengers) in 2025 is expected to be approximately 10 to 15 percent less compared to previous estimates. Despite this anticipated trend, aircraft emissions would continue to represent a significant portion of the remaining emissions in the Basin in 2010. Considering the level of reductions needed for attainment demonstration with the federal 1-hour ozone standard in 2010, all sources need to contribute their fair share toward the attainment goal. During any rulemaking process, the latest available emissions data will be utilized.

Response 21-4

The mitigation fee program from federal sources, including aircraft, ships, trains, 49 state vehicles, and certain off-road equipment, is proposed as an alternative to urgently needed

and more stringent national regulations and to ensure a fair share reduction from these sources. Collectively, these sources contribute to about 34% of NOx emissions in the Basin. It is expected that this program will be implemented by U.S. EPA in conjunction with other federal agencies, and fees will be established for each source category based on the emission contribution level, feasibility of controls, cost, and other parameters. Fees collected will then be used by the District to implement projects to achieve equivalent emission reductions from federal or non-federal sources for SIP purposes. This program is not intended to restrict the anticipated growth by airports, but is an alternative to achieving reductions while accommodating growth in the Basin.

Response 21-5

The impact of the airports projected growth on the region's transportation systems, included in the 2001 RTP, is already reflected in the 2003 AQMP. These projections take into account the anticipated growth (or decline) in all transportation sectors (e.g., cars, trucks, aircraft, trains). Therefore, emissions forecasts in the 2003 AQMP reflect any potential benefits due to implementation of transportation projects as well as adopted regulations. With respect to the inclusion of the projected increased capacity at John Wayne Airport or other airports in the 2003 AQMP, please refer to response to comment #21-2.

Response 21-6

The cost-effectiveness of the control measures which have been assigned emission reductions have been included in Table 6-7 of Chapter 6. In addition, control measures have been ranked from low to high cost-effectiveness the same table. Table 7-3 of Chapter 7 lists the adoption and implementation schedule taking into consideration the relative cost-effectiveness of each measure as required by state law. For those measures not listed in Table 6-7, no costs were able to be determined even after making every reasonable effort to quantify the impacts. However, during the rule development process of these control measures into rules, a detailed cost analysis will be conducted to determine the cost impacts from the control strategies on the affected industries.

Response 21-7

Responses to comments on individual issues are contained in responses 21-8 through 21-16.

Response 21-8

As indicated, the District is proposing to establish a mitigation fee program for federal sources. The fee would either be imposed directly on federal sources or would be obtained through a grant from EPA, or by EPA imposing fees and collecting monies for emissions in and around the airports. We understand that John Wayne Airport has concerns on the details of how the measure may be implemented. At this point the control measure does not have the details of a rule, and much of the structure will be

determined during the rulemaking procedure. The District's goal in establishing this control measure is to achieve reductions in air pollution emissions from sources that exist due to the operation of the airport. The District has the authority to impose indirect source regulations and fees on such sources of emissions, as well as the authority to impose restrictions on nonroad sources and to establish fleet rules. We believe this authority would allow the District to impose fees to support the regulation of these sources, as well as to substitute for direct regulation of these sources. Language has been added to the control measure that establishes the design criteria that will be used in establishing the fee and in selecting the emission reduction projects that will funded with the mitigation fee. The program design and implementation details will be developed during the rule development stage, where a thorough and collaborative effort will be initiated involving the District staff, regulated entities, and other interested stakeholders.

Response 21-9

The commenter is referred to the response to comment #3-1 and 3-2

Response 21-10

The commenter is referred to the response to comment #21-2 and 21-3

Response 21-11

The District staff agrees that the air carriers and aircraft manufacturers should be responsible for the vast proportion of emission reductions needed from aircraft operations. The draft 2003 AQMP CARB's control measure Airport-1 targets the aircraft operators. The proposed strategies in Airport-1 include lower-emission aircraft engines, retrofits of existing engines, reformulated jet fuel, and the application of commercial aircraft engine standards to non-tactical military aircraft. The District control measure FSS-05 also targets federal sources such as aircraft. Since aircraft are operated by commercial air carriers, this measure would also not necessarily require the airport operators to pay into the mitigation fee.

Response 21-12

The actual specific design on how a mitigation fee for aircraft would be structured is beyond the scope of the control measure write-up. The details of such a program would be thoroughly evaluated and analyzed during the rule development of the control measure. However, the measure will be revised to include criteria for establishing fees and selecting projects.

Response 21-13

At this time, it is unclear how the mitigation fee program for aircraft will be administered. The impacts of such as program will be evaluated during the rule development of the control measure. The District staff believes that while establishing a

fee program for general aviation aircraft used by private individuals presents unique administrative issues, for planning purposes we would include all types of general aviation aircraft for further evaluation.

Response 21-14

The District staff agrees that collected monies from mitigation fee program should be used in regions whose air quality is mostly impacted by the sources, such as those from ships in the communities surrounding regional port facilities. However, the distribution of collected fees should not be restricted to those areas exclusively, especially where the impacts from federal sources such as trains and aircraft are spread across the entire region.

Response 21-15

No emission reduction commitment is proposed for control measure FSS-05. However, if the commitment for federal sources from the 1997/1999 SIP is to be maintained, then there would need to be a 38% reduction from the 2010 baseline. This does not mean that aircraft operators would be responsible for a 38% reduction, rather a 38% reduction would be needed from all the federal sources, including aircraft. In any event, FSS-05 calls for a mitigation fee program for federal sources to provide monies to fund emission reduction projects for both federal and non-federal sources to achieve equivalent emission reductions. Although, the airline industry would not necessarily be called upon to reduce any emissions they would be responsible for paying the mitigation fee. However, in lieu of paying the fees, the federal sources may opt to implement a program to achieve their fair share reductions.

Response 21-16

Market-based emission reduction programs are contained in control measure FLX-01. As currently proposed, FLX-01 will promote the expansion of the District's Pilot Credit Generation Programs under Regulation XVI. The idea of developing a market-based program for airline operations is an interesting concept which may be explored at a future date. All the issues raised by the commentor would have to be addressed if such a program was ever considered, but at this time, the District is not considering such a program.

The District staff agrees that additional pressure should be applied to the federal government to fund research into cleaner jet aircraft propulsion systems and airframe designs, but we believe that the funding should come from both the federal government and the private sector.

Response 21-17

The comment references the control strategy or specific control measure from the State and Federal Element of the draft Plan. The overall control strategy and control measures specified in the State and Federal Element of the draft Plan have been developed by CARB. CARB staff is more technically qualified to analyze the feasibility and cost of these measures and provide responses to their control measures and the District staff will be forwarding all comments on the State and Federal Element of the draft Plan to CARB for their consideration. CARB staff will be evaluating these comments according to their own public review process prior to their Board adoption hearing. The District has prepared an Environmental Impact Report evaluating environmental impacts of all the draft Plan control measures.

COMMENT LETTER NO. 22
CALIFORNIA PORTLAND CEMENT

Response 22-1

The commenter is correct. The emissions inventory for cement manufacturing plants is included in the emissions summary table for control measure BCM-08 which is based on the annual emissions reports submitted by the facilities. The control measure's write-up will be modified to reflect this. However as part of implementation of this control measure, the District staff will perform a more detailed evaluation of the emissions from cement plant manufacturing operations.

Response 22-2

Also, since preliminary modeling analysis indicates that PM10 reductions in local areas with high PM10 readings will significantly impact PM10 attainment in these areas, localized controls would also be considered. The District staff has included cement plant operations in Control Measure BCM-08 because of the need to evaluate the potential of further controls of particulate emissions. Specifically, the District staff examined the possibility of reducing emissions from cement plant operations during modeling for the draft 2003 AQMP and found out that reductions in emissions from these plants resulted in significant reductions in levels of PM10 at a nearby monitoring station. The reduction target mentioned in the control measure write-up is a target based on the modeling results and its feasibility will be further evaluated during the rule development process. The estimated emission inventory from these operations will be evaluated during Step I of the proposed control measure to further refine and update their emissions inventory (i.e., based on more accurate emission factors and activity data). The estimated emission reductions from aggregate operations and cement manufacturing plants will be dependent on the control strategies selected. Based on the current information, a reduction target of 0.7 tons per day of PM10 will result in remaining PM10 emissions from these sources to be 1.0 tons per day by 2010. However, this emission target will be further evaluated for feasibility and refined during the rule making process.

Response 22-3

We understand that the commenter considers their operations to be fully controlled, but District staff feels that further evaluation is necessary given the findings from our modeling analysis. The District staff has recently visited your facility to investigate your concerns and has requested additional emission data to further refine the emissions inventory and evaluate emission reduction controls. As with any control measure, a detailed evaluation of the possible control methods will be conducted when the measure moves into its initial phase of consideration. The commenter is also referred to the response to comment #22-2.

COMMENT LETTER NO. 23
MUTUAL PROPANE

Response 23-1

The comment references the control strategy or specific control measure from the State and Federal Element of the draft Plan. The overall control strategy and control measures specified in the State and Federal Element of the draft Plan have been developed by CARB. CARB staff is more technically qualified to analyze the feasibility and cost of these measures and provide responses to their control measures and the District staff will be forwarding all comments on the State and Federal Element of the draft Plan to CARB for their consideration. CARB staff will be evaluating these comments according to their own public review process prior to their Board adoption hearing. The District has prepared an Environmental Impact Report evaluating environmental impacts of all the draft Plan control measures.

COMMENT LETTER NO. 24
DUNCAN MCKEE

Response 24-1

The District staff disagrees with this comment; the air in Southern California continues to get cleaner, with recent years registering as the cleanest in decades. The per-capita emissions have been brought down substantially in the Basin through 50 years of implementing pollution controls. However, it is true that the ever-increasing population of the Basin as well as the growth in commercial, industrial, and mobile sources (that grow proportionally to population) would impact the effectiveness of the regulatory program already in place. For this reason, the revisions to the regional air quality management plan are developed regularly (@ 3-yr intervals) to address and update the air quality improvements necessary for demonstrating attainment with the federal and state ambient air quality standards. The 2003 AQMP is designed to satisfy the planning requirements of the California Clean Air Act and to develop transportation emission budgets using the latest available data and planning assumptions. The Plan contains a number of short-term measures and long-term strategies aimed at reducing emissions from almost all source categories.

Response 24-2

The AQMP is a regional planning document and is not designed to focus on any individual facility. Nonetheless, your letter has been forwarded to the District's Engineering and Compliance Division. The District has designated Hacienda Heights/La Puente/Avocado Heights as a suitable candidate for the pilot Neighborhood Environmental Justice Council. The purpose of this Council is to address the community's environmental concerns including the issues raised regarding Quemetco. Many of the concerns identified in your comment letter are being addressed in this public forum which includes representation from the community, industry, and District staff.

Response 24-3

Your comment has been noted. Thank you.

Response 24-4

Please see response to comment 24-1.

COMMENT LETTER NO. 25
AMERICAN TRUCKING ASSOCIATION AND CALIFORNIA TRUCKING ASSOCIATION

Response 25-1

The comment references the control strategy or specific control measure from the State and Federal Element of the draft Plan. The overall control strategy and control measures specified in the State and Federal Element of the draft Plan have been developed by CARB. CARB staff is more technically qualified to analyze the feasibility and cost of these measures and provide responses to their control measures and the District staff will be forwarding all comments on the State and Federal Element of the draft Plan to CARB for their consideration. CARB staff will be evaluating these comments according to their own public review process prior to their Board adoption hearing. The District has prepared an Environmental Impact Report evaluating environmental impacts of all the draft Plan control measures.

Response 25-2

The intent of the District's control Measure FFS-07 is to reduce emissions from mobile sources. The Clean Air Act authorizes the regulation of emissions from mobile sources and is not in conflict with the Federal Aviation Administration Authorization Act of 1994, 49 U.S.C. § 14501 et seq. (as it pertains to motor carriers). Although the regulation of emissions may have an indirect effect on the prices that carriers charge, that effect is too tenuous, remote or peripheral to be preempted by the FAA.

