APPENDIX H

DRAFT PROGRAM ENVIRONMENTAL ASSESSMENT COMMENT LETTERS AND RESPONSES TO THE COMMENTS

COMMENT LETTER 1

CITY OF LOS ANGELES

CITY HALL
LOS ANGELES, CALIFORNIA 90012

April 25, 2000

Barry R. Wallerstein, D. Env., Executive Officer
South Coast Air Quality Management District
21865 E. Copley Drive
Diamond Bar, CA 91765-4182

Dear Dr. Wallerstein:

The City of Los Angeles (City) has reviewed the Draft Program Environmental Assessment (PEA) for the Proposed Fleet Rules and Related Rule Amendments and is pleased to provide the South Coast Air Quality Management District (District) with our comments on the document. The City of Los Angeles has not taken a position on the proposed fleet rules, and is providing these comments in our role as a responsible agency under the California Environmental Quality Act (CEQA). Responsible agencies will be required to consider the environmental effects of any proposed action stemming from the rules. Therefore, it is vital that the PEA provide adequate information to allow the public and decision-makers to fully understand the implications of proposed actions. In that regard, as we describe in our comments below and in the attached Technical Comments, we would request that the document be revised in the following ways:

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- the potential impacts on the provision of public services should address sanitation, street sweeping and repair, utility, and transit services since these public services are directly affected by the proposed rules and have not been included in the PEA;
- the potential impacts on public health and safety from significantly increasing the use of gaseous fuels should be revised to reflect the potential hazards that such fuels may pose;
- the potential impacts on land use from the siting and construction of new alternative fuel infrastructure should be addressed so that local land use authorities, such as the City of Los Angeles, can use the PEA to inform land use decisions;

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- the alternatives analysis should consider the reasonable and feasible alternatives that the City suggested in our comments on the Notice of Preparation (NOP), such as an alternative that would rely on a voluntary, incentive-based program to achieve the project's goals, one that uses a fuel-neutral, emissions-based approach, and one that would extend the rule to all fleets, public and private; and
- the analysis of cumulative impacts should be revised to consider the proposed fleet rules in the broader context of actions by the California Air Resources Board and the U.S. Environmental Protection Agency (EPA) relative to vehicles, engines, and reformulated and alternative fuels.

We look forward to working with the District to improve the PEA so that it can be used by the District and responsible agencies to inform the decision-making process.

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Dr. Barry R. Wallerstein, Executive Officer April 25, 2000

Public Services

1-4 The City is concerned that the potential impacts on the provision of public services have not been adequately addressed in the PEA. In considering public service impacts, the PEA assesses impacts on schools, police, and fire services. However, given that these rules are directly targeted to public agencies and that public agencies provide a wide variety of public services, the PEA should have assessed the potential impacts of the proposed fleet rules on all public services, including the impact on sanitation,

1-5 street sweeping and repair, water and electricity services, transit and others. Since the PEA acknowledges that compressed natural gas vehicles have reduced payload capacity and range and are less reliable than conventionally-fueled vehicles, inefficiencies in the provision of vital municipal services would result from conversion of fleet vehicles to this and other alternative fuels. In addition, the conversion to

1-6 alternative fuel fleets is more expensive than continuing to purchase conventionally fueled vehicles, resulting in increased costs to government agencies that could potentially result in a reduction of services and/or financial impacts to residents. These potentially significant impacts must be analyzed and

1-7 appropriate mitigation measures must be included in the Environmental Assessment.

Public Health and Safety (Hazards)

1-8 The City is also concerned that the potential hazards of transporting, storing, dispensing, and using gaseous fuels have not been fully or adequately addressed in the PEA. The PEA's conclusion that the public health and safety concerns associated with clean fuels will be the same or less than those of conventional fuels is unsubstantiated by the evidence. The District must fully and comprehensively address the public health and safety concerns associated with large scale implementation of gaseous fuels

1-9 in order to identify and mitigate the significant hazardous impacts that these fuels may pose. The first step in this process would be for the District to meet with emergency response personnel, as the City has previously recommended. The City would also recommend the creation of a Safety Task Force comprised of fire safety and risk management personnel who can develop safety procedures, training and maintenance protocols, and responder guidelines for the use of gaseous fuel infrastructure and vehicles.

Land Use

1-10 As the PEA clearly demonstrates, the construction of fueling infrastructure will result in a variety of environmental impacts. Unfortunately, the PEA does not include Land Use impacts among those anticipated, reasoning that construction of new fueling infrastructure will either occur at existing maintenance and fueling facilities or at sites that are currently zoned for such uses. As a responsible agency, the City will be required to use the PEA to inform any land use decisions stemming from the proposed rules. Therefore, the potential that future fueling infrastructure development could occur in areas that are not currently zoned for such facilities or in areas adjacent to residential or other incompatible uses could result land use impacts that the PEA should identify and mitigate as necessary.

1-11 Additionally, physical constraints at some facilities could limit the ability to accommodate the additional fueling infrastructure or additional vehicles that may be required to overcome payload losses, possibly necessitating the expansion of fleet yards to adjacent properties or new sites. In the case of sanitation

1-12 vehicles, the siting of expanded or new facilities is generally difficult and could also result in land use impacts. Also, the potential hazards associated with gaseous fuels could also result in land use impacts from the siting of fueling infrastructure. If the PEA is to serve as a programmatic CEQA document which

1-13 responsible agencies can use or from which they can tier their projects, the District must assess the potential for land use impacts resulting from the proposed fleet rules and identify and mitigate any significant impacts that may occur.

Dr. Barry R. Wallerstein, Executive Officer April 25, 2000

Alternatives Analysis

1-14 The PEA has rejected the alternatives to the project suggested in the City's comment letter on the Notice of Preparation (NOP). The City believes that the alternatives requested could feasibly and effectively meet the project's objectives and would provide for informed decision-making by the District and responsible agencies through the disclosure of impacts associated with a range of project alternatives.

1-15 *Voluntary, Incentive-Based Program* – In our comments on the NOP, the City had recommended that the District an alternative approach be included for assessment in the PEA that would have relied on the creation of incentives to achieve the District's goals. The PEA's response to this recommendation was the District had "no jurisdictional authority to authorize or fund additional programs" and that "a voluntary incentive-based program is not considered a true alternative." The City is disappointed that this alternative has been rejected by the District. We would request that the District re-evaluate the broad authority provided to it under the Health and Safety Code and review State authority to determine whether an incentive-based alternative could feasibly meet the District's objectives. The District appears to have had such broad authority in the past when developing and implementing the market-based RECLAIM program.

1-16 *Fuel-Neutral, Emissions-Based Program* – The City had recommended that an alternative that uses a fuel-neutral, emissions-based approach to achieving the project's objectives be assessed in the PEA. In response, the District has indicated that the rules have incorporated a fuel-neutral approach "to a certain extent" and that in some of the rules "there is an element of fuel neutrality." Assessing a fuel-neutral, emissions-based alternative that fully and completely adopted the fuel-neutral concept would allow decision-makers and the public to understand the implications and benefits of the proposed fleet rules and should be included in a revised PEA.

1-17 *All Fleets Alternative* - Given that the PEA indicates that public sector fleet vehicles represent one-quarter of the fleet vehicles in the basin, extending the rules to all fleets, public and private, could potentially triple the benefits of the proposed rules. However, the PEA inappropriately screens out from further analysis this alternative on the basis that the District does not have sufficient staff resources. The District has indicated both in the PEA and in public comments that they intend to extend these rules to the private sector in the future and the PEA is meant to serve as a programmatic document that evaluates all known future actions stemming from the rules. Therefore, the potential benefits and impacts of applying the fleet rules to the private sector must be evaluated.

Economic and Social Impacts

1-18 The PEA concludes that the proposed rules will not result in any direct economic and social impacts, referring the reader to the forthcoming Socioeconomic Impact Report for a complete discussion of such issues. As commented above, the proposed fleet rules may result in significant costs to government agencies, potentially resulting in the diversion resources from other programs or in the raising of fees on the public to accommodate these additional costs. These potential impacts to public services should be addressed in the PEA. Additionally, the District's inability to provide the Socioeconomic Report for

1-19 review in conjunction with the PEA has resulted in a public review process that has been incomplete and disjointed. By bifurcating the environmental and socioeconomic analyses in this way, the District has committed a disservice to the public and decision-makers seeking to understand the full implications of the proposed rules.

Specific Analysis for Each Rule

1-20 By aggregating the rules together for purposes of analysis, the PEA does not allow the public, the

Dr. Barry R. Wallerstein, Executive Officer April 25, 2000

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regulated community, or decision-makers to understand the impacts and benefits of each of the proposed rules on an individual basis. CEQA requires that programmatic environmental assessments provide sufficient detail to assess individual projects on their own merits, otherwise focused assessments are be required for individual project approval. Therefore, in order to provide full and complete disclosure and in order to adequately inform the decision-making process, the PEA must detail the impacts and benefits of each rule individually as well as in the aggregate.

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The City appreciates your consideration of these comments and concerns. In light of the significant changes and additional analyses required in the PEA to produce a document that can be used by the District and responsible agencies to inform their decision-making processes, the District must revise and re-circulate the document for additional public review. Such additional review should coincide with the public review of the forthcoming Socioeconomic Report to provide a full and complete understanding of the benefits, impacts, and costs associated with the proposed rules. In this way, the Final Program Environmental Assessment can adequately inform and enlighten the public, the regulated community, and decision-makers as they consider the proposed fleet rules.

Very truly yours,

Ronald F. Deaton
Chief Legislative Analyst

Lillian Kawasaki
Environmental Affairs Department

attachment

TECHNICAL COMMENTS
DRAFT PEA OF PROPOSED FLEET RULES & AMENDMENTS

Comments on California Environmental Quality Act (CEQA) Process

1-22 As a responsible agency under CEQA and in following the process for responsible agencies (CCR 15096(d)), the City of Los Angeles has concluded that the "Draft Program Environmental Assessment for Proposed Fleet Vehicle Rules and Related Amendments" (DPEA) does not meet the Standards of Adequacy of an EIR (PRC 21083, CCR 15151). Therefore, the DPEA must be revised to address these inadequacies and be recirculated prior to certification by the Governing Board in accordance with CCR 15088.5(a)(4).

1-23 As defined under CCR 15121(a), "An EIR is an informational document which will inform public agency decision-makers and the public generally of the significant environmental effect of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project." The subject DPEA fails to assess feasible alternatives recommended by the City in our response to the Notice of Preparation (CCR 15126(d)(2)) and fails to address and include all foreseeable actions in the No Project alternative (CCR 15126(d)(4)). The subject DPEA also fails to address potential areas of significant direct and indirect impacts from the effects of the proposed fleet rules on land use, public services, and public safety. Finally, much of the information included in the DPEA does not provide a balanced view of the areas of disagreement. Additionally, the failure of the DPEA to summarize the main points of disagreement (CCR 15151) identified through the rule workshop and task force process is contrary to the requirements of CEQA and contrary to promoting an informed public and informed decision-making.

1-24 The City of Los Angeles will expand on the specific issues where we believe the document is inadequate in the comments below, which follow the format of the DPEA. Due to the incompleteness of the analysis, the City may provide additional comments on the DPEA.

Chapter 1 - EXECUTIVE SUMMARY

California Environmental Quality Act - Type of Environmental Assessment

1-25 The City appreciates and understands the additional flexibility inherent in a Program EIR, and supports the SCAQMD's selection of this environmental review process. However, the additional flexibility also creates special responsibilities to ensure that the public and decision makers are fully informed. The DPEA should be revised to address all of the inadequacies of the document, or detailed project Environmental Assessments that address the inadequacies of the analysis should be prepared for each individual rule and submitted for public review and comment.

Intended Uses of the Document

1-26 The SCAQMD has indicated that local public agencies may rely on the Draft PEA for making land use and planning decisions related to the proposed rules. However, the SCAQMD did not assess potential land use and planning impacts of the proposed project because it was assumed that existing refueling and maintenance facilities would be capable of being converted to

1 4/25/00

1-26 alternative fuel infrastructure. The siting of alternative fuel sites may require zoning and land use changes to comply with the requirements of the proposed rules, as not all sites are appropriate for alternative fuels and additional property may need to be acquired to meet the requirements of the proposed fleet rules. Further, the City is concerned that the potential direct

1-27 and indirect impacts the proposed rules would have on public services have not been adequately

1-28 evaluated or considered. Finally, the potential increased health and safety impacts to public and emergency personnel associated with the expeditious introduction of natural gas vehicles and infrastructure on a large scale have not been adequately assessed in the DPEA. By not

1-29 addressing the potential impacts associated with placing additional planning, land use, public service, and public safety requirements on the City, the full and potentially significant impacts have not been disclosed the DPEA. Therefore, the DPEA is inadequate for the SCAQMD's intended uses of the document and does not provide public agencies with sufficient information to make sound policy decisions.

1-30 The level of environmental analyses included in the DPEA does not conform to SCAQMD's intended use of the DPEA as a tool to facilitate the decision making process. The DPEA does not contain enough detail to determine the impacts and benefits of each of the proposed rules fleet rules and amendments. The lack of cost information makes it impossible to determine the cost-effectiveness of the proposed rules and to assess the public service impacts and, therefore, impedes informed decision making. Accordingly, the DPEA, in its current form cannot be used to support consideration by the Governing Board or responsible agencies for fleet rule adoption.

1-31 Therefore the City recommends that rule specific analysis be provided in the recirculated DPEA or in subsequent project specific DEAs in order to allow for meaningful public participation in the rule development process and informed decision-making.

Chapter 2 - PROJECT DESCRIPTION

SCAQMD'S Multiple Air Toxics Exposure (MATES II) Study

1-32 In addressing toxic emission levels in the Basin, the SCAQMD has used the findings of the Multiple Air Toxics Exposure Study (MATES) II to illustrate that motor vehicles and other mobile sources are the predominant source of cancer-causing air pollutants in the Basin. As commented on the MATES II Study, the City requests that the uncertainties associated with the MATES II need be fully disclosed, explained, and documented in the Draft PEA, and the health risk implications associated with the assumptions be discussed. In light of the recent submission of comments from several members of the Air Toxic Study Technical Review ("Technical Responses to the Multiple Air Toxics Exposure Study - II, Final Report" SCAQMD Agenda Item #19, April 21, 2000), the uncertainties associated with the study must be described in a manner that provides the public and decision makers with a good understanding of the uncertainties and their implications.

1-33 In addition to disclosing the uncertainties of the MATES II, study the SCAQMD should include a discussion on other diesel air toxic studies and air toxic reduction efforts currently underway in the recirculated DPEA, including a discussion of the 1999 Health Effects Institute study, an update of the US EPA efforts, and the California Air Resources Board Needs Assessment for Diesel Air Toxics. A complete discussion is necessary to promote an informed public and informed decision making.

Statutory Authority

The SCAQMD is relying upon authority granted under the California Health and Safety Code (H&SC) §40447.5 to establish a methanol equivalent requirement when replacing vehicles with alternative fuel vehicles. Specifically, engines must be certified to the PM and NOx exhaust emission standards as a methanol-fueled engine or better. The proposed rules are being promulgated to reduce both criteria and toxic air pollutants on the basis of "methanol equivalency" which the SCAQMD has not defined in terms that can be measured for compliance. The City requests that the SCAQMD provide a clear definition of "methanol equivalency" in the recirculated DPEA. 1-34

Additionally, the underlying provision of H&SC §40447.5 indicates that the SCAQMD implement this statue "to the maximum extent feasible." According to PRC 21061.1, feasibility must take into account economic, environmental, social, and technological factors. Based on the lack of socioeconomic analysis to date for the proposed project, the lack of technical feasibility analyses for the various technologies proposed, and incomplete descriptions and staff reports for proposed rules 1192-1196, 1186.1, and amendments to Rule 431.2, the SCAQMD has not fulfilled their statutory authority for implementation of the proposed rules. 1-35

Project Objectives

The objective of reducing criteria and toxic air pollutants in the Basin is shared by the City. In particular, the City fully supports the SCAQMD's Environmental Justice Initiative #7, which seeks to "create incentives to clean-up or remove diesel engines in the basin." To this end, the City has taken many actions to increase the use of alternative fuel vehicles within our fleet and among City contractors in a feasible and cost-effective manner. 1-36

Another project objective of the proposed rules is to increase the availability of funding for alternative clean-fueled vehicle technology and infrastructure projects. The City had recommended in our NOP comments (Appendix C) that a voluntary incentive-based program be considered as an alternative to the proposed regulatory approach. In rejecting the alternative (SCAQMD #1-14), the SCAQMD indicated that they have no authority to authorize or fund additional programs beyond those in which it is already involved. However, H&SC §40448.5 gives the SCAQMD substantial authority to create, seek funding, and administer non-regulatory clean-fuel programs and should have been assessed in the DPEA. Accordingly, the City believes rejection of this alternative is inconsistent with the project objective and should be evaluated in the recirculated DPEA. More importantly, the City requests that the SCAQMD gives serious consideration on the means to provide adequate funding including the use of current SCAQMD funding sources. 1-37

The City is concerned that in the DPEA, the SCAQMD identifies technologies that achieve emission reductions similar to those proposed rules, but then fails to evaluate or assess those technologies as alternatives to the proposed fleet rules. As an example, according to the information in the DPEA, particulate traps with low sulfur diesel fuels are capable of exceeding (and for the CARB Urban Bus Rule, are expected to exceed) the "methanol equivalency" criteria of the proposed rules. Therefore, not including the use of these technologies because of lack of certification by CARB does not allow the public and decision makers the opportunity to evaluate 1-38

1-38 cont. feasible alternatives that could meet project objectives. Renewable fuels, early introduction of fuel cells, cleaner conventional fuels, along with the technologies already included need to be provided in the recirculated DPEA. Such evaluation should include a discussion of the time horizon such technologies are anticipated to be available for commercial application, including CARB certification, and the emission benefits/impacts associated with those implementation schedules. Only with such information can the benefits of the various technologies be evaluated in light of the potential environmental impacts associated with each of the technologies.

1-39 The City supports the SCAQMD's objective of reducing criteria and toxic air pollutants, but believes targeting government and specific public-service private fleets is inconsistent with and may limit the SCAQMD's ability to fully achieve all the project objectives. To better understand the benefits and impacts of regulating public fleets versus all fleets, the City specifically requested that all public utilities, fuel providers and private fleets be considered equally under the proposed fleet rules. However, the City's request to evaluate an "All Fleets Alternative" was rejected as infeasible due to lack of staff resources. Yet, the SCAQMD has also stated that they intend to consider such an alternative in the future, indicating the alternative is feasible and the action foreseeable. The SCAQMD offers no impact or feasibility discussions on the alternative to justify excluding commercial fleets from the proposed project, even though an "All Fleets Alternative" would be expected to result in more benefits than the proposed project and better meet the project objectives. Since there were no significant impacts found in DPEA for public fleets, there is no basis to assume there would be impacts from private fleets meeting the same criteria or assumptions as those of public fleets. Finally, resource requirements could be reduced

1-40 if regulation of both public and private fleets of larger sizes (e.g. > 100 vehicles) were investigated, versus all public fleets of 15 vehicles or more. An assessment of this alternative must be included in the recirculated DPEA.

Project Description

1-41 The City takes issue with the adequacy of the public process to date, in light of the non-responsiveness of the SCAQMD comments on the NOP (attached). Considered review has been impeded by the SCAQMD failing to provide documents for timely review and comment, especially the Socioeconomic Analysis. In fact, as this is being drafted, the Socioeconomic Analysis is still not available. With the modest benefits of this proposal, the cost factors have even greater importance for informed decision making. In addition, funding requirements for proposed fleet rule implementation by local governments have a direct relationship to public service impacts that must be assessed in the DPEA. Therefore, the DPEA and the Socioeconomic Analysis are inextricably linked and should undergo concurrent review.

PR 1191- Clean On-Road Light- and Medium-Duty Fleet Vehicles

1-42 From the analysis in the DPEA, it is not possible to determine the specific impacts and benefits of Proposed Rule 1191, except to note that the expected benefits of the PR 1191 are minor.

1-43 The assessment of light- and medium- duty vehicles included in the DPEA is flawed by lack of comparison with existing regulations (CARB LEV I/II) which would provide some context to evaluate the impacts and benefits of the proposed fleet rules. The assessment does not include the existing alternative fueled and low emitting vehicles currently in use in effected fleets (Table 4-2), nor does it include any future purchases of low emitting and alternative fueled vehicles by

1-43 cont. effected fleets that would occur under existing policies and programs. Since the assumptions on the baseline are suspect and methods to calculate emission benefits for this rule are absent, the City suggests the methods and assumptions be clearly disclosed in the recirculated DPEA.

1-44 The DPEA must evaluate the impact of administrative record keeping and reporting associated with the rule. In the 1997 Air Quality Management Plan (AQMP), the SCAQMD removed several control measures included in the 1994 AQMP due to significant administrative burdens associated with the rules, in light of the minimal air quality benefits achieved by the rules. The DPEA fails to evaluate the impacts of record keeping and reporting on the regulated community, thereby precluding decision makers from considering such impacts within the context of overlap with CARB regulatory programs. The additional failure to consider the record keeping burden in light of the minimal benefits of proposed Rule 1191, does not allow decision makers to balance these issues as was done for the AQMP measures.

1-45 The DPEA does not evaluate the impacts to public services resulting from the authority proposed to be granted to the Executive Officer to approve City vehicle purchases. This rule provision has the potential to be time consuming, inefficient, and could potentially result in impacts on providing public services. Our criteria are based on providing the best possible service to our citizens in an environmentally sensitive manner, with the maximum efficiency and the lowest cost to the public, and placing those vehicles into service as quickly and consistently as possible. The DPEA should evaluate the impacts of such a policy of providing SCAQMD oversight of vehicle purchases based upon air quality as the criteria, on public services and provide appropriate mitigations to minimize impacts to public services.

1-46 The credit program proposed by the SCAQMD was not assessed in the DPEA. The SCAQMD should provide an analysis of the impacts of implementing the credit program in the recirculated DPEA. The SCAQMD should justify why only alternative fueled SULEV and ULEV vehicles are eligible for credit programs under the proposed rules. Fundamentally, the objective of reducing criteria and air toxic emissions should be the highest priority of the rule, any technology that meets those emission based goals should be considered equally under the rule.

1-47 Additional information on: the cost of implementation; the benefits of existing use of alternative fuel and low emission vehicles; and the benefits of the continuing implementation of existing policies and programs to increase the use of alternative fueled and low emission vehicles is needed to allow thorough evaluation of the potential impacts of the rule.

PR 1192 - Clean On-Road Transit Buses

1-48 The level of analysis in the DPEA is inadequate for the City to comment meaningfully on the impacts and benefits of the rule. Although, the City requested a comparison of the benefits of Proposed Rule 1192 with the CARB Urban Bus Rule, that comparison has not been provided. Alternative B does not allow resolution of this question since all other rule impact and benefits are also included in the alternative. This lack of analysis to allow meaningful review of the specific elements of the alternative and proposed rules is a serious deficiency under CEQA, which the SCAQMD must correct in the re-circulated DPEA. In addition, such an analysis is necessary to ensure that proposed rule 1192 is not duplicative or inconsistent with CARB's Urban Bus Rule.

5 4/25/00

1-49 As commented above, the City is concerned that in the DPEA, the SCAQMD identifies technologies that achieve emission reductions similar to those of the proposed rules, but then fails to evaluate or assess those technologies as alternatives to the proposed fleet rules. Renewable fuels, early introduction of fuel cells, use of hybrid electric buses, and clean-diesel technologies, along with an objective evaluation of the technologies already included in proposed Rule 1192, need to be provided in the recirculated DPEA. The evaluation should include a discussion of the time horizon for each technology becoming commercially available, including CARB certification, and the emission benefits/impacts associated with those implementation schedules. Only with this information can the benefits of the various technologies be weighed in light of the potential environmental impacts and costs associated with each of the technologies.

PR 1193 -Clean On-Road Residential and Commercial Refuse Collection Vehicles

1-50 The DPEA does not contain sufficient information on the impacts/benefits of implementing this rule. Further, the DPEA fail to address the public service aspects of this rule. The City has previously commented that the transition to alternative fueled refuse collection vehicles may result in adverse significant operational changes from the decreased range, payload, and reliability of alternative fueled vehicles and infrastructure. The need to have additional trucks and additional fueling trips may extend the hours of refuse collection and may require significant modifications to current collection schedules, increase overall vehicle miles traveled (VMT) for City refuse collection services, and increase City staff necessary to provide the current level of service.

1-51 The SCAQMD has failed to provide the economic analysis to determine if implementation of the proposed Rule 1193 is cost-effective, feasible and to assist in evaluating impacts to public services associated with funding needs. The attached preliminary cost analysis shows the cost of implementing the proposal would be in the range of tens of millions of dollars a year beyond the cost of current operations. To fund such significant increases in costs of refuse collection associated with Rule 1193 implementation, governmental agencies would divert fiscal resources from other less essential and non-legally mandated programs or increase fees to residents. These potentially significant impacts must be analyzed in the recirculated DPEA and appropriate mitigation measures identified.

1-52 The DPEA acknowledges, but fails to provide any estimate of the additional fueling trips that would be required due to the lower energy content of the alternative fuels. The City has previously commented that the DPEA needs to consider the additional vehicles (estimated at 7-10%) necessary to provide the same level of service resulting from reductions in payload capacity and range. In addition, increases in worker trips would be experienced, as additional staff would be required to drive and maintain the additional alternative fueled vehicles required. The increase in VMT associated with alternative fueled refuse truck fleet is anticipated to reduce the emission benefits of the proposed Rule 1193. The City has repeatedly requested in the Rule 1193 working group that the emissions associated with a refuse collection routes using a diesel fleet and a alternative fueled fleet be calculated to give a direct comparison of emissions associated with refuse collection. Assessing emission benefits on a per-mile basis is inappropriate in light of the significant changes to refuse collection procedures associated with alternative fueled fleet operations.

1-53 Consistent with previous comments, the City request that the emission benefits specific to proposed Rule 1193 be clearly presented in the recirculated DPEA. In addition, the methodology and assumptions used to generate the emission estimates for proposed Rule 1193 need to be clearly presented and disclosed for public review and comment.

PR 1194 - Commercial Airport Ground Access
PR 1196 - Clean On-Road Heavy-Duty Public Fleet Vehicles
PR 1186.1 - Alternative Fuel Sweepers

1-54 Specific information on these proposed rules is insufficient, and therefore, meaningful review and comments on the adequacy of the DPEA assessment of these rules cannot be provided at this time. Consistent with previous comments, the City requests that once the rule parameters are defined, the emission benefits specific to each of the proposed rules (1194, 1196, and 1186.1) be clearly presented and rule impacts appropriately assessed in the DPEA. Impact assessments must include impacts to public services. The City will provide comments on this proposed rule in the recirculated DPEA, and subsequent rule development.

PR 1186.1 - Alternative Fuel Sweepers

1-55 Many of the issues associated with proposed Rule 1186.1 are of similar concern as those expessed by the City in our comments on Rule 1186, and are attached for your guidance in developing proposed rule 1186.1.

PAR 431.2 – Sulfur Content of Liquid Fuels

1-56 The inclusion of this rule is unclear in the context of the DPEA, since the SCAQMD has determined that Clean-Diesel technologies are not available and are not considered in the analysis of benefits. Further, we can find no analysis of the implementation and benefits of amended rule in the DPEA. In the recirculated DPEA, the SCAQMD must discuss the purpose, benefits, and impacts of this rule.

Rule Adoption Schedule

1-57 As previously indicated, the City requested that the SCAQMD assess an "All Fleets Alternative" in the DPEA. The SCAQMD indicated that there were insufficient staff resources to evaluate this alternative within the rule adoption timeframe and therefore, this alternative was not considered to be feasible. At the same time, the SCAQMD has indicated that the exact schedule by which the various proposed rules will be heard by the Governing Board is "tentative at this time" and depends on "resolution of various issues." This inconsistency must be clarified as it does not provide the public and decision-makers with full disclosure of possible feasible alternatives.

Air Quality Benefits Estimate

1-58 This section appears to be incorrectly labeled. The bullets address the reasons supporting promulgation of the rules, but not how the benefits were actually estimated. None of the underlying assumptions used to produce Tables 2-1 and 2-2 are include in the bullet list. Comments on the bullet items follow:

1-59
- While the City agrees that mobile source emission must be significantly reduced to meet federal and state ambient air standards, the SCAQMD fails to include the CARB

1-59 cont. and EPA measures that are being developed to address mobile source reductions needed for attainment, and included in the recently approved 1999 revisions to the 1997 State Implementation Plan. In the recirculated DPEA, the SCAQMD should

1-60 provide a discussion of the emission standards and include these standards in the development of the "No Project Alternative."

- 1-61 Public private partnerships are essential to develop the necessary infrastructure to support alternative fuel vehicles. Although government fleets are 25% of the fleet vehicles, they may also be the fleets that have done the most to implement clean-fuel programs. The City is disappointed that the SCAQMD has failed to include the leadership efforts of many public fleets by ignoring the clean-fuel programs and alternative fuel vehicles already in place in the analysis of benefits. As commented previously, the 75% of fleets that are private may offer the greatest source of emission benefits and support for additional infrastructure development. In addition, resource requirements could be reduced if regulation of public and private fleets of larger sizes were evaluated, versus restricting the analysis to public fleets of 15 vehicles or more. Inclusion of private fleets into the evaluation of the proposed fleet rules, and the association impacts, is essential to informed decision making.

- 1-62 Funding programs are generally only available for projects not otherwise required by regulation. As commented on the NOP, the City is concerned that the proposed fleet rules will result in effected fleets being ineligible for existing funding programs. Additionally, it has been our experience with the Carl Moyer Program and the MSRC that, because of their operational characteristics, private fleets tend to be more cost effective than public fleets, making them more likely to obtain funding under these programs. Finally, these programs do not have adequate funding to support the current voluntary applicants, much less the fleets effected under the proposed rules.

- 1-63 Centralized fueling is more likely a function of fleet size and operations, than whether a fleet is government or privately owned. Further, inclusion of private fleets could help to establish the necessary volumes for cost-effective development of alternative fuel infrastructure. Since the SCAQMD rejected the "All Fleets Alternative," there is no information available for the public and decision-makers to evaluate this issue. This deficiency must be corrected in the recirculated DPEA.

- 1-64 Early commitment to existing alternative fuel infrastructure may encumber resources that will make transition to future technologies more difficult. The assumption that building natural gas infrastructure will allow transit agencies to more smoothly transition to fuel cell technology is not consistent with the DPEA's discussion that there may be several paths for the development of fuel cells (pg. 3-67).

- 1-65 The fact that clean diesel technologies may not be applicable to older "dirty" vehicles, is not relevant since the appropriate comparison is between new technologies and the proposed fleet rules, which only address new purchases. The goal should be to replace the older technologies as soon as possible. The SCAQMD proposal may actually prolong the use of the dirtiest vehicles.

Tables 2-1 and 2-2

1-66 It is our understanding from discussion with staff that the SCAQMD estimated 20,000 vehicles for the City of Los Angeles fleets. Applying the 1.2 correction factor results in an estimate of 24,000 vehicles used for the analysis. Subsequently, we have provided information that our current on-road inventory is approximately 15,000 vehicles, including police and fire department vehicles (approximately 4,000 vehicles). Thus, the SCAQMD appears to have overestimated the City's fleet by at least 9,000 vehicles and possibly by 13,000 vehicles. Additionally, the analysis did not account for our existing alternative fueled and low emitting vehicles. If this estimate is indicative of the general fleet estimations then the benefits of the rule have been overestimated.

1-67 The assumptions and methods used to calculate the benefits of the proposed rules are not given and therefore cannot be reviewed for accuracy and/or appropriateness. Also, there should be a comparison of the benefits of the rules when compared to CARB's LEV I/II requirements for Table 2-1, and the CARB and EPA heavy-duty engine standards for Table 2-2. Other issues associated with this table are that the particulate benefits are based on speculative technology adopted on the basis of a an uncited presentation. This undefined natural gas engine (pg. E-8) may be capable of operating at a NOx emission level of 0.0045 g/bhp-hr, but has not been certified in California and is not currently available for purchase. Using this speculative technology for calculating potential benefits of the fleet rules is inconsistent with the SCAQMD's determination that it would be inappropriate and speculative to evaluate the potential benefits of particulate traps with lower sulfur fuels because they are not certified. This inconsistency results in the benefits of the proposed rules being overestimated and feasible alternatives not being considered. More realistic comparisons of future heavy-duty technologies and associated emissions must be included in the recirculated DPEA.