Response 25-3

Control Measure MSC-05 – Truck Stop Electrification is designed to reduce emissions from idling tractor trailers and refrigerated trailers at truck stops. It would require that truck stop operators install electrical systems that can provide heating, ventilation, and air conditioning to truck cabs as well as provide electricity to run appliances and other on-board systems on the tractors. It would also require the installation of external power sources of electricity in order to provide power to refrigerated trailer units. As a point of clarification, the control measure would not require the mandatory use of these systems by truck operators. This concept is consistent with the voluntary use of these systems by truck operators under District Rule 1634 – Pilot Credit Generation Program for Truck Stops. However, the District staff anticipates that truck operators would find the use of these systems cost-effective when compared with the consumption of diesel fuel and extra wear and tear on their engines as a result of the increased idling times associated with running their heaters, air conditioning, and appliances.

Response 25-4

The potential effect of the 2003 AQMP on both small and large business is considered under the district's Socioeconomic Report to the 2003 AQMP. Control measures that are ultimately considered for rule adoption undergo a comprehensive evaluation of costs and impacts on business.

COMMENT LETTER NO. 26
PORT OF LONG BEACH

Response 26-1

The District staff disagrees that the defined short-term control measures lack sufficient detail. The District's defined mobile source control measures describe several strategies which provide a basis for controlling mobile sources within the Basin. Specific implementation issues will be thoroughly evaluated during the rule development phase of each measure. For additional discussion please refer to the response to comment #3-1.

Response 26-2

Control Measure FSS-05 proposes a mitigation fee program for federal sources which will be paid for by U.S. EPA or federal sources and administered by the District. The monies collected will be used by the District to implement air quality projects to achieve fair share emission reductions from these sources. This program would be developed as an alternative to urgently needed stringent national rules so as to achieve a fair-share reduction commitment by federal sources to address unique local needs. The District staff plans to add language to the control measure that clarifies how the measure will be implemented and including what criteria will used to establish the fees and fund emission reduction projects paid for by the fees collected. A complete description of the control measure is provided in Appendix IV-A.

The commenter is also referred to the response for comment #13-1.

Response 26-3

In-use off-road vehicles represent a significant source of emissions in the Basin and though the District staff agrees with the commenter that it would be preferable that retrofit requirements on existing in-use fleets be applied statewide, due to the uncertainty in state and federal commitments to consider such regulations, and the magnitude of the air quality problem currently facing the Basin, the District is proposing this control measure to achieve additional reductions where feasible. The impacts from implementing retrofit requirements on captive off-road fleets will be thoroughly evaluated at the time the control measure undergoes rule development.

Response 26-4

Although there are restrictions in state and federal law regarding the district's authority to directly regulate emissions from nonroad sources through establishing emissions standards, the District has the authority to adopt in use restrictions on these sources. The District can require a permit, impose a limitation on the number of hours a source can operate and cap emissions, among other things. Therefore, it would be reasonable for the District to establish a fee program to support the costs of in-use programs or to

implement alternatives to those measures. Likewise, the District may adopt fleet rules and impose indirect source regulations and fees, and therefore may establish fee programs to support or substitute for those programs. See e.g. Clean Air Act Sections 110 and 209 (42 U.S.C. §7410 & 7543), 59 Fed. Reg. 31306 (1994), California Health and Safety Code Sections 40440, 40447.5, 40716 and 40522.5.

Response 26-5

The comment references the control strategy or specific control measure from the State and Federal Element of the draft Plan. The overall control strategy and control measures specified in the State and Federal Element of the draft Plan have been developed by CARB. CARB staff is more technically qualified to analyze the feasibility and cost of these measures and provide responses to their control measures and the District staff will be forwarding all comments on the State and Federal Element of the draft Plan to CARB for their consideration. CARB staff will be evaluating these comments according to their own public review process prior to their Board adoption hearing. The District has prepared an Environmental Impact Report evaluating environmental impacts of all the draft Plan control measures.

Response 26-6

The District staff is proposing to keep the three mobile source control measure in the Plan due to the significant size of the black box reductions needed and short timeframe until the Basin demonstrates attainment with federal standards. We look forward to working with the Ports and other interested stakeholders in developing these and additional control strategies as we implement the Plan in the coming years.

COMMENT LETTER NO. 26-A
PORT OF LONG BEACH

Response 26-A-1

The comment references the control strategy or specific control measure from the State and Federal Element of the draft Plan. The overall control strategy and control measures specified in the State and Federal Element of the draft Plan have been developed by CARB. CARB staff is more technically qualified to analyze the feasibility and cost of these measures and provide responses to their control measures and the District staff will be forwarding all comments on the State and Federal Element of the draft Plan to CARB for their consideration. CARB staff will be evaluating these comments according to their own public review process prior to their Board adoption hearing. The District has prepared an Environmental Impact Report evaluating environmental impacts of all the draft Plan control measures.

COMMENT LETTER NO. 27
NATIONAL PROPANE GAS ASSOCIATION

Response 27-1

The comment references the control strategy or specific control measure from the State and Federal Element of the draft Plan. The overall control strategy and control measures specified in the State and Federal Element of the draft Plan have been developed by CARB. CARB staff is more technically qualified to analyze the feasibility and cost of these measures and provide responses to their control measures and the District staff will be forwarding all comments on the State and Federal Element of the draft Plan to CARB for their consideration. CARB staff will be evaluating these comments according to their own public review process prior to their Board adoption hearing. The District has prepared an Environmental Impact Report evaluating environmental impacts of all the draft Plan control measures.

COMMENT LETTER NO. 28
WESTERN PROPANE GAS ASSOCIATION (WEINER)

Response 28-1

The comment references the control strategy or specific control measure from the State and Federal Element of the draft Plan. The overall control strategy and control measures specified in the State and Federal Element of the draft Plan have been developed by CARB. CARB staff is more technically qualified to analyze the feasibility and cost of these measures and provide responses to their control measures and the District staff will be forwarding all comments on the State and Federal Element of the draft Plan to CARB for their consideration. CARB staff will be evaluating these comments according to their own public review process prior to their Board adoption hearing. The District has prepared an Environmental Impact Report evaluating environmental impacts of all the draft Plan control measures.

In response to the comment on evaluating the environmental effects of OFF-RD LSI-3, the District has prepared the appropriate CEQA analysis for the Plan and the commenter is referred to the Draft Environmental Impact Report for 2003 AQMP released on Apri 8, 2003.

In response to the comment on the Health and Safety Code compelling the District to evaluate the effectiveness of OFF RD LSI-3, the District disagrees with the commenter's interpretation of the Health and Safety requirements. None of the statutes cited requires the District to analyze the effectiveness or technical feasibility of CARB measures. The legislature specifically divided the agencies' authority, purposely designing a system where each agency would develop expertise in different areas. Health and Safety Code Section 39002. CARB is the agency with the responsibility for preparation of the state implementation plan (SIP). Health and Safety Code Section 39602. CARB, as the oversight agency is required to review the adequacy of the District's and SCAG's measures. For example, §40465, while referring to SCAG specifically, states, "Each agency shall prepare and submit all necessary documentation…" which implies that CARB is responsible for assessing its own measures. Additionally, the process established for the plan would support that the legislature contemplated that CARB measures could be added to the plan after the District adopted its measures, thus precluding such an analysis by the District. Health and Safety Code Section 40460. While it is appropriate for CARB to "consult" with the District and SCAG, thus allowing the District input, nothing in the statute requires the District to do so. The plan becomes the air quality management plan "upon adoption by the state board" and the SIP upon federal approval. Health and Safety Code Section 40460. While the legislature has, as the commenter points out, expanded the District's authority beyond simply stationary source control measures, the legislature has not gone so far as to have the District become the reviewing authority for CARB.

COMMENT LETTER NO. 29
NATIONAL AEROSOL ASSOCIATION

Response 29-1

The commentator is referred to response to comment 16-1.

COMMENT LETTER NO. 30
AIR IMPROVEMENT RESOURCES, INC.

Response 30-1

As stated in Chapter 5 of the Draft 2003 AQMP and in Appendix V, the primary strategy for attaining both the ozone and PM10 standards was to first, demonstrate attainment of the PM10 standards in 2006, and then build upon that attainment by further reducing emissions to meet the ozone standard. The majority of reductions proposed to attain the PM10 standards rely on existing measures that will reduce VOC, NOx and SOx emissions. Reductions of directly emitted primary particulate emissions are limited. The net reduction in particulate emissions between 1995 and 2006 without additional controls is approximately 27 tons per day. This is highlighted by an approximate 4 ton per day reduction in toxic diesel particulate. With proposed controls, the inventory will be reduced by one additional ton per day of total particulate emissions. For 2006, the focus of the strategy was to obtain the maximum identifiable particulate emissions reductions, regardless of component toxicity.

In the CEQA document, several alternative PM10 and ozone simulations are presented. One of the simulations addresses lowering the toxicity of several emissions components.

Response 30-2

As part of the air quality simulation development process, UAM, CALGRID and CAMx were run for 2010 base year and multiple controlled cases to provide the simulations needed to generate ozone isopleths as a function of NOX and VOC emissions. The reductions from the base case were typically across the board emissions reductions. The output of the simulations was used to develop isopleths and was compared to the proposed control strategies. The results of the analysis were discussed at several AQMP advisory group meetings and were provided to the Districts expert panel for review.

The isopleth analysis indicated that the isopleths for UAM and CALGRID simulations were similar. The CAMx simulations significantly under predicted the peak ozone concentration for the base year. The UAM curves suggested that future year ozone was more sensitive to VOC reductions than for NOx. The CALGRID simulations also under predicted the peak ozone in the base year. When evaluated, the CALGRID isopleth also suggested that VOC reductions resulted in improved ozone and that lower predicted ozone concentrations was less sensitive to NOx reductions. The difference in the isopleths reflect the under prediction of the basin peak in the base year simulation. As a consequence, the net reduction of both VOC and NOx varied between model simulations. In general, the UAM simulation stated the lower carrying capacity.

The District and CARB modeling staffs attempted to include a weekend episode as part of the analysis however, the simulations failed to meet performance guidelines. As part of the sensitivity analyses presented in Appendix V, several projected weekend emissions

scenarios were run to simulate the impact to ozone formation using the August 1997 episodes meteorology.

Response 30-3

As stated in the response to question 30-1, the net amount of primary particulate reductions identified for the 2006 PM10 demonstration were limited and the net improvement in air quality resulted from proposed reductions in VOC and NOx. As a consequence, the minimum required emission reductions needed to attain the PM10 standard served as a starting point for additional emissions reductions required to attain the ozone standard.

Response 30-4

The UAMAERO-LT model was used for the PM10 attainment demonstration. The UAMAERO-LT model was developed from the UAMAERO model which used CB-IV chemistry and the linearized aerosol chemical package. Several modifications were made to the UAMAERO model to provide the capacity for long term simulations and to partition the particulate prediction for PM2.5. Chapter-2 of Appendix V provides an extended discussion of the chemical mechanisms and the modifications made to the software packages in the development of the UAMAERO-LT model.

Simulations using the chemical mechanism were conducted varying the amounts of VOC, NOX and ammonium emissions. As describe in the question, there were emissions combinations where a NOx reduction dis-benefits were identified.

Response 30-5

In the Basin, ammonium nitrate has been a major constituent of the PM10 and PM2.5 aerosol composition. While primary PM10 can amount up to 40 percent of the total mass measured sulfate, organic carbon and elemental carbon concentrations are lower than the nitrate component. Future base year simulations (2006 and 2010) of PM2.5 indicate that ammonium and nitrate will constitute the major portion of the particulate mass. As a result, the need exists to reduce nitrate. Sulfate contributions to PM2.5 are projected to be less than 10 percent and elemental carbon projections are expected to be less than sulfate as cleaner diesel become available. Organic carbon will remain approximately 15 percent of the total mass. Regardless, the 2010 PM2.5 mass is estimated to be above 25 μg/m3 in most areas of the Basin and as a consequence reductions to all constituents are needed to meet the standard.

Response 30-6

NOx is the primary building block of ozone. Reductions of NOx will reduce ozone contingent upon the ambient VOC/NOx ratio. There exist scenarios where increasing NOx while holding VOC constant will cause ozone concentrations to rise. However, overall reductions in NOx will eventually lead to lower the potential for ozone formation,

particularly when reductions are evaluated for optimal corresponding VOC reduction strategies. Lowering NOx emissions will in-turn reduce the potential for the formation of Nitric Acid.

As a result, the current emission reduction strategy is designed to lower exposure to both ozone and nitric acid. As described in the response to question 30-5, all precursor emission reductions will be needed to attain the future PM2.5 and 8-hour ozone standards.

COMMENT LETTER NO. 31
COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY

Response 31-1

Staff appreciates the comments submitted by LACSD on the draft 2003 AQMP. Following the release of the draft Plan on February 25th, three additional draft documents namely Draft Appendix V (Modeling and Attainment Demonstration), Draft EIR, and Draft Socioeconomic Report were released on April 4, April 8, and May 21 respectively and made available for comments.

Response 31-2

The new health-based ambient air quality standards for PM2.5 standards were adopted by U.S. EPA and CARB because of a number of health studies which showed strong associations between exposure to PM2.5 emissions and elevated mortality rates, respiratory symptoms, hospital visits, etc. Although the likely attainment date of 2014 is very ambitious, District along with all the stakeholders need to make every effort to adopt and implement every feasible and cost-effective control measure to attain this standard as expeditiously as possible. While staff's preliminary analysis indicates that it will be very difficult to attain those standards, it would be inappropriate to assume that they are not achievable this early in the process before the Basin had an opportunity to design an attainment strategy.

Response 31-3

The control strategy discussion in the draft 2003 AQMP includes two options for attainment demonstration: with and without reductions from federal sources. Although both options would demonstrate attainment with the federal 1-hour ozone standard, staff recommends the option which includes emission reductions from federal sources for a number of reasons: 1) considering the significant level of reductions needed for demonstrate attainment, federal sources which represent about 34% of NOx emissions, need to contribute their fair share of reductions; 2) the anticipated NOx reduction from federal sources would contribute toward expeditious attainment of the new PM2.5 standard; and 3) if these reductions are not considered in this plan, it would be extremely difficult to consider them in the next plan and expect reasonable implementation with adequate reductions by 2010.

Response 31-4

The District staff evaluated three models for demonstrating attainment with the federal 1-hour ozone standard: UAM, CALGRID, and CAMx (please refer to Appendix V). UAM was selected as the primary modeling tool due to its ability to simulate the peak ozone concentrations observed during the primary ozone episode which other models tend to underpredict. Therefore, until technical and performance issues with these models are

fully resolved, it would be inappropriate to directly compare the results of these models. If one were to correct/adjust the carrying capacity for underprediction, the results from all models would be comparable.

Staff also agrees that speciation and health risks of individual PM10 species are important parameters which could also be considered in developing regulations if such information is available. The chemical composition of PM10 and PM2.5 had been monitored for a number of years and incorporated into the regional modeling analysis. For PM10, based on the latest air quality data, control of fugitive dust which represents a significant portion of PM10 species has proven very effective in reducing PM10 emissions. For PM2.5, control of nitrates, which represent about 30% of the mass is expected to be key in designing the most effective strategy for reducing PM2.5 levels. However, control of PM2.5 precursers will also be necessary to ultimately reach attainment. Please also note that information relative to health risk of individual PM components is very limited, and that U.S. EPA in establishing the health-based PM10 and PM2.5 standards has considered the entire mass, and not just some of the components.

Response 31-5

The regional modeling tool used for the draft 2003 AQMP (i.e., UAM with CB-IV chemistry) does take into account the speciated reactivity of individual source categories. The speciation profiles are routinely updated by CARB to reflect the impact of new regulations. A preliminary analysis conducted recently by the District staff confirmed that source categories with the highest reactivities included passenger cars, light duty trucks, consumer products, and off-road equipment for which emission reductions are sought in the 2003 AQMP. Staff is committed to further evaluate and consider reactivity-based controls in future regulations and has funded, along with CARB, research efforts at U. C. Riverside to further explore reactivity-based approaches.

Response 31-6

The District and CARB use the same emissions and VOC speciation for this AQMP. As for the mobile source emissions, CARB's EMFAC2002 model can report VOC emissions as hydrocarbon, reactive organic gas and total organic gas. For modeling purpose, total organic gas emissions are used together with speciation profiles. Carbonyls are included in the motor exhaust speciation profiles.

Response 31-7

The state and federal element of the draft 2003 AQMP has been reviewed by District staff. However, CARB is the agency that decides the scope of its control measures. Because of the nature of control measures mandating new strategies and technologies, it is likely that they may have an impact on emission reduction credit programs such as those contained in Regulation XVI. As emission standards and other types of controls become more stringent over time, the opportunities for emission reduction credit

programs become more limited. However, the District will continue to seek new mechanisms for credit generation as described in control measure FLX-01.

Response 31-8

Control measure BCM-08 seeks to further reduce PM10 emissions from aggregate operations and cement manufacturing plants. As part of the rule development process, an examination of possible measures to control windblown dust from unpaved roads and process related activities will be conducted. Rule 403 – Fugitive Dust prohibits visible dust from these activities from crossing a property line. However, it is entirely possible that particulate matter which is not visible (most of which is PM10) is released into the air that does not violate Rule 403. Since aggregate operations and cement plants account for approximately 8% of the PM10 emissions inventory, it is entirely appropriate to include this control strategy as means of reducing PM10 emissions. Please also refer to the response for comment #31-4.

Response 31-9

Under the proposed Control Measure MSC-08, one of the potential control strategies considered is having each large VOC-emitting facility to submit an emission reduction plan which would outline the implementation of facility-specific feasible and cost-effective control strategies by 2010. In order to monitor the progress and compliance toward the emission reduction target, a baseline emission inventory will also be established using the facility's 1996/97 Annual Emission Report filed along with any updates provided by the facility. If actual emissions (substantiated by source test data) are less than the baseline emissions, the corresponding reductions could be credited toward facility's overall reduction target. In addition, as suggested, in order to accommodate cyclical variations in operations, provisions such as averaging or banking may also be considered during rulemaking.

Response 31-10

As part of the PR 1127 rule development process, staff is currently conducting analysis to evaluate the feasibility of additional control requirements (e.g., digesters, on-site treatment) for reducing VOC and ammonia emissions from livestock waste. Reductions attributed to water quality regulations and relocation of dairies are also being considered. The proposed rule would seek to identify additional reduction opportunities beyond the existing water quality regulations as well as the anticipated relocation of dairy farms out-of-Basin. With respect to PM10 emissions, the unpaved roads leading to farms are subject to District Rule 1186.

Response 31-11

The District staff agrees that a heavy-duty vehicle scrappage program may be a potential long-term control strategy which should be considered and will forward this comment to CARB.

Response 31-12

This comment assumes that user of "hot" gas is an industrial/commercial source that routinely adjusts the combustion device to achieve a permitted level of emissions. A substantial amount of natural gas is used by the residential sector in "dumb" combustion devices (e.g. water heaters, stoves, dryers, etc.) that are not routinely adjusted relative to emissions. The commentator is also referred to response to comment 9-1.

Response 31-13

The District's Rule 1171 – Solvent Cleaning Operations and Rule 1122 – Solvent Degreasers has been amended numerous times over the last few years based on the commercial availability of cost- effective low-VOC cleaning solvents that achieve desired performance standards. Likewise, Rule 1113 – Architectural Coatings, has been amended recently to lower the VOC limits on numerous coating categories because viable alternatives to higher-VOC coatings are commercially available. These rule amendments were based on comprehensive examination of the targeted source categories, existing compliant products, and technology on the horizon. Where there was a question as to whether products would be available by the compliance date to achieve the desired performance standards in a cost-effective manner for a particular source category, staff ensured that any future limits were conditioned on the results of methodical and detailed technology assessments. Currently, research efforts are on-going for several solvent cleaning categories to determine the viability of meeting future VOC limits established under Rule 1171. Any proposed rule development for low-VOC coatings and solvents based on 2003 AQMP control measures would necessitate thorough analyses of the availability of compliant product as well as cost-effectiveness and potential socioeconomic impacts. Such analyses would be performed with input from all stakeholders and be presented to the District Governing Board prior to their consideration of a proposed rule.

Response 31-14

The emissions inventories for mobile and area sources shown in Appendix III are made up of individual source categories collectively represented by major source categories listed in the appendix. Please be reminded that while a more detailed emissions inventory by individual federal or state source categories may reveal potential source categories for credit generation, successful credit programs are more dependent on whether the credits meet the definition of "real", "surplus", and "enforceable".

Response 31-15

Potential cross media issues associated with VOC control measures are discussed in the Draft Environmental Impact Report to the 2003 AQMP and will be addressed during rule making for individual measures.

COMMENT LETTER NO. 32
AMERIGAS

Response 32-1

The comment references the control strategy or specific control measure from the State and Federal Element of the draft Plan. The overall control strategy and control measures specified in the State and Federal Element of the draft Plan have been developed by CARB. CARB staff is more technically qualified to analyze the feasibility and cost of these measures and provide responses to their control measures and the District staff will be forwarding all comments on the State and Federal Element of the draft Plan to CARB for their consideration. CARB staff will be evaluating these comments according to their own public review process prior to their Board adoption hearing. The District has prepared an Environmental Impact Report evaluating environmental impacts of all the draft Plan control measures.

COMMENT LETTER NO. 33
GLOBE GAS CORPORATION

Response 33-1

The comment references the control strategy or specific control measure from the State and Federal Element of the draft Plan. The overall control strategy and control measures specified in the State and Federal Element of the draft Plan have been developed by CARB. CARB staff is more technically qualified to analyze the feasibility and cost of these measures and provide responses to their control measures and the District staff will be forwarding all comments on the State and Federal Element of the draft Plan to CARB for their consideration. CARB staff will be evaluating these comments according to their own public review process prior to their Board adoption hearing. The District has prepared an Environmental Impact Report evaluating environmental impacts of all the draft Plan control measures.

COMMENT LETTER NO. 34
NISSAN MOTOR CO., LTD

Response 34-1

The comment references the control strategy or specific control measure from the State and Federal Element of the draft Plan. The overall control strategy and control measures specified in the State and Federal Element of the draft Plan have been developed by CARB. CARB staff is more technically qualified to analyze the feasibility and cost of these measures and provide responses to their control measures and the District staff will be forwarding all comments on the State and Federal Element of the draft Plan to CARB for their consideration. CARB staff will be evaluating these comments according to their own public review process prior to their Board adoption hearing. The District has prepared an Environmental Impact Report evaluating environmental impacts of all the draft Plan control measures.

COMMENT LETTER NO. 35
SUBURBAN PROPANE (JONES)

Response 35-1

The comment references the control strategy or specific control measure from the State and Federal Element of the draft Plan. The overall control strategy and control measures specified in the State and Federal Element of the draft Plan have been developed by CARB. CARB staff is more technically qualified to analyze the feasibility and cost of these measures and provide responses to their control measures and the District staff will be forwarding all comments on the State and Federal Element of the draft Plan to CARB for their consideration. CARB staff will be evaluating these comments according to their own public review process prior to their Board adoption hearing. The District has prepared an Environmental Impact Report evaluating environmental impacts of all the draft Plan control measures.

COMMENT LETTER NO. 36
PUBLIC SOLAR POWER COALITION

Response 36-1

As discussed in Chapter 4 of the draft 2003 AQMP, renewable power generation technologies such as solar and wind electric power generation technologies may play a role in long-term attainment demonstration strategies. The District will evaluate the application of renewable power generation technologies through market incentive programs in order to achieve additional emission reductions. Future market incentive programs will focus on renewable power generation technologies used in residential and commercial applications. This section has been updated to include information on renewable energies.

The District's Technology Advancement Office is currently participating in a pilot solar thermal air conditioning project. The technology which is supported by this project involves the use of solar energy to provide air conditioning for commercial buildings. The project seeks to demonstrate the viability of using solar driven absorption chillers (which use heat from an array of solar collectors to produce chilled water) to air condition buildings.

Other possible strategies for increasing the penetration of renewable power generating technologies include encouraging solar and wind turbine use where applicable. Examples of possible renewable energy applications include powering electric motors used to run agricultural pumps with wind energy and utilizing solar panels in the residential and commercial sectors. The District has provided incentive money to convert diesel powered agricultural pumps to electric motors. The eastern portion of the district may have sufficient wind resources such that these electric motors could be cost-effectively driven by wind energy.