Mobile Source Regulations

1-68 As noted above, the SCAQMD has failed to include the Heavy-Duty engine standards adopted by CARB and EPA to be implemented in October 2002, or the future standards that have been proposed by these agencies to be implemented in 2007. For informed decision making, the foreseeable implementation of the heavy-duty standards, the LEVI/II standards, and the policies of government and airport fleets to acquire low emitting and alternative fuel vehicles must be included in the No Project Alternate in the recirculated DPEA. The following engine standards should be included in the assessment:

1-69
- USEPA, New Emission Standards for Heavy-Duty Diesel Engines Used in Trucks and Buses, October 1997.
- USEPA, Proposed Rule - Control of Emissions of Air Pollution from 2004 and Later Model Year Heavy-Duty Highway Engines and Vehicles; Revision of Light-duty Truck Definition, October 1999.
- CARB, California Exhaust Emission Standards and Test Procedures for 1985 and Subsequent Model Heavy-Duty Diesel-Engines and Vehicles, amended February 26, 1999.

9 4/25/00

1-69 cont.

- CARB, California Exhaust Emission Standards and Test Procedures for 1987 and Subsequent Model Heavy-Duty Otto-Cycle Engines and Vehicles, amended February 26, 1999.

CARB's Transit Bus Rule

1-70 The City of Los Angeles requested in our comments on the NOP that the SCAQMD compare the CARB Urban Bus Rule with the SCAQMD's proposal for urban buses, proposed Rule 1192. Since the SCAQMD failed to provide that comparison, we would consider the "Alternative Fuel Path" to be a reasonable surrogate for the proposed Rule 1192. As noted above, CARB's "Diesel Path" appears to be superior to the "Alternate Fuel Path" in regard to particulates, by requiring lower particulate standards for diesel buses in 2002. The SCAQMD should provide this comparison to clarify this issue for the public and decision makers in the recirculated DPEA.

Chapter 3 - EXISTING SETTING

Air Quality

1-71 As previously indicated, there are many uncertainties associated with the MATES II study that should be disclosed, explained, and documented. Discussion of all relevant studies (including the 1999 Health Effects Institute study), in addition to discussion of efforts underway by CARB, USEPA and others, to address mobile source emissions must be included in the recirculated DPEA for informed decision making.

Transportation/Circulation

1-72 The Regional Transportation Plan, prepared by the Southern California Association of Governments (SCAG 1997) includes objectives of increasing efficiencies and reducing vehicle miles traveled. Based on increased number of fueling trips, decreased payload, decreased durability, in addition to centralized fueling and fuel delivery, it is anticipated the VMT for effected fleets would increase. The SCAQMD must acknowledge that the proposed fleet rules have the potential of increasing VMT for effected fleets and assess those impacts in the recirculated DPEA.

Public Services

1-73 In discussing the public services setting, the SCAQMD has only included schools, law enforcement, and fire protection for the discussion of potential environmental impacts and alternatives. There are other public services that will be impacted by the proposed project such as refuse collection, street maintenance and repair, utility services, and public transit that should also be included in the analysis. By excluding these types of essential public services, the SCAQMD has not adequately investigated and discussed the potential significant effects of the proposed project. Additionally, because the SCAQMD is promulgating rules that are specific to the types of vehicles which provide these public services (e.g., transit buses, refuse collection vehicles, street sweepers), it would be reasonable to include these types of public services in the analysis in the recirculated DPEA.

Land Use

1-74 Responsible agencies will be expected to rely on this DPEA for CEQA compliance for their land use, zoning, and property acquisitions decisions, etc., as a result of the proposed fleet rules.

1-74 cont. Without any analysis of the issues, responsible agencies will have to prepare their own CEQA analysis, resulting in increased and unnecessary impacts to local government resources. This deficiency must be corrected in the recirculated DPEA.

Energy/Mineral Resources - Methanol

1-75 There are no engines available for sale in the State of California that run on methanol or ethanol. Also, the SCAQMD does not address the long term air toxic aspects of methanol fuels, focusing on the acute effects only. This lack of any real "methanol equivalency" and the lack of any discussion is a serious deficiency that must be addressed in the recirculated DPEA.

Hazards

1-76 The SCAQMD fails to adequately assess the impacts of siting, use, and deployment of large numbers of alternative fueled vehicles into residential areas on public health and safety. The conclusion that public health concerns associated with gaseous fuels is the same or less than those associated with diesel and gasoline is unsubstantiated by the evidence. It is our understanding that natural gas has the highest hazard ranking (four on a scale of zero to four) given by the National Fire Protection Association, while diesel has a ranking of two. Recent accidents relating to the use of natural gas as a transportation fuel in New York, Ohio, the Los Angeles County Metropolitan Transportation Authority, and other areas, considered in conjunction with the significant facility upgrades (such as increased ventilation systems, removal of open flame heaters, explosion proof electrical systems, methane monitoring and alarm systems, etc) necessary to accommodate alternative fueled vehicles and the protective clothing required when fueling LNG point to the potential hazards associated with use of gaseous fuels. The SCAQMD must fully and comprehensively investigate, address, and mitigate the public health and safety impacts associated with alternative fuel use in fleets.

1-77 In the City's NOP comment letter, it was suggested that the SCAQMD meet with City Fire Department officials during assessment of public health and safety issues associated with the proposed fleet rules. As part of the Refuse Truck Working Group, the City recommended establishment of an infrastructure workgroup with City participation to address repair and maintenance facility retrofits necessary to bring facilities up to alternative fuel safety standards. It is now once again suggested that the SCAQMD confer with emergency response personnel in assessing the public health and safety impacts of the proposed fleet rules and development of cost estimates for alternative fuel infrastructure. It is further recommended that the SCAQMD establish a Safety Task force comprised of the region's fire safety and risk management personnel to develop safety procedures, training, maintenance, monitoring protocols, and responder guidelines for the use of gaseous fuel infrastructure and vehicles.

1-78 The City Fire Department has conducted a preliminary assessment of vehicle fuels entitled "Consequences of Fuel Emergencies." The document is attached for your information. The document should only be utilized in relation to consequence management of fuel emergencies and not as a treatise on storage, handling, dispensing, and transportation of alternative fuels. These issues would be addressed through the City's Fire Prevention Bureau. The "Consequences of Fuel Emergencies" illustrates that from an emergency responder point of view, gaseous fuels are of greater concern than diesel and gasoline fuels.

11 4/25/00

1-79 While the City believes that the use of alternative fuels can be made safe with appropriate evaluation, phased integration into operations, training, and implementation of appropriate safeguards, the public health and safety and hazards associated with alternative fuels must be carefully and comprehensively considered. However, to date there has not been a thorough review of the safeguards and training necessary to safely implement the proposed fleet rules and the draft DPEA fails to adequately address these very important issues.

1-80 The California Public Utilities Commission (CPUC) recently approved construction of the Pacific Pipeline, a petroleum product pipeline, through Southern California. As part of the assessment, the CPUC required extensive emergency service mitigations, including funding for emergency response equipment and fire personnel training for the various jurisdiction through which the pipeline passed, incorporation of state-of-the-art safety and pipeline monitoring systems, and establishment of an multi-jurisdictional Fire Department working group. Clearly, the public safety impacts associated with increased transport of LNG and LPG in the South Coast Basin, increased alternative fuel fueling stations from 47 to in excess of 300, increased number of repair and maintenance facilities accommodating alternative fueled vehicles, and deployment of large numbers of alternative fueled vehicles into residential areas would be expected to have a potential impact on emergency services and public health and safety.

1-81 The significance of the public health and safety issues become of even greater importance when recognizing that certain heavy-duty vehicle applications have specific hazards already associated with them. For example refuse trucks catch fire due to contents left in residential trashcans. Such refuse truck fires cannot be avoided and are currently responded to as two alarm fires by the City's Fire Department. The recirculated DPEA must consider the parameters and concerns of this unique application. The DPEA makes no attempt to evaluate the various issues associated with the heavy-duty applications proposed to be regulated and therefore fails to address potentially significant public health and safety concerns and identify appropriate mitigation measures.

1-82 The City specifically requests that the SCAQMD include as a mitigation measure for public health and safety impacts purchase of potable methane sensors for the City's 190 Fire companies at a total estimated cost of $342,000 ($1,787 per unit) and emergency personnel training. Such equipment and training is necessary for emergency personnel to expeditiously assess the situation involving natural gas vehicles and/or facilities, thereby protecting Fire Department personnel responding to incidents, as well as providing for immediate implementation of measures appropriate to protect the public from hazards.

1-83 In addition, the City requests that the SCAQMD include a mitigation to increase California Highway Patrol inspections of vehicles transporting fuels. Although DOT regulations exist to ensure safe transport of alternative fuels such as LNG and LPG, it is important to ensure that DOT regulations are followed. With the increase transport of LNG and LPG associated with the proposed fleet rules, mitigations to ensure safe transport are warranted.

1-84 H&SC §40448.5 gives the SCAQMD authority to adopt a program of activities for increasing the use of clean-burning fuels and to seek private-sector funding. Such authority appears to allow the use of funds for activities such as funding of mitigation measures necessary and appropriate

1-85 to facility the use of alternative fuels. In addition, with the substantial benefits to be accrued to

12 4/25/00

1-85 cont. natural gas related businesses associated with the proposed rule, it would seem reasonable and appropriate to seek funding for mitigation measures from those entities.

Chapter 4. ENVIRONMENTAL IMPACTS & MITIGATION MEASURES

Introduction

1-86 The SCAQMD's contention that impacts associated with Rule 1191, 1192 and 1193 are similar to those of the other rules does not relieve the SCAQMD of its obligation to assess the potential impacts as "specifically and comprehensively as possible" (CCR 15168(c)(5)). This is especially true since the DPEA does not disclose that the information necessary to complete these analyses is unavailable. In this regard, the DPEA is deficient and must be corrected and re-circulated for public review and comment prior to consideration of the proposed fleet rules by the Governing Board.

Proposed Fleet Vehicle Universe

1-87 The SCAQMD appears to have overestimated the number of vehicles in the City's on-road fleets that would be affected by the proposed fleet rules by at least 9,000 vehicles. Further, in Table 4-2, the inventory does not include the already existing alternative fueled low emissions vehicles in the affected fleets. The analysis also does not consider the on-going policies by the City of Los Angeles and other agencies to increase the use of alternative fueled and low emission vehicles in fleets. The current alternative fuel transit bus fleet of over one thousand buses, which is approximately 25% of all buses in service, were not included in the baseline, resulting in an overestimation of the benefits of the rules.

Methanol

1-88 As discussed above, the increased use of methanol in the foreseeable future is very unlikely. The SCAQMD's assumptions for including methanol in the future fleet projections is unwarranted in light of the absence of any vehicles available for purchase, the lack of methanol production, and the declining inadequate infrastructure (pg. 3-61). Under the current proposals, the introduction of ethanol based technologies and fuel blends is less speculative than a future role for methanol.

1-89 Without any methanol certified engines and the lack of any air toxic or emission data on these engines other than 0.031 g/bhp-hr for particulates, the City would ask the SCAQMD to define "methanol equivalency" and describe its public health benefits. Because of the dependence of the SCAQMD on this issue under the H&SC §40447.5, these issues must be fully addressed in the re-circulated DPEA.

1-90 The SCAQMD "believes it is speculative" to estimate the number of clean-diesel vehicles (pg. 4-8) but has not applied that same standard to alternative fuel vehicles, especially methanol. This inconsistency must be resolved in the re-circulated DPEA.

Table 4-6, Comparison of Conventional Fuels to Alternative Clean Fuels

1-91 The assumptions used in the modified AIChE comparative study (Table 4-6) have resulted in a fundamentally flawed analysis as discussed below:

13 4/25/00

1-92 Basing greenhouse gas emissions (CO2) on "equivalent heating value of a gallon of conventional gasoline" ignores the inherent efficiencies of diesel engines (Table 3-26) in that much more work is accomplished while consuming less carbon based fuel. This results in lower CO2 emissions per vehicle mile traveled compared to alternative fueled vehicles. The more appropriate comparison would be the volume of fuel or the BTUs necessary to travel a mile. This is inconsistent with the assumptions used for this table on fuel cost. In addition, it is important to account for methane emissions as well as CO2 emissions in assessing greenhouse gas impacts associated with the fuel types.

1-93 The City is not aware of any gasoline applications in the state of California that do not use CARB reformulated gasoline. The SCAQMD should verify, and if necessary, modify this table with CARB certified reformulated gasoline as the benchmark for all fuels.

1-94 It is not clear, but is assumed that the diesel fuel considered in the table is not CARB certified. Also missing is a comparison utilizing particulate traps and low sulfur diesel.

1-95 The AIChE methods and the SCAQMD modifications to incorporate diesel, not included in the original AIChE comparative study, must be fully disclosed. Especially since the comparison seems to be incomplete. The greenhouse gases evaluation does not discuss the relative contribution for natural gas, alcohol fuels, or electricity. However, all of these fuels are considered significantly better than diesel and reformulated gas at reducing greenhouse gases.

1-96 The assumption that diesel vehicles cost 2.5% more needs to be explained. Especially when the incremental cost of CNG/LNG vehicles is 20% or greater than diesel powered vehicles.

Air Quality

Table 4-7

1-97 The questionable assumptions used to produce this table have been discussed above. In summary, the City is concerned that the fleet inventory may have been overestimated, the existing alternative and clean-fuel vehicles in the fleet have not been accounted for, and policies and programs to increase the use of alternative fuel and low emission vehicles have not been included. This analysis needs to be corrected for the re-circulated DPEA.

Table 4-8

1-98 As commented previously, without a breakdown of the impacts/benefits of the specific rules, it is not possible to make meaningful comments. There appears to be an assumption that CARB and EPA will not implement new engine standards in 2007. If this assumption were changed to reflect CARB and EPA's proposed 2007 engine emission standards, there would be no benefits to these rules after 2007. This should be corrected in the analysis and the results should be disclosed to the public and decision-makers.

Table 4-9

1-99 The estimated relative toxic risk fails to include alcohol fuels and LPG for comparison. Although this table is incomplete, it does indicate that there is a trade-off of risks associated with diesel and natural gas engines. This trade-off in toxic emissions associated with implementing

1-99 cont. the proposed fleet rules could result in a potential increase in exposure to benzene, 1,3 butadiene, acid aldehydes, and heavy metals such as hexavalent chromium. The implications of such toxic emission tradeoffs should be fully explored and discussed in the re-circulated in the DPEA.

1-100 The SCAQMD should evaluate and model the health benefits of the proposed fleet rules and the alternatives assessed in the DPEA. Modeling should be similar to that done for the MATES II. Since different fuels may vary in the generation of toxic air contaminants, the SCAQMD should provide an analysis of the relative toxic impacts of the fuels under consideration. Upon determining the health benefits of the proposed fleet rules, the SCAQMD should evaluate the cost-benefit of the proposed fleet rules and alternatives in the Socioeconomic Analysis with the intent of identifying the most effective means to achieve the greatest health benefits for those communities most impacted.

1-101 The table should be modified to include the risk reduction possible from particulate traps and low sulfur fuel, as well as the currently undisclosed risks of methanol, ethanol, propane, and any other potential fuels allowed by the proposed rules. In addition, the table should be modified to include the expected benefits of each of the proposed fleet rules individually for informed decision making.

Operational-Related Impacts

1-102 The assumption that existing diesel and gasoline fueling infrastructure would be replaced with alternative fuel stations (pg. 4-17, 4-19) ignores the reality that alternative fuel stations would generally be established in addition to existing fueling stations necessary to support the current fleet. Conversion of fueling infrastructure would only occur when the number of gasoline and/or diesel fueled vehicles in a fleet are so small that it would be impractical to maintain the existing infrastructure. This may occur in later years, but is unlikely to occur in the early phases of the rules. The proposed fleet rules will require the development of the alternative fuel sites, resulting in land use impacts that have not been assessed in the DPEA. This deficiency must be corrected in the recirculated DPEA.

1-103 It is very unlikely that new methanol infrastructure will be developed, especially when there are no methanol vehicles currently available. Past history with methanol vehicles and concerns over the toxic, corrosive nature of the fuel, and the very low energy value of methanol (Table 3-26) will probably preclude it from being a viable alternative fuel for the foreseeable future.

1-104 The City of Los Angeles agrees that current clean-diesel technologies would have to be used in conjunction with low sulfur diesel to comply with "methanol equivalency" (pg 4-17) and is participating in the ARCO EC-Diesel fleet project in hopes of demonstrating practical applications of these technologies. Even though such technology is not currently CARB certified, particulate traps and low sulfur fuels should be considered as a method of achieving the project objectives. Failure to do so is inconsistent with the SCAQMD's proposal to amend Rule 431.2. Since clean diesel technology may allow retrofit of current diesel engines to emission levels lower than the "methanol equivalency," it is of even greater interest as an alternative to the proposed fleet rules.

15 4/25/00

1-105 For the replacement of heavy-duty vehicles, the SCAQMD has indicated that fleet operators will have considerable flexibility in choosing the appropriate alternative fuel vehicle to avoid payload constraints since the implementation of the proposed rules is gradual. However, review of alternative fueled vehicles available, especially in refuse truck and street sweeper configurations, indicate that this is not the case currently. Therefore, the SCAQMD must assume payload losses in its analyses. Furthermore, the SCAQMD has recognized that alternative fueled vehicles have lower fuel efficiencies than gasoline or diesel and will require greater refueling trips or larger fuel tanks to perform the same level of service, but has not provided an analysis of the potential impacts. The SCAQMD has estimated that vehicles using M85, LNG, and LPG may need to refuel up to 68%, 55%, and 36%, respectively, more often than gasoline-fueled vehicles and 130%, 110%, and 86%, respectively, more often than diesel-fueled vehicles. For those vehicles estimated to convert to the alternative fuels indicated, the City recommends that the SCAQMD evaluate the potential emissions from additional miles traveled to refuel and the additional vehicles required to maintain service.

1-106

1-107 Although the SCAQMD acknowledges (pg. 4-26) that because of low energy content, alternative fuel vehicles may have to return to fuel much more frequently (55 percent to 130 percent), there is no indication that these additional trips were included in the analysis. Not including the additional Vehicle Miles Traveled (VMT) and the increased emissions associated with the operation of alternative fuels vehicles, results in an overestimation of the benefits of switching to alternative fueled vehicles.

Table 4-17

1-108 The calculation of increased fuel delivery trips is based on data included in Table F-8. In that table, the fuel efficiency (miles/gallon) for gasoline light- and medium-duty vehicles is listed at 21 miles per gallon, while heavy-duty diesels is listed at 29 miles per gallon. The City would refer the SCAQMD to the 1999 LACMTA study that indicates that 3.9 miles per diesel gallon is a more appropriate estimate of urban bus fuel efficiency. City refuse trucks achieve a fuel efficiency of 2.3 miles per diesel gallon (refer to attached cost estimate) and street sweepers would be expected to have similar fuel efficiencies. The SCAQMD's overestimation of fuel efficiencies serves to underestimate the projected number of additional fuel trips. This incorrect assumption and associated analyses must be corrected in the re-circulated DPEA. In addition, it must be verified that correct fuel efficiency assumptions are used when estimating emission benefits associated with the each of the individual proposed fleet rules.

1-109 The additional use of compressor engines cannot be excluded from the project impacts just because they will be covered under existing regulatory programs (pg. 4-28). All impacts resulting from the project should be disclosed for public review and informed decision making. The effect of those regulations to minimize those impacts should be disclosed but, by themselves, the regulatory programs do not eliminate the increased emission impacts.

1-110 The inconsistency of precluding clean-diesel technologies based on the contention that they are speculative and unquantifiable (pg. 4-32), while using a presentation on a future potential natural gas engine (pg. B-8) for quantification of the benefits of the proposed fleet rules must be reconciled. If CARB certification is the standard for feasibility, then that standard must be applied to all technologies.

1-111 The SCAQMD has missed the purpose of the City's comments on the economic and social aspects of the proposed rules (pg. 4-37). The focus was on including feasible alternative for assessment, as the SCAQMD acknowledges they should include those alternatives "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors". The contention that the SCAQMD does not have to assess economic effects that do not result in "physical change" is correct but ignores that economic effects can result in significant physical change. Failure to address the issue precludes informed decision making.

1-112 The centralized fueling assessment (pg. 4-41) should also include the additional trips and VMT that result from the reduced payload and range capabilities of alternative fueled vehicles when compared to diesel and gasoline powered vehicles.

Table 4-19

1-113 The benefits of the proposed rule come at the cost of increasing some criteria and air toxic pollutants. The tradeoffs of these benefits and impacts must be clearly presented and discussed. Additionally, emission factors comparing carbon monoxide (CO) emissions from the various engines have not been provided. The South Coast Air Basin is currently in non-attainment of CO and therefore, potential increases in CO emissions would be of concern. Since there is inadequate detail to determine the contribution from the individual sources subject to the proposed fleet rules, this table does not provide the information necessary to inform the public and decision-makers. All methods and assumptions used in preparing this table should be disclosed in the re-circulated DPEA.

Cumulative Impacts

1-114 Since the assessment is inadequate for the impacts/benefits associated with the proposed fleet rules in that it contains incomplete and incorrect information and does not address the potential duplicative impacts, the conclusion that there are no cumulative impacts is not supported by the DPEA.

Transportation/Circulation

1-115 Although the SCAQMD has indicated that there are no significant adverse transportation/circulation impacts associated with the proposed rules, the City believes there is a potential for local traffic congestion in the vicinity of refueling locations due to the different operational characteristics of alternative fuel vehicles. Based on lower fuel efficiency, reduced range, reduced payload, and reduced reliability, alternative fuel vehicles will likely make more trips and generate more VMT than their traditional counterparts. As such, the SCAQMD must consider these additional factors, conduct an analysis, and include the results of all potential transportation related impacts resulting from the proposed fleet rules in the re-circulated DPEA. Special attention should be paid to consistency with the Regional Transportation Plan and CO Hotspot issues in the revised analysis.

Cumulative Impacts

1-116 The assessment is inadequate for the impacts/benefits associated with the proposed fleet rules in that it contains incomplete and incorrect information and does not address the potential

17 4/25/00

1-116 cont. duplicative impacts of other regulations, policies, and programs. Therefore, the conclusion that there are no cumulative impacts to Air Quality is not supported by the DPEA.

Public Services

1-117 The failure to address public service impacts on refuse collection, street maintenance, and transit services, that have specific rules drafted, renders the DPEA analysis inadequate. The additional number of vehicles required and the reductions in range and payload could result in changes in operations with potentially significant effects. The assertion that "there must be an expansion or addition to existing . . . public services" (pg. 4-62) ignores the potential impacts of reduced or altered services. Delays in refuse collection would impact quality of life, if not public health. Reduced ability to sweep streets could result in increased fugitive dust emissions and water quality impacts (the Los Angeles County Municipal Stormwater Permit requires monthly street sweeping).

1-118 Of more importance are the potential impacts to public services in the event of an emergency. The potential failure of alternative fuel infrastructure in the event of an emergency, such as an earthquake, may restrict the City's ability to respond, particularly to restore utility services, repair streets and sewers, and collect and dispose of debris. The SCAQMD failure to assess these potential impacts must be corrected in the re-circulated DPEA and appropriate mitigation measures provided.

Cumulative Impacts

1-119 The assessment is inadequate for the impacts/benefits associated with the proposed fleet rules in that it contains incomplete and incorrect information and does not address the potential duplicative impacts of other regulations, policies, and programs. Therefore, the conclusion that there are no cumulative impacts to Public Services is not supported by the DPEA.

Hazards

1-120 The discussion of hazards associated with CNG, LNG and LPG are incomplete (pg. 4-78). Attached for your consideration is a White Paper prepared by the Los Angeles Fire Department that provides a description of the potential hazards associated with the various fuel types. The potential of an explosion from gaseous fuels presents greater risks to the public and emergency response personnel than incidents involving gasoline or diesel. The highly compressed nature of CNG adds significant cylinder and valve failure risks not associated with liquid fuels. The cryogenic nature of LNG increases the potential of freezing tissue and creating explosive boil-off conditions that do not exist with gasoline or diesel. The assertion that LNG, CNG, and LPG are safer because they have higher temperatures for auto-ignition and a narrower range of flammability ignores the frequency that such conditions are encountered in everyday settings. The real and documented potential for significant accidents resulting from the increased use of these fuels must be addressed in the DPEA and appropriate mitigation measures provided. These potential hazards must be disclosed to the public and decision-makers in the re-circulated DPEA.

Cumulative Impacts

1-121 The assessment is inadequate for the impacts/benefits associated with the proposed fleet rules in that it contains incomplete and incorrect information and does not address the potential

1-121 cont. duplicative impacts of other regulations, policies, and programs. Therefore, the conclusion that there are no cumulative impacts of Hazards is not supported by the DPEA.

Energy/Mineral Resources

1-122 The CEC report cited in the DPEA clearly shows the future use of methanol as an alternative fuel is unlikely, making the SCAQMD consideration of methanol speculative. The SCAQMD has estimated that approximately two stations per year for five years would be converted to methanol due to the proposed fleet rules. In addition, the SCAQMD estimated that approximately 0.5% of affected light- and medium-duty vehicles and 1% of heavy-duty vehicles will switch to methanol, which accounts for 750 vehicles total for the entire Basin. Although the SCAQMD has provided data that indicates there is a sufficient amount of methanol fuel available to comply with the proposed fleet rules, the City believes the SCAQMD must also include additional information on the availability of methanol-fueled vehicles and fuel delivery infrastructure, as it is the SCAQMD's intent to apply the proposed rules where it is technically and economically feasible.

1-123 The SCAQMD must also consider the impacts and energy use of compressor engines utilized at CNG stations (pg 4-28). As commented above, the fact that these engines are subject to permit regulations does not preclude the impacts of the compressors from consideration as part of the program. This insufficiency must be corrected in the re-circulated DPEA.

Cumulative Impacts

1-124 The assessment is inadequate for the impacts/benefits associated with the proposed fleet rules in that it contains incomplete and incorrect information and does not address the potential duplicative impacts of other regulations, policies, and programs. Therefore, the conclusion that there are no cumulative impacts to Energy/Mineral resources is not supported by the DPEA.

Hazards Effects

1-125 The Health and Safety requirements included in the discussion of various fuel types (Table 4-30) do not address the toxic and fire/explosive hazardous footprint of any of these fuels. The SCAQMD has not assessed the significant hazards which the rules may create. The potential for serious accidents from the use of natural gas and LPG, as evidenced in recent incidents acknowledged by the SCAQMD, must be assessed in the re-circulated DPEA. The Los Angeles Fire Department has provided a White Paper (attached) on the hazards of the fuels under consideration for use in assessing potential public health and safety impacts in the re-circulated DPEA.

Cumulative Impacts

1-126 The assessment is inadequate for the impacts/benefits associated with the proposed fleet rules in that it contains incomplete and incorrect information and does not address the potential duplicative impacts of other regulations, policies, and programs. Therefore, the conclusion that there are no cumulative impacts from Hazard Effects is not supported by the DPEA.

19 4/25/00

ENVIRONMENTAL IMPACTS FOUND NOT TO BE SIGNIFICANT

Land Use and Planning

The SCAQMD did not assess potential land use and planning impacts of the proposed project because it was assumed that existing refueling and maintenance facilities would be capable of being converted to alternative fuel infrastructure. Siting of alternative fuel facilities may require zoning and land use changes to comply with the requirements of the proposed rules, as appropriate sites may not be available or additional property may need to be acquired. Without specific knowledge of the requirements for siting alternative fuel stations or the zoning and land use requirements of those fuels, it is not possible to reach the conclusion that there will be no land use impacts. Therefore, the SCAQMD must address these impacts, especially since regulated governments must rely on the CEQA analysis for individual land use impacts. The inadequate assessment of land use impacts in the DPEA would preclude the use of the document for responsible agency CEQA purposes.

1-127

Chapter 5 - PROJECT ALTERNATIVES

Alternatives Rejected as Infeasible

Voluntary, Incentive Based

The City, in its comments on the NOP, recommended that an alternative that uses a voluntary, incentive based approach be included in the Environmental Assessment. Such an alternative would be consistent with the SCAQMD's Environmental Justice Initiative #7 which is to "[c]reate incentives to remove or replace diesel engines in the Basin." However, in rejecting this feasible alternative, the SCAQMD states that it lacks additional authority for these types of programs. Nevertheless, the SCAQMD has substantial authority to create, seek funding for, and administer clean-fuel programs under H&SC §40448.5. In addition, CEQA does not limit alternative analyses (CCR 115126) to review of only those areas within the jurisdiction of the lead agency, but is much broader in scope. The California Air Resources Board (CARB) has authority similar to that of the SCAQMD to establish incentive programs. Legislation could also be introduced, as was the case with the Carl Moyer Program, to establish incentive programs to clean up or remove diesel engine in the basin. Therefore, a project alternative involving an incentive program established by the SCAQMD, CARB, and/or the state should have been assessed in the DPEA. Therefore, the SCAQMD should re-evaluate this authority and reconsider an incentive based approach to meet the project objectives in the re-circulated DPEA.

1-128

Fuel Neutral Emission Standard

The City recommended in its comment letter on the NOP that the Environmental Assessment evaluate an alternative that is fuel-neutral and emission based. The SCAQMD should clearly define the "methanol equivalency" as an emission standard and assess the benefits of the proposed fleet rules on the basis of compliance with the standard, evaluate the environmental impacts based upon the most cost-effective technologies able to achieve the standard, and disclose that analysis in the re-circulated DPEA.

1-129

All Fleets

In the City's NOP comment letter, the City requested the SCAQMD to assess an All Fleets

1-130

20 4/25/00

Alternative in the Draft PEA in order to provide the broadest review of possible alternatives, with full disclosure of the impacts, benefits, and costs to insure informed decision making. The SCAQMD indicated that although an all fleets alternative may be an option for consideration in the future, "there were insufficient staff resources to evaluate this alternative within the rule adoption timeframe advocated by the Governing Board", and therefore, was not considered to be a feasible alternative. Insufficient staff resources to appropriately assess a reasonable alternative is not an appropriate screening criteria for a feasibility determination. Finally, resource requirements could be reduced if regulation of both public and private fleets of larger size were investigates versus all public fleets of 15 vehicles or more. The City once again requests that the SCAQMD evaluate the All Fleets Alternative as it meets the objectives of the project, is within the SCAQMD's regulatory authority under the H&SC §40447.5, and is expected to result in increased emission reductions.

1-130 cont.

Description of Alternatives

Alternative A - No Project

The underlying analysis of the No Project Alternative is inadequate because it fails to address the:

1-131

- CARB/EPA Oct 2002 heavy duty engine standards, the
- CARB/EPA proposed 2007 heavy duty engine standards, the
- Existing alternative fueled and low emission vehicles.
- Existing policies and programs for alternative fueled and low emission vehicle programs.
- Potential of other technologies to meet project objectives.

Each of these must be included as part of the No Project Alternative in the re-circulated DPEA.

APPENDIX E

LDV/MDV Methodologies

The implicit assumption in the analysis that fleet purchases in the absence of the proposed fleet rules would correspond to the mix of vehicles projected to be sold by manufacturers complying with CARB LEV I/II program is not clear. Using that assumption, it would be expected that as the percentage of the lowest emitting vehicles increased under the LEV I/II program, that the overall benefits of the proposed Rule 1191 and 1192 would decrease. However, in the analysis the benefits continue to increase every year after 2004. The SCAQMD needs to explain how the emission benefits continue to increase if the number of the compliant vehicles under the CARB regulation gets closer to the requirements of the proposed fleet rules.

1-132

HDV Methodologies

The comparison of current diesel standards of 0.10 g/bhp-hr with an engine emitting 0.045 g/bhp-hr is speculative (pg. E-8) since the SCAQMD has not provided any information on this technology, its likelihood of development, the timeframe of introduction, vehicle applications, or consideration of the variability of the engine class. Additionally, the 0.10 g/bhp-hr is a certification level not a test level so may not be suitable for comparison since the data from one

1-133

1-133 cont. engine is not adequate to determine the variability of the engine class and the appropriate certification level. Finally, the failure of the SCAQMD to consider the emission levels obtainable with other technologies presents an inconsistency relative to future technologies.

1-134 The SCAQMD did not provide the NOx emission factors used to compare heavy-duty diesel engines with alternative fueled engines in Table E-8. The statement that "it is anticipated that compliant natural gas powered engines will have lower NOx emissions compared to corresponding diesel engines subsequent to the October 2002 implementation of the 2.5 g/bhp-hr NMHC + NOx standard" is not supported in the DPEA. Although the heavy-duty diesel engines are subject to the October 2002 standards, alternative fueled engines, including natural gas engines, are not. In fact, cleaner natural gas engines will not be required until the 2004/2007 heavy-duty engine standards take effect, which was not considered by the SCAQMD in its analysis. Based on the lack of any regulatory requirement, the SCAQMD should explain/justify the emission assumptions made for heavy-duty alternative fueled engines in the future year comparisons in the re-circulated DPEA.

APPENDIX F

Table F-8

1-135 The fuel efficiencies of 21 miles per gallon for light- and medium-duty vehicles would appear to be very optimistic. The assumption that heavy-duty vehicles get 28.77 miles to the gallon is completely unrealistic. As commented above, the heavy-duty fuel efficiency is more likely to be around 2 to 3 miles per gallon. If this factor has been used to calculate the number of additional fuel trips, then the estimate may have been underestimated by a factor of ten for the heavy-duty vehicles. If the estimated emission benefits are based upon these flawed fuel efficiency assumptions, such estimates would also be inaccurate. These calculations should be revised and re-submitted for public comment.

1-136 As commented above, the lack of adequate information and the use of questionable information renders Appendix F insufficient for meaningful review. The deficiencies discussed above should provide guidance on the appropriate level of analysis required to make the recirculated DPEA sufficient as a tool to promote an informed public and informed decision making.

Additional References the SCAQMD should consider in addition to many already listed but not discussed.

USEPA. New Emission Standards for Heavy-Duty Diesel Engines Used in Trucks and Buses, October 1997.

USEPA, Proposed Rule - Control of Emissions of Air Pollution from 2004 and Later Model Year Heavy-Duty Highway Engines and Vehicles; Revision of Light-duty Truck Definition, October 1999

CARB; California Exhaust Emission Standards and Test Procedures for 1985 and Subsequent Model Heavy-Duty Diesel-Engines and Vehicles, amended, February 26, 1999

1-137

CARB, California Exhaust Emission Standards and Test Procedures for 1987 and Subsequent Model Heavy-Duty Otto-Cycle Engines and Vehicles, amended, February 26, 1999

CARB, Needs Assessment for Diesel Particulate emissions, on-going. www.arb.ca.gov. This program is being administered by CARB and is expected to be releasing finding later this year.

US General Accounting Office, Mass Transit, Use of Alternative Fuels in Transit Buses, Report to Congressional Committees, December 1999.

Harvard Center for Risk Analysis, Risk in Perspective, Fueling Heavy Duty Trucks: Diesel or Natural Gas? January 2000.

Attachments to City of Los Angeles Comments on the SCAQMD Draft Program Environmental Assessment for Proposed Fleet Vehicle Rules and Related Amendments

City of Los Angeles Letter, "Comments on the NOP/IS for Proposed Rule 1190", December 14, 1999.

City of Los Angeles Letter, "Comments on the Proposed Rule 1186", December 6, 1996.

City of Los Angeles Letter, "City of Los Angeles Review and Comments on the Draft 1997 AQMP", September 24, 1996.

1-138

City Fire Department, "Consequence Management of Fuel Emergencies", April 2000,

City of Los Angeles, "CNG Refuse Truck, Bureau of Sanitation - Incremental Costs Over Diesel Fleet", March 2000.

City of Los Angeles, "City of Los Angeles On-Road Fleet Vehicle Inventory, by Department, Fuel and Weight Class as of December 1999." March 2000.

COMMENT LETTER 1: CITY OF LOS ANGELES

Response 1-1: The City of Los Angeles asserts that they are a responsible agency for the project, which is the subject matter of the PEA. According to CEQA Guidelines §15381 a responsible agency is "[A] public agency that proposes to carry out or approve a project, for which a lead agency is preparing or has prepared an EIR or negative declaration. For the purposes of CEQA, the term 'responsible agency' includes all public agencies other than the lead agency **which have discretionary approval power over the project** [emphasis added]." This means that a responsible agency has discretionary approval authority over the project under consideration. The PEA specifies that the project is a number of rules requiring fleets of 15 or more vehicles to acquire alternative-fueled vehicles when purchasing or leasing new or replacement vehicles ("fleet rules") and requiring that the sulfur level of liquid fuel be reduced. In this context, the City of Los Angeles has no discretionary approval authority over any of the proposed fleet vehicle rules. Consequently, the City of Los Angeles cannot be considered a responsible agency for the proposed fleet vehicle rules. The authority is granted to the SCAQMD by Health & Safety Code §§40447.5, 40919 and 40920.5.

The City of Los Angeles may have discretionary approval authority over any projects that follow as a result of adopting the proposed fleet vehicle rules, such as construction of alternative fuel refueling stations, that are within its area of jurisdiction. In this situation, it is likely that the City of Los Angeles would be a lead agency. This situation, however, still does not qualify the City of Los Angeles as a responsible agency for the proposed fleet vehicle rules.

The SCAQMD prepared a program environmental assessment (PEA), in part, because the proposed fleet vehicle rules constitute rules, regulations, plans, or other general criteria that govern the conduct of a continuing program (CEQA Guidelines §15168(a)(3)). Subsequent activities in the program must be analyzed in light of the program CEQA document to determine whether an additional environmental document must be prepared. Through the PEA the SCAQMD has identified all potential adverse environmental impacts generated by the proposed project to the extent that these impacts can be foreseen and given the detail of the project itself.

The CEQA Guidelines recognize that, because a program CEQA document analyzes impacts from a project consisting of basic or broad policy considerations, projects that follow may require site-specific operations. For any projects that follow, a lead agency can use the PEA as the basis of the environmental analysis for the project. If impacts from the site-specific project are within the scope of the program CEQA document, no further environmental documents would be required (CEQA Guidelines §15168(c)(2)).

The SCAQMD is aware that the City of Los Angeles may rely on the PEA in making discretionary decisions regarding infrastructure siting and installation; however, the City of Los Angeles has an affirmative duty to conduct its own review if necessary and has the ultimate responsibility to interpret and analyze any aspects of the project under its jurisdiction. *Lexington Hills Assn. v. St. of CA., (*1988) 200 Cal.App.3d 415, 246 Cal.Rptr.97. *Save S.F. Bay Assn. v. S.F. Bay Conservancy,* 10 Cal.App.4th 922, 13 Cal.Rptr.2d 117.

Response 1-2: The PEA provides a comprehensive and, therefore, adequate analysis of potential adverse impacts that may result from the proposed fleet vehicle rules. The CEQA Guidelines indicate that the degree of specificity required in a CEQA document depends on the type of project being proposed (CEQA Guidelines §15146). The detail of the environmental analysis for certain types of projects cannot be as great as for others. For example, the environmental document for projects, such as the adoption or amendment of a comprehensive zoning ordinance or a local general plan, should focus on the secondary effects that can be expected to follow from the adoption or amendment, but the analysis need not be as detailed as the analysis of the specific construction projects that might follow. As a result, the Draft PEA analyzes impacts of a regulatory program with a degree of specificity commensurate with the degree of specificity of the entire proposed fleet vehicle program.

The five bullet points are general summaries of the specific comments contained in the remainder of the letter. Responses # 1-3 through #1-138 respond to each specific issue raised in these general summaries. Where necessary, the Final PEA will be revised to reflect responses to comments.

Response 1-3: As indicated by the number of public workshops, general fleet vehicle rule working group meetings, and working group meetings on the individual rules, the SCAQMD has made a substantial effort to work with affected or regulated agencies or parties to reach consensus, to the extent possible, on the specific requirements contained in each proposed rule. In fact, a representative from the City of Los Angeles has attended a number of these meetings. The SCAQMD welcomes any substantive information or other assistance the City of Los Angeles has to offer. As indicated in response to comment #1-1, by definition none of the public agencies regulated by the proposed fleet vehicle rules is a responsible agency. The only proposal for which there is a responsible agency is proposed amended Rule (PAR) 431.2 and that agency is the California Air Resources Board (CARB) because state law provides that this rule is subject to approval by CARB (Health and Safety Code §40447.6).

Response 1-4: The SCAQMD disagrees with the commentator's assertion that the Draft PEA did not adequately address potential adverse impacts to public services. SCAQMD staff consulted the CEQA Guidelines and CEQA case law for guidance

regarding the analysis of potential public service impacts. According to the "Public Services" section of the Environmental Checklist in Appendix G of the CEQA Guidelines, public services impacts include only substantial physical impacts associated with the provision of new or physically altered governmental facilities. Similarly, in *Goleta Union School District v. Regents of University of California (2d Dist. 1995) 37 Cal.App.4th 1025 [44 Cal.Rptr.2d 110]*, for a project that had the potential to increase student enrollment at the local school district, the court found that increased school enrollment resulting in overcrowding is not, in itself, a significant environmental impact requiring mitigation under CEQA. Instead, increased enrollment will only lead to such an impact if the increased enrollment will ultimately require physical changes in the environment, such as construction of new school facilities. In reaching this decision, the court relied on the following CEQA principles, which distinguish between economic and social effects (which do not constitute environmental impacts) and physical effects (which can constitute environmental impacts):

> "[e]conomic or social effects of a project shall not be treated as significant effects on the environment. An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on the physical changes." (CEQA Guidelines §15131(a)).
>
> The court also relied on the definition of a project which states in pertinent part, that a "significant effect on the environment" means a substantial or potentially substantial adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna…An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant (CEQA Guidelines §15382).

The above information relates to the proposed fleet vehicle rules in the following ways; the cost of purchasing fleets and installing infrastructure, in itself, is not a significant adverse impact unless it results in physical changes to the environment. Direct air quality impacts from installing refueling stations and potential indirect air quality impacts from additional VMT to reach a centralized refueling station, etc., are physical effects on the environment and have been evaluated in Chapter 4 of this PEA. Cost effects as they relate to construction of additional city services may be considered a significant adverse indirect environmental impact, while the effects of a project that may include a reduction in city services is not identified as a significant

adverse impact in the CEQA Guidelines, nor has staff found any case law to support this latter interpretation. In fact, staff reviewed the City of Los Angeles' *Draft L.A. CEQA Thresholds Guide* document to evaluate the public services significance thresholds proposed for use by the City. In general, the public services significance thresholds are related to increases in public services, not a reduction in public services.

The potential costs of the proposed fleet vehicle rules have been evaluated in a separately prepared socioeconomic impact analysis. In addition, the socioeconomic impact analysis includes information on potential funding sources that could be used to offset the additional costs of purchasing heavy-duty alternative fuel fleet vehicles.

With regard to potential physical adverse environmental impacts from a reduction in public service, the PEA includes an analysis of potential air quality impacts from a possible reduction in the number of transit buses available to bus riders and resulting vehicle commute trip emissions from a portion of these individuals driving their own vehicles to work. The PEA also include an analysis of potential physical adverse impacts resulting from insufficient funding to cover the additional costs of replacing a diesel bus with an alternative clean fuel bus. In this case, it was assumed that transit agencies would keep their diesel buses longer than would otherwise occur. The results of both of these analyses were incorporated into the emission benefits analysis in Chapter 4 (see Tables 4-7 and 4-8) and Appendix E-1 (formerly Appendix E in the Draft PEA). No other adverse physical environmental impacts to public services consistent with the guidance from the CEQA Guidelines and CEQA case law were identified, including potential adverse public impacts to sanitation, street sweeping and repair, and water and electricity services.

Response 1-5: Since alternative fuels, as permitted in the proposed fleet rules, have different properties that could affect the performance and drivability of vehicles powered by these fuels, it is expected that fleet operators would choose the particular alternative fuel and corresponding engine/vehicle combination that makes the most sense for the fleet. If payload capacity and range are important considerations in the vehicle selection process, then the fleet operator would strongly consider the use of liquefied natural gas (LNG). Based on fleet operator input, LNG powered vehicles only result in a nominal reduction in payload capacity, and achieve essentially an equivalent range as conventionally powered vehicles. With regard to reliability, first generations of alternative-fuel engine/vehicle technology were less reliable and cost more to maintain, which is usually true for most new technologies. However, based on input from engine manufacturers and fleet operators, alternative fuel technology (e.g., natural gas) has matured and can potentially result in maintenance costs that are not significantly different or even lower compared to diesel technologies.

Response 1-6: Costs associated with implementing the proposed fleet vehicle rules have been analyzed in the Economic Assessment. As noted in response to comment

#1-4, economic or social effects of a project shall not be treated as significant effects on the environment (CEQA Guidelines §15131). Costs that result in potential adverse physical changes to the environment, i.e., air quality, have been evaluated in the PEA. The commentator is referred to the response to comment #1-4 and the "Indirect Air Quality Effects" section of the PEA.

Response 1-7: Potentially significant direct and indirect adverse environmental impacts resulting from implementing the proposed fleet vehicle rules have been adequately analyzed in the PEA. The degree of specificity of the analysis is commensurate with the degree of specificity of proposed project (see also response to comment #1-2). Where significant adverse environmental impacts have been identified, in this case for construction air quality impacts, appropriate feasible mitigation measures have been identified. The commentator is referred to the "Construction-related Mitigation" subsection in Chapter 4 of the PEA for a discussion of mitigation measures applicable to air quality impacts. See also Table 4-15.

It should also be noted that pursuant to CEQA Guidelines §15168(c)(3), "An agency shall incorporate feasible mitigation measures and alternatives developed in the program EIR into subsequent actions in the program." This means that subsequent projects undertaken by other public agencies to comply with the proposed fleet vehicle rules where the public agencies rely on the PEA for the proposed fleet vehicle rules must incorporate the mitigation measures identified in the PEA into these future projects.

Response 1-8: The SCAQMD disagrees with the commentator's opinion that potential hazards impacts have not been adequately addressed in the PEA. The analysis in the PEA sufficiently and comprehensively addresses the potential hazards posed by the clean fuels. Sections 3 (pages 3-75 through 3-86) and 4 (pages 4-78 through 4-97) of the PEA provide a comprehensive assessment of the potential hazards associated with the clean fuels and how those hazards compare to those posed by conventional fuels (gasoline and diesel fuel). Numerous references including, for example, the Department of Energy (Clean Cities Fact Sheet, May 2000) and the Natural Gas Vehicle Coalition Bulletin (http://www.ngvc.org/safetybulletin.html) attest to the safety of gaseous fuels in widespread applications over a number of years.

The SCAQMD has provided substantial evidence in the PEA that hazard impacts from the proposed fleet vehicle rules will not be significant. The commentator has provided no evidence, information or data that refutes or contradicts the analysis of potential hazards impacts in the PEA. "Argument, speculation, unsubstantiated opinion or narrative, evidence which is clearly inaccurate or erroneous, or evidence of social or economic impacts which do not contribute to, or are not caused by, physical impacts on the environment, is not substantial evidence. Substantial

evidence shall include facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts." [Public Resources Code §21082.2.]

Response 1-9: The commentator incorrectly assumes that new fire safety and risk management procedures need to be developed and that fire safety and risk management personnel are not trained for responding to emergencies associated with gaseous fuels. The City of Los Angeles Fire Department (LAFD) was contacted and questioned concerning their alternative fuel response capabilities. The LAFD and Hazardous Materials Response personnel in Los Angeles are trained to respond to incidents involving releases of compressed natural gas (CNG), liquefied natural gas (LNG) and liquefied petroleum gases (LPG) and for compressed and liquefied gas incidents for compounds that are much more hazardous. This includes flammable compounds such gaseous and liquid hydrogen used in aerospace and refinery operations and pressurized toxic compounds such as liquid chlorine that is used in water and wastewater treatment and anhydrous ammonia used extensively in refrigeration applications. The LAFD has experience in dealing with CNG buses operated by the Los Angeles County Metropolitan Transit Authority (MTA), with LPG in vehicles and stationary tanks (LPG in stationary storage containers has been present in LA for many years), and propane vehicles operated by Los Angeles Department of Transportation. Additional training programs are currently being developed by LAFD for other alternate fuels and will be disseminated in the future. Discussion with the LAFD In-Service Training Unit (Chief Fry and Captain Webber) confirmed that all LAFD companies are currently capable of responding to LPG and CNG incidents. For large releases, they are trained to work with the County HAZMAT team. All LAFD companies have annual hazardous material "first responder" refresher courses. NFPA codes for CNG, LPG and LNG specify maintenance and system requirements.

In spite of the above, the SCAQMD developed and recently release to the public a Training Availability and Opportunity Document for PRs 1191 through 1196 in conjunction with the support documents already prepared or under preparation for the proposed fleet vehicle rules. Staff is obtaining information from organizations such as community colleges that offer courses on alternative clean fuel systems and maintenance, engine/vehicle manufacturers, and fuel suppliers (e.g., the Gas Company), as well as fleets that are using significant numbers of alternative-fuel vehicles. Safety and training are important issues to the SCAQMD, but they can be adequately addressed to the extent that entire fleets like Sunline Transit (operating transit buses in the Coachella Valley) have converted 100 percent of their bus fleet to natural gas operation, with the cooperation and assistance of the above mentioned organizations.

Response 1-10: Regarding any analysis of siting or land use issues, the PEA did not identify any land use issues. The reasons for this, as is stated in the PEA, are as

follows. It is anticipated that light- and medium-duty fleet vehicles, which will be regulated by proposed Rule 1191, will not require infrastructure changes because replacement vehicles would consist of CARB-certified LEV or cleaner vehicles such as ULEVs and SULEVs as required by the proposed rule. These vehicles can operate on conventional reformulated gasoline.

With regard to heavy-duty vehicles in the remaining proposed fleet vehicle rules, it was assumed in the analysis that these replacement vehicles will consist primarily of alternative-fueled vehicles (AFVs). It was also assumed that infrastructure changes such as construction of EV charging stations or natural gas compressors will largely occur at existing maintenance and refueling sites. In this situation it not likely that changes to existing zoning ordinances would be required. If AFV refueling stations must be constructed at sites other than existing maintenance and refueling sites, it is anticipated that they will be sited in appropriately zoned areas, which are not expected to require changes to existing zoning ordinances.

Because siting alternative fuel refueling stations is a land use issue, the responsibility of proper siting of alternative fuel refueling stations belongs to the local public agencies with general land use authority, i.e., cities or counties. If the City must purchase alternative fuel refueling sites, it is not known and cannot be known at this time where such facilities would be located. Therefore, it is speculative to assume that the proposed fleet vehicle rules will require the City to modify existing zoning ordinances. This conclusion is consistent with CEQA Guidelines §15145. It is understood that individual refueling sites, when ultimately procured, may need to undergo a site-specific CEQA evaluation by the appropriate CEQA lead agency, typically the agency with general land use authority, such as cities or counties. CEQA Guidelines §15168(c)(1) recognizes this possibility by stating, "If a later activity would have effects that were not examined in the program EIR, a new initial study would need to be prepared leading to either an EIR or a negative declaration." This means the necessity to prepare CEQA documents for site-specific projects subsequent to preparation of a program CEQA document does not make the program CEQA document inadequate or deficient in any way.

The SCAQMD contacted several municipal planning departments to inquire whether they had specific land use, zoning and permitting requirements or concerns for AFV refueling facilities, specifically focussing on CNG, since this is projected to be the most prevalent clean fuel for HDVs. The planning officials of the two municipalities that responded, the City of Long Beach and the City of Torrance, both stated that permitting and zoning requirements were identical for CNG or diesel facilities. Both cities already have experience in using CNG fleet vehicles and in permitting of CNG refueling infrastructure. In Long Beach the majority of the city fleet has already been converted to CNG. In Torrance, street sweepers and trash trucks are fueled by CNG. Based on this random inquiry within the Los Angeles basin, special land use, zoning

and permitting requirements, if any, are expected to be rare when planning for conversion to (or addition of) AFV refueling facilities. This conclusion is supported by comments made at the fleet vehicle rule working group meetings.

Response 1-11: The SCAQMD disagrees that the use of alternative-fuel refuse collection vehicles will require additional trucks as discussed in more detail under response to comment #1-50. The expansion of existing facilities or the need for new facilities may therefore only be plausible in isolated cases where the AFV refueling infrastructure cannot be accommodated within existing locations. As discussed under response to comment #1-10, if AFV refueling stations must be constructed at sites other than existing maintenance and refueling sites, it is anticipated that they will be sited in appropriately zoned areas, which are not expected to require changes to existing zoning ordinances.

Response 1-12: With regard to potential land use impacts the commentator is referred to the response to comment #1-10. Regarding potential hazard impacts the commentator is referred to the response to comment #1-8.

Response 1-13: With regard to the assertion that the City is a responsible agency, the commentator is referred to the response to comment #1-1. With regard to potential land use issues the commentator is referred to the response to comment #1-10. With regard to preparation of a program CEQA document and other public agencies' use of a program CEQA document, the commentator is referred to the responses to comment #1-1 and #1-2. See also the response to comment #1-7.

Response 1-14: Pursuant to CEQA Guidelines §15126.6, a CEQA document shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project or would substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. The CEQA document "**need not consider every conceivable alternative to the project** [emphasis added]**"** (CEQA Guidelines §15126.6(a)). The alternatives discussion and comparison of the relative merits of each project alternative in Chapter 5 of the Draft EA complies with these and all other relevant requirements regarding project alternatives in CEQA Guidelines §15126.6.

With regard to the specific alternatives suggested by the commentator in the December 14, 1999 comment letter on the Notice of Preparation and Initial Study (NOP/IS) for the proposed fleet vehicle rules, the SCAQMD evaluated each of the potential project alternatives recommended by the commentator. The proposed alternatives were ultimately rejected as infeasible as discussed in the section "Alternatives Rejected as Infeasible" section in Chapter 5 of the PEA and in responses to NOP/IS comments #1-14 through #1-18 in Appendix C of the Draft PEA. Evaluating potential project alternatives and including a discussion of the

rationale for rejecting potential project alternatives is consistent with CEQA Guidelines §15126.6(c).

Response 1-15: As indicated in response to comment #1-14 staff has evaluated the commentator's suggestion for a voluntary, incentive-based program and rejected it for a number of reasons. The quote provided by the commentator from the responses to comments on the NOP/IS is misleading as it provides only part of the rationale provided by the SCAQMD for rejecting an incentives-based alternative. First, the SCAQMD considers incentive-based programs to be part of the No Project Alternative. The reason for this determination is that there already exists a number of voluntary incentive programs including the Carl Moyer Fund and the MSRC Discretionary Funds Program. In addition to these incentive programs there are a number of other incentive programs, including the following: U.S. Internal Revenue Service (IRS) tax deduction for clean fuel vehicles and certain refueling properties; U.S. IRS electric vehicle tax credit for the purchase of qualified EVs and hybrid EVs; U.S. Department of Energy (DOE) Clean Cities Program, which coordinates voluntary efforts between local government and industry to accelerate the use of alternative fuels and expand AFV refueling infrastructure; U.S. DOE State and Alternative Fuel Provider Fleets AFV Credits Program, which is a program where credits are allocated to state fleet operators and covers alternative fuel provider fleet operators when AFVs are acquired over and above the amount required under existing programs or are acquired at a faster rate; State Energy Program, which includes provisions for competitively awarded financial assistance for a number of state-oriented special project activities including alternative fuels; and local government subvention funds provided by AB 2766 that can be used to purchase alternative fuel vehicles or engines. Because of the number and variety of voluntary incentive programs already available and the fact that the SCAQMD is already involved in the AB 2766 program, a separate voluntary incentive program would be duplicative with the No Project Alternative and, therefore, is not considered a true alternative.

A voluntary program is also not considered a true alternative since there is no enforcement mechanism whereby the benefits of the project can be assured. While the SCAQMD has authority to help administer certain voluntary programs such as the Carl Moyer program, it does not have authority to compel additional funds to be appropriated for such programs.

The SCAQMD's authority to regulate stationary sources, through its RECLAIM program for example, is not in question and is irrelevant to implementing a program controlling emissions from mobile sources such as fleet vehicles, either regulatory or voluntary. Contrary to the commentator's understanding of the RECLAIM program, it is not a voluntary program. Facilities with NOx or SOx emissions four tons per year or greater are required to be in the RECLAIM program, a market incentive

regulatory program, and are required to reduce facility-wide NOx or SOx emission by a prescribed amount on an annual basis. The RECLAIM program provides a great deal of flexibility, however, in how regulated facilities reduce emissions to comply with their declining annual allocations. Emission reductions obtained under the RECLAIM program are required by law to be equivalent to emission reductions that would have been obtained under the command-and-control rules from the AQMP that it replaced.

Response 1-16: As noted in the SCAQMD's response to the City of Los Angeles' NOP/IS comment #1-15 (see response to comment #1-15 in Appendix C of the PEA), the proposed fleet vehicle rules do incorporate fuel neutrality for the following reasons. With regard to the proposed fleet vehicle rules, fleet owners or operators would be required to replace heavy-duty fleet vehicles with vehicles that comply with the methanol equivalency provision contained in H&SC §40447.5. This means that any alternative clean fueled-vehicle that meets the methanol equivalency criteria could be used as a compliant replacement fleet vehicle.

PR 1191, which regulates light- and medium-duty fleet vehicles, requires replacement vehicles to consist of CARB-certified LEVs or cleaner vehicles including ULEVs and SULEVs. These vehicles operate on currently available reformulated gasoline. Fleet owners or operators can also replace fleet vehicles AFVs.

It is assumed by this comment, however, that the commentator is "disappointed' that an alternative allowing the use of diesel fuel was not included in the Draft PEA. First, at the time that the Draft PEA was released to the public and currently, there are no CARB-certified heavy-duty diesel engines available that can meet the methanol equivalency provision contained in H&SC §40447.5. Further, based on comments received at the various fleet vehicle working group meetings and workshops, control technologies for heavy-duty diesel engines that can meet the methanol particulate equivalency criterion are not expected to be available for another one to two years. Similarly, control technologies for heavy-duty diesel engines to meet the methanol NOx equivalency criterion are not expected to be available for approximate another seven years. In spite of the fact that there are currently no methanol equivalent CARB-certified heavy-duty engines, the Draft PEA identified potential clean diesel technologies and analyzed potential adverse environmental impacts that could be generated by these clean diesel technologies.

Since the release of the Draft PEA, some of the proposed fleet vehicle rules have been modified to allow greater use of diesel- and gasoline-fueled vehicles. These modifications are briefly described in the following paragraphs.

PR 1186.1 has been further clarified to include a technical infeasibility criteria and procedures provision, which is a demonstration by a fleet owner or operator that it is

technically infeasible to comply with the provisions of the rule requiring replacement of street sweepers with alternative fueled-sweepers because such sweepers are not commercially available for the specified application. A technical infeasibility finding can also be made if an AFV refueling station is not available within five miles of the vehicle storage or maintenance yards.

PR 1193 has been modified to allow, prior to July 1, 2002, replacement refuse trucks to consist of trucks with CARB-certified dual fuel engines. Dual fuel engines operate on both natural gas and diesel fuel simultaneously. The majority of the fuel burned is natural gas. Diesel fuel is used as the ignition source under the heat of compression. Dual-fueled vehicles can operate on 100 percent diesel fuel under certain operating conditions.

PR 1194 has been modified to allow replacement taxi or shuttle service fleet vehicles operating out of local airports to consist of CARB-certified ULEVs, SULEVs, or ZEVs. As already noted, ULEVs and SULEVs can operate on currently available reformulated gasoline. Courtesy shuttles operating to and from local airports would still be required to replace fleet vehicles with AFVs when buying new or replacing old fleet vehicles.

These modifications are not considered to be significant modifications to the proposed project requiring recirculation of the Draft PEA pursuant to CEQA Guidelines §15088.5 because no new significant adverse impacts would result; a substantial increase to the severity of an impact will not occur; etc. To the extent that greater use of diesel-fueled vehicles is allowed for complying with the proposed fleet vehicle rules a slight reduction in impacts could occur because there would be a minor reduction in the number of alternative fuel refueling stations that would need to be built. Significant adverse impacts (construction air quality impacts) would not be eliminated, however, because these impacts are generated by refinery modifications necessary to produce low sulfur fuel pursuant to PAR 431.2, which would be used by diesel vehicles. The PEA does contain sufficient analysis of the potential adverse environmental impacts associated with refinery modifications necessary to produce low sulfur diesel and use of such fuel along with associated diesel control technologies such as particulate traps, etc.

As noted above, the SCAQMD's authority over fleets is primarily based on California Health & Safety Code Section 40447.5, which allows the SCAQMD to require fleet operators of 15 or more vehicles to purchase vehicles which are capable of operating on methanol or other equivalently clean burning alternative fuel. Because of methanol's inherently low particulate matter (PM) emissions when used as a heavy-duty engine application, equivalently clean-burning fuels (including equivalent technologies) have been determined to include compressed natural gas (CNG), LNG, liquefied petroleum gas (LPG), battery-electric, and fuel cells. These fuels are also

consistent with permitted alternative fuels as contained in CARB's recently adopted Urban Bus Fleet Rule.

Response 1-17: A CEQA document is required to describe a "reasonable range of potentially feasible alternatives" to the project (CEQA Guidelines §15126.6(a)) (see also response to comment #1-14). A CEQA document is also required to describe reasonably foreseeable future phases of the project. The PEA describes all reasonably foreseeable fleet rules. While it is possible that the SCAQMD may adopt additional fleet rules applicable to private sector fleets in the future, whether such rules would be adopted or what form they could take is not reasonably foreseeable. Should such rules be developed, a future environmental assessment would be prepared.

Response 1-18: The City contends that the SCAQMD has not adequately considered social and economic impacts from the project. As an example, the City contends that the SCAQMD has not considered the project's costs to government agencies and the potential for reductions in services or increases in fees. The City's contention is without merit. In the first place, the SCAQMD is required to consider economic and social impacts only if they are related to a physical change in the environment. (City of Pasadena v. State of California (1993) 14 Cal.App.4th 810, 828; Citizens Association for Sensible Development of Bishop Area v. County of Inyo (1985) 172 Cal.App.3d 151, 169-170.) These impacts are fully considered in SCAQMD's Socioeconomic Impact Report. No environmental impacts resulting from increased agency costs have been identified or can be foreseen. Also, there is no requirement to consider social or economic impacts that do not cause significant environmental impacts. (See City of Pasadena, 14 Cal.App.4th at 828.) The increased costs from the rules, the only economic impact and social impacts the City has identified, need not cause any impacts to the environment. All non-environmental social and economic impacts have been identified in the SCAQMD's Socioeconomic Impact Report. See also response to comment #1-4.

Response 1-19: As noted in responses to comments #1-4 and #1-18 a CEQA economic or social economic or social effects of a project shall not be treated as significant effects on the environment. Since the Draft PEA did not rely in any way on the information or conclusions contained in the SCAQMD's *Economic Assessment* for the proposed fleet vehicle rules it is not clear in what way the review of the project is "incomplete and disjointed." The Draft PEA was available March 10, 2000, and was available for review by the public for over 45 days. This is consistent with CEQA requirements regarding the review period for a project with significant adverse environmental impacts (Public Resources Code §21091.

Response 1-20: The City of Los Angeles contends that each specific rule in the fleet rule series should have a separate analysis, and that failure to do so gives the public inadequate notice and opportunity for review and comment. The SCAQMD elected

to prepare a Program EA for the fleet rule series of rules in an effort to commence and prepare a document, which detailed and discussed the potential environmental impacts and provided the best and earliest opportunity for public review and comment. The PEA described the scope, intent and targeted affected fleets for each rule.

CEQA Guidelines §15165 requires that where a phased project is to be undertaken, and where the total undertaking comprises a project with significant environmental effect, the lead agency shall prepare a single program EIR for the ultimate project. A program EIR (or EA) described in CEQA Guideline §15168 is the appropriate document for the issuance of rules or regulations to govern the conduct of a continuing program. The Program EIR (or EA) is preferable because it allows a more exhaustive consideration of effects and alternatives, a better analyses cumulative impacts of the project as a whole, and avoids duplicative discussion of policy consideration and duplicate paperwork. See also responses to comments #1-1, #1-2 and #1-7.

Response 1-21: The SCAQMD seriously considers all comments received by all commentators on its CEQA documents. The SCAQMD, however, disagrees with the commentator's opinion that the analysis in the PEA requires substantive changes or additional analyses. As noted in the responses to comments #1-1, #1-2, #1-7, #1-13, and #1-20, the SCAQMD prepared a program CEQA document because the proposed fleet vehicle rules constitute an ongoing regulatory program. Further, the level of detail of the analysis is appropriate given the level of detail of the project. The commentator has provided no credible evidence that any of the analyses contained in the PEA are deficient in any way that would trigger the requirement to recirculate the PEA pursuant to CEQA Guidelines §15088.5.