For the last few years, there have been substantial incentives available from California Public Utilities Commission and California Energy Commission to install solar panels on private residential rooftops. These incentives have been heavily utilized by the commercial sector, but those for the residential sector remain substantially unused, due to lack of awareness by the public. While LADWP is vigorously advertising the availability of their incentives, other energy providers have done less in this regard. The District can possibly promote and, depending on the availability of funds, leverage the incentives for rooftop solar panels currently available from other public agencies.

Additionally, solar power may play a role in facilitating the development and penetration of fuel cells as part of a near-zero emission hydrogen economy. To illustrate the required technology integration for a near-zero emission hydrogen economy, a demonstration project anticipated by the District is the development of an integrated hydrogen production, storage, and fuel cell power facility to be located at the Diamond Bar headquarters. Hydrogen will be produced renewably using an electrolyzer powered by an

upgraded solar array; the hydrogen will then be used for fueling internal combustion engine (ICE) vehicles and fuel cell vehicles, as well as fueling an ICE generator and PEM fuel cell for backup and premium power. The engineering, operational, and economical integration scenarios will be addressed to provide data for key decision makers.

The District expects to participate in advancing the overall efficiency and cost-effectiveness of solar technology. It is assumed that as solar power technology advances, it will replace existing power generating technologies where feasible and cost-effective.

COMMENT LETTER NO. 37
FERRELLGAS (WAKEFIELD)

Response 37-1

The comment references the control strategy or specific control measure from the State and Federal Element of the draft Plan. The overall control strategy and control measures specified in the State and Federal Element of the draft Plan have been developed by CARB. CARB staff is more technically qualified to analyze the feasibility and cost of these measures and provide responses to their control measures and the District staff will be forwarding all comments on the State and Federal Element of the draft Plan to CARB for their consideration. CARB staff will be evaluating these comments according to their own public review process prior to their Board adoption hearing. The District has prepared an Environmental Impact Report evaluating environmental impacts of all the draft Plan control measures.

COMMENT LETTER NO. 38
WESTERN PROPANE GAS ASSOCIATION (REYNOLDS)

Response 38-1

The comment references the control strategy or specific control measure from the State and Federal Element of the draft Plan. The overall control strategy and control measures specified in the State and Federal Element of the draft Plan have been developed by CARB. CARB staff is more technically qualified to analyze the feasibility and cost of these measures and provide responses to their control measures and the District staff will be forwarding all comments on the State and Federal Element of the draft Plan to CARB for their consideration. CARB staff will be evaluating these comments according to their own public review process prior to their Board adoption hearing. The District has prepared an Environmental Impact Report evaluating environmental impacts of all the draft Plan control measures.

COMMENT LETTER NO. 38-A
WESTERN PROPANE GAS ASSOCIATION
(REYNOLDS/SUBMITTED TO CARB)

Response 38-A-1

The comment references the control strategy or specific control measure from the State and Federal Element of the draft Plan. The overall control strategy and control measures specified in the State and Federal Element of the draft Plan have been developed by CARB. CARB staff is more technically qualified to analyze the feasibility and cost of these measures and provide responses to their control measures and the District staff will be forwarding all comments on the State and Federal Element of the draft Plan to CARB for their consideration. CARB staff will be evaluating these comments according to their own public review process prior to their Board adoption hearing. The District has prepared an Environmental Impact Report evaluating environmental impacts of all the draft Plan control measures.

COMMENT LETTER NO. 39
SUBURBAN PROPANE (4 EMPLOYEE LETTERS)

Response 39-1

The comment references the control strategy or specific control measure from the State and Federal Element of the draft Plan. The overall control strategy and control measures specified in the State and Federal Element of the draft Plan have been developed by CARB. CARB staff is more technically qualified to analyze the feasibility and cost of these measures and provide responses to their control measures and the District staff will be forwarding all comments on the State and Federal Element of the draft Plan to CARB for their consideration. CARB staff will be evaluating these comments according to their own public review process prior to their Board adoption hearing. The District has prepared an Environmental Impact Report evaluating environmental impacts of all the draft Plan control measures.

COMMENT LETTER NO. 40
FERRELLGAS (CHESTERMAN)

Response 40-1

The comment references the control strategy or specific control measure from the State and Federal Element of the draft Plan. The overall control strategy and control measures specified in the State and Federal Element of the draft Plan have been developed by CARB. CARB staff is more technically qualified to analyze the feasibility and cost of these measures and provide responses to their control measures and the District staff will be forwarding all comments on the State and Federal Element of the draft Plan to CARB for their consideration. CARB staff will be evaluating these comments according to their own public review process prior to their Board adoption hearing. The District has prepared an Environmental Impact Report evaluating environmental impacts of all the draft Plan control measures.

COMMENT LETTER NO. 41
MR & MRS CARTER SPOHN

Response 41-1

The 2003 AQMP is designed with the primary objective of demonstrating attainment with the federal standards that are currently exceeded in the Basin (i.e., 1-hour ozone and PM10). The reduction in toxic air emissions is not the focus of this Plan and is dealt with in other regulatory programs.

Emergency diesel generators are usually limited to no more than 200 operating hours per year. Permit conditions for such equipment require that to receive an exemption from other AQMD regulations that they only be used during equipment testing or when there is a disruption of power and for a total of no more than 200 hours per year. Based on the information in the comment letter, it is assumed that the engine in question meets the requirements for emergency standby engines and, as such, received a permit to operate.

In regard to the public notice for the emergency engine, AQMD Rule 212 - Standards for Approving Permits and Issuing Public Notice, requires public notice be given prior to the granting of a permit to construct or permit modification for any new or modified permit unit that may emit air contaminants located within 1000 feet from the outer boundary of a school. The notice must be distributed to the parents or legal guardians of children in any school within 1/4 mile of the facility and to each address within a radius of 1000 feet from the outer property line of the proposed new or modified facility. The notice, which contains sufficient detail to describe the project, is intended to allow the public an opportunity to comment on the proposed project prior to the applicant receiving a permit. The notice would not have described potential risks from diesel since diesel is not currently regulated by the District's new source toxics rule.

Relative to the location of the equipment, the AQMD has no jurisdiction over land use. Facility and equipment sitting is under the purview of local government. Nevertheless, the AQMD recognizes the potential for adverse cumulative impacts from the exposure to emissions from individually permitted emissions sources and, as such, has developed a Cumulative Impact Working Group (http://www.aqmd.gov/rules/CIWGmeet.htm#mtg1) to attempt to address this complicated issue. As part of this effort, AQMD staff will be preparing a White Paper on Regulatory Options for Addressing Cumulative Impacts From Air Toxic Emissions to the Governing Board in Summer 2003. It would include staff's recommendations regarding options for addressing cumulative impacts from sources of air toxics. Specific to the issue raised by the commenter, one option being discussed in the working group meetings entails developing a rule for diesel back-up generators that may, for example, require alternative-fueled engines such as natural gas in a highly impacted area. Other options may include innovative or emerging technologies such as solar or fuel cell technologies for electricity generation.

Five cumulative impact community forums have been scheduled in locations throughout the region (the first was May 9, 2003, the least June 7, 2003) to present to the communities the progress to date, and to listen and solicit their feedback (AQMD contact, Linda Turner at (909) 396-3625).

Additionally, CARB is in the process of developing an air Toxic Control Measure (ACTM) that would further reduce emissions and potential health risks from stationary diesel engines. The proposed ATCM would require the owners or operators of new and in-use stationary compression ignition (CI) engines greater than 50 horsepower to: (A) provide districts with a record of where their engines are located, what fuel they use, and how they are operated; (B) to require diesel-fueled new and in-use stationary CI engines to meet specified fuel requirements, operating limits, and emission standards; and (C) to require non-diesel-fueled new and in-use stationary CI engines to meet specified fuel requirements.

COMMENT LETTER NO. 42
ORANGE COUNTY SANITATION DISTRICT

Response 42-1

Despite existing regulations, architectural industrial maintenance (AIM) coatings still represent one of the largest non-mobile sources of VOC emissions in the Basin. Because AIM coating surfaces cannot be painted within an enclosure vented to an air pollution control device, the only cost-effective method to control VOC emissions from AIM coatings to date is to reduce the VOC content of the coatings. The point of the sentence that the commenter quotes in part from control measure CTS-07 – Further Emission Reductions from Architectural Coatings and Cleanup Solvents, is that District staff will continue to research AIM coating technology to achieve additional reductions from this source category. The statement is not meant to imply that staff has precluded any specific means of reducing emissions from AIM coating operations. Analyses performed during rule development would reveal which emission control strategies would be appropriate relative to emission reduction potential, desired performance standards, cost-effectiveness, potential socioeconomic impacts, and potential adverse environmental impacts.

Response 42-2

Control measure CMB-07 has been modified to reflect that it does not apply to Publicly Owned Treatment Works (POTWs).

Response 42-3

As described in Appendix IV-A, the intent of this control measure (CM #2003 BCM-07) is to achieve further reductions in PM10 emissions from fugitive dust sources (e.g., construction activities, paved and unpaved road travel, etc.). Potential program enhancements would be based on recently adopted most stringent fugitive dust control measures included in other PM10 non-attainment areas (e.g., San Joaquin Valley, and Clark and Maricopa Counties), to the extent they are effective and applicable to this region. A summary of these potential program enhancements is mentioned in the control measure writeup and included in the recently adopted 2002 Coachella Valley PM10 State Implementation Plan and can be viewed at http://www.aqmd.gov/aqmp/fcvsip.html.

Regarding the potential format of any future rule or rule amendment, it should be noted that the District presently has two regulations applicable to fugitive dust sources: Rule 403 (emissions from construction/demolition activities, agriculture, landfills, and other stationary sources) and Rule 1186 (emissions from paved and unpaved travel surfaces and certain livestock activities). During the Rule development process, District staff will evaluate the effectiveness of the most stringent fugitive dust control measures beyond existing AQMD rule requirements. This process will also assess the most effective

approach to incorporating any proposed program enhancements including, if warranted, a separate regulation.

Response 42-4

The emission factor for ammonia emissions from sewage treatment plants (POTW) that is used in the 2003 Air Quality Management Plan reflects the lower emission rate presented to the District in 1995 by the POTWs. The document, "Final 1997 Gridded Ammonia Emission Inventory Update for the South Coast Air Basin (SCAB)" reports an inventory of 0.08 tons/day for ammonia emissions from POTWs in the SCAB.

Response 42-5

Although the majority of point sources facilities are subject to various source-specific District rules, emissions from the largest facilities in the Basin still represent a significant sources of VOC emissions. Control Measure MSC-08 will target these facilities by requiring them to further reduce their facility-wide emissions by implementing feasible measures. Whether the control measure applies to all the top 300 facilities or a portion of them has not been determined and would be considered at the time of rule development.

Response 42-6

Rule 1133.2 implements a portion of Control Measure WST-02 (Emission Reduction from Composting) related to co-composting operations. Compliance with this rule is expected to be achieved through a combination of feasible and cost-effective composting and control methods discussed in the staff report. The second portion of the control measure deals with greenwaste and foodwaste composting operations. Staff will continue to work through the Composting Technical Advisory Committee to identify and develop feasible measures (e.g., best management practices) to reduce emissions from these sources.

Response 42-7

This control measure is a carry over from previous AQMPs because it is required by Section 185 of the Clean Air Act (CAA) in the event the Basin fails to attain the ozone standard by 2010. It would apply to major stationary sources of VOC emissions in the Basin (major sources in an extreme non-attainment area are defined as 10 tons or more of VOC). The fee will be $5,000 per ton of VOC emitted in excess of 80 percent of the baseline amount (i.e., in excess of the lower of actual emissions or permitted emissions in 2010). The control measure cannot be removed because of the CAA requirement.

Response 42-8

The District staff agrees that market incentive programs contribute to compliance flexibility, increase the penetration of low-emission technologies, and should continue to be developed. However, in order to avoid potential increases in toxic air contaminants,

the District will not allow the development of any market incentive program under control measure FLX-01 to increase the emissions of toxic air contaminants.

Response 42-9

The statement on pp. IV-103 is correct. CARB has not adopted any regulations affecting in-use fleets of off-road vehicles and equipment subject to control measure FSS-06. However, CARB is proposing requirements for existing off-road fleets as part of their Air Toxics Control Plan and State and Federal Element of the draft 2003 AQMP. Due to the magnitude of the air quality problem currently facing the Basin, additional reductions are needed from all sources where feasible to demonstrate attainment with the air quality standards.

Response 42-10

The acceleration of implementation dates of short-term control measures in the draft 2003 AQMP is recommended by U.S. EPA as a possible contingency measure to the AQMP if the District failed to meet its Reasonable Further Progress (RFP) target. In CTY-01, the original adoption dates remain the same while the starting implementation dates are moved forward. By moving the starting implementation dates forward, the District staff anticipates that early implementation, in whole or part, is technically feasible.

COMMENT LETTER NO. 43
IMPCO

Response 43-1

The comment references the control strategy or specific control measure from the State and Federal Element of the draft Plan. The overall control strategy and control measures specified in the State and Federal Element of the draft Plan have been developed by CARB. CARB staff is more technically qualified to analyze the feasibility and cost of these measures and provide responses to their control measures and the District staff will be forwarding all comments on the State and Federal Element of the draft Plan to CARB for their consideration. CARB staff will be evaluating these comments according to their own public review process prior to their Board adoption hearing. The District has prepared an Environmental Impact Report evaluating environmental impacts of all the draft Plan control measures.

COMMENT LETTER NO. 44
CONSTRUCTION INDUSTRY AIR QUALITY COALITION

Response 44-1

The commenter is referred to the response to comment #14-1.

Response 44-2

The District staff agrees that this control measures should be implemented using promotion or voluntary incentive programs.

Response 44-3

Control measure MSC-06 – Emission Reduction from Wood Burning Fireplaces and Wood Stoves, sets forth possible control strategies but does not specify which one may ultimately be proposed. Numerous air districts in California and other states have adopted rules regulating wood fireplaces and stoves and the control measure lists possible strategies based on these existing regulations as well as CARB's Suggested Control Measure. The analyses performed during rule development would reveal which of the possible strategies would be appropriate relative to emission reduction potential, cost-effectiveness, potential socioeconomic impacts, and potential adverse environmental impacts. The control measure has been revised to remove specific control suggestions; the revised control measure indicates that District staff will investigate the effectiveness of the control strategies adopted by other air districts and those suggested by CARB as part the rulemaking process.

The commenter is referred to response to comment 14-3.

Response 44-4

The commenter is referred to the response to comment #14-4.

Response 44-5

The commenter is referred to the response to comment #14-5.

COMMENT LETTER NO. 45
CALIFORNIA DEPARTMENT OF TRANSPORTATION

Response 45-1

The intent of the draft 2003 AQMP is to submit an update to the attainment demonstration plans for the federal 1-hour Ozone, PM10, and CO standards. Discussions about green house gasses such as CO_2 are not required or appropriate in this plan and therefore are not included in any of the documents.

Response 45-2

The federal standard for NO_2 was first met in 1992. The District did not request revision of the attainment status until 1997 to ensure that the attainment would be maintained. The CO standard was attained in 2002. The criteria use to determine CO attainment states that one exceedance of the 8-hour standard is allowed during a two year running period. The 8-hour standard was not exceeded during 2001 and only once in 2002. The District will consider requesting a change in the attainment status later this year after reviewing the ongoing trend of CO air quality through the fall season.

Response 45-3

As stated in the response to comment 45-2, the District will consider requesting a change in the attainment status later this year after reviewing the ongoing trend of CO air quality through the fall season. This will place further confidence that the standard will be maintained in the future.

Response 45-4

Please refer to the response to comment #45-2

Response 45-5

The federal standard is listed in Table 2-1 on page 2-2.

Response 45-6

The statement is consistent with the statements of attaining the standards since one exceedance is allowed in a two year period and the degree of exceeding the 8-hour standard threshold is not a provision of the standard attainment criteria.

Response 45-7

Both 1990 and 1995 are included in the 2003 AQMP. Text in Chapter 3 has been modified to reflect that.

Response 45-8

Table 3-2 indicates that the projected 2010 population is 15% higher than 1997 and the projected 2010 Daily VMT is 20% higher than 1997. The data are derived from SCAG's 2001 RTP. This 2010 population projection is 1% lower than the 2010 projection in the 1997 AQMP (16.5 million vs. 16.7 million). Since we use new projection in the 2003 AQMP, no reconciliation is required.

Response 45-9

The growth forecasts incorporated in the 2003 AQMP are based on the SCAG's 2001 Regional Transportation Plan (RTP). The typographical error will be corrected in the final AQMP.

Response 45-10

Mobile source emission estimates are based on a regional land use forecast developed by SCAG. This forecast consists of allocating regional population growth and employment growth totals amongst zones based on existing factors that can shape development. Land use policies and programs impact the allocation of population and employment growth and are reflected in the regional land use forecast, and therefore in the mobile source emissions estimate. To be consistent with the SIP currency, the emission reductions from the RTP have been remodeled based on EMFAC2002. Emission estimates revised since the release of the Draft Appendix IVC to the 2003 AQMP have been provided.

Response 45-11

Table 4-3 has been modified to more accurately reflect its content. The TCM categories are based on the first two years of the most current Regional Transportation Improvement Program (RTIP). The Table also reflects that the projects listed are targeted for implementation by or before 2010.

Response 45-12

As noted in your comment, the "black box" represents the level of emissions reductions needed for attainment demonstration after implementation of short-term control measures. The carrying capacity as determined through modeling analysis represents the remaining allowable emissions in 2010 for attainment demonstration. Under the federal Clean Air Act Section 182(e)(5), the extreme non-attainment areas such as the South Coast Air Basin are authorized to rely on long-term measures which anticipate the development of new control technologies or improvement of existing controls. Emission reductions from these measures that are not well defined are referred to as "black box" reductions. Tables 4-5A and 4-5B depict the necessary reductions for short-term measures and long-term measures (i.e., "black box") under two scenarios based on agency responsibility.

Response 45-13

Since the credits issued under the Pilot Credit Generation Programs of Regulation XVI expire between 2005 and 2010, the credit generating projects may continue to produce long-term emission reduction benefits beyond the mandatory program end date. However, it is unclear as to whether these benefits can contribute to the reduction of the "Black Box" since there is not guarantee that the project's life will continue beyond the end date.

Response 45-14

The California CO standard is 9.0 ppm for an 8-hour average concentration. The state standard is expected to be met in 2004. It is anticipated that the attainment demonstration in the Draft 2003 AQMP will be the basis of the future maintenance plan for both the state and federal standards.

Response 45-15

Control Measure FSS-05 proposes a mitigation fee program for federal sources which will be paid for by U.S. EPA or federal sources and administered by the District. The monies collected will be used by the District to implement air quality projects to achieve fair share emission reductions from these sources. This program would be developed as an alternative to stringent national rules so as to achieve a fair-share reduction commitment by federal sources to address unique local needs. A complete description of the control measure is provided in Appendix IV-A.

The commenter is also referred to the response to comments #13-1 and #26-2.

Response 45-16

The 2002 update refers to the 2002 update to the Technology Advancement Plan under the Clean Fuels Program of the District's Technology Advancement Office.

Response 45-17

As mentioned, the MATES II Study was referenced in Appendix I. The summary of findings is described on pp. I-18 and I-19. A specific mention of the MATES II Study has been added to the text to make the reference more prominent.

Response 45-18

It is anticipated that EPA will provide designations to the state for review at the end of 2003 and in 2004 the time table for a future 8-hour ozone SIP will be established. At this time, the estimation is that the SIP submittal will be required in 2007. EPA has proposed to eliminate the 1-hour standard when the SIP process for the 8-hour standard takes over. At this time, this issue has not been resolved.

Response 45-19

The misspelling will be corrected in the final AQMP.

Response 45-20

Page III-1-20 explains the difference between average annual day inventory and planning inventory.

Response 45-21

1990 emissions were reconstructed in the 2003 AQMP for demonstrating both federal and state Clean Air Acts. (Page III-1-1, paragraph 1) These do no relate to the 1997 base year data used in the 2003 AQMP.

Response 45-22

The commenter should note that Table 2-5 does include the growth factors for 2020. SCAG provided the growth factors up to 2030. However, CARB's Off-Road model only projects to 2020. That is why the 2003 AQMP shows the projected data up to 2020.

Response 45-23

The NSR account is the amount of emissions set aside to track future growth of permitted sources above and beyond the projected controlled baseline emissions inventory. The Offset budget creates an emissions bank to provide NSR offsets for sources that otherwise cannot obtain offsets any other way (e.g., open market). The Offset Budget is funded primarily from orphan shutdowns and credits generated from SIP-approved protocols, and is set at 1 ton per day in the draft 2003 AQMP for each criteria pollutant. The only nexus that exists between the two accounts is that they are both added to the resulting future controlled emission inventory for purposes of demonstrating attainment with the standards.

Response 45-24

SIP Reserve (potential technology assessments) is different from "black box". The District set aside 3 tons/day VOC and 2 tons/day NOx (Table 2-11 on page III-2-31) as SIP Reserve in the event that new air pollution control technology is not available at the scheduled rule implementation time, thus requiring the postponement or relaxation of the rule. SIP Reserve is designed to ensure the delaying or relaxing will not interfere with the Basin's attainment demonstration. The "black box" represents the additional emission reductions (beyond the reductions from short-term measures) needed for attainment based on development of new technologies or improvement of existing technologies.

Response 45-25

Planning inventories, which account for seasonal variations, provide the basis for tracking emission reduction progress specified by the federal Clean Air Act and California Clean Air Act so it is appropriate to show planning inventories rather than annual average inventories in Table 1 on pp. IV-2.

Response 45-26

The district staff has reexamined the cost-effectiveness section on pp.IV-21 and concludes that the information presented is sufficiently clear to avoid the unnecessary step of adding a table.

Response 45-27

Control measure LT/MED-DUTY-2 proposes improvements to the Smog Check Program. However, no emission reductions are associated with remote sensing since the control measure does not include remote sensing as a strategy because they are difficult to quantify.

Response 45-28

The draft 2003 AQMP's long-term strategy is comprised of two components: 1) Tier I, which is based on the District's commitment to achieve additional reductions beyond its proposed measures as well as the long-term strategy contained in CARB's State and Federal Element; and 2) Tier II, which is based on the remaining long-term emission reductions needed for attainment demonstration.

Under Scenario 1, recommended by District staff, the 1997/99 SIP commitments by agencies are used as a starting point to allocate the portion of Tier II long-term reductions needed. Since CARB/U.S. EPA have not met their commitments in the 1997/99 SIP (as of 2003), these agencies would be required to achieve the same level of remaining emissions by 2010 as contained in the current SIP. In addition, the remaining emission reductions needed for Tier II long-term measures are then apportioned to each agency based on the contribution of the remaining emissions within each agency's legal authority.

Under Scenario 2, recommended by CARB staff, Tier II reductions will NOT be specifically assigned to agencies, at this time, but would represent the lump sum total reductions needed for attainment demonstration. Further emission reduction assignment would occur over time as specific strategies are identified within each agency's authority.

Response 45-29

For purposes of the draft 2003 AQMP, CARB has shown emission reduction ranges that the state commits to adopt by 2010.

Response 45-30

The Table has been modified. The Performance Criterion Approach has been replaced with a project specification approach. Instead of providing generic HOV lane miles, as was the case in the Draft Regional Transportation Strategy and Control Measures section, details of each HOV project will be specified based on the most recent (currently 2002) Regional Transportation Improvement Program (RTIP). This provides more detail and more accurately reflects regional progress toward attainment.

Response 45-31

The project listing has been modified. The TCMs are based on the first two years of the most current Regional Transportation Improvement Program (RTIP), SR60 is not listed as a TCM in the current RTIP (2002 RTIP).

COMMENT LETTER NO. 46
REALTORS COMMITTEE ON AIR QUALITY

Response 46-1

The control measure descriptions in the draft 2003 AQMP are included in Appendix IV-A, B, and C. The referenced control measure descriptions do not include emission reduction and cost estimates because the type and extent of controls associated with the applicable sources are unknown at this time. Further evaluation is needed to establish these estimates. However, the District staff will conduct a detailed benefit, impact, and cost analysis at the time the control measures are evaluated for rule adoption. Potential control methods are discussed in the control measure descriptions and the commenter should refer to Appendix IV-A for this discussion.

Response 46-2

District staff agrees with your comment and will continue to work with CARB and U.S. EPA to further define federal participation in implementing the 2003 AQMP.