Response 1-22: As noted in response to comment #1-1 is not a responsible agency for the proposed fleet vehicle rules. The City of Los Angeles comments that the PEA is inadequate for a number of reasons and must be re-circulated. CEQA Guideline §15088.5 outlines when re-circulation is required. The leading case in deciding when re-circulation is necessary is Laurel Heights v. Regents of Univ. of CA., (1993) 6 Cal.4th 1112, 26 Cal.Rptr.2d 231 (Laurel Heights II), which states:

> [W]e conclude that the addition of new information to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement…[R]eciruclation is not required where the new information added to the EIR "merely clarifies or amplifies…or makes insignificant modifications in…an adequate EIR." (Id. At pp. 1129-1130).

The comments raised by the City of Los Angeles do not require circulation because they do not provide new information of an significant adverse environmental effect of a physical change resulting from the project. See also response to comment #1-21.

Response 1-23: The SCAQMD is aware of the substantive and procedural requirements under CEQA and the PEA complies with all relevant requirements. Relative to project alternatives recommend by the City, the commentator is referred to the responses to comments #1-14, #1-15, #1-16, and #1-17. With regard to potential land use impacts, the commentator is referred to the responses to comments #1-10 and #1-13. Regarding potential public services impacts, the commentator is referred to the responses to comments #1-4, #1-6, and #1-18. With regard to potential public safety impacts, the commentator is referred to the response to comment #1-9.

When considering the standards of adequacy of a CEQA document, the CEQA Guidelines (§15151) recognize that disagreement among experts does not make a CEQA document inadequate. In this case disagreement refers to the facts and the analysis of potential adverse impacts contained in the CEQA document. In *Concerned Citizens of Costa Mesa, Inc. v. 32nd District Agricultural Assoc.* (1986) 42 Cal. 3d 929, the court held that "the EIR must contain facts and analysis, not just the agency's bare conclusions or opinions." In *Browning-Ferris Industries of California, Inc. v. San Jose* (1986) 181 Cal. App. 3d 852, the court reasserted that an EIR is a disclosure document and as such an agency may choose among differing expert opinions when those arguments are correctly identified in a responsive manner. Further, the state Supreme Court in its 1988 *Laurel Heights* decision held that the purpose of CEQA is to compel government at all levels to make decisions with environmental consequences in mind. CEQA does not, indeed cannot, guarantee that these decisions will always be those which favor environmental considerations, nor does it require absolute perfection in an EIR. The only disagreement expressed by the commentator are based on opinions that are unsupported by documentation, facts, or other data. As noted in response to comment #1-8, opinion does not constitute substantial evidence.

Response 1-24: As already noted the SCAQMD disagrees with the commentator's opinion that the PEA for the proposed fleet vehicle rules is inadequate. See responses to comments #1-21 and #1-22.

Response 1-25: As already noted the SCAQMD disagrees with the commentator's opinion that the PEA for the proposed fleet vehicle rules is inadequate. See responses to comments #1-21 and #1-22. With regard to the adequacy of the analysis of environmental impacts contained in the PEA, see also responses to comments #1-1, 1-2, #1-7, #1-8, #1-9, #1-10, #1-18, #1-19, and #1-20.

Response 1-26: With regard to the intended uses of the PEA by other public agencies, the commentator is referred to the responses to comments #1-1, #1-2. With regard to potential land use impacts and siting of AFV refueling stations, the commentator is referred to the responses to comments #1-10 and #1-13.

Response 1-27: The SCAQMD disagrees with the commentator's opinion that the direct and indirect impacts on public services have not been properly evaluated or considered. Since no specific public services were mentioned in this comment the reader is referred to the Public Services impact analysis in the PEA (p. 4-60 – 4-63) and response to comment #1-9, which address concerns regarding the ability of typical municipal fire protection services in addressing emergencies associated with clean fuels. See also responses to comments #1-4, #1-6, and #1-18.

Response 1-28: With regard to potential safety impacts, the commentator is referred to the responses to comments #1-8 and #1-9.

Response 1-29: As already noted the SCAQMD disagrees with the commentator's opinion that the PEA for the proposed fleet vehicle rules is inadequate or that it does not provide public agencies with sufficient information to make sound policy decisions. The SCAQMD is aware that the City of Los Angeles and other public agencies may rely on the PEA in making discretionary decisions regarding infrastructure siting and installation; however, the City of Los Angeles and other public agencies have an affirmative duty to conduct its own review if necessary and has the ultimate responsibility to interpret and analyze any aspects of the project under its jurisdiction. *Lexington Hills Assn. v. St. of CA., (*1988) 200 Cal.App.3d 415, 246 Cal.Rptr.97. *Save S.F. Bay Assn. v. S.F. Bay Conservancy,* 10 Cal.App.4th 922, 13 Cal.Rptr.2d 117. With regard to the adequacy of the analysis of environmental impacts contained in the PEA, see responses to comments #1-21 and #1-22. See also responses to comments #1-1, 1-2, #1-7, #1-8, #1-9, #1-10, #1-18, #1-19, and #1-20.

Response 1-30: With regard to later uses of the PEA in other public agencies' decision making process, the commentator is referred to the response to comment #1-29. Relative to the level of detail of the environmental analysis contained in the PEA, the commentator is referred to the responses to comments #1-2 and #1-7. Regarding the availability of cost information, the commentator is referred to the response to comment #1-19. See also responses to comments #1-4, #1-6, and #1-18.

Response 1-31: As noted in response to comment #1-1, the CEQA Guidelines recognize that, because a program CEQA document analyzes impacts from a project consisting of basic or broad policy considerations, projects that follow may require site-specific operations. For any projects that follow, a lead agency can use the PEA as the basis of the environmental analysis for the project. If impacts from the site-specific project are within the scope of the program CEQA document, no further

environmental documents would be required (CEQA Guidelines §15168(c)(5)). Currently, no impacts have been identified from each of the individual proposed fleet vehicle rules that are not within the scope of the PEA. If during the rule promulgation process new significant adverse environmental impacts are identified or existing adverse impacts are made substantially worse, then the appropriate subsequent CEQA document will be prepared (CEQA Guidelines §15168(c)(1)).

Response 1-32: The Multiple Air Toxics Exposure Study (MATES) II project represents one of the most comprehensive air toxics monitoring programs ever conducted in a major urban area in the country, and an extraordinary level of national and international interest has focused on this study. This project included air monitoring of over 30 toxic pollutants, both gaseous and particulate, at 10 fixed sites characterizing neighborhood-scale conditions over a one-year period; and a complementary microscale study using three mobile platforms for approximately one month at each of 14 additional locations. In addition to the monitoring, the toxics emissions inventory was further developed, and computer models were utilized to depict toxic risks for the entire Basin.

The SCAQMD acknowledges that there are various inherent uncertainties as part of the MATES II study as identified through the public commenting process for this study; however, these uncertainties are not significant to the extent that they would change the conclusions drawn from the study. The uncertainties inherent in the MATES II study are irrelevant to the analysis of potential adverse impacts from the proposed fleet vehicle rules. The authority to regulate fleet vehicles is granted to the SCAQMD by Health & Safety Code §§40447.5, 40919 and 40920.5. This means that the SCAQMD already has the authority to promulgate fleet vehicle rules and does not rely on the MATES II study for this authority. With or without the MATES II study the analysis of potential adverse environmental impacts would be the same.

The uncertainties associated with the MATES II study are clearly documented in the Final MATES II report (SCAQMD, 2000). At the commentator's request, however, some of the uncertainties associated with the MATES II report are summarized in the following sentences. The SCAQMD recognizes that there are inherent uncertainties associated with the toxic risk factor associated with diesel, as established in California, and that on a national level, there has not been any recommendation for a quantified value for diesel. However, the SCAQMD staff relied upon the medical expertise within the Cal EPA for establishing pollutant toxicity risk factors (as well as the state ambient air quality standards for criteria pollutants), and believes the current estimate to be appropriately health protective. Also, the SCAQMD staff accepts risk factors established by Cal EPA as applicable to the entire state. Another potential area of uncertainty, based on public comments in response to the MATES II report, is the potential under-estimation of risk from stationary sources. SCAQMD staff response is that the computer model utilized in the MATES II study properly

treated the relative contribution and distribution of all mobile and stationary source emissions, to ensure that the stationary source emissions and resultant contribution to overall toxic risk to ambient air would not be understated. The commentator is referred to the Final MATES II report for a more comprehensive discussion of the associated uncertainties.

Response 1-33: It is unclear what relevance other toxics studies, especially those "currently underway" have to the proposed fleet vehicle rules since these studies are unrelated to: the SCAQMD's authority to promulgate fleet vehicle rules; the proposed project; and the analysis of potential adverse environmental impacts from the proposed project.

Response 1-34: Health & Safety Code §40447.5 the authorizes the SCAQMD to require fleets to purchase vehicles capable of operating on "methanol or other equivalently clean burning alternative fuel." The "Statutory Authority" section in Chapter 2 of the PEA discusses methanol equivalency. Further, PR 1192 and PR 1193 in Appendix A of the Draft PEA also defined methanol equivalency. The commentator is, therefore, referred to those sections of the PEA. With regard to recirculation of the PEA, the SCAQMD continues to assert that the commentator has provided no information, evidence, or data that would trigger recirculation of the PEA pursuant to CEQA Guidelines §15088.5.

Response 1-35: The language the commentator refers to the SCAQMD's authority to require operation on alternative fuels "to the maximum extent feasible" when operating within the south coast district. The definition of feasible cited by the commentator in Public Resources Code §21061.1, applies specifically to findings a public agency must make concerning whether to mitigate or avoid significant effects identified in an EIR.

Response 1-36: In this comment, the commentator appears to agree with one of the project objectives identified in the PEA, reduce TAC and criteria pollutant emissions from public and certain private fleet vehicles. No other response is necessary.

Response 1-37: The City of Los Angeles comments that Health & Safety Code §40448.5 authorizes the SCAQMD to create and seek funding for a non-regulatory clean fuels program and this should be analyzed as an alternative. The SCAQMD has adopted programs to encourage voluntary usage of clean burning fuels and has funded numerous such projects. The authority granted to the SCAQMD by Health & Safety Code §40447.5, to establish fleet rules and require the purchase or lease of alternative fuel vehicles is wholly separate from §40448.5. The two do not provide comparable emission reductions and are not alternative. The commentator is also referred to the response to comment #1-15.

The comment requesting the SCAQMD to give "serious consideration on the means to provide adequate funding including the use of current SCAQMD funding sources" is not related to the CEQA analysis. However, a considerable portion of the Economic Assessment does identify potential funding sources, including current funding sources, to cover the incremental additional costs associated with AFVs.

Response 1-38: It should be clarified that, not only did the PEA identify mobile source diesel emission control technologies, but potential adverse environmental impacts from these control technologies were analyzed for comparison to alternative clean fuel technologies. The commentator is referred to response to comment #1-16 regarding the state of low emission diesel technologies. Therefore, sufficient information was presented to allow selection of these technologies if desired by the SCAQMD Governing Board.

In this comment, the commentator makes a number of recommendations regarding additional analyses to be included in the PEA. The commentator recommends that an additional analysis be performed for renewable fuels. Aside from ethanol, it is not clear what else the City would like to see evaluated since it does not define what it means by renewable fuels. Regardless, the PEA does identify ethanol as a potential clean fuel. As noted in the PEA, since ethanol has many of the physical and chemical properties as methanol, the analysis of methanol serves as a surrogate for ethanol. Potential adverse environmental impacts from methanol were comprehensively analyzed in the PEA (although it is not likely that methanol would be used for heavy-duty replacement vehicles because of the substantially higher life cycle costs, it was assumed that a small percentage of heavy-duty vehicles would convert to methanol).

Although substantial advances in fuel cell technology have occurred over the last few years, fuel cells are not yet currently available. As indicated in some of the proposed fleet vehicle working groups and public workshops, fuel cell engines are expected to be made commercially available in approximately seven to 10 years. To the extent that vehicles powered by fuel cells use alternative clean fuel refueling stations, analysis of fuel cells is addressed in the PEA. Because additional research and development is necessary before fuel cells can become commercially viable, any analysis of potential adverse environmental impacts specifically from fuel cells at this time would be speculative.

It is unclear what the commentator means by cleaner conventional fuels other than low emission diesel technologies. As already indicated, these were already analyzed in the PEA.

Finally, the SCAQMD disagrees with the commentator's opinion that the PEA needs to be recirculated. See responses to comments #1-21 and #1-22.

Response 1-39: For additional information regarding why an alternative regulating all fleets is infeasible, the commentator is referred to the responses to comments #1-14 and #1-17

Response 1-40: The commentator incorrectly states that the analysis of the proposed fleet vehicle rules did not identify significant adverse environmental impacts. The analysis in the PEA concluded that modifications to refineries that would enable them to produce low sulfur diesel would result in significant adverse construction air quality impacts in 2001 and 2002. Further, it is not necessarily correct to assume that no other impacts would occur if the fleet vehicles rules were expanded to cover all fleets. To the extent that such a project would require replacement fleet vehicles to consist of AFVs, additional AFV refueling stations might need to be built. Depending on the additional number of refueling stations that may be built concurrently, new construction air quality impacts could be generated. While it is possible that the SCAQMD may adopt additional fleet rules applicable to private sector fleets in the future, whether such rules would be adopted or what form they could take is not reasonably foreseeable. Should such rules be developed, a future environmental assessment would be prepared. See response to comment #1-14.

Response 1-41: The commentator's opinion that SCAQMD responses to comments submitted by the City on the NOP/IS were non-responsive is incorrect. The SCAQMD carefully considered all responses submitted by commentators on the NOP/IS and prepare comprehensive responses to all comments submitted (see Appendix C of this PEA). The commentator has provided no information at all to indicate in what way the NOP/IS comments were unresponsive. With regard to the relationship between the PEA and the Economic Assessment, the commentator is referred to the response to comment #1-19. See also responses to comments #1-4, #1-6, and #1-18.

Response 1-42: As explained in the section entitled "The Proposed Fleet vehicle Universe" in Chapter 4 of the PEA and as noted in response to comment #1-10, it is anticipated that light- and medium-duty fleet vehicles, which will be regulated by proposed Rule 1191, will not require infrastructure changes because replacement vehicles would consist of CARB-certified LEV or cleaner vehicles such as ULEVs and SULEVs as required by the proposed rule. These vehicles can operate on conventional reformulated gasoline. Consequently, no infrastructure impacts from construction of AFV refueling stations are expected to occur.

At the request of the commentator, the emissions reduction benefits have been estimated for each individual rule. The commentator is referred to Appendix E-1 (formerly Appendix E in the Draft PEA).

Response 1-43: The basis for the emission benefit calculation methodology for light- and medium-duty vehicles affected by the proposed fleet rules is to develop emission

reductions beyond the CARB LEV I/II regulations. This has been clearly shown in the Draft PEA (see Appendix E-1 (formerly Appendix E in the Draft PEA)). Therefore, a direct comparison between the proposed fleet rules and the CARB LEV I/II regulations is not relevant, since the proposed fleet rule emission benefits were determined to be surplus to and not in competition with the CARB regulation. With regard to future purchases of low emitting vehicles, the calculation methodology in the PEA automatically takes this into account since CARB future projections of low-emission vehicles are accounted for in the emission reduction calculation methodology.

Response 1-44: The record keeping requirements, which are minimal in nature, are necessary in PR 1191 to ensure rule enforceability. These requirements are not burdensome in that the proposed rule simply requires records that would generally be kept by properly managed fleets, in the absence of any fleet rule requirements. These include official DMV registrations, manufacturer, model-year, model, engine family number and fuel type for each vehicle. In addition to the modest requirements for record keeping, the record keeping requirements do not generate significant adverse environmental impacts to any environmental topics.

Response 1-45: Because there are potentially hundreds of fleets that could be affected by the proposed fleet rules, SCAQMD staff will most likely spot check fleet vehicle purchases, as deemed appropriate by SCAQMD compliance staff, to ensure compliance with rule requirements. In terms of government fleets, in particular, regular oversight of vehicle fleet purchases is not expected to be needed since many of these public agencies have already taken a leadership position in utilizing vehicles being facilitated for use by the proposed fleet rules. It is further expected that government fleets managed by large agencies (such as the City of Los Angeles) that have extensively analyzed the proposed fleets rules both from environmental and operational perspectives, will need minimal oversight from SCAQMD staff for rule compliance purposes.

Response 1-46: Since release of the Draft PEA in March 2000, at the request of affected fleet owners PR 1191 has been modified to allow the purchase of gasoline- or diesel-fueled medium-duty vehicles only if the fleet owner or operator can demonstration that a medium-duty engine/chassis configuration is not available from the list published by the Executive Officer or that a medium-duty engine/chassis configuration has not been certified by CARB as LEV or better. However, to qualify for the purchase gasoline- or diesel-fueled medium-duty vehicles at least one of the following two conditions must be met:

(A) The public fleet operator has sufficient prior purchases as of July 1, 2001 of alternative-fueled vehicles in the existing fleet that have been certified as ULEV, SULEV, or ZEV that would offset the emissions associated

with the gasoline- or diesel-fueled vehicle as specified under subparagraph (e)(4); or

(B) The public fleet operator purchases concurrently with the medium-duty vehicle, alternative-fueled vehicles in sufficient quantities that have been certified as SULEV or ZEV that would offset the emissions associated with the gasoline- or diesel-fueled vehicle as specified under subparagraph (e)(4).

The above changes to PR 1191 have been analyzed to determine if these modifications alter the analyses or conclusions in the Draft PEA. First, it should be noted that PR 1191 did not contribute to any of the potential environmental impacts in the PEA because PR 1191, which regulates light- and medium-duty fleet vehicles, requires replacement vehicles to consist of CARB-certified LEVs or cleaner vehicles including ULEVs and SULEVs. These vehicles operate on currently available reformulated gasoline. As a result, no infrastructure development is required, so no construction or other potentially adverse environmental impacts would be generated. Similarly, to the extent that PR 1191 allows currently available medium-duty gasoline or diesel vehicles to be purchased as replacement vehicles no infrastructure or other changes generating potential adverse environmental impacts would be generated because these vehicles are already currently in use.

Under these credit provisions there would be no net effect on the emission benefits anticipated for PR 1191 because emissions from gasoline- or diesel-fueled medium-duty vehicles would have to be offset through purchase of sufficient quantities of other fleet vehicles that have been certified as ULEV or cleaner.

These modifications are not considered to be significant modifications to the proposed project requiring recirculation of the Draft PEA pursuant to CEQA Guidelines §15088.5 because no new significant adverse impacts would result; a substantial increase to the severity of an impact will not occur; etc.

Response 1-47: With regard to potential cost impacts of the proposed fleet vehicle rules, the commentator is referred to the SCAQMD's Economic Assessment. See also responses to comments #1-4, #1-6, #1-18, and #1-19. With regard to the existing benefits from the use of AFVs, this is not part of the proposed project. However, as part of the emissions benefits analysis, the emission reduction benefits of the Consent Decree between heavy-duty engine manufacturers and U.S. EPA have been accounted for in the emission benefits analysis so there is no double counting of these emission reduction benefits. Similarly, the emission reduction benefits of CARB's urban transit bus fleet rule have also been incorporated into the emission reduction benefits of the proposed fleet vehicle rules to avoid double counting the emissions benefits. It should be noted that a portion of the environmental impacts generated by the fleet vehicle rules will actually be generated as a result of transit bus

fleet operators in the district complying with CARB's urban transit bus fleet. These reductions in potential environmental impacts effects from CARB's urban transit bus fleet rule have not been incorporated into the PEA. This means that the impacts identified in the PEA overestimate potential adverse impacts from implementing the SCAQMD's proposed fleet vehicle rules.

Further, Alternative B has been modified by eliminating the heavy-duty vehicle standards currently under consideration by CARB and incorporating the heavy-duty vehicle standards proposed on May 17, 2000.

In addition to the above, the emissions benefits analysis in Alternative B takes into consideration U.S. EPA's recently proposed heavy-duty engine emission standards (May 17, 2000) that are expected to be adopted within a seven-year time frame. Finally, with regard to existing voluntary AFV and low emission vehicle programs, the commentator is referred to the response to comment #1-15.

Response 1-48: At the time the Draft PEA, CARB's urban transit bus fleet had not been adopted. The emission reduction benefits of CARB's rule, based on what was available at the time were accounted for in Alternative B. Now that CARB's rule has been adopted, it's emission reduction benefits have been removed from Alternative B and incorporated into the emission benefits estimates for the proposed fleet vehicle rules. Further, Alternative B has been modified by eliminating the heavy-duty vehicle standards currently under consideration by CARB and incorporating the heavy-duty vehicle standards proposed on May 17, 2000. The U.S. EPA heavy-duty standards are very similar to the standards under consideration. These minor modifications do not change any conclusions in the PEA and do not trigger any of the criteria that require recirculation of a CEQA document pursuant to CEQA Guidelines §15088.5.

As has been previously communicated to City of Los Angeles environmental and fleet operations staff, the recently adopted CARB urban transit bus fleet rule establishes two compliance paths: a diesel path and an alternative fuel path. The diesel compliance path basically requires transit bus fleets to purchase diesel buses meeting certain emission standards along with certain other fleet related emission reduction requirements, and the alternative fuel path requires these fleets to purchase alternative -fuel buses meeting certain emission standards along with certain other fleet related emission reduction requirements. The net effect of PR 1192 will be to require transit bus fleets to choose CARB's alternative fuel path, in order to capture additional particulate matter and NOx emission reductions that would occur through the utilization of alternative fuel buses instead of diesel buses. Consequently, PR 1192 is not duplicative or inconsistent with the alternative fuel path in CARB's urban transit bus fleet rule. Further, the emission reduction benefits of PR 1192 have been described in the Staff Report for PR 1192. With regard to the level of analysis in the PEA, the commentator is referred to the responses to comments #1-2 and #1-7.

Response 1-49: As explained in Chapter 2 of the Draft PEA and in response to comment #1-16, the SCAQMD's authority to regulate fleet vehicles, contained in part in H&SC §40447.5, restricts the SCAQMD's authority to requiring replacement fleet vehicles to comply with specific methanol equivalency criteria. Diesel currently does not qualify as methanol equivalent for either PM10 or NOx emissions. In spite of this the PEA includes an analysis of potential environmental impacts from using clean diesel technologies. The commentator is referred to Chapter 4 of the PEA and responses to comments #1-16 and #1-38. With regard to renewable fuels and fuel cells, the commentator is referred to the response to comment #1-38.

Response 1-50: The SCAQMD disagrees with the commentator's opinion that the PEA does not include sufficient information on the impacts and benefits of implementing PR 1193. The SCAQMD has estimated the air quality benefits that would result from implementing each of the proposed fleet vehicle rules and associated rule amendments separately. The commentator is referred to the section entitled " Emission Reductions from Implementing the Proposed Fleet Vehicle Rules and Related Amendments and Appendix E. The SCAQMD disagrees that the information presented regarding impacts is not sufficient. The SCAQMD has attempted to identify reasonably anticipated impacts of the proposed fleet vehicle rules and evaluate their significance.

The SCAQMD does not agree that the transition to alternative fueled refuse collection vehicles will result in adverse significant operational changes from reduced range, payload and reliability. The SCAQMD also disagrees that the use of alternative fueled refuse collection vehicles will require additional trucks, additional refueling trips, or additional City staff. The SCAQMD contacted Waste Management (personal communication with Kent Stoddard, Waste Management, May 18, 2000), which is currently operating 30 CNG-fueled refuse collection vehicles in Palm Desert, regarding their experience with operation of those vehicles and changes in operations that they would anticipate when converting their entire fleet to CNG-fueled refuse collection vehicles. Waste Management indicated that: (1) the CNG tanks on their refuse collection vehicles are sized to provide the same range as diesel-fueled refuse collection trucks; (2) vehicle payload for CNG-fueled refuse collection vehicles is approximately 1,600 pounds less than the 22,000 pound payload of diesel-fueled refuse collection vehicles; (3) the decrease in payload of approximately seven percent could cause an increase in vehicles-miles-traveled (VMT) of approximately seven to eight percent; (4) this increased VMT could be accommodated with the existing fleet, avoiding the need for additional vehicles or drivers; and (5) additional maintenance personnel would not be required to maintain CNG-fueled refuse collection vehicles. Additionally, although Waste Management experienced substantial downtime caused by failure of high-pressure regulators, actuators, spark plugs and the electronic control system, these problems were largely overcome as a result of improved or modified components, training of maintenance personnel and

new computer analysis software (letter to David Coel, SCAQMD, from Kent Stoddard, Waste Management, January 21, 2000). The SCAQMD would expect these improved and modified components to be incorporated in new CNG-fueled refuse collection vehicles that would be acquired by the City of Los Angeles for compliance with PR1193.

The SCAQMD has evaluated the potential air quality and transportation/circulation impacts from the increased VMT resulting from the reduced CNG-fueled refuse truck payload as discussed in responses to comments #1-52 and #1-115, respectively.

The increase in VMT will mainly be caused by additional trips to and from the disposal facilities, which would take place at a much higher speed than the speed possible (due to the frequent starts and stops) during refuse collection. The SCAQMD therefore expects that the seven-to-eight percent increase in VMT would lead to a relatively insignificant increase in required labor hours that can generally be accommodated within current working schedules.

With regard to potential public service impacts, the commentator is referred to responses to comments #1-4, #1-6, and #1-18.

Response 1-51: The Economic Assessment identifies that the costs of PR 1193 range from $4.73 to $24.51 million, depending on funding availability. Additionally, the Staff Report for PR 1193 provides a range of cost effectiveness estimates. The impact of PR 1193 and other proposed fleet rules resulting from the diversion of spending elsewhere is analyzed in Chapter V of the economic report.

Response 1-52: The SCAQMD disagrees with the assertion that additional vehicles would be required by reductions in payload, as described in response to comment #1-50. Additionally, as also discussed in response to comment #1-50, the SCAQMD disagrees with the assertion that additional workers and associated commuting trips would be required.

In response to the comment submitted by the City of Los Angeles, the SCAQMD has estimated the emissions associated with the increased VMT caused by the reduced payload of CNG-fueled refuse collection vehicles compared with diesel-fueled refuse vehicles. The results of this analysis are presented in the indirect air quality impacts section of the Final PEA, and the details of the analysis are presented in Appendix F. To summarize, an eight percent increase in VMT traveled by CNG-fueled refuse collection vehicles leads to estimated NO_X and PM_{10} emissions of 1,096 and 24 pounds per day when the entire estimated fleet of 6,000 diesel-fueled refuse collection vehicles has been converted to CNG-fueled vehicles. However, the conversion of these vehicles from diesel fuel to CNG results in estimated decreases of 6,544 and 656 pounds per day of NO_X and PM_{10}, respectively, which far exceed the estimated increases associated with the increased VMT.

Response 1-53: The emission benefits for Proposed Rule 1193 have been developed and are included in the Staff Report for PR 1193, along with an explanation of the emission reduction calculation methodology, which was developed based on input received from waste hauler fleet operators.

Response 1-54: The SCAQMD disagrees with the commentator's opinion that the environmental analysis in the PEA relative to PR 1194, PR 1196, and PR 1186.1 is insufficient. Consistent with CEQA, the SCAQMD prepared a program CEQA document for the reasons explained in responses to comments #1-1, #1-2, and #1-7.

The environmental analysis for the proposed fleet vehicle rules contained in the Draft PEA overestimates potential adverse environmental impacts for the following reasons. The estimate of the affected vehicle universe includes a 20 percent scale up factor in the event that the initial fleet vehicle surveys underestimated affected public fleets. Further, the analysis does not take into account the fact that a large number of AFVs are already included in public fleets, that is, the analysis assumes all affected vehicles are diesel or gasoline vehicles. Finally, representatives from energy suppliers in the district have indicated that the SCAQMD's assumption of the number of AFV refueling stations that would be necessary to support implementation of the proposed fleet vehicle rules substantially overestimates the actual number that would be required.

In addition to the above, as noted in response to comment #1-16 minor modifications have been made to several of the proposed fleet vehicle rules. The net effect of these modifications, especially for PR 1194, is to allow greater use of CARB-certified LEV or cleaner vehicles that operate on currently available reformulated gasoline. As a result, infrastructure modifications to install AFV refueling stations would not need to be as extensive as assumed in the PEA. All of the reasons provided in this response, as well as the environmental analysis contained in the PEA disputes the commentator's opinion that the specific information in the PEA is insufficient.

Response 1-55: SCAQMD staff has studied City of Los Angeles comments relative to PR 1186.1 and has addressed them as part of the development of the proposed rule.

During promulgation of Rule 1186 the City identified and the SCAQMD previously addressed several sweeper-related issues such as range, size of debris picked up, and sweeper weight. These same issues are being considered and addressed in PR 1186.1 development. Specifically, PR 1186.1 allows for a technical infeasibility certification that would allow the purchase of a conventional-fueled sweeper if an alternative fuel sweeper is not available with the desired technical specifications.

Response 1-56: The commentator's opinion that environmental impacts from using clean diesel technologies were not evaluated in the PEA is incorrect. The

commentator is referred to Chapter 4 of the PEA and responses to comments #1-16 and #1-38.

The SCAQMD included PAR 431.2, which would limit the sulfur content in diesel, as part of the proposed fleet vehicle rules because it will result in immediate Basinwide PM emission reductions when implemented, and it will facilitate the widespread use of particulate filters for diesel vehicles not affected by the proposed fleet rules. In addition, it should be noted that alternative methods of compliance are being considered as part of the development of the proposed fleet vehicle rules, including the use of particulate filters in combination with low-sulfur diesel fuel. The emission benefits of PAR 431.2 have been considered in terms of this proposed rule being used in combination with particulate filters an alternative method of compliance to achieve basically equivalent PM emission benefits.

Response 1-57: With regard to consideration of an alternative regulating all fleet vehicles, the commentator is referred to the response to comment #1-17. See also responses to comments #1-14 and #1-40.

The rule adoption schedule for the proposed fleet vehicle rules has been included in the SCAQMD's monthly Board Agenda Item *Rule and Control Measure Forecast Report* since March 2000. Some of the Public Hearings for the proposed fleet vehicle rules have, however, been rescheduled since that time. The currently proposed fleet vehicle rules adoption schedule, which is subject to change, is as follows:

June 16, 2000 Public Hearings:	Proposed Rules 1191, 1192, and 1193;
August 18, 2000 Public Hearings:	Proposed Rules 1186.1, 1194, 1196 and PAR 431.2
To Be Determined	Proposed Rule 1195

Response 1-58: The "Air Quality Benefits Estimate" section in Chapter 2 is correctly labeled. Table 2-1 shows the air quality benefits anticipated to occur from PR 1191 and PR 1192, which regulate light- and medium-duty vehicles. Table 2-2 shows the air quality benefits anticipated to occur from heavy-duty vehicles subject to PRs 1186.1, 1192, 1193, 1195, and 1196. As is clearly stated in the text of the section identified by the commentator, the reader is referred to both Chapter 4 and Appendix E-1 (formerly Appendix E in the Draft PEA) for a more thorough discussion of how the emission reductions were determined for the proposed fleet vehicle rules. Appendix E-1 (formerly Appendix E in the Draft PEA), included as part of the PEA, specifically includes the emission reduction calculation methodologies and assumptions. Including technical detail of an analysis in an appendix to the main body of the text is consistent with CEQA Guidelines §15147, which states in part, "Placement of highly technical and specialized analysis and data in the body of an

EIR should be avoided through inclusion of supporting information and analyses as appendices to the main body of the EIR."

Response 1-59: The commentator's opinion that the PEA fails to include CARB's and U.S. EPA's mobile source measures is incorrect. With regard to adopted CARB and U.S. EPA mobile source rules, the PEA includes that incremental emission reductions resulting from the proposed fleet rules, beyond these CARB and U.S. EPA rules. However, it is inappropriate to include future measures for which adoption is uncertain in the benefits analysis. Specific mobile source measures as identified and being developed by CARB and U.S. EPA will be insufficient to achieve CARB and U.S. EPA ambient air quality standards for particulate matter and ozone for the South Coast Air Basin. This is one of the primary reasons why the SCAQMD has pursued the development of the proposed fleet rules. For additional information the commentator is referred to the response to comment #1-47.

Response 1-60: With regard to potential future more stringent heavy-duty engine emission standards, CARB has yet to formally propose these standards, and U.S. EPA just recently (May 17, 2000) proposed more stringent standards. The emission benefit analysis included in Alternative B of the PEA included SCAQMD assumptions on these emission standards levels for the 2007 model year, based on CARB input. These assumptions (0.01 g/bhp--hr for PM and 0.2 g/bhp-hr in 2007) are remarkably close to U.S. EPA's recently announced proposal (0.01 g/bhp-hr PM in 2007 and 0.2 g/bhp-hr NOx phased in between 2007 to 2010). It is not appropriate to include these standards in the No Project Alternative as they have not been formally adopted by either CARB or U.S. EPA. Instead these standards more appropriately form the basis of one of the project alternatives, Alternative B as already indicated.