Response 46-3

The commenter is referred to the response for comment #14-1.

Response 46-4

The commenter is referred to the response for comment #14-2.

Response 46-5

Proposed control measure MSC-06 – Emission Reduction from Wood Burning Fireplaces and Wood Stoves, is primarily intended to reduce emissions of PM10, though its implementation would also be expected to reduce emissions of CO, VOC, NOx, SOx, and hazardous air pollutants associated with the incomplete combustion of wood. The control measure as proposed does not specify an emission reduction target and, thus, the PM10 or ozone attainment demonstrations are not dependent on this measure. Nevertheless, the severity of the air pollution problem in the Basin dictates that the District investigate all emission sources and the potential for emission reduction. The District is also required to implement all feasible measures and make expeditious progress under the federal and state Clean Air Acts. The emissions inventory for wood fireplaces and stoves is over six tons per day in 2006 which is not insignificant. Thus, District staff will continue to research the potential for cost-effective emission reductions from this source to determine if rule development is warranted.

It should be noted that numerous air districts in California and other states have adopted rules regulating wood fireplaces and stoves and the control measure MSC-06 is modeled

on these existing regulations as well as CARB's Suggested Control Measure. As with any proposed rule, however, a thorough analysis would be performed with input from all stakeholders and be presented to the District Governing Board prior to their consideration of a proposed rule. The analyses performed during rule development would reveal which of the possible strategies identified in the control measure, or additional strategies identified at that time, would be appropriate relative to emission reduction potential, cost-effectiveness, potential socioeconomic impacts, and potential adverse environmental impacts. During the development of a proposed rule staff would consider any conditions unique to Southern California as well as other pertinent information provided by stakeholders. The control measure has been revised to remove specific control suggestions; the revised control measure indicates that District staff will investigate the effectiveness of the control strategies adopted by other air districts and those suggested by CARB as part the rulemaking process.

Response 46-6

Due to the significant increase in emissions from mobile sources and the lower carrying capacity identified in the 2003 AQMP, significant reductions must be achieved from both on- and off-road sources in the near-term. Rather than relegate FSS-06 (Further Emission Reductions from In-Use Off-Road Vehicles and Equipment) to a contingency measure, it is necessary to move aggressively and adopt measures that reduce the emissions from existing mobile sources. In addition, the FSS nomenclature in Control Measures FSS-06 already refers to a control measure requiring further study strategy.

Response 46-7

The text has been revised to provide further clarification. As previously stated, mobile source emission estimates are based on a regional land use forecasts developed by SCAG. This forecast consists of allocating regional population growth and employment growth total among zones based on existing factors that can shape development. Land use policies and programs impact the allocation of population and employment growth and are reflected in the regional land use forecast, and therefore in the mobile source emission estimates.

Response 46-8

The District staff acknowledges the delay in release of both the CEQA and Socio-Economic Document. The release of the draft Plan (and many of the appendices) in February 2003 was intended to initiate an early public review process because of the significant policy issues with the Plan (e.g., black box reductions, federal responsibility). However, the CEQA was released in April, 2003 and the Socio-Economic Document was made available in May 2003 for public review and comment.

COMMENT LETTER NO. 47
TRANSPORTATION CORRIDOR AGENCIES

Response 47-1

The TCM strategy has been revised and is based on the TCM projects in the 2002 RTIP. The biennial RTIP does not include any projects that are defined as "priced alternatives" to HOV lanes, such as toll roads or other congestion pricing projects.

Response 47-2

The text has been revised to clarify the direct link between air quality planning and regional transportation planning.

Response 47-3

The text has been revised to emphasize the importance of reasonable, quantifiable performance measures. Language describing the formal substitution process has also been added.

Response 47-4

Zero Emission Vehicle and Alternative Fuel measures were eliminated because, under the Clean Air Act, by definition, they are not considered to be TCMs. In the 1997/99 AQMP, they were not identified as TCMs but rather as advanced transportation technologies, and should have been more appropriately discussed under the mobile source emission control strategy section. Only those projects specifically identified as TCM projects in the first two (fiscally constrained) years of the current RTIP are listed as TCMs in the 2003 AQMP.

Response 47-5

Instead of specifying generic performance criteria for the various TCM Project categories, the Regional Transportation Strategy and Control Measures now use the project listing contained in the first two years (the fiscally constrained portion) of the most recent (currently 2002) Regional Transportation Improvement Program (RTIP). This provides greater accountability and presents a richer description of regional progress toward attainment of the National Ambient Air Quality Standards. A section describing the Timely Implementation Reporting Protocol for the biennial RTIP process has been added as well. This Protocol provides a reliable and well-tested mechanism for tracking progress throughout the region.

Response 47-6

The TCM strategy has been revised is based on the TCM projects in the biennial RTIP. The 2002 RTIP does not include any projects that are defined as "priced alternatives" to HOV lanes, such as toll roads or other congestion pricing projects.

COMMENT LETTER NO. 48
WSPA

Response 48-1

The trends of ozone, carbon monoxide and particulate matter air quality are presented in Appendix II, Figure 1-4. The figure provides the number of days in each year when air quality exceeded the federal standard. The supporting air quality statistics are provided in tabular form in the attachment to Appendix II.

Population exposure for the 1984-1986 base period and three key years identified in the California Clean Air Act (1994, 1997 and 2000) are presented in Chapter 1 of Appendix V. Over the period, per capita exposure statistics have greatly improved. In the base period, 1984-86, per capita exposure was calculated as 133 pphm-hours above the standard. By 2000, the per capita exposure statistic improved to 5 pphm -hours above the standard. This translates to a 97 percent improvement in exposure to ozone over the 14-year period.

Response 48-2

Appendix III of the draft 2003 AQMP shows the emissions inventory by major source category. This appendix also shows the top 300 point sources of emissions. The district staff considers the presentation of emissions in Appendix III and the rest of the draft 2003 AQMP to be sufficient and no additional breakdown by SIC code is necessary. However, such data is public information and is available upon request. This data shows that the top 7 source categories contributing over 80% of total emissions include in order of contribution: heavy-heavy-duty diesel trucks, passenger cars and light and medium duty trucks, off-road equipment, ships and commercial boats, medium-duty diesel trucks, RECLAIM Program, and aircraft. Throughout the draft 2003 AQMP, it is repeatedly emphasized that the majority of emission reductions have to come from mobile sources since they represent the largest segment of emissions. However, given the significant nature of the "black box", additional sources of emission reductions, including from stationary sources, have to be considered where feasible and cost-effective.

Response 48-3

The California Clean Air Act requires air pollution control districts to access the effectiveness of control measures in reducing ambient ozone concentrations as part of their plan submittals. In developing their control measure implementation schedule, districts must consider a wide range of effectiveness criteria including cost-effectiveness, technological feasibility, emission reduction potential, public acceptability, and enforceability. The District staff must take all these factors into account when adopting and implementing control measures. The evaluation of these criteria is the primary reason why more cost-effective control measures are not adopted sooner. In addition, it is entirely possible that the cost-effectiveness estimation will change from the

development of control measure to the adoption of the control measure into a rule. The District staff would anticipate this since the analysis conducted for a rule is more detailed and refined than that done for a control measure.

When cost estimates are estimated for a control measure, they are displayed as a discrete number or a range of numbers. Table 6-6 of the draft 2003 AQMP shows both discrete numbers and ranges, where appropriate. Upper thresholds of cost-effectiveness are also shown in Table 6-6 and represent what our estimates show would be the maximum cost-effectiveness given the proposed methods of control.

The discounted cash flow method through extensive stakeholder input was determined to be the preferred method of determining the cost-effectiveness for the stationary source control strategies and it has been the traditional approach used in previous plans and in determining the cost-effectiveness of the rules presented to our Governing Board. It provides the Governing Board with a tool or scale that accounts for relative comparison between various rules adopted. While the levelized cash flow method is just as valid and is used by other agencies, it provides policy makers with another tool for relative comparison. However, the two calculation methods do differ, and would result in different numerical values for the same control measure. To alleviate further confusion, the District staff proposes to maintain the discounted cash flow method as the preferred approach.

Response 48-4

Over the past several months, the District staff has made presentations on the AQMP and received some suggestions from the AQMP Advisory Group on possible control strategies. None of these strategies have been discarded and some may be considered for the final 2003 AQMP. In addition, the District staff has recently formed a technical working subcommittee to the AQMP Advisory Group to identify potential strategies for reducing the size of the "black box" for further consideration in the final 2003 AQMP. To the extent possible, these strategies will be incorporated into the final Plan.

Response 48-5

Under the approach proposed by District staff (Scenario 1), the draft 2003 AQMP bifurcates the required long-term emission reductions into Tier I and II. Tier I emission reductions are the long-term emission reductions that the respective agencies are committing to achieving. Tier II emission reductions represent the additional long-term emission reductions that need to be achieved for attainment demonstration. Tier II reductions are based on the 1997/99 SIP commitments by agency as well as the agencies contribution to the remaining emissions. District staff believes that this is the preferred method of distribution by agency since it results in a fair share distribution of needed emission reductions by responsible agency and commits each agency to achieving these reductions. The approach recommended by CARB staff (Scenario 2), however, has no specific assignments and would distribute the entire long-term emission reductions over time as specific strategies are identified within each agency's authority.

The District staff has modified the long-term control strategy measure (i.e., LTM-ALL) to include a specific process on how the emission reduction control strategies for black box reductions will be identified. It will be a multi-mechanism approach that includes various steps that include, but not limited to input from the Technical subcommittee of the AQMP Advisory Group, annual technology assessment workshops, emission inventory updates/studies, VOC reactivity studies, and periodic BACT reviews. The district staff considers this approach to contain features the commenter considers important (e.g., flexibility, feasibility).

Response 48-6

Control measure #CMB-09 is currently being developed as Proposed Rule 1105.1 - Reduction of PM10 and Ammonia Emissions from Fluid Catalytic Cracking Units. The commenter is referred to the Staff Report for PR 1105.1 for a complete discussion of the issues raised by the commenter. However, the intent of CMB-09 is to reduce both primary PM10 and precursors to PM10, including ammonia.

Response 48-7

Control measure CMB-10 contains several proposed control methods for achieving the 3 tons per day NOx emission reduction target. In addition to the two mentioned by the commenter, the District staff could consider excluding smaller emitting facilities and bifurcating the market into powerplants and non-powerplant facilities. The commenter's objection is noted, however, the District staff will evaluate all four methods during the development phase of CMB-10.

Response 48-8

Control measure MSC-08 identifies several possible emission reduction strategies which could be implemented to reduce emissions under a site-specific plan. Product reformulation is one among many strategies that could be implemented. However, it would not be the district's intent to mandate a specific control measure but leave it up to the source to determine which control measures would be implemented to reduce their facility-wide emissions under the site-specific plan.

Response 48-9

Proposed control measure MSC-07 – Natural Gas Fuel Specifications, is intended to limit an increase in emissions from natural gas combustion due to combustion of "hot gas." "Hot gas" is typical of associated gas production (i.e., natural gas produced along with crude oil) since associated gas tends to have are greater percentage of ethane, propane, and other hydrocarbons which elevate the heating value of the gas. According to the California Energy Commission, nearly three-quarters of total natural gas produced in California is associated gas. Associated gas is generally produced in Southern California while non-associated gas is produced in Northern California. Approximately 96 percent

of California Division of Oil & Gas District 4 (Kern, Tulare, Inyo) production is associated gas.

The District has the legal authority to set natural gas specifications. SCAQMD Rule 431.1 (Sulfur Content of Gaseous Fuels) restricts the transfer, sale or offer for sale natural gas containing sulfur compounds (calculated as H_2S) in excess of 16 parts per million by volume for use in the jurisdiction of the District. As noted in the control measure, while the California Public Utilities Commission (PUC) General Order 58-A (Standards for Gas Service in the State of California) sets standards for the heating value and purity of natural gas, it does not specify an average, minimum, or maximum heating value. Similarly, while the Southern California Gas Company's Rule 30 (Transportation of Customer-Owned Gas) sets a maximum heating value, the rule applies only to customer-owned gas and sets the maximum heating value at 1150 Btu (gross) per dry standard cubic foot (dscf) which is considered "hot gas."

The District sponsored two test projects to evaluate the effect of varying blends of natural gas to quantify the effects on emissions. The University of California, Riverside performed analyses of gas composition and boiler emissions from a 250,000 Btu per hour gas-fired boiler; the University of California, Irvine tested a 60-kW microturbine generator. The results show that "hot gas" can increase stationary source NOx emissions by greater than 20 percent. Even "hot gas" at only 1100 Btu/dscf had significantly higher NOx emissions.

The commenter asserts that the implementation of this control measure would result in adverse secondary impacts (i.e., construction-related impacts and emissions from additional electricity generation). An option other than refrigeration (which could condense out the "higher energy" components) may be to add inerts. The addition of inerts reduces the higher heating value and act as a diluent to reduce NOx emissions. This control option would minimize the potential secondary impacts referenced by the commenter. Furthermore, the potential secondary environmental impacts asserted by the commenter are speculative at this time; an appropriate environmental analysis would be performed during rule development.

The commenter suggests other methods of reducing overall emissions from the combustion of natural gas. These suggestions assume, however, that the user of "hot gas" is an industrial/commercial source that routinely adjusts the combustion device to achieve a permitted level of emissions. A substantial amount of natural gas is used by the residential and commercial sectors in combustion devices that are not routinely adjusted relative to emissions (e.g. furnaces, water heaters, stoves, dryers, pool heaters, etc.); the proposed control measure targets this market of natural gas users.

It should be noted that the control measure as proposed does not specify an emission reduction target and, thus, the one-hour ozone attainment demonstration is not dependent on this measure. Nevertheless, additional NOx emission reductions are necessary to achieve the eight-hour ozone and PM2.5 standards and the District will continue to research the air quality effects associated with "hot gas" combustion to determine if rule

development is warranted. Rule development would necessitate a thorough analyses of emission reduction potential, cost-effectiveness, potential socioeconomic and adverse environmental impacts, and other impacts (e.g., constraints on fuel supply). Such analyses would be performed with input from all stakeholders and be presented to the District Governing Board prior to their consideration of a proposed rule.

Response 48-10

Taking credit for emission reductions under the SIP did not occur because there were potential implementation issues that could have resulted in the rules falling short of the expected emission reductions. Potential double counting with the State's mobile source regulations and proposed measures was another reason. In addition, the fleet rules were originally designed to reduce exposure to toxic air contaminants such as diesel particulate matter and not meet the SIP obligations for reducing NOx and VOC emissions.

Response 48-11

The commenter is referred to the response to comment #46-8.

COMMENT LETTER NO. 49
HERITAGE PROPANE

Response 49-1

The comment references the control strategy or specific control measure from the State and Federal Element of the draft Plan. The overall control strategy and control measures specified in the State and Federal Element of the draft Plan have been developed by CARB. CARB staff is more technically qualified to analyze the feasibility and cost of these measures and provide responses to their control measures and the District staff will be forwarding all comments on the State and Federal Element of the draft Plan to CARB for their consideration. CARB staff will be evaluating these comments according to their own public review process prior to their Board adoption hearing. The District has prepared an Environmental Impact Report evaluating environmental impacts of all the draft Plan control measures.

COMMENT LETTER NO. 50
U.S. EPA

Response 50-1

District staff appreciates comments from the U.S. EPA on the two attainment scenarios provided in the draft 2003 AQMP for meeting the federal 1-hour standard (i.e., scenario 1 including reductions from federal sources and scenario 2 excluding reductions from federal sources). The comment letter re-iterates U.S. EPA staff's previous oral comments regarding the state's lack of authority to assign SIP emission reduction responsibility to the federal government. As a result, the letter states that U.S. EPA will not approve Scenario 1 as proposed in the draft 2003 AQMP.

Although District staff recognizes the legal limitations on requiring federal government to achieve its fair share of reductions in the Plan, nevertheless, without reductions from federal sources, attainment of the 1-hour ozone federal standard by 2010 as well as the upcoming PM2.5 standards (expected by 2014) will be seriously jeopardized. In 2010 and beyond, the federal sources would represent a significant portion of the NOx emissions in the Basin (i.e., 34% in 2010). If federal regulations for reducing these emissions are not timely developed and implemented, the burden of reductions needed for attainment demonstration will unfairly fall on state and local agencies which are already committing to achieve significant reductions under both short-term and long-term strategies. Under Scenario 2, significant VOC and NOx reductions would still have to be achieved by CARB and AQMD, some of which would depend on future technology development for sources under state and local jurisdiction. If these technologies are not developed in time and implemented by 2010 for sources that have already been regulated for many years, the corresponding reductions anticipated under the long-term strategy in scenario 2 will not be realized, jeopardizing the attainment demonstration.

In contrast, there are several federal sources that have either never been regulated or are under-regulated including aircraft, ships, trains, and farm and construction equipment, for which there could be greater opportunities for achieving reductions. Therefore, we urge the U.S. EPA to aggressively seek such opportunities through national standards for new engines, international negotiations (i.e., for aircraft and ocean-going vessels), federal regulations for existing engines in extreme non-attainment areas such as South Cost Air Basin, or any other innovative programs (e.g., mitigation fees). The District staff is also willing to do more if funding is provided by the federal government or through mitigation fee type programs implemented by U.S. EPA. However, as mentioned repeatedly before, the federal government needs to achieve its fair share of reductions if this region has any chance of meeting the federal ambient air quality standards. District staff is more than willing to work with U.S. EPA staff to explore these possibilities to achieve the maximum feasible reductions from federal sources by 2010.

Oral Comments Received at the Regional Public Workshops for the Draft 2003 AQMP March 4, 5, and 13, 2003

Oral Comments Received at the
Regional Public Workshops for the Draft 2003 AQMP
March 4, 5, and 13, 2003

General Comments on Air Quality

Comment: *The District should consider means to implement controls on population growth and loss of open space in order to control air pollution.*

Response: The District cannot control zoning; land use decisions are generally under the jurisdiction of cities and counties. District's authority must not "interfere with" city and county authority over land use, as specified in the Health and Safety Code. Please be cognizant that the AQMP does take into account the impacts of growth related emissions.

Comment: *The District should establish air quality monitoring stations on school grounds to warn children of unsafe conditions in the Eastern San Fernando Valley.*

Response: A network of air quality monitoring stations are strategically located throughout the Los Angeles, Orange, Riverside, and San Bernardino counties to measure ambient air pollutant concentrations for the purpose of demonstrating attainment with state and federal ambient air quality standards. Localized air quality monitoring of sensitive sites is done on a case-by-case and as-needed basis. District staff will evaluate the Eastern San Fernando Valley for possible placement of a localized monitor.

Comment: *With the increased use of consumer products in the Basin, it seems impossible to reduce emissions from this sector enough to meet the air quality standards.*

Response: CARB's strategy is to reduce emissions through the use of low VOC consumer products in a manner that more than offsets any emission increase due to the increased use of such products. The effectiveness of the control strategy for consumer products, however, is partially based on consumer choices - it is incumbent on the consumer to choose products with less pollution potential.

Comment: *The public should receive more local air quality measurement information.*

Response: The District has a network of 32 air quality monitoring stations throughout the four-county area. Data from these stations are on the District's website (http://www.aqmd.gov) and are also reported in a number of regional and local newspapers.

Comment: *The information presented in the Draft 2003 AQMP does not reveal the extent of the air quality problem since state standards are more stringent than the federal standards.*

Response: The federal CAA sets specific dates for air districts to demonstrate attainment with federal ambient air quality standards whereas the California CAA requires implementation of all feasible measures to attain the state standards as expeditiously as possible. When adopting standards more stringent than the federal standards, the state acknowledged that attaining them would require additional time. As discussed in Chapters 1 and 5 of the Draft 2003 AQMP, the Plan is designed to meet the federal standards by the dates specified in the federal CAA (2006 for PM10 and 2010 for ozone) while meeting the state requirement to implement all feasible measures. The focus on attaining the federal standards (since they are just a few years off) is not intended to diminish the severity of the air pollution problem. The final version of the 2003 AQMP will discuss in greater detail the ambient air pollutant concentrations relative to state standards and the effectiveness of the Plan in attaining them.

Comment: *What is the explanation of the leveling off of the ozone concentration (i.e., not decreasing) in the last four years?*

Response: Unfavorable meteorology over the last few years and changes in the location/mechanics of some monitoring stations are a couple of factors affecting the data; however, overall emissions and per-capita exposure from maximum ozone concentration are continuing to decrease. It is further noted that the data is reported in Basin-day exceedances which represents the number of days a standard was exceeded anywhere in the Basin. It is generally acknowledged that peak concentration and per-capita exposure is more representative of air quality than the absolute annual number of days a standard may have been exceeded in the Basin.

General Comments on the Draft 2003 AQMP

Comment: *The plan focuses too much on small business and consumer products when the bulk of emissions come from a small number of large sources.*

Response: Due to the extent of the problem, the control strategy in the draft 2003 AQMP focuses on all sources of emissions. While large stationary sources that are already heavily regulated will be required to do more since the mass emissions from these facilities is so large, other emission sources will also need to do their fair share to reduce emissions in order to demonstrate attainment in the Basin. Consumer products represent one of the largest contributors to VOC emissions in the Basin.

Comment: *Regardless of jurisdictional issues, the control strategy must include measures that specifically reduce emissions (especially diesel) from ships and heavy-duty truck traffic at and around the port area. The proposed measure that collects fees from federal sources but reduces emissions from other sources would not help the residents of communities surrounding the ports.*

Response: Numerous control measures in the Plan seek to control emissions from sources operating in and around the ports, including ships, heavy-duty vehicles, and off-road equipment. Please see District's mobile source control measures (Appendix IV-A) and the State and Federal Element (Appendix IV-B) for details. The District would seek to use fees generated in port area to obtain emission reductions in nearby areas to the extent feasible.

Comment: *The District should reevaluate the emissions inventory of stationary sources (particularly with respect to projected emissions).*

Response: Emissions inventories are routinely evaluated for both accuracy and changes (i.e., increases or decreases). Staff appreciates receiving any information that may increase the accuracy of emissions inventories.

Comment: *The AQMP should show a chart of VOC reactivity by major source categories and reactivity-based controls should be considered.*

Response: The data presented in the draft 2003 AQMP (text, charts, graphs, etc.) provide the public and decision-makers with the information necessary to make informed decisions regarding the Plan. It should be noted, however, that the regional modeling tool used for the draft 2003 AQMP (i.e., UAM with CB-IV chemistry) does take into account the speciated reactivity of individual source categories. The speciation profiles are routinely updated by CARB to reflect the impact of new regulations. A preliminary analysis conducted recently by District staff confirmed that source categories with the highest reactivities included passenger cars, light duty trucks, consumer products, and off-road equipment for which emission reductions are sought in the 2003 AQMP. Staff is committed to further evaluate and consider reactivity-based controls in future regulations. To that end, the District and CARB are in the process of sponsoring research efforts by U. C. Riverside I reactivity and associated issues. The findings of these research efforts could go towards structuring future regulatory approaches that are reactivity-based.

Comment: *The schedule for close of comments on the Draft 2003 AQMP is too short and the District needs to allow more time for meaningful input. The short comment period will have a limiting effect on the number and quality of creative ideas coming forward to assist in the AQMP development process. A period of six months is recommended.*

Response: The District staff acknowledges the delay in release of Appendix V, and the CEQA and Socio-Economic Documents. Due to the significant policy issues in this Plan, the draft Plan (minus the above mentioned documents) was released for public review on February 25, 2003 as a means of initiating the public review as early as possible. In addition to the draft Plan, a preview document for the draft Plan was released in January 2003 which introduced the key elements and identifies key issues for this revision of the AQMP. Because of the early release of the preview document and the fact that the public will have an additional 45 days for comment after the release of the EIR, the District staff considers the review time to be adequate.

While the deadline to submit written comments was not published in the written notification of the public workshops, it was publicly announced at all six workshops as being March 28, 2003. Additional comments have been received after the deadline and will be incorporated into the Plan as the schedule permits. Following the release of the draft Plan on February 25th, three additional draft documents namely Draft Appendix V (Modeling and Attainment Demonstration), 2003 AQMP Draft EIR, and 2003 AQMP Draft Socioeconomic Report were released on April 4, April 8, and May 21, respectively and made available for comments.