Response 1-61: With regard to regulating private fleets, the commentator is referred to the response to comment #1-17. See also responses to comments #1-14 and #1-40. With regard to accounting for existing AFV fleet vehicles, the commentator is referred to the responses to comments #1-54 and #1-66.

Response 1-62: SCAQMD staff has discussed with CARB the availability of funding from the Carl Moyer Program and the MSRC to support implementation of the proposed fleet rules. Both of these organizations have indicated to the SCAQMD that funding from their programs is available to support rule implementation. The cost effectiveness of emission reductions for public versus private fleet programs depends on the individual circumstances for that fleet; however, it should be noted that a significant amount of funding from both of these programs has been used to support alternative fuel vehicle operation in public fleets. SCAQMD staff recognizes that there may be funding shortfalls relative to available funding from sources including these two programs and the amount of funding necessary for rule implementation, and this has been addressed in the PEA. For additional information

on funding sources the commentator is referred to the SCAQMD's Economic Assessment for the proposed fleet vehicle rules.

Response 1-63: With regard to regulating private fleets, the commentator is referred to the response to comment #1-17. See also responses to comments #1-14 and #1-40.

Response 1-64: The commentator has misrepresented the information on fuel cells contained on page 3-67 of the Draft PEA. The discussion simply identifies three possible different sources of hydrogen, which is a very desirable fuel for fuel cells. The discussion does not indicate either implicitly or explicitly that the three sources of hydrogen are equally likely to be used for future fuel cell technologies. Based on input from fleet owners that plan to or are currently operating significant numbers of vehicles powered by natural gas, building natural gas infrastructure is a desirable strategy to smoothly transition towards the use of fuel cell technology. This is because, based on current research and development, natural gas refueling stations can be relatively easily modified to produce hydrogen, which, as already noted, is a very desirable fuel for use in fuel cells.

Response 1-65: In addition to the fact that clean diesel technologies are not applicable to older vehicles, clean diesel does not qualify as an alternative clean fuel. For additional information, the commentator is referred to the responses to comments #1-16 and #1-38.

PR 1191 requires fleets to purchase the cleanest light- and medium duty vehicles being produced by vehicle manufacturers, including gasoline powered vehicles. Because the cleanest gasoline vehicles are included as compliant vehicles, SCAQMD does not project any cost impact for this proposed rule, nor any driving force for fleets to delay purchases of new vehicles because they may cost more as a result of compliance with this proposed rule. With regard to Proposed Rule 1192, which primarily affects large transit buses (over 33,000 pounds gross vehicle weight), Federal rules allow up to 83 percent of the capital cost of a new alternative-fuel bus purchase to be funded by the Federal Government, so it is unlikely that the additional costs of alternative fuel buses will result in significant delays in new bus purchases for most transit bus operators. The analysis in the PEA analyzed indirect air quality impacts from delayed vehicle turnover for some of the smaller transit bus agencies that do not have access to federal funds. With regard to remaining proposed fleet rules, minor modifications have been made that will allow limited use of gasoline or diesel vehicles to comply with the relevant proposed fleet vehicle rule. Finally, a number of factors will likely influence whether or not a fleet operator or owner will delay purchasing or replacing vehicles. One factor to consider to that will likely minimize excess delays in replacing fleet vehicles is the higher maintenance costs associated with using older vehicles as they are operated beyond their normal retirement age, as well as competitive pressures that promote the use of newer vehicles among fleets vying for the same customer base.

Response 1-66: In general, SCAQMD staff received timely cooperation from government agencies when vehicle fleet population data were requested as part of the rule development effort. These data were used in the PEA. The City of Los Angeles was an exception and has only recently provided draft vehicle population information after the Draft PEA was released for public review. Based on continued refinements of the affected vehicle populations and the emission reduction methodologies, the SCAQMD does not expect that emission reductions estimates for the proposed fleet rules to be overestimated for the all of the fleet vehicle populations in general, although they might have been slightly overestimated specifically for the City of Los Angeles. With regard to the credit provision in PR 1191 relative to existing alternative-fueled fleet vehicles, the emission credit methodologies are based on the incremental benefit of future alternative-fueled vehicles and not on the operation of present alternative-fuel vehicles.

As indicated in the comment, it appears that the analysis of potential adverse impacts includes another factor that overestimates potential adverse environmental impacts, the overestimation of the City of Los Angeles' fleet vehicle population. The commentator is referred to response to comment #1-54 for a discussion of other parameters and assumptions that were used to provide a "worst-case" analysis of potential adverse environmental impacts from the proposed fleet vehicle rules. By providing a "worst-case" analysis of potential adverse impacts, the SCAQMD has provided full disclosure to the public of the adverse environmental effects of the proposed fleet vehicle rules.

Response 1-67: The commentator's opinion that the PEA did not include assumptions and methodologies used to calculate emission reduction benefits is incorrect. As is clearly stated in the text of the section identified by the commentator, the reader is referred to both Chapter 4 and Appendix E-1 (formerly Appendix E in the Draft PEA) for a more thorough discussion of how the emission reductions were determined for the proposed fleet vehicle rules. Appendix E-1 (formerly Appendix E in the Draft PEA), included as part of the PEA, specifically includes the emission reduction calculation methodologies and assumptions. Including technical detail of an analysis in an appendix to the main body of the text is consistent with CEQA Guidelines §15147, which states in part, "Placement of highly technical and specialized analysis and data in the body of an EIR should be avoided through inclusion of supporting information and analyses as appendices to the main body of the EIR."

In addition, information regarding these calculation procedures has been communicated to City of Los Angeles Environmental staff. The formulas are based on established guidance that CARB has provided to local air quality districts in determining emission reduction benefits from mobile source control programs, as well as additional input from CARB staff regarding the latest emission factors that

should be utilized in these analyses. The emission reduction methodology did not use speculative assumptions, and a 0.0045 g/bhp-hr NOx emission factor was not used in the emission reduction calculations. The purpose of the emission reduction calculations is to determine the incremental or surplus emission reductions beyond currently adopted CARB and U.S. EPA rules. Since surplus emission reductions are being determined, the rationale is unclear with regard to separating emission reductions from one (ARB LEV I/II) out of dozens of California and Federal mobile source emission reduction programs that have been adopted during the past thirty year of regulatory development.

Response 1-68: The commentator's opinion that the SCAQMD failed to include rules adopted by CARB and the U.S. EPA is incorrect. The emission benefit analysis in the PEA incorporated CARB LEV I/II emission standards. The commentator is referred to responses to comments #1-47, #1-59 and #1-67. With regard to potential future more stringent heavy-duty engine emission standards, CARB has yet to formally propose these standards, and U.S. EPA just recently (May 17, 2000) proposed more stringent standards. The emission benefit analysis included in Alternative B of the PEA included SCAQMD assumptions on these emission standards levels for the 2007 model year, based on CARB input. These assumptions (0.01 g/bhp-hr for PM and 0.2 g/bhp-hr in 2007) are remarkably close to U.S. EPA's recently announced proposal (0.01 g/bhp-hr PM in 2007 and 0.2 g/bhp-hr NOx phased in between 2007 to 2010).

Response 1-69: With regard to incorporating heavy-duty engine standards adopted by CARB and U.S. EPA, the commentator is referred to response to comments #1-47, #1-59, #1-67, and #1-68.

Response 1-70: With regard to consideration of CARB's urban transit bus fleet rule, the commentator is referred to response to comment #1-48. Moreover, CARB's staff report states that the alternative fuel path will provide better PM benefits than the diesel path due to higher in-use emissions for diesel.

Response 1-71: With regard to the uncertainties relative to the SCAQMD's MATES II study, the commentator is referred to response to comment #1-32.

Response 1-72: The transportation/circulation section of Chapter 3 is a description of the existing transportation/circulation system in the district prior to implementation of the proposed fleet vehicle rules. An analysis of potential indirect transportation/circulation impacts resulting from increasing VMT resulting from affected heavy-duty fleet vehicles traveling longer distances to AFV refueling stations was conducted in Chapter 4. Potential transportation/circulation impacts per fueling facility did not exceed the SCAQMD's significance threshold.

In addition to the analysis of potential transportation/circulation impacts, the PEA includes in Chapter 4 an evaluation of the consistency of the proposed fleet vehicle rules with the Regional Transportation Plan (RTP). As indicated in the consistency discussion, some of the goals of the RTP include: enhancing the environment through transportation strategies that minimize impacts on the environment and support new technologies that improve air quality, mobility, etc.; reducing energy consumption through transportation strategies and investments that reduce the region/dependence on traditional fossil fuels, while actively supporting the development and deployment of clean/alternative fuel technologies and the associated transition to clean alternative fuels; etc. The RTP also includes consideration of the development and implementation of advanced transportation technology strategies and includes the use of zero emission vehicles, alternative clean fuels, etc.

Also included in the RTP consistency discussion were the considerations that the proposed fleet vehicle rules could result in the minor loss of bus service and increasing passenger trips from former bus riders commuting to work. Compared to other factors and trends affecting regional mobility, these potential effects were concluded to be insignificant. Based upon these and above considerations and the fact that transportation impacts from the proposed fleet vehicle rules were concluded to be insignificant, the proposed fleet vehicle rules were determined to be consistent with the RTP.

Response 1-73: In addition to the public service agencies identified in the existing setting chapter, Chapter 3, "The Proposed Fleet Vehicle Universe" section in Chapter 4 includes a comprehensive description of the existing fleet vehicle universe for all fleet vehicles affected by the proposed fleet vehicle rules, including those identified by the commentator, refuse collection vehicles, street maintenance and repair, and public transit buses. For a complete list of the types of vehicles included in the existing universe of fleet vehicles, the commentator is referred to Tables 4-1, 4-2, 4-3 and especially 4-4 in Chapter 4. Regarding the analysis of public service impacts, the commentator is referred to the responses to comments #1-4, #1-6, and #1-18. Consequently, the commentator's opinion that the specific types of vehicles identified were excluded from the analysis in the PEA is in error.

Response 1-74: With regard to the issue of which public agencies constitute responsible agencies relative to the proposed fleet vehicle rules, the commentator is referred to the response to comment #1-1. With regard to land use and siting issues the commentator is referred to the responses to comments #1-10, #1-13, #1-29, and #1-31. With regard to preparation of a program CEQA document and intended uses of a program CEQA document, the commentator is referred to the responses to comments #1-1, #1-2 #1-7, and #1-10.

Response 1-75: AQMD staff acknowledges that there are no methanol or ethanol engines currently for sale in California. Essentially, this is a business decision that

engine manufacturers have made relative to the current and future potential to profit from the sale of these engines. However, there have been methanol engines certified (approved) by CARB for sale in the recent past, and emission data are available from the certification process to establish methanol equivalency. With regard to the long term air toxic aspects of methanol fuels, this is not perceived to be an issue since it is not expected that vehicles powered by methanol engines will be sold in the District in the future, based on input from engine manufacturers (from the supply side) and fleets that could use these vehicles (from the demand side), including the City of Los Angeles.

Response 1-76: This comment incorrectly assumes that clean fuel facilities will be located in residential areas. Similar to facilities for existing fuels, clean fuel refueling facilities are typically not located in areas that are zoned as residential, but instead they are located in commercial or industrial areas. As described in Section 4 (pages 4-81 through 4-88) of the Draft PEA, the hazards posed by gaseous clean fuels are generally not significantly greater than those posed by conventional systems. Moreover, since the vast majority of the clean fuels used will consist of CNG brought in via pipeline, the traffic and hazards caused by tanker trucks potentially passing through or nearby residential neighborhoods are greatly reduced by the proposed fleet vehicle rules. Additional information relative to potential hazards impacts can be found in responses to comments #1-8 and #1-9. See also responses to comments #1-78, #1-80, and #1-120.

Response 1-77: With regard to safety issues, the commentator is referred to the response to comment #1-8 and #1-9.

Response 1-78: The SCAQMD has reviewed a preliminary version of this document. The author of the document, Mr. Donald Frazeur, was contacted. He stated it was in the process of being updated and a request was made to obtain the latest version. The document prioritizes the fire hazards of responding to natural gas fires and other fuel fires, rating a natural gas fire as more hazardous. However, this is not the same as concluding that natural gas presents a significantly greater hazard. The document does not take into account the fact that the natural gas containers are much more rugged than diesel or gasoline tanks and would be less likely to rupture in an accident than a diesel or gasoline tank. Also, the ignition temperature of natural gas is higher than diesel, and natural gas is lighter than air and disperses (rather than pooling like diesel or gasoline spills do), causing less of a fire risk.

Response 1-79: The SCAQMD disagrees with the commentator's opinion that the PEA does not adequately address safety and training. The commentator is referred to the response to comments #1-8 # 1-9, and #1-76.

Response 1-80: It is unclear what the relevance is of the comparison of a crude oil pipeline with the proposed fleet vehicle rules, except possibly to demonstrate that

transport of crude oil is inherently more dangerous than transport of natural gas. See comment 1-8 and 1-9 regarding emergency services and codes for maintenance facilities. Maintenance and fueling facilities will most likely be sited at existing diesel maintenance and fueling locations. All new facilities and modified existing facilities will have to comply with extensive state and local codes. Increase of shipments of LNG and LPG, which will only constitute a small segment of the clean vehicle universe, will be offset by a reduction in diesel shipments to the facilities and by the shipment of natural gas by pipeline (since the majority of the clean fuel anticipated to be used is CNG) rather than by diesel trucked over the road. The commentator has not provided any justification for the assumption that alternate fueled vehicles deployed in residential areas are inherently less safe than diesel or gasoline vehicles. In fact, statistics indicate that these vehicles are as safe in normal operations and sometimes safer in accident situations. The Natural Gas Vehicle (NGV) Coalition reports in http://www.ngvc.org/safetybulletin.html for 1999 that based on a survey of 8,331 natural gas utility, school municipal and business fleet vehicles (NGVs) that traveled 178.3 million miles that NGV fleet vehicle injury rate was 37 percent lower than the gasoline fleet rate and there were no fatalities compared with 1.28 deaths per hundred million miles for gasoline fleet vehicles. In the two years prior to the report for 85,000 NGVs operating in the U.S., there had not been a fuel tank rupture. The U.S. Department of Energy, Clean Cities Fact Sheet, May 2000 states "there is no evidence that CNG buses pose any greater risk of fire or explosion than diesel buses." Similar statements can be made for LNG and LPG.

Response 1-81: Waste Management Inc., (Ken Stoddard and Kermit Martin) was contacted to discuss their experience with CNG powered heavy-duty refuse disposal vehicles. WMI has extensive experience with CNG waste vehicles. WMI indicated that CNG-powered heavy-duty vehicles have not presented operational risks that are greater than with diesel vehicles. Further, trash fires are very rare and the proposed fleet vehicle rules will not in any way increase the frequencies of such fires. All trash trucks have fire extinguishers for small fires. The WMI procedure for a truck fire (on either a diesel or CNG vehicle) is to dump the load and move the vehicle away from the fire and extinguish the trash fire. The City of Santa Monica (Ralph Merced) also has extensive experience with CNG trash trucks and based on that City's experience since 1995 considers them to be as safe or safer than diesel. No further assessment is therefore considered necessary.

Response 1-82: The City requests the SCAQMD to pay for the purchase of portable methane sensors for the City ($342,000) and to pay for emergency personnel training. The City asserts these are mitigation measures for public health and safety impacts of the proposed rules. However, feasible mitigation measures are only required for significant adverse environmental impacts of a proposed project. No significant health and safety impacts were identified in the PEA.

Response 1-83: The City requests the SCAQMD to require as a mitigation measure increasing California Highway Patrol inspections of vehicles transporting fuels. The SCAQMD does not have authority to require this measure. Since the vast majority of the clean fuels used will consist of CNG brought in via pipeline, the traffic and hazards caused by tanker trucks potentially passing through or nearby residential neighborhoods are greatly reduced by the proposed fleet vehicle rules. As a result, no significant impacts from switching to alternative fuels were identified. Petroleum fuels also present risks during transport.

Response 1-84: The commentator requests the SCAQMD to seek funding from natural gas-related businesses to pay for funding mitigation measures necessary to implement the rules. As noted in responses #1-82 and #1-83, no significant adverse environmental impacts requiring such mitigation have been identified. However, the SCAQMD has committed some funds pursuant to Health & Safety Code §40448.5 to assist public entities in complying with the proposed fleet vehicle rules. Further, the SCAQMD will work with alternative-fuel providers to encourage mechanisms to ease compliance for affected fleets.

Response 1-85: The fact that natural gas companies may benefit from the proposed fleet vehicle rules is not an objective of the proposed project nor is it an appropriate criterion used to impose mitigation measures. Pursuant to CEQA Guidelines 15126.4(a)(3), "Mitigation measures are not required for effects which are not found to be significant." Since significant adverse environmental impacts from the operational phase of the project were not identified, mitigation measures are not required.

Response 1-86: The commentator has either misunderstood or misrepresented the statement in the "Introduction" section of Chapter 4. The specific sentence says that PR 1191, PR 1192, and PR 1193 are expected to be considered by the SCAQMD Governing Board earlier than the other proposed fleet vehicle rules. The sentence goes on to say, "[S]ince the potential impacts associated with these three rules are similar to or less than those of the other proposed fleet vehicle rules and related amendments, **the following environmental impact analyses [in Chapters 4 and 5] evaluates the total impacts for the entire series of fleet vehicle rules and related amendments** [emphasis added]." This statement in bold clearly states that the environmental analysis covers the entire suite of fleet vehicle rules, including the proposed amendments to Rule 431.2. Further, review of the environmental impact is clearly predicated upon all of the proposed fleet vehicle rules and related amendments. Therefore, the commentator's opinion that the PEA is deficient and needs to be recirculated is without merit. The commentator is also referred to the responses to comments #1-2 and #1-7 for a discussion on the degree of specificity of the environmental analysis in a program CEQA document.

Response 1-87: With regard to overestimating the fleet vehicle universe for the City of Los Angeles and excluding existing AFVs from the fleet vehicle universe, the commentator is referred to response to comment #1-66. See also response to comment #1-54.

Response 1-88: As clearly stated in Chapter 4 of the PEA, ethanol, methanol, and electricity are the least preferred of the alternative clean fuels that could be used to comply with the proposed fleet vehicle rules. This is due primarily to their relatively high fuel costs and relatively low net energy efficiency. Further, the analysis assumed that one percent of heavy-duty vehicles could switch to methanol or ethanol, even this small percentage is not likely for similar reasons, higher cost than other fuels and lower availability and reliability. Unlike clean diesel technologies, however, ethanol and methanol qualify as an alternative clean fuel, which is why the environmental analysis in Chapter 4 included an analysis of these fuels. See also response to comment #1-38.

Response 1-89: As already noted in response to comment #1-16, the SCAQMD's authority over fleets is primarily based on California Health & Safety Code Section 40447.5, which allows the SCAQMD to require fleet operators of 15 or more vehicles to purchase vehicles which are capable of operating on methanol or other equivalently clean burning alternative fuel. Because of methanol's inherently low particulate matter (PM) emissions when used as a heavy-duty engine application, equivalently clean-burning fuels (including equivalent technologies) have been determined to include compressed natural gas (CNG), LNG, liquefied petroleum gas (LPG), battery-electric, and fuel cells. These fuels are also consistent with permitted alternative fuels as contained in CARB's recently adopted Urban Bus Fleet Rule. See also response to comment #1-34. Nevertheless, the PEA considered the impacts of refinery modifications necessary to produce low sulfur fuel as well as the use of low sulfur diesel and emission control technologies.

Response 1-90: The commentator has misunderstood or misrepresented the information on page 4-8. The specific discussion referred to indicates that it is speculative to consider clean diesel technologies because there currently are no CARB-certified diesel technologies that can meet the methanol equivalency criteria in California Health & Safety Code Section 40447.5. See also response to comment #1-16. As indicated in the PEA, it is unlikely that methanol will be used to comply with the proposed fleet vehicle rules for the reasons given in response to comment #1-88. The difference between methanol and diesel, however, is that methanol is considered to be an alternative clean fuel and the compliance criteria in California Health & Safety Code Section 40447.5 is based on methanol equivalency. Therefore, although it is unlikely that methanol will be used to any great extent, it is not speculative to consider that it could be used. It is for this reason that potential adverse environmental impacts from methanol use have been evaluated and to

provide full disclosure to the public regarding potential adverse environmental impacts from the proposed fleet vehicle rules. Even though potential adverse environmental impacts from the production and use of low sulfur fuel and associated control technologies were analyzed, since diesel does not qualify as an alternative clean fuel and given the uncertainties at this time that it could meet the methanol equivalency criteria, it is uncertain at this time whether or not it will be used to comply with the proposed fleet vehicle rules.

Response 1-91: The SCAQMD disagrees with the commentator's opinion that assumptions used to modify the AIChE Table 4-6 produced fundamentally flawed results. The AIChE table was included to show the relative comparison of alternate and conventional fuels for various performance indices. The information in the table was not used to assess the potential significance of environmental impacts of the proposed fleet vehicle rules. The table assumes that all of the indices such as fuel cost, vehicle cost, etc., have equal weight when forming an average score. By including this table, the SCAQMD is not affirming that all these indices have equal weighting. The only column added to the table was for "diesel", which was not included in the 1997 AIChE report. It was included to show how conventional diesel may have ranked if it had been included in the 1997 study using criteria, data, and technology comparable to what was available at that time. Responses to comments #1-92 through #1-96 below will address specific comments in more detail.

Response 1-92: The commentator states that basing green house gas emissions on the equivalent heating value of gasoline ignores the inherent efficiency of diesel engines …." and concludes for diesel fuel… "that much more work is accomplished while consuming less carbon based fuel. This results in lower CO_2 emissions per vehicle mile traveled compared to alternative fueled vehicles." This conclusion neglects the life cycle emissions associated with diesel. The production of diesel fuel is a more energy intensive process than for CNG. In Appendix A of the AIChE analysis, the authors considered life cycle emissions for greenhouse gases for each of the alternates when developing their relative comparisons in the table, so a similar correction has to be made when considering diesel. Several publications indicate that CNG vehicles have greenhouse gas emissions that are less than diesel when compared on a life cycle basis. This conclusion was recently confirmed by the U.S. Department of Energy, Office of Energy Efficiency, Clean Cities Fact Sheet (May 2000) in a comparison of CNG and diesel buses which stated that even including methane emissions (20 times stronger than CO2) that might be emitted during refueling "CNG buses appear to have total greenhouse gas emissions that are very similar to, if not slightly better than, diesel buses despite emitting higher levels of methane."

Response 1-93: The table from the 1997 AIChE study that was cited by the SCAQMD includes a column for RFG based on data that were available at that time.

The performance indices in the table for the RFG and conventional gasoline are the same except for non-greenhouse gas emissions. The relative comparisons among RFG and the other alternatives would not be significantly different if RFG was included instead of other types of gasoline.

Response 1-94: The table modification was not based on CARB diesel. No emerging control technologies were considered in the AIChE study for any of the alternate fuels. The table was not a comparison of control technologies, but a comparison of the inherent characteristics of the fuels listed. For this reason, particulate traps were not included.

Response 1-95: The AIChE methodology is explained in their report "Alternative Transportation Fuels: A Comparative Analysis", American Institute of Chemical Engineers, September 1997. The methodology used to determine each index in Table 4-6 of the proposed fleet vehicle rules can be found in the footnotes to the table and in the report text on page 4-9 and 4-10. Regarding greenhouse gas comparisons, the commentator is referred to the responses to comment #1-92.

Response 1-96: Diesel vehicle cost was estimated to be slightly higher than an equivalent gasoline powered vehicle based on a sampling of vehicle prices that have both diesel and gasoline options. (Gasoline options are not available for some heavy-duty fleet vehicles). For table 4.6, an equivalent diesel vehicle was assumed to be approximately 2.5 percent more than an equivalent gasoline vehicle, which made the diesel vehicle cost index slightly less favorable than gasoline (4.9 out of a maximum score of 5 for gasoline). A cost index score of 4.9 on this table indicates that an equivalent diesel vehicle cost is more than a gasoline vehicle, is comparable with methanol and ethanol vehicle conversions (which also had a score of 4.9) and is less than CNG, LNG and electric. The AIChE study assigned a 5 to the best incremental vehicle cost (gasoline) and a 1 to the worst incremental cost (electric vehicles) and interpolated in between for the other alternates to get a score between 1 and 5. The methodology is explained in their report that was referenced above and is summarized in the Chapter 4 section entitled "Comparison of Conventional Fuels to Alternative Clean Fuels."

Response 1-97: With regard to the commentator's opinion that the emission benefits of the proposed fleet vehicle rules identified in Table 4-7 have been overestimated, the commentator is referred to responses to comments #1-47, #1-58, and #1-66.

Response 1-98: Regarding the specificity of the environmental analysis, the commentator is referred to the responses to comments #1-2 and #1-7. With regard to accounting for CARB and U.S. EPA standards for heavy-duty vehicles, the commentator is referred to responses to comments #1-47, #1-59, #1-60, and #1-68.

Response 1-99: The toxic risk analysis includes diesel and natural gas powered vehicles to illustrate the potential relative toxic risks of corresponding vehicles powered by these two fuels. These two fuels were chosen because staff expects the primary toxic benefits from the proposed implementation of the fleet rules will result from the use of natural gas powered heavy-duty vehicles instead of diesel powered vehicles. It should be noted that the commercial availability of natural gas engines/vehicles dominates the universe of potentially available heavy-duty engines powered by other alternative fuels such as LPG, methanol and ethanol.

Response 1-100: Available data already suggest substantial toxic risk reductions through the use of alternative fuels (see response to comment #1-99). If alternative fuel vehicles eventually constitute a significant percentage of on-road vehicles, then it would be appropriate to conduct modeling similar to that conducted in the MATES II programs to assess the overall toxic risk reduction in ambient air through the use of alternative fuel vehicles. The commentator is referred to the SCAQMD's Economic Assessment document for the proposed fleet vehicle rules for a discussion of costs.

Response 1-101: With regard to the comparison of fuels in Table 4-9, the commentator is referred to response to comment #1-99. The risk reductions are based on engine emission levels, based on input from CARB staff, using adopted emission standards for diesel powered engines and corresponding emission levels for engines operating on alternative fuels (i.e., natural gas). SCAQMD staff is unaware of a specific emission level that can be assigned to "clean diesel." SCAQMD staff is developing toxic risk analyses for heavy-duty vehicles on a rule by rule basis. Including the individual benefits of each individual rule in the PEA will not change any of the conclusions in the PEA or trigger any other criteria that would require recirculation of the PEA pursuant to CEQA Guidelines 15088.5.

Response 1-102: The staff report does not assume that existing facilities will be replaced. It does assume that in most cases, sufficient land will be available at current fleet yards to incorporate additional CNG hardware. If additional land was needed, on average a 50' x 100' parcel would accommodate a NG refueling facility. At $50 per square feet, and at a transaction cost of six percent, the cost per mile for a fleet of 100 trucks would be less than 0.3 cents per mile. Given this small magnitude of cost, the staff estimate is a reasonable first-order estimate of the capital costs involved in CNG vehicle refueling.

Response 1-103: With regard to the consideration that methanol may or may not be used as an alternative clean fuel to comply with the provisions of the proposed fleet vehicle rules, the commentator is referred to the responses to comments #1-38, #1-88, and #1-90.

Response 1-104: With regard to consideration of clean diesel and associated control technologies, the commentator is referred to the responses to comments #1-16 and #1-38. Regarding the rationale for amending Rule 431.2, the commentator is referred to the response to comment #1-56.

Response 1-105: As noted in response to comment #1-16, as a result of input received from the proposed fleet vehicle public workshops and working group meetings, several of the proposed rules have been modified to allow greater use of diesel vehicles including the rules regulating refuse haulers (PR1193) and street sweepers (PR 1186.1).

PR 1193 has been modified to allow, prior to July 1, 2002, replacement refuse trucks to consist of trucks with CARB-certified dual fuel engines. Dual fuel engines operate on both natural gas and diesel fuel simultaneously. The majority of the fuel burned is natural gas. Diesel fuel is used as the ignition source under the heat of compression. Dual-fueled vehicles can operate on 100 percent diesel fuel under certain operating conditions.

PR 1186.1 has been further clarified to include a technical infeasibility criteria and procedures provision, which is a demonstration by a fleet owner or operator that it is technically infeasible to comply with the provisions of the rule requiring replacement of street sweepers with alternative fueled-sweepers because such sweepers are not commercially available for the specified application. A technical infeasibility finding can also be made if an AFV refueling station is not available within five miles of the vehicle storage or maintenance yards.

To the extent that greater use of diesel-fueled vehicles is allowed for complying with the proposed fleet vehicle rules a slight reduction in impacts could occur because there would be a minor reduction in the number of alternative fuel refueling stations that would need to be built. These modifications are not considered to be significant modifications to the proposed project requiring recirculation of the Draft PEA pursuant to CEQA Guidelines §15088.5 because no new significant adverse impacts would result; a substantial increase to the severity of an impact will not occur; etc.

Response 1-106: Appropriate planning of fleet vehicle routes can minimize or eliminate the need for additional trips for refueling created by the potential seven to eight percent reduction in range of alternative fueled vehicles. However, the PEA's analysis of increased VMT and emissions associated with centralized refueling in the Indirect Impacts section of Chapter 4 conservatively assumed that all heavy-duty fleet vehicles subject to the proposed fleet vehicle rules, except transit buses, would travel an additional five miles to refuel. Since many fleet operators are anticipated to install alternative fuel refueling facilities at their existing refueling sites, this assumption is conservative and the resulting estimated emissions would more than

account for additional emissions caused by more frequent refueling by a portion of the fleet vehicles.

The SCAQMD disagrees that additional alternative fueled vehicles will necessarily be required to maintain the same level of service as conventionally fueled vehicles, as described in response to comment #1-50. However, as noted in response to comment #1-52, the SCAQMD has estimated the increased emissions associated with an eight percent increase in VMT for CNG-fueled refuse collection trucks, caused by a reduced payload, and concluded that the emission reductions from the conversion of these vehicles to alternative fuels will exceed the emission increases caused by the additional VMT.

Response 1-107: The SCAQMD performed a conservative evaluation of emissions associated with the increase in VMT resulting from centralized refueling and reduced payload of trash trucks in the Final PEA as discussed under response to comment #1-106.

Response 1-108: In response to the comment submitted by the City of Los Angeles, the SCAQMD has revised the analysis presented in Table 4-17 to account for the lower fuel efficiencies cited in the comment. The results are presented in the operational air quality impacts section of Chapter 4 and in Appendix F of the PEA. The effect of the revision is to increase the estimated number of additional district-wide fuel delivery trips from four trips per day to eight trips per day by 2010, with estimated CO, VOC, NO_X and PM_{10} emissions of 13, two, 16 and 33 pounds per day, respectively. These higher emission estimates do not trigger the significance thresholds of the PEA and have been incorporated into a revised net air quality benefits analysis presented in Chapter 4 and Appendix F of the PEA.

Response 1-109: The commentator's opinion that emissions from ICEs used to operate compressor engines at CNG refueling stations should be accounted for in the analysis is inconsistent with CEQA guidelines section §15064(h), which states, "Except as otherwise required by Section 15065, a change in the environment is not a significant effect if the change complies with a standard that meets the definition in subsection (h)(3)." For the purposes of this subsection a "standard" means a standard of general application that is all of the following:

(A) A quantitative, qualitative or performance requirement found in a statute, ordinance, resolution, rule, regulation, order, or other standard of general application;
(B) Adopted for the purpose of environmental protection;
(C) Adopted by a public agency through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency;

(D) One that governs the same environmental effect which the change in the environment is impacting; and,

(E) One that governs within the jurisdiction where the project is located.

Consistent with the above CEQA guidance, emissions from compressor engines were not included in the analysis of air quality impacts because there is a presumption of insignificance if emissions from a source comply with an air quality rule or regulation. ICEs in the district are regulated by one of the following: to SCAQMD Regulation XIII, SCAQMD 1110.2 or the statewide registration program (see SCAQMD Rule 2100).

Response 1-110: The SCAQMD is unaware of a specific emission standard level that could be assigned to "clean diesel." CARB and U.S. EPA set emission standards for vehicles/engines and allow the manufacturers the flexibility to use appropriate emission control technology to achieve these emission standard levels. CARB and U.S. EPA also specify fuel specifications as well; some of these specifications are established to facilitate the effectiveness of the emission control technology expected to be used on the corresponding engine/vehicles. With regard to clean diesel, based on CARB's recently adopted Urban Bus Fleet Rule, a 0.01 g/bhp PM standard applicable to diesel bus engines beginning in October 2002 is expected to require the use of a particulate filter and low-sulfur diesel (possibly the "clean diesel" referred to by the commentator). The use of low-sulfur diesel alone (i.e., without associated control technologies such as particulate traps) is not generally considered relevant in the context of meeting this emission standard level. It should be noted that the U.S. EPA has recently proposed this 0.01 g/bhp-hr PM emission standard level for all heavy-duty engines beginning in 2007. Again, it is expected that both low-sulfur diesel and particulate filter technology will be needed for compliance with this emission standard level.

Response 1-111: In this comment the commentator incorrectly assumes that by citing CEQA Guidelines §15131 the SCAQMD has not evaluated potential economic impacts that result in physical changes to the environment. Indeed the text referenced by the commentator is the introductory discussion of the "Indirect Air Quality Effects" section, which specifically includes analyses of economic impacts generating secondary or indirect air quality impacts. In particular the commentator is referred to the subsections entitled "Loss of Service," "Longer Fleet Turnover Rate," and "Centralized Refueling." No other indirect impacts result from economic effects anticipated to be caused by the proposed fleet vehicle rules were identified.

Response 1-112: The SCAQMD disagrees that reduced payload and range capabilities of alternative fueled vehicles will result in additional refueling trips, as discussed in response to comment #1-106. Additionally, as further discussed in response to comment #1-106, the assumption made by the SCAQMD in the analysis of the impacts of centralized refueling that all heavy-duty vehicles subject to the

proposed fleet vehicle rules except urban transit buses will utilize centralized refueling is highly conservative. Therefore, the analysis of the impacts from centralized refueling contained in the PEA accounts for additional refueling trips that may be required.

Response 1-113: Both the benefits and the impacts on air quality of the proposed fleet vehicle rules have been analyzed and presented in the PEA. The CO emission reductions from the proposed rules and related amendments and increases from direct and indirect construction and operational impacts have been evaluated to the extent that reliable emission factors are available. The methods used to estimate the emission reductions from the proposed fleet vehicle rules are presented in Appendix E-1 (formerly Appendix E in the Draft PEA) of the PEA, and the methods used to estimate the air quality impacts resulting from the proposed rules are presented in Appendix F.

Response 1-114: The SCAQMD disagrees with the commentator's opinion that the analysis of impacts and benefits in the PEA is incomplete, contains incorrect information, and the conclusions regarding insignificant cumulative impacts are unsupported by the analysis. As noted in prior responses, the commentator has misunderstood the information in the PEA, misrepresented the information in the PEA, overlooked crucial information supporting the analyses being criticized, and mischaracterized CEQA requirements to support flawed opinions. As noted several times in previous comments, the degree of specificity of the environmental analysis in the PEA is consistent with the degree of specificity of the project under consideration (CEQA Guidelines 15146). See also responses to comments #1-2 and #1-7. Without additional detail as to why the commentator feels the cumulative impacts analyses are deficient, it is difficult to provide a more detailed response.

The PEA for the proposed fleet vehicle rules has been prepared with a sufficient degree of analysis to provide decision-makers with information that enables them to make a decision, which intelligently takes account of environmental consequences. The evaluation of the environmental effects of a proposed project have been as exhaustive as possible in light of what is reasonably feasible analyze. The SCAQMD understands that the City of Los Angeles may disagree with parts of the analysis or conclusions, but the opinions expressed by the commentator have not, in general, been supported by any factual data or other information. Further disagreement with the information contained in a CEQA document does not make an EIR inadequate. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure. The PEA prepared for the proposed fleet vehicle rules has been prepared consistent with the goals identified by the courts.

Since the commentator does not specifically define the terms identified here that are used in this comment, it is assumed here that the commentator's statement that the PEA does not address the potential duplicative impacts of other regulations, policies,

and programs refers to CARB's urban transit bus fleet rule; the consent decree between heavy-duty engine manufacturers and U.S. EPA; and the heavy-duty engine standards recently proposed by U.S. EPA. The commentator is referred to the responses to comments #1-47, #1-60, and #1-68.

Response 1-115: The SCAQMD disagrees with the commentator's opinion that local traffic congestion will increase in the vicinity of refueling locations. As discussed in response to comment #1-106, the SCAQMD does not agree that additional refueling trips will necessarily be required for alternative-fueled vehicles. Additionally, as presented in the indirect transportation/circulation section of Chapter 4 of the PEA, the SCAQMD evaluated the average increase in daily refueling trips that would occur if all heavy-duty fleet vehicles affected by the proposed fleet vehicle rules, except transit buses, traveled to centralized refueling sites. The analysis concluded that an average of 40 refueling trips would be made each day by heavy-duty vehicles to each site, which is far below the significance criterion of 350 trips per site. Based on this estimate, the number of refueling trips made by heavy-duty vehicles subject to the proposed fleet vehicle rules would have to increase by a factor of seven to exceed the significance criterion. Therefore, the SCAQMD does not anticipate that the proposed fleet vehicle rules will cause significant transportation/circulation impacts.

Response 1-116: Regarding the cumulative impact conclusions, the commentator is referred to the response to comment #1-114.

Response 1-117: The SCAQMD disagrees with the commentator's opinion that the PEA did not adequately address public services relative to refuse vehicles. Please see responses to comments #1-50, #1-52, and #1-115

Response 1-118: According to Sempra Energy, the Northridge earthquake resulted in isolated service outages in areas there were generally closest to the earthquake epicenter. It should be noted that, in the event of an earthquake of a magnitude similar to the Northridge earthquake, natural gas would still be available in large segments of the pipeline system and no widespread power outages would occur. Sempra Energy has recommended in public meetings that mutual assistance agreements be established between cities. These agreements would ensure that each city would have a source of natural gas in the event of a gas outage.

Response 1-119: Regarding the cumulative impact conclusions, the commentator is referred to the response to comment #1-114.

Response 1-120: The commentator has not provided any justification for the assumption that alternate fueled vehicles are inherently less safe than diesel or gasoline vehicles. In fact, statistics indicate that these vehicles are as safe in normal operations and sometimes safer in accident situations. The Natural Gas Vehicle

(NGV) Coalition reports in a 1999 report, http://www.ngvc.org/safetybulletin.html , that based on a survey of 8,331 natural gas utility, school municipal and business fleet vehicles (NGVs) that traveled 178.3 million miles that NGV fleet vehicle injury rate was 37 percent lower than the gasoline fleet rate, there were no fatalities compared with 1.28 deaths per hundred million miles for gasoline fleet vehicles. In the two years prior to the report for 85,000 NGVs operating in the US, there had not been a fuel tank rupture. The Department of Energy, Clean Cities Fact Sheet, May 2000 states "there is no evidence that CNG buses pose any greater risk of fire or explosion than diesel buses." Locally, several organizations were interviewed to assess their operational experience with alternative clean fuels. These include specific Southern California entities such as: Waste Management Industries with 30 CNG heavy duty trash trucks and 70 diesels; the City of Santa Monica with 200 CNG and LPG vehicles of which 32 are heavy duty trash vehicles; GTE with several hundred CNG vehicles; the City of Cypress that has operated an assortment of LPG vehicles for 20 years; and, the City of Oxnard with 35 transit buses. None of these users have experienced any safety issues such as fires or explosions due to the alternate fuels over a time period ranging from four to twenty years of operation. The commentator is also referred to the responses to comments #1-8, #1-9, and #1-76.

Response 1-121: Regarding the cumulative impact conclusions, the commentator is referred to the response to comment #1-114.

Response 1-122: The commentator has misunderstood the analysis of potential future uses of methanol. Further, based on this and prior comments it appears that the commentator objects to including an analysis of potential methanol impacts in the PEA. The proposed fleet vehicle rules do not require methanol to be used. As noted in responses to comments #1-33, #1-88, and #1-90, methanol could be used because by definition it is an alternative clean fuel. To exclude an analysis of potential environmental impacts from the use of methanol, would not provide full disclosure of potential impacts from the proposed project that can be identified and would not be fully consistent with CEQA Guidelines §15121, which states in part that a CEQA document, "…is an informational document which will inform public agency decision-makers and the public generally of the significant environmental effect of a project,…"

Response 1-123: The page referenced by the commentator is from the "Direct Air Quality Effects" section in Chapter 4 of the PEA, not from the "Energy/Mineral Resources" analysis in Chapter 4. The PEA considered the impacts of energy use for compressor stations in the "Operation-related Impacts" subsection of the "Energy/Mineral Resources" section in Chapter 4 of the PEA. The commentator is, therefore, referred to this subsection.

Response 1-124: Regarding the cumulative impact conclusions, the commentator is referred to the response to comment #1-114.

Response 1-125: With regard to the LAFD white paper, the commentator is referred to response to comment #1-78. The commentator has not provided any justification for the assumption that alternate fueled vehicles are inherently less safe than diesel or gasoline vehicles or have greater toxic and fire/explosion hazards. Refer also to the response to comment #1-120 above concerning safety. The risk of fire and explosion has to be considered along with the probabilities of such occurrences. The natural gas systems have more rugged tanks and are less likely to rupture in an accident. Before individual fueling facilities are permitted, incremental risk estimates will have to be performed. LNG, LPG and CNG have different handling problems than gasoline or diesel and require certain precautions, but that does not preclude their viability as alternative fuels. NFPA codes govern maintenance and fuel systems. LPG, LNG and CNG are not toxic, as claimed, whereas diesel is. CNG does not pool when released and LPG, LNG vaporize rapidly avoiding the potential for extensive soil contamination when spilled. The commentator is also referred to the responses to comments #1-8 , #1-9, and #1-76.

Response 1-126: Regarding the cumulative impact conclusions, the commentator is referred to the response to comment #1-114.

Response 1-127: With regard to potential land use and zoning impacts, the commentator is referred to the responses to comments #1-10, 1-13, #1-29, and #1-31. With regard to what public agencies constitute a responsible agency relative to the proposed fleet vehicle rules, the commentator is referred to the responses to comments #1-1 and #1-2.

Response 1-128: With regard to the general requirements related to project alternatives the commentator is referred to the response to comment #1-14. With regard to a voluntary incentive-based alternative, the commentator is referred to the responses to comments #1-15 and #1-47.

Response 1-129: With regard to a fuel neutral alternative, the commentator is referred to the response to comment #1-16. See also response to comment #1-14. With regard to a definition of methanol equivalency, the commentator is referred to the responses to comments #1-16 and #1-34.

Response 1-130: With regard to consideration of an alternative that would regulate all fleets, public and private, the commentator is referred to the response to comment #1-1-17. See also responses to comments #1-14 and #1-40..

Response 1-131: With regard to the commentator's opinion regarding the deficiencies of the No Project Alternative, the commentator is referred to the responses to comments #1-59, #1-60, #1-69 and #1-98.

Response 1-132: The benefits of all the proposed fleet rules are based on the new purchase of vehicles that are emitting are lower levels than would have occurred otherwise in the absence of the proposed fleet vehicle rules. These lower emitting vehicles, purchased in a particular year, continue to operate in succeeding years and thus the emission benefits accumulate over the years as additional low-emitting vehicles are purchased by affected fleets. It is not expected that new lower emitting vehicles would only operate and produce emission benefits for one year after their purchase. The commentator is also referred to the responses to comments #1-66 and #1-67.

Response 1-133: The use of a 0.0045 g/bhp-hr PM emission factor was based on CARB input relative to expected in-use PM emission levels from natural gas heavy-duty engines. The SCAQMD has recently received additional input from CARB for expected PM emission levels from natural gas-powered heavy-duty engines, including urban bus engines. These emission factors will be used to refine the emission benefit analysis. The commentator is also referred to the responses to comments #1-66 and #1-67.

Response 1-134: The emission benefit assumptions for alternative-fuel engines are based on CARB input relative to appropriate NOx and PM emission factors for diesel heavy-duty engines and corresponding alternative-fuel engines. These emission factors are based on emission standards and the expected in-use emissions of these engines. The commentator is also referred to responses to comments #1-132 and #1-133.

Response 1-135: As discussed in response 1-108, the SCAQMD has revised the analysis of increased fuel delivery trips using lower fuel efficiencies and incorporated the results into a revised net air quality benefits analysis presented in Chapter 4 and Appendix F of the PEA.

Response 1-136: The SCAQMD disagrees with the commentator's opinions that the environmental analysis in the PEA in general, and Appendix F in particular are inadequate. Responses to comments #1-1 through #1-135 rebut the commentator's opinions regarding any deficiencies in the environmental analyses contained in the PEA for the proposed fleet vehicle rules. All SCAQMD responses to the commentator's opinions are supported by facts, data, or other information, which support the conclusions reached in the PEA.

Response 1-137: This is a list of references for consideration by the SCAQMD. No specific response is necessary.

Response 1-138: This is a list of documents cited in specific comments provided by the commentator. Responses to comments containing these documents have been prepared and no further comment is necessary.

COMMENT LETTER 2

CALIFORNIA AIR RESOURCES BOARD

Winston H. Hickox
Agency Secretary

Air Resources Board

Alan C. Lloyd, Ph.D.
Chairman
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Gray Davis
Governor

April 21, 2000

Mr. Darren Stroud
Office of Planning and Policy
South Coast Air Quality Management District
21865 East Copley Drive
Diamond Bar, California 91765-4182

Dear Mr. Stroud:

I am writing in response to the Notice of Completion of a Draft Program Environmental Assessment for the Proposed Fleet Vehicle Rules and Related Amendments, dated March 8, 2000. Thank you for the opportunity to comment on the Draft Program Environmental Assessment (PEA).

2-1 It is our understanding that the Draft PEA is intended to generally address the impacts associated with six proposed vehicle fleet rules and amendments to existing South Coast Air Quality Management District (District) Rule 1186.1, Alternative Fuel Sweepers and Rule 431.2, Sulfur Content of Liquid Fuels. It is also our understanding that the District may elect to forego further environmental assessments required under the California Environmental Quality Act (CEQA), for specific proposed fleet rules or proposed amendments to Rules 1186.1 or 431.2, if it determines that the impacts from a specific rule are included within the impacts identified in the PEA. At present, draft rule language is available for only Proposed Rule (PR) 1191, Clean On-Road Light and Medium-Duty Public Fleet Vehicles, PR 1192, Clean On-Road Transit Buses, and

2-2 Proposed Amended Rule (PAR) 1193, Waste Haulers. In addition, we understand that the District has not yet released its socio-economic impact analyses for these proposed rules.

Type of Environmental Assessment Prepared

2-3 The PEA notes that "pursuant to CEQA Guidelines section 15168(a), a PEA is an Environmental Assessment (EA) which may be prepared on a series of actions that can be characterized as one large project and are related either: (1) geographically, (2) [as] logical parts in the chain of contemplated actions, (3) in connection with the issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or (4) as individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways."

2-3 cont.

We concur that a PEA provides a useful and appropriate platform for evaluating the environmental impacts of PRs 1191, 1192, 1193, 1194, 1195, 1196, and 1186.1. As described by the District, each of these proposed rules would require government entities to acquire alternative-fueled vehicles when adding or replacing fleet vehicles. It is likely that many of these rules will result in shared infrastructure needs. Moreover, the District can pursue each of these rules pursuant to the authority granted in Health and Safety Code (HSC) section 40447.5(a). This observation does not preclude the possibility that supplemental environmental impact assessments may be warranted or needed for one or more specific proposed rules.

2-4

However, we believe that a separate EA would be needed for PAR 431.2, Sulfur Content in Diesel Fuels. First, we believe that PAR 431.2 cannot be addressed as part of the fleet rules program because it is not part of the fleet rule authority granted the District under HSC 40447.5. The District's authority to specify the composition of diesel fuel offered for sale in the Air Basin is contingent on approval by the Air Resources Board (ARB) (HSC 40447.6), and therefore is very different from the fleet rule authority in HSC 40447.5. In addition, PAR 431.2 could have a different range of impacts, as it would affect all diesel vehicles and not just those in government fleets. Finally, the PEA as currently structured, does not allow an assessment of the impacts, including the air quality benefits, attributable solely to PAR 431.2.

2-5

ARB Chairman, Dr. Alan Lloyd, in his March 16, 2000 letter to District Chairman, Dr. William Burke, discussed our reasons for supporting revisions to the national diesel fuel standard. As his letter notes, broad applicability reduces implementation problems and provides greater emission benefits. If the District is intent on pursuing amendments to Rule 431.2, I would recommend that you contact ARB's Stationary Source Division to discuss the extensive environmental and socio-economic impact analyses, as well as the fuel availability evaluations needed for such a proposal. We are also reviewing whether ARB's approval of PAR 431.2 would be subject to review by the California Environmental Policy Council under Senate Bill 529 (Bowen, Chapter 99-613). Finally, please note that under the federal Clean Air Act, California is authorized to enact clean alternative-fuel requirements only as part of the State Implementation Plan (SIP). Accordingly, if the District adopts PAR 431.2 and ARB approves the proposed changes, the resulting rule would have to be submitted as a SIP revision.

Assessment of Alternatives

2-6

Alternative A: We recommend that the PEA acknowledge the diesel emission reduction efforts that are underway at both the State and federal level. Dr. Lloyd referred to ARB's diesel emission reduction efforts in the letter mentioned previously. As Dr. Lloyd noted, the ARB convened a multi-stakeholder group in 1998 to develop a

comprehensive diesel particulate matter (PM) reduction plan. A draft plan will be released this spring and will be brought before our Board in September. We also expect that the U. S. Environmental Protection Agency (U.S. EPA) would soon be considering the adoption of a national low-sulfur fuel standard.

2-6 cont.

We recognize that these initiatives cannot be quantified at this point and are not considered part of the "baseline" for EA purposes. Nonetheless, it is likely that both ARB and U.S. EPA will have significant diesel PM reduction measures in effect by 2010 that would provide additional diesel PM reductions. The final PEA should address these initiatives as part of the "no project" alternative.

2-7

Alternative B: The final PEA should reflect ARB's Urban Transit Bus Fleet Rule as adopted on February 24, 2000.

Proposed Project: The remaining comments are limited to an evaluation of the existing and anticipated alternative-fuel infrastructure; availability of alternative-fuels to meet the District's anticipated demand, and the availability of light and medium-duty vehicles (LDV/MDV) to meet the purchase requirements of the proposed fleet vehicle requirements.

2-8

In identifying the number of LDV/MDV that will utilize alternative-fuels as a result of the proposed rules, the District has accurately estimated that the majority (95.5%) of these vehicles will be gasoline-powered vehicles certified to the low-emission vehicle (LEV) standards. As a result, the number of clean-fueled vehicles that will be purchased by fleets to comply with the proposed rules will be relatively small. The PEA appears to be accurately characterizing potential fuel and vehicle costs, and the availability of alternative-fuels to meet fleet vehicle purchase demands. However, the PEA appears to overestimate the infrastructure need estimates because it does not factor in the excess capacity in the existing alternative-fuel infrastructure. Existing alternative-fuel facilities generally dispense either compressed natural gas (CNG) or liquefied petroleum gas (LPG) for fleet use and are particularly suited to meet some of the anticipated increase in demand.

2-9

2-10

The PEA indicates that methanol and liquefied natural gas (LNG) vehicles will be available to meet some portion of the LDV/MDV fleet purchasing requirements. We are not aware of any plans to manufacture vehicles capable of operating on either methanol or LNG.

Thank you for the opportunity to comment on this program assessment. Please contact Ms. Sylvia Oey, District Liaison, at (916) 322-6110, if you have any questions concerning our comments. Please contact Mr. Dean Simeroth, Chief, Criteria Pollutants

Branch, to discuss the environmental and socio-economic impact analyses requirements associated with a fuel standard revision. Mr. Simeroth can be reached at (916) 322-6020.

Sincerely,

Michael P. Kenny
Executive Officer

cc: Dr. Barry Wallerstein
South Coast Air Quality Management District
21865 East Copley Avenue
Diamond Bar, California 91765-4182

COMMENT LETTER 2: CALIFORNIA AIR RESOURCES BOARD

Response 2-1: First it should be noted that PR 1186.1 is a new rule, not an amendment to an existing rule. Regarding the type of CEQA prepared for the proposed fleet vehicle rules, the SCAQMD prepared a program environmental assessment (PEA), in part, because the proposed fleet vehicle rules constitute rules, regulations, plans, or other general criteria that govern the conduct of a continuing program (CEQA Guidelines §15168(a)(3)). Subsequent activities in the program must be analyzed in light of the program CEQA document to determine whether an additional environmental document must be prepared. Through the PEA the SCAQMD has identified all potential adverse environmental impacts generated by the proposed project to the extent that these impacts can be foreseen and given the detail of the project itself.

The CEQA Guidelines indicate that the degree of specificity required in a CEQA document depends on the type of project being proposed (CEQA Guidelines §15146). The detail of the environmental analysis for certain types of projects cannot be as great as for others. For example, the environmental document for projects, such as the adoption or amendment of a comprehensive zoning ordinance or a local general plan, should focus on the secondary effects that can be expected to follow from the adoption or amendment, but the analysis need not be as detailed as the analysis of the specific construction projects that might follow. As a result, the Draft PEA analyzes impacts of a regulatory program with a degree of specificity commensurate with the degree of specificity of the entire proposed fleet vehicle program.

The CEQA Guidelines recognize that, because a program CEQA document analyzes impacts from a project consisting of basic or broad policy considerations, projects that follow may require site-specific operations. For any projects that follow, a lead agency can use the PEA as the basis of the environmental analysis for the project. If impacts from the site-specific project are within the scope of the program CEQA document, no further environmental documents would be required (CEQA Guidelines §15168(c)(2)). If impacts not analyzed in the PEA are identified during the promulgation process for subsequent rules, additional environmental analyses will be prepared.

The project descriptions in Chapter 2 of the PEA provide a description for each proposed fleet vehicle rule that is sufficient in detail to allow meaningful analysis of potential adverse environmental impacts. In addition to draft rule language being available for PR 1191, 1192, and 1193, draft rule language is available for PR 1186.1 and 1194.

Response 2-2: The Draft Economic Assessment was released to the public on April 25, 2000.

Response 2-3: It should be noted that PR 1191, which regulates light- and medium-duty fleet vehicles, does not require replacement vehicles to consist of alternative fuel vehicles (AFVs). Instead, PR 1191 requires replacement vehicles to consist of CARB-certified LEVs or cleaner vehicles including ULEVs and SULEVs. These vehicles operate on currently available reformulated gasoline. Fleet owners or operators can also replace fleet vehicles AFVs.

PR 1193 has been modified to allow, prior to July 1, 2002, replacement refuse trucks to consist of trucks with CARB-certified duel fuel engines.

Similarly, since the initial concept for PR 1194 was released as part of the Draft PEA, it has been modified to allow replacement taxi or shuttle service fleet vehicles operating out of local airports to consist of CARB-certified ULEVs, SULEVs, or ZEVs. As already noted, ULEVs and SULEVs can operate on currently available reformulated gasoline. Courtesy shuttles operating to and from local airports would still be required to replace fleet vehicles with AFVs when buying new or replacing old fleet vehicles.

PR 1186.1 has been further clarified to include a technical infeasibility criteria and procedures provision, which is a demonstration by a fleet owner or operator that it is technically infeasible to comply with the provisions of the rule requiring replacement of street sweepers with alternative fueled-sweepers because such sweepers are not commercially available for the specified application. A technical infeasibility can also be made if an AFV refueling station is not available within five miles of the vehicle storage or maintenance yards.

Finally, as noted in response to comment #2-1, if impacts not analyzed in the PEA are identified during the promulgation process for subsequent rules, additional environmental analyses will be prepared.

Response 2-4: The SCAQMD is aware that the enabling legislation allowing the SCAQMD to regulate vehicle fleets does not include authority to establish fuel specifications for diesel fuel. The SCAQMD further understands that its authority to establish fuel specifications for diesel fuel is subject to approval by CARB (H&SC §40447.6). The SCAQMD does not believe these statutory differences with respect to authority have any effect on the appropriate CEQA document or the CEQA analysis. PAR 431.2 is appropriately part of the PEA because it allows cleaner vehicles for those fleet vehicles that are not alternative-fueled.

The PEA provides a comprehensive analysis of potential adverse impacts at Basin refineries that would need to make refinery modifications enabling them to produce

low sulfur fuel. The PEA assumes that all diesel fuel at the affected refineries would be low sulfur diesel and, therefore, fully analyzed all potential environmental impacts from PAR 431.2 It should be noted that the SCAQMD has extensive experience as a CEQA lead agency for refinery modification projects.

The SCAQMD disagrees with the commentator's assertion that the PEA does not allow assessment of potential adverse environmental impacts resulting from amending rule 431.2 to require low sulfur diesel. The PEA includes a comprehensive analysis of potential environmental impacts from amending rule 431.2 as described in the following paragraphs.

To estimate the potential "worst-case" air quality impacts with refinery modifications associated with the proposed project, the SCAQMD utilized the air quality impacts analysis contained in the Final EIR for the Mobil Torrance Refinery Reformulated Fuels Project (SCAQMD, 1994). The Mobil EIR comprehensively analyzed the environmental impacts associated with refinery modifications necessary to enable Mobil to produce gasoline that complied with federal and CARB reformulated gasoline (RFG II) regulations. However, the scope of the modifications analyzed in the Mobil EIR are much more extensive than the modifications expected by affected refineries that would be required to produce PAR 431.2 compliant low sulfur diesel fuel. In the Mobil EIR, not only were modifications needed to produce lower sulfur gasoline, but extensive modifications where necessary to enable Mobil to produce gasoline with lower benzene content, lower Reid vapor pressure, lower olefin content, lower T-90, etc. Thus, the Mobil Refinery had to essentially modify major portions of its whole refining process in order to comply with the RFG II regulations.

In the context of the proposed project, the SCAQMD does not expect that affected refineries will have to modify their existing refining processes to the extent that Mobil had to for its Reformulated Fuels Project. However, the SCAQMD expects that some of the types of construction activities that occurred for the Mobil Refinery Reformulated Fuels Project would be similar to those required to low sulfur fuels that meet the requirements of PAR 431.2.

In order to estimate the construction impacts associated with refinery modifications, the SCAQMD assumed that peak daily construction emissions during modification of a refinery to comply with PAR 431.2 would be about 25 percent of the peak daily construction emissions that were estimated for the Mobil reformulated fuels project. The SCAQMD also assumed that the six largest refineries (e.g., ARCO, Chevron, Mobil, Equilon, Tosco, and Ultramar) within its jurisdiction would construct modifications that would have similar emissions. Finally, as a "worst-case," the SCAQMD assumed that the peak daily emissions from construction of modifications at each refinery would all occur on the same day. It was also assumed that refinery modification construction activities would last two years. Under these assumptions, the peak daily emissions for construction of refinery modifications to comply with

PAR 431.2 would be 1.5 times the peak daily emissions estimated for construction of modifications for Mobil's Reformulated Fuels Project (6 refineries x 0.25 x Mobil reformulated fuels project construction emissions). Accordingly, these assumptions lead to an extreme "worst-case" analysis since some refineries may not need to make any modifications and the Mobil modifications from which this analysis is scaled are much more intensive that what can be expected under the proposed project.

The SCAQMD included PAR 431.2, which would limit the sulfur content in diesel, as part of the proposed fleet vehicle rules because it will result in immediate Basinwide PM emission reductions when implemented, and it will facilitate the widespread use of particulate filters for diesel vehicles not affected by the proposed fleet rules. In addition, it should be noted that alternative methods of compliance are being considered as part of the development of the proposed fleet vehicle rules, including the use of particulate filters in combination with low-sulfur diesel fuel. The emission benefits of PAR 431.2 have been included in the proposed project in terms of this proposed rule being used in combination with particulate filters, an alternative method of compliance, to achieve equivalent PM emission benefits.

Response 2-5: The SCAQMD supports the adoption of national diesel fuel quality standards. At the same time, the SCAQMD faces a 2006 deadline for the compliance with federal PM standards, and has recently determined that over 70 percent of the airborne cancer risk in the South Coast Air Basin is associated with diesel particulate emissions. There is a pressing need to expedite the availability of low sulfur diesel fuel to accommodate particulate trap technology, and to facilitate the introduction of NOx adsorber and other NOx control technology on an expedited basis. Several refiners have already indicated that they produce sizeable quantities of low sulfur diesel fuel already. SCAQMD staff have contacted CARB Stationary Source Division staff, as well as the staff of the CEC, to discuss the scope of analysis required to properly assess the full range of socio-economic issues involved with PR 431.2. Staff also recognize that SCAQMD adoption of the rule would be subject to CARB review.

Response 2-6: SCAQMD agrees with the commentator that emission reductions from current initiatives to reduce PM emission levels cannot be quantified at this time, since it is somewhat speculative as to how these initiatives will translate into adopted PM emission standards. Nevertheless, to address this comment, SCAQMD staff is modifying Alternative B to develop emission reductions from the proposed fleet rules assuming that U.S. EPA's proposed PM and NOx emission standards are adopted as proposed (0.01 g/bhp-hr PM in 2007 and 0.2 g/bhp-hr NOx phased in between 2007 and 2010, for heavy-duty engines).

Response 2-7: To address this comment, the baseline emission reduction calculation will be modified to incorporate CARB's recently adopted Urban Bus Fleet Rule. At the time the baseline emission reduction calculation was developed,

CARB's Urban Bus Fleet Rule had not been adopted and it was not clear how CARB would possibly modify the proposed fleet rule at the Public Hearing to consider the adoption of this rule.

Response 2-8: This comment states that the universe of light- and medium-duty vehicles described in the PEA was accurately estimated and the estimate of the number of light- and medium-duty vehicles expected to be replaced by AFVs is also accurate. The commentator also states that the PEA accurately characterizes potential fuel and vehicle costs and the availability of alternative fuels to meet fleet vehicle purchase demands. No other response is necessary.

Response 2-9: The SCAQMD concurs that the estimate of the number of alternative fuel refueling stations likely overestimates the actual number of refueling stations that will ultimately be built. The environmental analysis from implementing the proposed fleet vehicle rules contained in the Draft PEA also overestimates potential adverse environmental impacts for the following reasons. The estimate of the affected vehicle universe includes a 20 percent scale up factor in the event that the initial fleet vehicle surveys underestimated affected public fleets. Further, the analysis does not take into account the fact that a large number of AFVs are already included in public fleets, that is, the analysis assumes all affected vehicles are diesel or gasoline vehicles. Finally, representatives from energy suppliers in the district have indicated that the SCAQMD's assumption of the number of AFV refueling stations that would be necessary to support implementation of the proposed fleet vehicle rules substantially overestimates that actual number that would be required.

In addition to the above, as noted in response to comment #2-3, minor modifications have been made to several of the proposed fleet vehicle rules. The net effect of these modifications, especially for PR 1194, is to allow greater use of CARB-certified LEV or cleaner vehicles that operate on currently available reformulated gasoline. As a result, infrastructure modifications to install AFV refueling stations would not need to be as extensive as assumed in the PEA. By overestimating potential adverse environmental impacts from the proposed rules, the SCAQMD has provided a "worst-case" analysis of potential adverse impacts and the SCAQMD, that is unlikely to underestimate actual impacts, and has provided full disclosure to the public of the potential adverse environmental effects of the proposed fleet vehicle rules.

Response 2-10: As indicated in Chapter 4 of the PEA, ethanol, methanol, and electricity are the least preferred of the alternative clean fuels that could be used to comply with the proposed fleet vehicle rules. This is due primarily to their relatively high fuel costs and relatively low net energy efficiency. Further, the analysis assumed that one percent of heavy-duty vehicles could switch to methanol or ethanol, although even this small percentage is not likely for similar reasons, higher cost than other fuels and lower availability and reliability. Ethanol and methanol qualify as an alternative clean fuel, which is why the environmental analysis in Chapter 4 included

an analysis of these fuels. It is for this reason that potential adverse environmental impacts from methanol and ethanol use have been evaluated and to provide full disclosure to the public regarding potential adverse environmental impacts from the proposed fleet vehicle rules.

COMMENT LETTER 3

INTERNATIONAL TRUCK AND ENGINE CORPORATION

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April 25, 2000

Mr. Darren Stroud
c/o Office of Planning and Policy
South Coast Air Quality Management District
21865 E. Copley Drive
Diamond Bar, California 91765-4182

Re: Draft Program Environmental Assessment for Proposed Fleet Vehicle Rules and Related Amendments

Dear Mr. Stroud:

On behalf of International Truck and Engine Company, ("International"), we submit the following comments on the Draft Program Environmental Assessment for Proposed Fleet Vehicle Rules and Related Amendments ("Environmental Assessment") released on March 8, 2000 by the South Coast Air Quality Management District ("SCAQMD"). While International supports the SCAQMD's objective of reducing mobile source emissions from fleet vehicles, International believes that adoption of new fleet regulations requires a fair and full evaluation of the environmental impacts and benefits of the full range of alternatives available to achieve the District's air quality goals.