The Socio-Economic Document was released in May 2003. The public and other stakeholders will have an additional 45 days from the release of the Draft EIR to analyze the impacts and provide comments on the Draft EIR. As required by the California Health and Safety Code, written notification on the development and adoption of the 2003 AQMP will be published 45 days prior to the regional 4-county public hearings.

General Comments on Proposed Control Measures

Comment: *Pricing strategies should be investigated with further input from stakeholders.*

Response: Staff is open to all potential control strategies and provided numerous opportunities and forums for stakeholders to provide meaningful input on the development of innovative control measures. A subcommittee of the AQMP Advisory Group was recently formed and will meet on a regular basis to further discuss and brainstorm additional control measures.

Comment: *Emission reductions should not be assigned to the most costly control measures to avoid being locked into the commitment with no additional flexibility.*

Response: Emission reductions are included as part of the control measure description when reductions can be identified. Though emission reductions maybe identified in a control measure, one of the criteria for adopting a control measure as a regulation is that it meets the cost-effectiveness criteria set by the District Governing Board. If it exceeds

the cost-effectiveness criteria, the measure will be subject to a pre-hearing to allow the Board to decide whether to proceed with the measure.

Comment: *The socioeconomic impact report should consider the control strategies effect on the cost and affordability of housing in the region.*

Response: The socioeconomic analysis of the 2003 AQMP presents the cost of the draft Plan and its CEQA alternatives. The economic model used for the analysis currently does not have the capability of assessing affordability of housing. The analysis of the Plan does, however, provide aggregated economic impacts related to various industries, including the real estate and construction industries. For example, the analysis includes the average annual control costs for quantifiable control measures among various industries, the impact on product prices of regional industries (relative to the rest of the U.S.), and job impacts by industry. A more detailed impact analysis would be required for any proposed rule developed from a control measure. Rule development would necessitate thorough analyses of emission reduction potential, cost-effectiveness and potential socioeconomic impacts, as well as any potential adverse environmental impacts. Such analyses would be performed with input from all stakeholders and be presented to the District Governing Board prior to their consideration of a proposed rule.

CARB's Consumer Product Control Measures

Comment: *Aerosol products are not inherently higher emitting than non-aerosol products. In fact, some aerosol products contain VOCs that are significantly less reactive than the VOC constituents in certain non-aerosols products.*

Response: It is acknowledged that the reactivity of VOCs does have a role in ozone formation and both aerosol and non-aerosol products contain VOCs with differing reactivity. It is also acknowledged, however, that for products with comparable reactivity, the use of the aerosol product would generally result in greater emissions since their use would typically result in greater mass emissions than that of a non-aerosol product. See also the response to comments 5-2 and 16-1.

Comment: *The replacement of aerosol propellants with lower reactive propellants sometimes results in the use of global warming compounds.*

Response: There are numerous regulations and programs addressing global warming compounds. It is assumed that manufacturers will consider global warming regulations when developing less reactive propellants. See also the response to comments 5-2 and 16-1.

CMB-10 (Additional NOx Reductions for RECLAIM)

Comment: *Control Measure CMB-10 would require a major overhaul of the RECLAIM program, which may not be the District's intent. Further, the imposition of source specific rules on RECLAIM sources is contradictory to the principle of the RECLAIM program. Any reference to Regulation XI rules should be removed from the control measure.*

Response: The extent of the air pollution problem dictates an initial look at all potential control options. RECLAIM facilities represent a large portion of the overall emission inventory and further evaluation of these sources for control is warranted. The specific means to achieve additional reductions from these sources will be further evaluated during rule development.

MSC-08 (Further Emission Reductions from Large VOC Sources)

Comment: *This control measure is troubling because it would be micromanaging the industry, business by business. In addition, the measure should be rewritten to clarify how large VOC sources' compliance with existing Regulation XI plays into this control measure. It was further stressed that the $5,000 per ton of VOC fee for large VOC sources is punitive and sends a message that large companies are not welcome in the Basin and may adversely impact the region's economy.*

Response: Before any control measure is adopted as regulation, it must undergo comprehensive analysis to ensure it is technologically feasible and cost-effective. The specific provisions of the regulation are developed with input from stakeholders as well as CARB and U.S. EPA. If it meets the applicable legal criteria, the District Governing Board considers it for adoption in a public forum. Regarding a $5,000 per ton charge to large VOC sources, this measure is included in the Plan pursuant to the federal CAA Section 185 which requires such a measure to be implemented in the event the Basin does not reach attainment by the specified deadlines.

SCAG's Transportation Control Measures

Comment: *The District should not rely on emission reductions from HOV lane development because they tend to exacerbate emissions by releasing latent demand.*

Response: The effectiveness of HOV Lanes as an emission reduction strategy has been questioned on the basis that any congestion that is relieved from the Mixed Flow lanes is replaced by latent demand. Some amount of the congestion initially relieved by such projects is indeed taken up by latent demand, but HOV lanes will continue to be an important strategy in efforts to mitigate the air pollution impacts of on-road mobile sources. There are two reasons for this. First, even though some of the congestion relieved by HOV lane usage is taken up by latent demand, there is still a net reduction in

per capita trip emissions[2]. Second, as congestion begins to increase in the mixed flow lanes, the relatively congestion-free HOV lanes become more attractive and so more likely to induce changes in ridership habits.

CARB's Control Measure OFF-RD LSI-3 (Require New Forklift Purchases and Forklift Rentals to be Electric – Lift Capacity <8,000 pounds)

The following comments summarize the main points raised during the public workshops on Control Measures OFF-RD LSI-3.

Comment: *Neither the propane industry nor the LPG forklift users were consulted during development of this measure. Stakeholders would like to work very closely with CARB staff on this control measure and have initiated this process by requesting CARB to provide the methodology for calculating emission reductions associated with the proposed control measure.*

Comment: *The proposed measure does not meet the technological feasibility or cost-effective criteria of the Health and Safety Code.*

Comment: *The District has a responsibility to evaluate CARB control measures for technological feasibility and cost-effectiveness as part of the AQMP adoption process.*

Comment: *A substantial number of comments were received indicating that the control measure would cause serious economic hardship to the propane industry and result in loss of jobs. This in turn would result in a loss in the tax base for numerous cities and counties throughout California.*

Comment: *The technical and socioeconomic issues raised are not just issues for California, but are national issues since other states often adopt regulations similar to those adopted in California.*

Comment: *Concerns were raised on the viability of electric forklifts and the disadvantages of electric forklifts compared to LPG forklifts such as reduced power and operating hours, infrastructure requirements (e.g., battery storage, electrical), and hazardous waste disposal (i.e., spent batteries).*

Comment: *It was suggested that because of the way the control measure is written, users of forklifts would convert their fleet to diesel forklifts as a way of avoiding electric lifts, thus creating more emissions.*

[2] A good discussion of the complex issues involved in such research is summarized in: Cervero, Robert. 2003. "Are Induced-Travel Studies Inducing Bad Investments?" Access, n22 (Spring 2003): 22-27. In summary, Cervero finds that "every ten percent increase in lane-mile capacity…was associated with a six percent increase in VMT." Taken literally, this suggests that only 40% of new capacity is actually added by capacity-enhancement projects.

Comment: *Industry has already spent millions of dollars to comply with the new statewide emission standards (e.g., 2004 LPG forklifts will be 85% cleaner) and now the proposed control measure requires that only electric forklifts to be sold in the Basin.*

Comment: *With the ban of LPG forklifts, forklift owners would be left with equipment that has little resale value after having made a substantial capital investment.*

Comment: *Comments were made that LPG is part of the solution to the region's air quality problem. The use of LPG forklifts and other LPG-powered off-road equipment would reduce emissions relative to the diesel equipment currently in use.*

Comment: *In lieu of CARB's OFF-RD LSI-3 for requiring electric forklifts, develop a measure that would include scrapping component that would provide incentives to scrap older LPG, gasoline, natural gas, and diesel forklifts as well as mandatory retrofitting of existing forklifts.*

Comment: *Replace diesel off-road equipment with LPG equipment for short- and mid-term emission reductions.*

Response: The comments reference the control strategy or specific control measure from the State and Federal Element of the draft Plan. The overall control strategy and control measures specified in the State and Federal Element of the draft Plan have been developed by CARB. CARB staff is more technically qualified to analyze the feasibility and cost of these measures and provide responses to their control measures and the District staff will be forwarding all comments on the State and Federal Element of the draft Plan to CARB for their consideration. CARB staff will be evaluating these comments according to their own public review process prior to their Board adoption hearing. The District has prepared an Environmental Impact Report evaluating environmental impacts of all the draft Plan control measures.

Comments Suggesting Additional Control Measures

Comment: *Require the federal government to set new emission standards for Stage II aircraft.*

Response: Local and state officials are precluded form assigning emission reductions or specified control measures to the federal government. Nevertheless, CARB has included control measure Airport-1 in the State and Federal Element of the South Coast State Implementation Plan. Part of this control measure calls for more stringent aircraft emission standards and the development of lower-emission aircraft engines. This measure considers U.S. EPA working with the Federal Aviation Administration (FAA) and the International Civil Aviation Organization (ICAO) to adopt lower emission standards for: VOC, to reduce both ozone and toxic compounds; PM, to reduce fine particles and potentially toxic compounds; and NOx. See Appendix IV-B for details.

Comment: *Implement a program where tax credits can be received for installation of solar equipment and from the use of natural gas and hybrid vehicles.*

Response: The California Energy Commission in partnership with automakers, air districts, and the Mobile Source Emission Reduction Committee has launched an efficient vehicle program that promotes the purchase of clean efficient gasoline and alternative fuel vehicles. The program offers incentives up to $1,000 for efficient gasoline fuel vehicles and up to $3,000 for dedicated natural gas vehicles purchased or leased to individuals and fleet buyers. Incentive amounts vary by county and are provided through the manufacturer at the time of purchase or lease to customers on a first-come, first served basis.

All incentive funds for hybrid vehicles are depleted except for in the following areas: South Coast Air Quality Management District ($500), Ventura County Air Pollution Control District ($1,000), and Santa Barbara Air Pollution Control District ($1,000). However, a number of programs throughout the state are available that complement the Energy Commission's program. Cash rebates are offered to Riverside Public Utilities electric customers who purchase or lease a "pure" electric or hybrid vehicles. Customers are eligible to receive rebates of 10% of the vehicle's purchase price of up to $5,000. Likewise, CARB provides an incentive of up to $9,000 for "pure" electric vehicles statewide. The Bay Area Air Quality Management District provides incentives to public fleets under their VIP program for hybrids, natural gas vehicles, and neighborhood electric vehicles in their region; the San Joaquin Valley Unified Air Pollution Control District provides incentives for hybrids and natural gas vehicles in their region.

Finally, purchasers of clean-fuel vehicles (which include natural gas vehicles and hybrid vehicles) may be eligible for a deduction on their federal income tax return (see Publication 535 [Section 12, Electric and Clean-Fuel Vehicles]).

Similarly, there are numerous solar power rebate programs for both businesses and residences.

Comment: *Encourage the use of solar and renewable energies.*

Response: As discussed in Chapter 4 of the draft 2003 AQMP, renewable power generation technologies such as solar and wind electric power generation technologies may play a role in long-term attainment demonstration strategies. The District will evaluate the application of renewable power generation technologies through market incentive programs in order to achieve additional emission reductions. Future market incentive programs will focus on renewable power generation technologies used in residential and commercial applications. It is assumed that as solar power technology advances, it will replace existing power generating technologies where feasible and cost-effective.

Comment: *Emphasize educational programs to provide consumers with a better understanding of the air quality consequences of their choices.*

Response: Staff will incorporate this suggestion into the Plan.

Comment: *Institute promotional programs for green products.*

Response: Staff will evaluate this suggestion.

Comment: *Provide emission information on new car window stickers.*

Response: In 2001, the District conducted a voluntary pilot program on increasing the consumer awareness on their purchases of new vehicles. This program consisted of contacting dealerships and distributing stickers and information brochures describing low-emission vehicles terminology and listing which vehicles fell into which categories. Dealers were requested to place stickers on new vehicles as a way of informing their customers of the low-emission capability of each vehicle. The District plans to expand the pilot program this fall.

Comment: *Include emission information on product labels.*

Response: The District and CARB have robust public outreach programs in place. However, staff will consider the specific suggestions to complement the existing programs.