3-1

Unfortunately, the Environmental Assessment is deficient in that it fails to adequately analyze alternatives that will meet the SCAQMD's air quality objectives with lesser environmental impacts and with fewer socioeconomic and other adverse impacts. In addition, the Environmental Assessment's analysis is flawed in significant areas and relies on outdated or inaccurate information. Finally, the Environmental Assessment fails to adequately consider the availability of Green Diesel Technology and other advanced diesel technologies utilizing ultra-low sulfur diesel fuel ("advanced diesel technology") and to adequately analyze these approaches as compliance options under the Rules. For these, and the reasons set forth below, we believe

3-2

3-2 cont. that the Environmental Assessment is flawed and must be revised significantly to include additional analysis and must be recirculated to the public for comment.

3-3 International is providing constructive comments on the Environmental Assessment for the SCAQMD's proposed fleet rules notwithstanding, and without waiving, its concern that federal law preempts the SCAQMD's authority to adopt the proposed fleet rules.

Summary Of Defects In The Environmental Assessment

3-4 International believes that the Environmental Assessment is flawed for several reasons. As explained more fully below, International believes that the Environmental Assessment is deficient because 1.) the Project Objectives fail to include objectives that the SCAQMD is required to or should consider as part of its rulemaking authority; 2.) the Environmental Assessment attempts to assess the impacts of rules which have not yet been released for public comment and review, thus making the opportunity to understand the rules and comment illusory; 3.) the Alternatives Analysis fails to consider a sufficiently broad range of alternatives, including alternatives that achieve environmental objectives with fewer potential environmental and socioeconomic impacts; 4) the Alternatives Analysis fails to consider a truly fuel neutral alternative; 5.) the Environmental Assessment fails to include an alternative that permits advanced diesel; 6) the Environmental Assessment contains inaccurate and outdated information regarding advanced diesel technology including its emissions characteristics and availability; 7.) the Environmental Assessment inappropriately consolidates the analysis of seven different rules, eliminating the ability to fairly evaluate the alternatives that are being considered for each rule, among other things; and 8.) the Environmental Assessment fails to adequately analyze the costs and environmental impacts of moving to alternative fuels.

Project Description and Objectives

3-5 International does not believe that the Environmental Assessment's statement of Project Objectives sufficiently sets forth the objectives that the SCAQMD is required to or should consider as part of its rulemaking authority. International requests that the Project Objectives be modified to reflect the required objectives and that each alternative be analyzed against these revised project objectives.

3-6 The Project Objectives must be reframed to take into account additional objectives contained in the Air Resources division of the Health & Safety Code that the SCAQMD is required to or should consider as part of promulgating its proposed fleet rules. (Health & Safety Code §§ 39000 et seq.) As discussed more fully below, the California Legislature has indicated a legislative intent that the SCAQMD rules allow for a broad range of alternative methods of lowering emissions, adequately take into consideration socioeconomic impacts and cost-effectiveness, and consider impacts to small businesses. Therefore, it is appropriate, if not required that the Project Objections reflect these goals as established by the Legislature and reflected in the California Health & Safety Code.

A Broad Range of Alternative Methods of Lowering Emissions

The Health & Safety Code articulates a strong legislative intent to encourage a broad range of alternative means of achieving lower emissions. In establishing rules and regulations, air pollution control districts are required to "include a process to approve alternative methods of complying with emission control requirements that provide equivalent emission reductions, emissions monitoring, or recordkeeping." (Health & Safety Code § 40001(d)(1).)

In addition, the statutory requirements of the SCAQMD's "clean-burning fuels program" reflect the specific objective of lowering emissions through the use of advanced pollution control technologies utilizing traditional fuels:

3-7

> When considering which clean fuels projects to promote, the south coast district shall consider, among other factors, the current and projected economic costs and availability of fuels, the cost-effectiveness of emission reductions associated with clean fuels compared with other pollution control alternatives, **the use of new pollution control technologies in conjunction with traditional fuels as an alternative means of reducing emissions**, potential effects on public health, ambient air quality, visibility within the region, and other factors determined to be relevant by the south coast district.

(Health & Safety Code § 40448.5 (emphasis added).) The California Legislature has made clear that the SCAQMD has an obligation to encourage the broadest range of compliance strategies that achieve lower emissions. Moreover, the SCAQMD has an obligation to explore clean technologies that utilize traditional fuels, such as diesel. Therefore, the project objectives should be revised to reflect these goals as discussed below.

Socioeconomic Impacts and Cost-Effectiveness

The Health & Safety Code also requires the SCAQMD to adopt rules which, among other things, "are efficient and cost-effective" (Health & Safety Code § 40440(c).) The Code states that:

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> In adopting any regulation, the district shall consider, pursuant to Section 40922 [cost-effectiveness assessment], and make public, its findings related to the cost-effectiveness of a control measure. A district shall make reasonable efforts, to the extent feasible within existing budget constraints, to make specific reference to the direct costs expected to be incurred by regulated parties, including businesses and individuals.

(Health & Safety Code § 40703.) Section 40440.8 requires the SCAQMD to examine "[t]he availability and cost-effectiveness of alternatives to the rule or regulation" by considering the socioeconomic impacts of proposed rules and regulations.

3-8 cont.

The requirements of creating rules that are efficient and cost-effective and providing socioeconomic impact assessments reflect a legislative intent that the SCAQMD consider and seek to minimize socioeconomic impacts and have these considerations as objectives of its rulemaking authority.

Impacts to Small Businesses

Finally, the Health & Safety Code contains a number of provisions aimed at providing financial assistance to small businesses affected by SCAQMD rules and regulations. The Legislature has stated that "[i]t is necessary to increase the availability of financial assistance to small businesses which are subject to the rules and regulations of the south coast district, in order to minimize economic dislocation and adverse socioeconomic impacts." (Health & Safety Code § 40448.6(a). *See also,* §§ 40448, 40448.7, 40448.8 requiring the SCAQMD to provide assistance to small businesses.)

3-9

These provisions reflect the Legislature's intent that the SCAQMD consider alternative means of achieving lower emissions, cost-effectiveness, socioeconomic impacts, and impacts to small businesses. In light of these principles, the Environmental Assessment's stated Project Objectives are inadequate in several ways.

In general, the objectives do not focus on emissions reduction, but rather favor the use of "alternative clean-fuels," as defined to exclude advanced diesel technology. Only two of the seven project objectives even refer to lowering emissions, while three specifically promote "alternative clean-fuels," through such goals as "fostering the development of" and "increasing the availability of funding for" alternative clean-fuels. In focusing on "alternative clean-fuels," the objectives fail to consider alternative means of achieving lower emissions. Consequently, compliance strategies that produce greater emissions reductions, such as Green Diesel Technology, are overlooked or rejected in the environmental analysis and not analyzed as an alternative compliance option.

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Furthermore, the objectives fail to adequately consider cost-effectiveness and socioeconomic impacts. Because the rules will primarily affect local government agencies, school districts and private fleet operators, including small business owners, the project objectives should reflect sensitivity towards cost, socioeconomic impacts, and impacts to small businesses.

3-11

To better reflect the policies contained in the Air Resources provisions of the Health & Safety Code, the Project Objectives should be revised to include the following:

- Allowing flexibility and as broad a range of alternatives as possible to achieve lower emissions;
- Minimizing costs and other adverse impacts imposed on school districts, governmental agencies and private fleet operators;
- Reducing emissions by replacing older vehicles as quickly as possible;
- Reducing emissions while minimizing impacts to small business owners; and
- Minimizing other socioeconomic impacts to the public.

3-12

International requests that the Project Objectives be modified to reflect the required SCAQMD's objectives as suggested above and that each alternative be analyzed against these revised project objectives.

In addition, the Environmental Assessment fails to describe with sufficient specificity the requirements of each of the proposed fleet rules to provide adequate opportunity for public comment. Four of the seven rules have not yet been released. Meaningful comments on the Environmental Assessment cannot be provided in the absence of understanding what the rules will require. The preparation of an environmental assessment for rules not yet written may constitute an abuse of discretion under CEQA. Therefore environmental assessments should be prepared with the release of each draft rule.

3-13

Alternatives Analysis

The alternatives analysis contained in the Environmental Assessment fails to consider a broad enough range of alternatives that will achieve environmental objectives. Whenever the SCAQMD adopts a rule, California law requires the agency to analyze the socioeconomic impacts of the adoption, including "the availability and cost effectiveness of alternatives to the rule or regulation" (Health & Safety Code § 40440.8). The Environmental Assessment rejects without analysis available and more cost-effective alternatives that meet the SCAQMD's air quality objectives, such as Green Diesel Technology and other advanced diesel technologies. The alternatives analysis, therefore, should be modified.

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The alternatives analysis is specifically deficient in several respects. First, the Environmental Assessment fails to consider a fuel neutral alternative. A fuel neutral strategy has many environmental and other benefits. These benefits include encouraging the broadest range of alternatives and technologies to continue to reduce emissions. Fuel neutrality provides incentives for natural gas, diesel and other technologies to continue to improve from an emissions standpoint through competition. A fuel neutral strategy gives governmental agencies,

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3-15 cont. school districts and private fleet operators more flexibility in meeting both environmental and other important objectives in a manner that is most cost-effective. Fuel neutrality is also more equitable. No technology should be excluded in the absence of a valid health and safety concern, especially when that technology achieves articulated environmental objectives.

3-16 Although the City of Los Angeles, in its comments on the Notice of Preparation and Initial Study for Rule 1190, requested analysis of a fuel neutral compliance option (Environmental Assessment at C-1-5), the Environmental Assessment fails to evaluate this option. In response to the City's comment, the Environmental Assessment claims that "fuel neutrality is already a component of the current versions of the proposed fleet vehicle rules." (Environmental Assessment at C-1-19). This assertion is not true in that because the Environmental Assessment expressly "disallows" advanced diesel technology (Environmental Assessment at 5-2), the rules effectively require natural gas for almost all vehicle categories.

3-17 By disallowing advanced diesel technology, the Environmental Assessment denies agencies the opportunity to explore more feasible and cost-effective ways of achieving the air quality goals of the proposed rules. In most product categories, very few alternatives exist if advanced diesel alternatives are eliminated. **For the school bus category, International is not aware of any other alternative to compressed natural gas if advanced diesel is eliminated.** The Environmental Assessment should be revised to include a truly fuel neutral alternative that allows all technologies that meet specific emissions standards.

Evaluation of Advanced Diesel Technologies

3-18 International representatives have met with the SCAQMD on numerous occasions to provide information, including emission and technical, cost, and other information about Green Diesel Technology. International also has presented for review a demonstration school bus equipped with Green Diesel Technology that it intends to offer for sale within approximately 12 months. Similar advanced diesel technology is already in operation both throughout Europe for nearly 10 years and in a pilot program that International participates in with the San Diego Unified School District. There, 10 Green Diesel school buses have been in service since October 1999. International has informed the SCAQMD staff and Board members that intends to offer on the market vehicles equipped with Green Diesel Technology.

3-19 In addition to a fuel neutral option, International requests assessment of an option expressly allowing advanced diesel technology as a compliance option under each of the proposed fleet rules and for the proposed fleet rules applicable to school buses, in particular. Advanced diesel technologies that use ultra-low sulfur fuels such as International's Green Diesel Technology are proven technologies. Advanced diesel technology using ultra-low sulfur fuel has been successfully implemented for nearly 10 years in Europe, where over 6,400 vehicles are in service. Previously, the primary barrier to the feasibility of advanced diesel technologies in the United States was the availability of sulfur fuel with a sulfur content below 15 ppm. As noted

3-20 below, this barrier no longer exists. The Environmental Assessment is inadequate in that it fails

3-20 cont. to analyze as a compliance option the availability of advanced diesel technologies—including Green Diesel Technology.

3-21 Advanced diesel technologies, including Green Diesel Technology, provide comparable or better emissions levels than the other compliance strategies, have no land use impacts, and are less expensive than other compliance technologies. Green Diesel Technology consists of a combination of (1) optimized engine calibration to minimize NOx and other emissions, (2) exhaust after-treatment in the form of a Continuously Regenerating Trap ("CRT") to reduce particulate emissions, and (3) the use of an ultra-low-sulfur fuel. These components, taken together, can result in a new generation of diesel engines that are equivalent to or better than other clean burning vehicles from an emissions standpoint.

3-22 Green Diesel Technology provides air quality benefits that are equal to or better than other compliance options. Specifically, this technology reduces particulate emissions more than 90% below current levels and below the U.S. EPA's and California Air Resources Board's expected 2007-2010 heavy-duty engine emission standards. With Green Diesel technology, particulate levels are 50% lower than the lowest emission-certified natural gas engine and NOx levels are significantly reduced to 3.0 g/bhp-hr, which equals NOx emission levels of some of the better selling natural gas engines and is cleaner than methanol engines. In addition, hydrocarbon emissions are below measurement capability and the exhaust produces no smoke or smell.

3-23 Tables 1 and 2 (below) show the results of emissions comparisons conducted by International of Green Diesel Technology and other alternative fuel engines. Table 1 demonstrates the results of a comparison with a methanol-fueled engines. Table 2 shows a comparison of Green Diesel Technology against two natural gas engines. "Bus Engine A" is a John Deere 350 CNG 6.8 Liter engine, the best-selling natural gas engine for school buses in the United States. "Bus Engine B" is the Cummins B5.9G engine. As shown in these tables, methanol and natural gas PM and HC emissions reductions are significantly exceeded with Green Diesel Technology. NOx emissions reductions associated with methanol are also significantly exceeded with Green Diesel Technology. NOx emissions levels associated with natural gas are either lower than or comparable to Green Diesel Technology.

Table 1: Green Diesel Technology Comparison to Methanol Equivalent Heavy-Duty Benchmark g/bhp-hr

	Green Diesel Technology School Bus	DDC M85 V-6
PM	0.005	0.03
NOx	3.0	4.1
HC	0	0.2

3-23 cont.

Table 2: Green Diesel Technology Comparison to CNG g/bhp-hr

	Green Diesel Technology School Bus	Bus Engine A	Bus Engine B
PM	0.005	0.07	0.08/0.02*
NOx	3.0	3.2	2.6/1.7*
HC	0	0.5	0.06

*with catalyst

3-24 The Environmental Assessment justifies its exclusion of advanced diesel technologies by repeatedly and incorrectly suggesting that the required low-sulfur fuel is unavailable and that therefore the technology is speculative (Environmental Assessment at 2-12). These assertions are in fact incorrect. On December 15, 1999, ARCO Products Company ("ARCO") announced that it would make ultra-low sulfur fuel available to centrally-fueled fleet vehicle owners and operators. Subsequently, Equilon, a joint venture of Shell Oil and Texaco, requested approval from the California Air Resources Board to make low-sulfur fuel available in Northern California. It is expected that other major oil companies will follow suit. International has presented this information to the SCAQMD on numerous occasions. The Environmental Assessment's evaluation of advanced diesel technologies should be rewritten to consider the current availability of low sulfur fuels.

3-25 In addition, much of the information contained in the Environmental Assessment regarding advanced diesel technology is severely outdated. The Environmental Assessment

3-26 relies on technologically incorrect reports and statistics pertaining to older diesel technology that produced significantly higher emissions levels. The Environmental Assessment fails to consider

recent studies and comparisons among advanced diesel technology and alternative clean fuels. Several studies, including "A Comparative Analysis of the Feasibility and Cost of Compliance with Potential Future Emission Standards for Heavy-Duty Vehicles Using Diesel or Natural Gas," prepared in February 2000 by Sierra Research for Californians for a Sound Fuel Strategy; "Use of Alternative Fuels in Transit Buses," prepared by the U.S. General Accounting Office in December 1999 as a Report to Congressional Committees; "Fuel Strategies for Future Bus Procurements: Final Report," prepared by the Transit Operations Department of the Los Angeles County Metropolitan Transit Authority in August 1999; "Final Report: Analysis of Costs and Emissions Associated with the Replacement of Transit Bus Fleets," prepared by Vitetta Group in October 1999 for the California Transit Association; and "Fueling Heavy Duty Trucks: Diesel or Natural Gas?" prepared by the Harvard Center for Risk Analysis in January 2000 have examined advanced diesel technology more recently than the American Institute of Chemical Engineers study cited in the Environmental Assessment.[1] The more recent studies offer a more accurate comparison because they take into account current market and technological advances. These studies consider some of the hazards and drawbacks associated with natural gas and more fairly evaluate benefits to be derived from advanced diesel technology. We request that the Environmental Assessment be revised to consider the information set forth in the reports cited herein. Any assessment of advanced diesel technology must incorporate updated and accurate information such as that provided here and previously provided by International to the SCAQMD.

3-26 cont.

3-27

Consideration of updated information reveals that advanced diesel technology would meet the SCAQMD's environmental objectives with fewer land use, cost, and socioeconomic impacts. The information submitted to the SCAQMD shows that advanced diesel technology can achieve the SCAQMD's desired emissions reductions objectives. In addition, advanced diesel technology does not require construction of new refueling facilities, thus minimizing land use impacts associated with siting refueling stations and short term construction impacts.

3-28

Advanced diesel technology also provides significant air quality benefits due to lower costs and the ability of fleet operators to replace older higher emitting vehicles more quickly. The dealer net cost of diesel vehicles is lower than that of other vehicles. For example, the diesel version of a Blue Bird "All American RE" school bus capable of transporting 84 passengers costs $63,454. The dealer net cost of the natural gas version costs is $32,500 more, at $95,954. The retail prices paid by school districts would be proportionately higher. These higher vehicle costs would have to be borne by school districts and public agencies, whose ability to apply funds towards education and other public services would consequently be

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[1] For the convenience of the SCAQMD, a copy of the Harvard Center for Risk Analysis study is attached hereto as Exhibit A. Copies of all studies are being submitted under separate cover due to their combined length.

3-29 cont. severely impacted. As a result, fleet turnover would be delayed as older vehicles would remain in service longer, thereby prolonging current adverse air quality impacts.

3-30 Because the SCAQMD has been provided information that differs significantly from information set forth in the Environmental Assessment, the SCAQMD must include and analyze such information in the Environmental Assessment. When pertinent information is readily available, a lead agency's failure to include it within an environmental assessment may constitute an abuse of discretion pursuant to California Environmental Quality Act ("CEQA") Guidelines § 15151, which calls for sufficient analysis in evaluating environmental consequences and "adequacy, completeness, and a good faith effort at full disclosure." (*Kings County Farm Bureau*, (1990) 221 Cal.App.3d 692, 730-737 (Environmental impact report was deficient because it omitted "substantial information" about the use of natural gas; Court of Appeal emphasized the need for a "quantitative, comparative analysis" of the relative environmental impacts of project alternatives.))

Combined Review of Seven Different Rules

The proposed fleet vehicle rules were originally proposed in one rule, Rule 1190, which applied to "any" fleet vehicle. (Environmental Assessment at 2-7.) In response to comments received during the NOP/IS comment period as well as comments received at the Public Workshop/CEQA Scoping Meeting on December 21, 1999 and the Public Workshops held on January 21, 2000 and February 16, 2000, Rule 1190 was divided into seven different rules according to vehicle type. The primary basis for separating the rules was that compliance options differed by vehicle type.

3-31 The rationale for dividing Rule 1190 should also apply to require rule-specific environmental analysis. Because environmental impacts, costs, and appropriate alternatives vary among vehicle categories, a single environmental assessment covering all rules is inadequate to analyze the specific compliance options under consideration for each separate fleet rule applicable to vehicle categories. Furthermore, as noted above, the Environmental Assessment purports to analyze impacts of rules not yet drafted. Without rule-specific environmental assessment and without knowing what the language of each rule, the public does not have an adequate opportunity to understand and comment on the alternatives being considered for each rule. The Environmental Assessment should either be revised to contain more detailed analysis of the impacts, costs, and alternatives associated with each proposed rule, or separate assessments should be prepared for each proposed rule. The public must have an opportunity to comment following the release of proposed rule language for each rule.

Costs and Environmental Impacts of Moving to Alternative Fuels

3-32 The Environmental Assessment is flawed because it fails to adequately analyze the environmental and socioeconomic impacts of transitioning to the alternative fuels permitted under the proposed rules.

3-33 The Environmental Assessment fails to adequately consider the land use impacts presented by fuel alternatives that require new refueling stations. As suggested by the City of Los Angeles (Environmental Assessment at C-1-6), siting options for such stations are limited within the District. The land use impacts of finding refueling station locations and any localized impacts resulting from the rerouting of vehicles to get to fueling locations must be examined.

3-34 The Environmental Assessment is further flawed in that it fails to analyze the impact of moving to high cost alternative fuels on fleet turnover for older vehicles. Alternative fuel vehicles cost more than advanced diesel technology vehicles in a variety of respects. (See school bus comparison, above.) These costs include higher refueling infrastructure costs, acquisition and operational costs. Because public agencies' (and school districts in particular) ability to purchase new vehicles and replace older vehicles is constrained by limited governmental funding sources, alternatives that require using higher cost alternative fuel options will necessarily retard the speed of replacing older vehicles by governmental agencies. An alternative that allows advanced diesel technology will result in a faster rate of replacement of higher-emissions vehicles. Because of lower infrastructure, acquisition and operational costs, the Environmental Assessment should quantify and compare the emissions benefits and impacts associated with different replacement rates comparing alternatives that allow and do not allow advanced diesel technology as a compliance option. The Environmental Assessment is deficient because it ignores and fails to quantify the adverse emissions impact of retaining older vehicles and effectively excludes the most cost effective compliance options—namely advanced diesel technologies—which would allow fleets to more quickly replace older, higher emitting vehicles.

3-35 Furthermore, limited funding exists for the development of infrastructure to transition to clean fuel vehicles and costs associated with the on-going operation of such vehicles. These costs present an additional disincentive to purchase new low emission vehicles. Many of these costs would not be triggered if advanced diesel technology is permitted as a compliance option. The Environmental Assessment needs to better examine and compare operational costs in this context.

3-36 Finally, the Environmental Assessment provides no risk analysis of the hazards presented by natural gas. As the evaluation sets forth in the Harvard Center for Risk Assessment and the other studies cited herein indicate. Natural gas vehicles pose hazards including increased risk of fire and explosion both with respect to vehicle operation as well as vehicle maintenance and refueling. The assessment of safety risks does little more than provide anecdotal and incomplete information. A quantitative risk analysis should be prepared comparing natural gas to advanced diesel technology.

In addition to these general comments, International submits the following specific comments with respect to individual sections of the Environmental Assessment.

Mr. Darren Stroud
April 25, 2000
Page 12

Executive Summary.

3-37

- Environmental Assessment at 1-2. The language of the rule also applies to private vehicle fleets. Private fleets include private delivery trucks (e.g., United Parcel Service), repair and service trucks (e.g., tow trucks; plumbing, electricity, and cable trucks), merchandise delivery vehicles, and private transportation vehicles. Please explain whether the SCAQMD has evaluated the impacts of these vehicles.

3-38

- Environmental Assessment at 1-8. The Environmental Assessment relies heavily on the Multiple Air Toxics Exposure Study II study ("MATES II"), which International maintains does not accurately estimate the concentration of diesel exhaust particulate in ambient air within the South Coast Air Basin. International supports the SCAQMD's efforts to study exposure to air toxics, and has submitted comments regarding MATES II. Specifically, International has urged modifications to the report that ensure a sound scientific basis and more accurate reflection of the potential risks to citizens from exposure to air pollutants. International requests that the Environmental Assessment analysis reflect and incorporate International's suggested modifications to the MATES II study.

3-39

- Environmental Assessment at 1-15. In its analysis of indirect air quality impacts, the Environmental Assessment concludes, "significant adverse air quality impacts are not expected from the implementation of the proposed fleet vehicle rules and related amendments." This statement is incorrect. The proposed fleet vehicle rules present potential indirect air quality impacts in several areas. As discussed more fully below, the Environmental Assessment fails to consider land use impacts related to the siting of new refueling stations. The Environmental Assessment also fails to analyze localized impacts, such as local traffic impacts related to the relocation of fueling infrastructure. Because certain conventional vehicle fueling locations do not have room to add alternative fuel infrastructure, the fleet rules will require that new fueling facilities be sited in new locations, affecting different communities and potentially exposing such communities to air quality, traffic, noise and other impacts. Refueling stations may be located in areas that will experience impacts once alternative fuel vehicles are rerouted to those areas. These impacts need to be addressed in the revised assessment.

3-40

- Environmental Assessment at 1-16. The Environmental Assessment concludes that transportation/circulation impacts associated with the proposed rules will be insignificant. International disputes this conclusion. The Environmental Assessment fails to adequately consider impacts resulting from the relocation of refueling stations. As noted above, the City of Los Angeles

3-40 cont.

has commented that siting refueling stations within the District will present land use impacts that have not been adequately examined (Environmental Assessment at C-1-6). Based on these land use constraints, refueling stations may be located in areas where traffic impacts would result. The siting of new locations may present new air quality, noise, traffic and other impacts to previously unaffected neighborhoods. Transportation and circulation impacts need to assessed in light of these possibilities.

3-41

- Environmental Assessment at 1-18. The Environmental Assessment states that the Initial Study concluded that the project would have no significant direct or indirect adverse effects on 8 of 15 environmental topics. The SCAQMD defends its finding of "no significant impacts" for those 8 topics on the basis that no comments were received to refute this conclusion. At least with respect to land use, geophysical, and noise impacts, this claim is false, as the City of Los Angeles commented on the issue in its comment letter contained in the Environmental Assessment (Environmental Assessment at C-1). Regardless of an absence of public comment on this issue, the SCAQMD should examine these impacts on a rule-by-rule basis, as the Initial Study addressed a different, more global rule.

3-42

- Environmental Assessment at 1-18. The Environmental Assessment's dismissal of 8 of 15 environmental topics in its initial study results in a defect in the Environmental Assessment. The proposed rules have the potential to result in significant impacts in a number of those areas in which environmental analysis was not performed. The following topics should be evaluated in the Environmental Assessment for potential impacts.

3-43

Land use and planning. The SCAQMD has failed to consider the observations of the City of Los Angeles that the proposed rules present potentially significant impacts to land use and planning. Such impacts would result from changes in land use for purposes of siting refueling stations. Potential impacts would result from such changes as zoning ordinance modifications and may be cumulative. The proposed rules may also require siting refueling stations and locating refueling routes in neighborhoods, including residential neighborhoods not previously impacted by vehicle fleet operations.

3-44

Geophysical impacts. The SCAQMD also failed to consider the observations of the City of Los Angeles that the proposed rules may result in potentially significant geophysical impacts. The SCAQMD previously concluded that because refueling stations would be primarily located in industrial areas, no geophysical impacts would result. In response, the City of Los Angeles identified potential impacts associated

3-44 cont. with infrastructure for vehicles which primarily serve recreational or residential areas not proximate to industrial refueling stations. Because refueling locations for such vehicles may not be restricted to industrial areas, construction of such stations may result in potentially significant geophysical impacts.

3-45 *Noise.* Similarly, the City of Los Angeles also identified potential impacts associated with refueling stations located adjacent to parks and residential areas. These potentially significant noise impacts should be assessed.

3-46 *Cultural Resources.* It is unclear where new construction will take place. Due to that uncertainty, cultural resources may be impacted by the infrastructure requirements of alternative fuel stations.

3-47 *Secondary Environmental Impacts from Economic Impacts.* As noted above, allowing advanced diesel technology as a compliance alternative would enable agencies to take advantage of lower infrastructure acquisition and operational costs that enable faster fleet turnover. This is especially true because of lesser operating ranges of alternative fuel vehicles. The environmental impacts of disparate fleet turnover rates should be examined.

Project Description.

3-48 • Environmental Assessment at 2-7. Three of the project objectives contained in the Environmental Assessment promote "alternative clean-fueled technologies." To the extent these objectives are not revised according to the modifications suggested above, "alternative clean-fueled technologies" should include advanced diesel technologies.

3-49 • Environmental Assessment at 2-7. The Environmental Assessment states as one of its objectives "increasing the availability of funding for alternative clean-fueled vehicle technology." "Alternative clean-fueled technologies" should be defined to include advanced diesel technology.

3-50 • Environmental Assessment at 2-14. The Environmental Assessment claims that, "[i]n order to provide a conservative estimate of the potential air quality benefits associated with the proposed fleet vehicle rules and related amendments, the SCAQMD used an unscaled vehicle population." Please explain the term "unscaled vehicle population" and what vehicles were included and excluded from the analysis.

Mr. Darren Stroud
April 25, 2000
Page 15

Existing Setting.

3-51
- Environmental Assessment at 3-58. The Environmental Assessment contains a list of non-petroleum, alternative clean fuels. Low sulfur diesel should not be excluded from the list of non-petroleum, alternative clean fuels. The list includes methanol, but excludes advanced diesel technology using ultra-low sulfur fuel and ignores the fact that such technology, including Green Diesel Technology, achieves lower emissions levels compared to methods with respect to all relevant criteria pollutants. Either low sulfur fuel should be included as an alternative fuel, or the focus of the Project should be reduce emission levels.

3-52
- Environmental Assessment at 3-75. Again, low-sulfur fuel and Green Diesel Technology should be added to the list of alternative clean fuels.

3-53
- Environmental Assessment at 3-81. In its analysis of CNG and LNG, the Environmental Assessment fails to discuss relevant information about safety hazards encountered by natural gas vehicles and their fueling infrastructure. These hazards have included increased risk of fire and explosion both with respect to vehicle operation as well as vehicle maintenance and refueling. This section should be revised to include a thorough quantitative risk assessment comparing overall safety risks of natural gas and other compliance options, including advanced diesel technology.

Environmental Impacts and Mitigation.

3-54
- Environmental Assessment at 4-8. The Environmental Assessment incorrectly labels the availability of low-sulfur fuel as "speculative." As noted above, the availability of low-sulfur fuel is in fact a certainty. The Environmental Assessment should not dismiss advanced diesel technology as a viable compliance alternative and should evaluate the environmental and socioeconomic impacts and benefits of such a strategy compared to other compliance approaches.

3-55
- Environmental Assessment at 4-11. Table 4-6, which purports to compare the performance of conventional fuels to alternative clean fuels, is significantly flawed. The table relies heavily on a 1997 study by the American Institute of Chemical Engineers ("AIChE") and concludes that CNG, LPG, and RFG present the best overall alternatives to conventional gasoline "based on current technology." (Environmental Assessment at 4-9.) The Environmental Assessment must also consider more recent studies. Such studies include those conducted by the Los Angeles County Metropolitan Transportation Authority ("LACMTA"), the General Accounting Office, Sierra Research, the Vitetta Group, and the Harvard Center for Risk Analysis,

3-55 cont.

which have considered and compared diesel, natural gas and gasoline vehicles for operational, performance, environmental and cost impacts, and found that advanced diesel technology presents a superior alternative.

3-56

- Environmental Assessment at 4-11. Table 4-6 is also significantly flawed because the AIChE conclusions and the reported indices for diesel and other alternatives are not supported by more recent information available to the SCAQMD including that cited above. It is clear from the diesel statistics cited in the Environmental Assessment that the AIChE study relied on outdated diesel statistics and failed to examine advanced diesel technology using ultra-low sulfur fuel. The Environmental Assessment must consider all relevant available information, not just the outdated AIChE study.

3-57

The table's numerical values for vehicle cost index of 5.0 for a diesel vehicle and 4.6 for a CNG vehicle do not reflect the broad cost advantages of advanced diesel technology. Information submitted to the SCAQMD demonstrates that the cost of acquisition of CNG buses and medium-duty trucks currently is approximately 50% more than advanced diesel technology vehicles. In addition, CNG bus operating costs are 40%-50% higher than advanced diesel technology. The table's numerical values should reflect this 40-50% cost differential in favor of advanced diesel technologies.

3-58

The Environmental Assessment also is incorrect in its conclusion that CNG has a higher net energy efficiency than diesel. Although the Table states that the net energy efficiency index for diesel is 4.9 and that of CNG is 5.0, in fact, advanced diesel technology is 40% more efficient than other technologies including CNG. The fact that diesel technologies are significantly more fuel efficient than natural gas is supported by the LACMTA and Harvard Center for Risk Analysis studies and the numerical values should be reversed and the disparity significantly increased to reflect that difference.

3-59

With respect to non-greenhouse emissions, the table contains an index of 1.0 for diesel, 3.9 for methanol and 4.5 for CNG. These relative values are also incorrect. Green Diesel Technology produces significantly lower HC, PM, and NOx emissions as compared to methanol. Compared to natural gas, EPA certified testing fuel data emissions of PM produced by Green Diesel school buses are 50% lower than PM levels for natural gas buses—and school buses utilizing Green Diesel Technology produce no HC emissions. Because Green Diesel Technology produces significantly lower PM emissions and no HC emissions while producing comparable NOx emissions, the figures in the table are significantly flawed. Advanced diesel technology should receive an equivalent or higher

3-59 cont. numerical value taking into account its relative PM, HC, and NOx emissions characteristics.

3-60 With respect to greenhouse emissions, the table contains an index of 3.1 for diesel and 4.5 for CNG. These values are also contrary to Green Diesel Technology, which emits significantly fewer greenhouse gases than any other technology. The President's Greenhouse gas strategy encourages the use of diesel technology precisely because of its lower carbon monoxide emissions.

3-61 The SCAQMD needs to explain the source of its diesel statistics and must include accurate numbers for advanced diesel technology.

3-62
- Environmental Assessment at 4-13. In examining the estimated relative toxicity of diesel and natural gas fueled transit buses, school buses, and all other HDVs, the Environmental Assessment appears to exclude some PMs when evaluating CNG. For diesel-based vehicles, total PM emissions were analyzed, while for CNG, however, toxic risk was estimated based on the PM contribution of only certain constituents: nickel and hexavalent chromium emissions, and the NMHC emissions of formaldehyde, acetaldehyde, benzene, and 1,3 butadiene emissions. Because there is no evidence that particulates from advanced diesel technology differ in character from natural gas particulates, and the basis of the toxicity findings with respect to diesel are in dispute, all particulates should be included in the toxicity assessment for natural gas. If the SCAQMD assumes that diesel particulates are toxic, CNG particulates should not be assumed harmless, especially given the lack of research in this area. This is especially the case since natural gas particluates have been found to contain significantly more particulates of smaller dimensions (nanoparticles) and these nano-particles are believed to raise significant health concerns. The analysis should draw a comparison between natural gas and Green Diesel Technology and must consider and evaluate the potential health impacts of natural gas nano-particles.

3-63
- Environmental Assessment at 4-26. The Environmental Assessment anticipates that no additional employees will be needed to perform fuel delivery duties under the new rules. Organized labor representatives have indicated, however, that because of the differences in natural gas repairs, purchasing of natural gas vehicles results in greater outsourcing of repair functions by government agencies. The environmental impacts of performing repairs at additional and different locations and the related socioeconomic impacts must be analyzed.

3-64
- Environmental Assessment at 4-30 to 4-37. The section on "clean diesel technology" does not account for Green Diesel Technology. Green Diesel

3-64 cont.

Technology meets lower emissions levels than those described in the "clean diesel technology" section of Environmental Assessment. The statement that the availability of advanced diesel technology is "mostly speculative and unquantifiable" is incorrect. (Environmental Assessment at 4-32.) Advanced diesel technology has been successfully implemented throughout Europe and has been in use at the San Diego Unified School District since October 1999. With the recent announcements of low-sulfur fuel availability, and International's plans to offer on the market vehicles equipped with Green Diesel Technology, advanced diesel technology will be commercially available within 12 months. As noted above, International has made the SCAQMD aware of this information through numerous meetings and technology demonstrations. By contrast, methanol technology is not readily available on the market in many product categories and there are no indications suggesting that the product will become available reasonably soon.

3-65

- Environmental Assessment at 4-33. The Environmental Assessment suggests that the use of advanced diesel technology may lead to potential air quality impacts if changes in infrastructure, such as fuel supply or delivery, occur. International is unaware of any potential infrastructure changes required by low-sulfur fuel other than in cases where a fleet operator cannot dedicate an existing diesel tank for ultra-low sulfur fuel. The SCAQMD should elaborate on what infrastructure changes it expects would be warranted.

3-66

- Environmental Assessment at 4-36. The Environmental Assessment concludes that the use of PM filters in conjunction with ultra-low sulfur diesel fuel will not result in significant adverse air quality impacts. International agrees with this conclusion.

3-67

- Environmental Assessment at 4-41. The Environmental Assessment concludes that centralized refueling related to the proposed fleet vehicle rules are not anticipated to generate significant direct or indirect operational-related air quality impacts. As stated above, International disagrees with this conclusion because air quality impacts will be relocated to different communities due to siting refueling locations and different transportation routes to those locations. The SCAQMD should quantify and re-examine these impacts.

3-68

- Environmental Assessment at 4-58. The "Indirect Transportation/Circulation Effects" section fails to analyze operational impacts of transitioning to natural gas. A transition to natural gas will require refueling stations that have yet to be sited. These stations may be located in areas that will require a rerouting of traffic through communities and neighborhoods not previously impacted. The

3-68 cont. potential traffic and circulation impacts to these communities must be evaluated.

3-69
- Environmental Assessment at 4-78, 4-82, 4-92. The "Hazards Effects" section contains inadequate analysis of the safety and hazard risks of the use of natural gas. The anecdotal data contained in the Environmental Assessment is insufficient. In addition, the SCAQMD should assess the potential environmental impacts of storage requirements particular to CNG, LNG and propane, such as whether buffer zones would be provided around storage facilities, and whether such facilities are required to be maintained above-ground, unlike diesel. A quantitative risk analysis of various compliance options should be prepared.

3-70
- Environmental Assessment at 4-97. Under "Environmental Impacts Found Not To Be Significant," the Environmental Assessment concludes that the proposed rules will not affect present or planned land uses within the District. The City of Los Angeles has commented with respect to this issue (Environmental Assessment at C-1-6), indicating that there are likely to be problems associated with siting refueling infrastructure and LNG, Methanol and other alternative fuel production facilities within the South Coast Air Basin. The SCAQMD has not adequately responded to these comments.

3-71
- Environmental Assessment at 4-102. The Environmental Assessment "Economic and Social Impacts" section ignores the potential for higher fleet turnover under an advanced diesel technology alternative, as described above. The impacts of delayed conversion to alternative fuels due to high costs must be carefully studied, with a rule-by-rule comparison, which includes analysis of advanced diesel technology.

Alternatives Analysis.

3-72
- Environmental Assessment at 5-2. Table 5-1 describes alternatives recommended by the public and whether those alternatives were rejected or incorporated into the alternatives analysis. The Environmental Assessment claims that the "Fuel Neutral Emission Standard" alternative has been incorporated, stating that "[t]he proposed fleet vehicle rules are considered fuel neutral because affected fleet owners have a range of clean fuels they can use for compliance. The only major fuel type not allowed by the proposed rules is clean diesel because the technology is currently not available." (Environmental Assessment at 5-2). As explained above, advanced diesel technology is in fact available. Advanced diesel technology is available and in use throughout Europe in over 6,400 vehicles. Furthermore, the rule is not fuel neutral if very few alternatives are available. Because International is not

3-72 cont.

aware of any methanol buses currently available on the market, practically speaking, CNG school buses will be the only product offered as a compliance option in the school bus vehicle category. In practical terms, the rules are not fuel neutral.

3-73

For the foregoing reasons, International requests that the Environmental Assessment be revised to include new project objectives, that each alternative be analyzed against the new objectives, that a rule-by-rule analysis be conducted, that an advanced diesel technology be considered and analyzed as a compliance option, and that a revised environmental assessment be recirculated for public comment.

International appreciates the opportunity to submit these comments in response to the Environmental Assessment and looks forward to continuing to work with the SCAQMD to develop effective strategies for achieving clean air goals.

Sincerely,

Warren Slodowske

Warren Slodowske
Manager, Environmental Staff, Engine Engineering

cc: SCAQMD Board Members
Mr. Barry Wallerstein, SCAQMD
Mr. Jack Broadbent, SCAQMD

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BY HAND DELIVERY

TO: Darren Stroud

DATE: April 26, 2000

FILE NO.:

FROM: Estela de Llanos

COPIES TO:

SUBJECT: International Truck & Engine Corp. Comment Letter Re: Draft Program Environmental Assessment for Propsed Fleet Vehicle Rules and Related Amendments

Enclosed please find the above-referenced comment letter sent to you yesterday via fax. Also enclosed are the following studies cited in the comment letter:

Exhibit A: Harvard Center for Risk Analysis, *Fueling Heavy Duty Trucks: Diesel or Natural Gas?* January 2000.

Exhibit B: Sierra Research, Inc., *A Comparative Analysis of the Feasibility and Cost of Compliance with Potential Future Emission Standards for Heavy-Duty Vehicles Using Diesel or Natural Gas,* February 14, 2000.

Exhibit C: United States General Accounting Office, *Use of Alternative Fuels in Transit Buses,* December 1999.

Exhibit D: Vitetta Group, *Final Report: Analysis of Costs and Emissions Associated with the Replacement of Transit Bus Fleets,* October 1, 1999.

Exhibit E: Los Angeles County Metropolitan Transit Authority, *Fuel Strategies for Future Bus Procurements: Final Report,* August 1999.

International requests that these materials be included with its comment letter as part of the administrative record. If you have any questions regarding this submission, please do not hesitate to call me at 213/891-7814.

COMMENT LETTER 3: INTERNATIONAL TRUCK AND ENGINE CORPORATION

Response 3-1: Pursuant to CEQA Guidelines §15126.6, a CEQA document shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project or would substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. The CEQA document "**need not consider every conceivable alternative to the project** [emphasis added]**" (**CEQA Guidelines §15126.6(a)). The alternatives discussion and comparison of the relative merits of each project alternative in Chapter 5 of the Draft EA complies with these and all other relevant requirements regarding project alternatives in CEQA Guidelines §15126.6.

Response 3-2: This comment is a general summary of the specific comments in the remainder of the comment letter. The commentator is referred to the specific responses to comments #3-3 through #3-74.

Response 3-3: The SCAQMD understands that the commentator does not, by making these comments, waive its concern that federal law preempts the SCAQMD's authority to adopt the proposed fleet rules.

Response 3-4: The SCAQMD disagrees with the commentator's opinion that the PEA prepared for the proposed fleet vehicle rules is flawed. The PEA for the proposed fleet vehicle rules has been prepared with a sufficient degree of analysis to provide decision-makers with information that enables them to make a decision that intelligently takes account of environmental consequences. The evaluation of the environmental effects of a proposed project have been as exhaustive as possible in light of what is reasonably feasible analyze. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure. The PEA prepared for the proposed fleet vehicle rules has been prepared consistent with the goals identified by the courts. The remainder of this comment summarizes subsequent specific comments. Specific responses to each of the points are provided in responses to comments #3-5 through #3-74.

Response 3-5: The commentator states that the "Project Objectives fail to include objectives that the SCAQMD is required or should consider as part of its rulemaking authority." Its unclear what is meant by this statement. Project objectives are required in a CEQA document pursuant to CEQA Guidelines §15124(b), which states, in part, "The statement of objectives should include the underlying purpose of the project. The statement of objectives contained in the PEA for the proposed fleet vehicle rules complies with all relevant CEQA requirements.

Response 3-6: As noted in response to comment #3-5, project objectives is a specific requirement pursuant to CEQA Guidelines §15124(b). and has a specific meaning with regard to preparation of a CEQA document. CEQA legislation is codified in the California Public Resources Code §21000, et seq. and the CEQA Guidelines are codified in the California Code of Regulations §15000, et seq. Similar terminology in legislation contained in other statutes, e.g., the Health and Safety Code, does not necessarily have the same meaning as the meaning in the Public Resources Code or the California Code of Regulations. As noted in response to comment #3-5, the "Project Objectives" section in the PEA complies with all relevant CEQA requirements.

Response 3-7: The commentator asserts that the SCAQMD has an obligation to explore clean technologies that utilize traditional fuels, such as diesel and that the project objectives should be revised to include this obligation. There is not specific legal requirement that the proposed fleet vehicle rules consider a compliance option that includes low sulfur diesel and associated emission control equipment. It should be noted that the Federal Code of Regulations (40 CFR 86.000-02) defines alternative fuels as "any fuel other than gasoline and diesel fuels, such as methanol, ethanol, and gaseous fuels." The comment appears to be confusing the SCAQMD's rulemaking authority and requirements with the legal requirements for a CEQA analysis of the potential impacts of this specific project. Health & Safety Code §40001(d)(1) specifics that rules adopted by Air Pollution Control Districts shall include a process to approve alternative methods of complying with emission control requirements that provide equivalent emission reductions. This statute does not directly apply to the proposed project since it deals with rules applicable to "facilities" and fleets are not facilities. In any event, the proposed fleet vehicle rules do not require one method of compliance, but require that fleet owner or operators purchase or lease various alternative fuel replacement vehicles when buying new or replacing existing fleet vehicles. There is limited allowance of diesel vehicles under conditions specified in the proposed rules that have diesel provisions.

The program to encourage clean burning fuels referred to in the comment (Health & Safety Code §40448.5) is authority wholly separate from the authority relied upon for the fleet rules. Health & Safety Code §40448.5 requires that the SCAQMD establish a voluntary program and expend funding on research, development and demonstrations in furtherance of increasing the utilization of clean burning fuels (Health & Safety Code §040448.5.1). The SCAQMD has complied with these requirements and established such a program. Because this program is voluntary, it would not be an enforceable element of this project.

Finally, although the proposed project focuses on replacement vehicles consisting of alternative clean fuel vehicles, provisions are included in some of the proposed fleet vehicle rules for compliance vehicles to be gasoline or diesel vehicles. The

commentator is referred to the response to comment #1-16. Consequently, the PEA does analyze potential adverse environmental impacts from the production and use of low sulfur fuel, as well as analyzing potential adverse environmental impacts from associated emission control equipment. For further information, the commentator is referred to the responses to comments #1-16 and #1-38. Accordingly, the CEQA analysis complies with all relevant CEQA requirements.

Response 3-8: The SCAQMD has considered cost effectiveness of the proposed fleet vehicle rules in its Economic Assessment. The SCAQMD intends to continue to comply with this requirement during rule adoption.

Response 3-9: As with all other statutory requirements, the SCAQMD will comply with Health and Safety Code requirements regarding assistance to small businesses affected by the SCAQMD's rules and regulations. The SCAQMD disagrees, however, that these rule adoption requirements are relevant to the SCAQMD's CEQA analysis. The CEQA analysis is independent from the requirements to consider cost effectiveness during rule adoption and to assist small business. CEQA and the rule adoption requirements impose completely separate obligations on the SCAQMD. The commentator has not provided any reason to believe that these rule adoption requirements are relevant to CEQA.

Response 3-10: The commentator asserts that the project objectives inappropriately focus on the use of alternative clean fuels, rather than emission reductions, so that "green diesel technology" is overlooked. It should be noted that the Federal Code of Regulations (40 CFR 86.000-02) defines alternative fuels as "any fuel other than gasoline and diesel fuels, such as methanol, ethanol, and gaseous fuels." However, the PEA does analyze potential environmental impacts of green diesel technology (referred to here as clean diesel technology), including the use of low-sulfur diesel with add-on controls. The commentator is referred to the response to comment #3-7. Therefore, these impacts are adequately analyzed. For example, the analysis of environmental impacts includes an analysis of refinery modifications necessary to produce low sulfur fuel, and thus fully discloses potential adverse impacts of refinery changes to allow all diesel produced to consist of low sulfur fuel. The project objectives may appropriately emphasize clean alternative fuels since such fuels are inherently cleaner burning. See also responses to comments #3-5 and #3-6.

Response 3-11: With regard to project objectives, the commentator is referred to the responses to comments #3-5, #3-6, #3-10. With regard to analyzing socioeconomic impacts, CEQA Guidelines §15131 states in part, "[e]conomic or social effects of a project shall not be treated as significant effects on the environment." For additional information on CEQA requirements relative to socioeconomic impacts the commentator is referred to the responses to comments #1-4, #1-6, and #1-18. It should be noted that costs associated with implementing the proposed fleet vehicle

rules have been analyzed in the Economic Assessment. Cost information can also be found in the staff reports for PR 1191, PR 1192, and PR 1193.

Response 3-12: The commentator requests that the project objectives be revised to include various objectives that the commentator contends SCAQMD is legally required to include, based on its statutory rulemaking requirements. This is not a CEQA comment pertinent to the adequacy of the PEA for the fleet rules. Further, as stated in response to comment #3-6, CEQA requirements are not contained in the Health and Safety Code, but in the Public Resources Code and the California Code of Regulations. See also response to comment #3-5. The commentator is correct in contending that the SCAQMD is required to consider cost effectiveness, impact to small business and other socioeconomic impacts when rulemaking. Each of these considerations is dealt with in the Staff Reports or socioeconomic assessment documents that are part of the administrative record for these rules. These elements are not necessarily CEQA requirements and the PEA is not inadequate because these rulemaking requirements are not analyzed in the PEA. Finally, there is no requirement that the project objectives specifically list each of the laws to which a project is subject.

Response 3-13: The commentator states that the PEA fails to describe with sufficient specificity specific rule language for each of the proposed fleet vehicle rules. The project descriptions in Chapter 2 of the PEA provide a description for each proposed fleet vehicle rule that is sufficient in detail to allow meaningful analysis of potential adverse environmental impacts. In addition to draft rule language being available for PR 1191, 1192, and 1193 at the time the Draft PEA was released for public review, draft rule language is currently available for PR 1186.1 and 1194.

The SCAQMD disagrees with the commentator's opinion that preparing a program environmental assessment (PEA) constitutes an abuse of discretion under CEQA. The CEQA document for the proposed fleet vehicle rules is a program CEQA document prepared pursuant to CEQA Guidelines §15168, in part, because the proposed fleet vehicle rules constitute rules, regulations, plans, or other general criteria that govern the conduct of a continuing program (CEQA Guidelines §15168(a)(3)). For any projects that follow, a lead agency can use the PEA as the basis of the environmental analysis for the project. If impacts from the site-specific project are within the scope of the program CEQA document, no further environmental documents would be required (CEQA Guidelines §15168(c)(2)). The PEA provides a comprehensive and, therefore, adequate analysis of potential adverse impacts that may result from the proposed fleet vehicle rules. For additional information on program CEQA documents, the commentator is referred to the responses to comments #1-1 and #1-2. If during the rule promulgation process new significant adverse environmental impacts are identified or existing adverse impacts

are made substantially worse, then the appropriate subsequent CEQA document will be prepared (CEQA Guidelines §15168(c)(1)). See also response to comment #1-31.

Response 3-14: The SCAQMD disagrees with the commentator's opinion that the alternatives analysis does not comply with all relevant CEQA requirements. With regard to CEQA requirements relative to project alternatives, the commentator is referred to the responses to comments #1-14 and #3-1. In addition, the CEQA document includes a comprehensive analysis of clean diesel technologies including low sulfur fuel and associated control technologies as part of the analysis of the proposed project. For more information on the analysis of clean diesel technologies, the commentator is referred to the responses to comments #1-16 and #1-38. With regard to a cost effectiveness analysis for the proposed fleet vehicle rules, the commentator is referred to the responses to comments #1-4, #1-6, and #1-18.

Response 3-15: The commentator contends that the PEA for the proposed fleet vehicle rules is deficient because it does not include a fuel neutral alternative. Please see responses to comments #1-14 and #1-16.

Response 3-16: With regard to a fuel neutral alternative, the commentator is referred to the responses to comments #1-14 and #1-16.. It should be noted that the CEQA document does not disallow the use of clean diesel technologies. Further, the Federal Code of Regulations (40 CFR 86.000-02) defines alternative fuels as "any fuel other than gasoline and diesel fuels, such as methanol, ethanol, and gaseous fuels." The CEQA document analyzes the requirements contained in the proposed fleet vehicle rules. Further, the CEQA document includes an analysis of clean diesel technologies as part of the analysis of the project because some of the proposed fleet vehicle rules allow limited use of diesel vehicles to comply with the specific provisions of the various rules. For additional information, the commentator is referred to the responses to comments #1-16 and #1-38. See also response to comment #1-14.

Response 3-17: As noted in response to comment #3-16, the PEA does not disallow the use of clean diesel technology. Although natural gas (CNG or LPG) is currently a leading alternative fuel for school buses; other alternative fuel engines could be used in this application, from a technological feasibility standpoint, if engine manufacturers desire to market these engines. Further, the CEQA document includes an analysis of clean diesel technologies as part of the analysis of the project because some of the proposed fleet vehicle rules allow limited use of diesel vehicles to comply with the specific provisions of the various rules. For additional information, the commentator is referred to the responses to comments #1-16 and #1-38. See also response to comment #1-14.

Response 3-18: The SCAQMD is encouraged by the development of green diesel technology. It is prudent, however, that additional emissions data be developed for vehicles utilizing this technology to ensure that the low emissions characteristics of

this technology last throughout the life of the vehicle. If this can be satisfactorily demonstrated, then the SCAQMD could consider clean diesel as a method of compliance. It should be noted that the Federal Code of Regulations (40 CFR 86.000-02) defines alternative fuels as "any fuel other than gasoline and diesel fuels, such as methanol, ethanol, and gaseous fuels."

At the time that the Draft PEA was released to the public and currently, there are no CARB-certified heavy-duty diesel engines available that can meet the methanol equivalency provision contained in H&SC §40447.5. Further, based on comments received at the various fleet vehicle working group meetings and workshops, control technologies for heavy-duty diesel engines that can meet the methanol particulate equivalency criterion are not expected to be available for another one to two years. Similarly, control technologies for heavy-duty diesel engines to meet the methanol NOx equivalency criterion are not expected to be available for approximate another four to seven years. See also response to comment #1-16.

Response 3-19: The CEQA document includes an analysis of clean diesel technologies, i.e., low sulfur fuel and associated control technologies, as part of the analysis of the project because some of the proposed fleet vehicle rules allow limited use of diesel vehicles to comply with the specific provisions of the various rules. For additional information, the commentator is referred to the responses to comments #1-16 and #1-38. See also response to comment #1-14. Further, it is currently unclear what emission rate assumptions should be used for advanced diesel technology option, since this technology is currently in an initial demonstration phase in California. Once this technology is certified (approved for use) in California, then it may be included in an advanced diesel technology option.

Response 3-20: The CEQA document includes an analysis of clean diesel technologies, i.e., low sulfur fuel and associated control technologies, as part of the analysis of the project because some of the proposed fleet vehicle rules allow limited use of diesel vehicles to comply with the specific provisions of the various rules. For additional information, the commentator is referred to the responses to comments #1-16 and #1-38. See also response to comment #1-14.

Response 3-21: In this comment various types of clean diesel technologies are described. As noted in prior comments, clean diesel technologies were analyzed as part of the analysis on the proposed project. See response to comment #1-16. The commentator also asserts, incorrectly, that there are no environmental impacts associated with clean diesel technologies, including low sulfur fuel. The analysis in the PEA concluded that modifications to refineries that would enable them to produce low sulfur diesel would result in significant adverse construction air quality impacts in 2001 and 2002.

Until this technology is certified by CARB for use in California and sufficiently tested from an emissions durability standpoint, it is premature to conclude green diesel technology produces the same or lower emission levels compared to alternative fuels. Nevertheless, SCAQMD is looking forward to the development and commercialization of green diesel technology if this conclusion is reached by regulatory agencies.

Response 3-22: At the time that the Draft PEA was released to the public and currently, there are no CARB-certified heavy-duty diesel engines available that can meet the methanol equivalency provision contained in H&SC §40447.5. Further, based on comments received at the various fleet vehicle working group meetings and workshops, control technologies for heavy-duty diesel engines that can meet the methanol particulate equivalency criterion are not expected to be available for another one to two years. Similarly, control technologies for heavy-duty diesel engines to meet the methanol NOx equivalency criterion are not expected to be available for approximate another four to seven years. See also responses to comments #1-16, #3-18, #2-4, and #3-21.

Response 3-23: Thank you for providing the information in Tables 1 and 2 of your letter. Nevertheless, until this technology is certified by CARB for use in California and sufficiently tested from an emissions durability standpoint, it is premature to conclude green diesel technology produces the same or lower emission levels compared to alternative fuels. SCAQMD is looking forward to the development and commercialization of green diesel technology if this conclusion is reached by regulatory agencies. See also responses to comments #1-16, #3-18, #2-4 and #3-21.

Response 3-24: As noted in prior comments, clean diesel technologies, including refinery projects necessary to produce low sulfur fuel, were analyzed as part of the analysis on the proposed project. See response to comment #1-16. Regarding the availability of low sulfur diesel, the commentator incorrectly states that the PEA suggests that low sulfur fuel is unavailable and that it is a speculative technology and then cites page 2-12. Relative to low sulfur fuels, the text on page 2-12 states, "The availability of low-sulfur diesel fuel is a critical component in lowering fine particulate emissions from diesel-fueled engines that have advanced after-treatment control devices." Indeed, the proposed amendments contemplated for Rule 431.2 would be to substantially lower the sulfur content limits for petroleum-based liquid fuels (specifically diesel) as indicated in the project description for PAR 431.2 in Chapter 2 of the Final PEA. The commentator is also referred to the responses to comments #2-4 and #3-21.

Response 3-25: This comment summarizes issues contained in comments #3-26 and #-27. Please refer to responses #3-26 and #3-27.

Response 3-26: The SCAQMD disagrees with the commentator's opinion that the information in the PEA is outdated. First, AIChE (1997) report is not the only reference used to support the analysis contained in the PEA. A thorough search of references and the internet was conducted to support the information contained in the PEA. Indeed, many of the references used to provide information on diesel technologies are dated 1999 and there are a few references dated 2000. Although there are older references cited, the bulk of the analysis relies on information published in the last two to three years. This information was used because it is still considered to be relevant.

Response 3-27: With regard to using the most current information available, the commentator is referred to the response to comment #3-26. With regard to analyzing advanced diesel technologies, the commentator is referred to the response to comment #3-64.

Response 3-28: The commentator incorrectly asserts that there are no significant adverse impacts associated with clean diesel technologies. As noted in responses to comments #2-4 and #3-21, refinery modifications necessary to produce low sulfur diesel are expected to generate significant adverse construction air quality impacts. Further, no significant environmental impacts were identified from the construction of alternative fuel refueling station (the analysis assumed that, on the average, three CNG refueling stations would always be built concurrently until sufficient refueling stations were constructed. Further, the analysis of the number of AFV refueling stations that would need to be built is a "worst-case" scenario that likely overestimates the actual number expected to be needed. For a discussion on the conservative assumptions used to estimate the number of AFV refueling stations needed, the commentator is referred to the responses to comments #1-54 and #1-66. With regard to the air quality benefits of clean diesel technology, the commentator is referred to the response to comment #3-22.

Response 3-29: With regard to costs associated with the proposed fleet vehicle rules, the commentator is referred to the responses to comments #1-4, #1-6, #1-18, and #3-11. With regard costs generating indirect environmental impacts from delaying the purchase of new vehicles, the commentator is referred to the response to comment #1-4.

Response 3-30: The PEA fully analyzes all adverse environmental impacts and concludes that the only significant adverse impact is short-term construction air quality impacts from modifications at Basin refineries necessary to produce low sulfur fuel. See responses to comments #2-4 and #3-21. Since "advanced diesel technology" would require low-sulfur fuel, these impacts would still exist. Therefore, the situation is not similar to that in *Kings County*, where the EIR omitted information about an alternative that would generate substantially less adverse impacts. Moreover, the PEA did discuss the environmental impacts of compliance

through the use of advanced diesel technology, so pertinent information was not omitted.

Response 3-31: The SCAQMD disagrees with the commentator's opinion that a program environmental assessment covering all rules is inadequate for analyzing impacts from the individual rules. With regard to the rationale for preparing a program environmental assessment, the commentator is referred to the responses to comments #1-1, #1-2, and #1-31. With regard to preparing individual EAs for each proposed fleet vehicle rule, the commentator is referred to the response to comment #1-20. With regard to the level of detail required for a program CEQA document, the commentator is referred to the responses to comments #1-2 and #1-7. With regard to the adequacy of the project description, the commentator is referred to the response to comment #3-13.

Response 3-:32 The SCAQMD disagrees with the commentator's opinion that the PEA fails to analyze potential adverse environmental impacts from greater reliance on alternative clean fuels. The PEA provides a comprehensive and, therefore, adequate analysis of potential adverse impacts that may result from the proposed fleet vehicle rules. For additional information on the adequacy of the analysis, the commentator is referred to the following responses to comments. With regard to potential land use impacts, the commentator is referred to the responses to comments #1-10 and #1-13. Regarding potential public services impacts, the commentator is referred to the responses to comments #1-4, #1-6, and #1-18. With regard to potential public safety impacts, the commentator is referred to the response to comment #1-9. See also responses to comments #1-1, #1-2, #1-7, #1-8, #1-10, #1-16, #1-38 and see also responses to comments #3-33 through #3-36.

Response 3-33: The SCAQMD disagrees with the commentator's opinion that the PEA did not address land use impacts. With regard to land use impacts, the commentator is referred to the responses to comments #1-10, #1-13, #1-29, and #1-31.

Response 3-34: The PEA includes an analysis of the indirect air quality impacts of a longer fleet vehicle turnover rate in Chapter 4 and in Appendix F. The net effect of delayed replacement of vehicles would not be an adverse air quality impact; instead the potential benefits of the proposed fleet vehicle rules would be reduced. As presented in the indirect air quality impacts discussions in Chapter 4 and in Appendix F, the SCAQMD does not anticipate that the turnover rate would be reduced for light-duty or medium-duty vehicles because LEV/ULEV or cleaner replacement vehicles should be readily available at a relatively small incremental cost. The analysis of the effects of longer vehicle turnover rates for heavy-duty vehicles conservatively assumed 10 percent of the heavy-duty vehicle population subject to the proposed fleet vehicle rules and related rule amendments that would be replaced each year would instead be delayed for one year. Therefore, the daily loss of air

quality benefits under this scenario would be equal to 10 percent of the daily benefits that would occur if all of the vehicles were replaced each year. With regard to costs associated with the proposed fleet vehicle rules, the commentator is referred to the responses to comments #1-4, #1-6, #1-18, and #3-11.

The commentator asserts incorrectly that greater reliance on clean diesel technologies will result in a faster rate of replacement. The proposed fleet vehicle rules do not require fleet owners or operate to buy new, or replace existing fleet vehicles by a specific date. Instead, fleet vehicle owners or operators are subject to the rule requirements only when they purchase new or replace existing fleet vehicles. As a result, the analysis of emission benefits in the PEA assumes an estimated average vehicle life of seven years. There is no reason to assume that the fleet vehicle replacement rate would be different if replacement fleet vehicles operated on clean diesel technologies.

The commentator also incorrectly asserts that the PEA does not analyze potential adverse indirect impacts from the delayed replacement of fleet vehicles because of the incremental increase in the cost of alternative-fueled vehicles. With regard to the analysis of longer turnover rates, the commentator is referred to the response to comment #1-111.

The PEA includes an analysis of the indirect air quality impacts of a longer fleet vehicle turnover rate in Chapter 4 and in Appendix F. The net effect of delayed replacement of vehicles would not be an adverse air quality impact; instead the potential benefits of the proposed fleet vehicle rules would be reduced. As presented in the indirect air quality impacts discussions in Chapter 4 and in Appendix F, the SCAQMD does not anticipate that the turnover rate would be reduced for light-duty or medium-duty vehicles because LEV/ULEV or cleaner replacement vehicles should be readily available at a relatively small incremental cost. The analysis of the effects of longer vehicle turnover rates for heavy-duty vehicles conservatively assumed 10 percent of the heavy-duty vehicle population subject to the proposed fleet vehicle rules and related rule amendments that would be replaced each year would instead be delayed for one year. Therefore, the daily loss of air quality benefits under this scenario would be equal to 10 percent of the daily benefits that would occur if all of the vehicles were replaced each year.

Response 3-35: With regard to costs associated with the proposed fleet vehicle rules, the commentator is referred to the responses to comments #1-4, #1-6, #1-18, and #3-11.

Response 3-36: The commentator provides no basis for the opinion that natural gas vehicles have increased risk of fire and explosion. Risk has two elements, frequency and severity. Due to the more rugged construction of CNG tanks, the frequency of tank rupture should be less for CNG than diesel in an accident. See also response to

comment in #1-120 concerning NGV Coalition and DOE publication concerning CNG vehicle safety. See also responses to comments #1-8, #1-9, #1-76, and #1-78. Hazard identification and associated regulations/procedures were presented in Table 4-30 of the PEA. A quantitative risk analysis would be premature at this point since it would require speculation as to the mix of alternative fuels in various fleets and the distribution of the fleets and the size of the facility and location of the potential receptor(s). Before individual fueling facilities are permitted, incremental risk estimates may have to be performed. See also response to comment #1-31.

Response 3-37: Staff has evaluated the emissions and economic impact for public fleet vehicles that would be affected by the proposed fleet rules, including vehicles used in support functions such as repair and service vehicles. Also, private transportation vehicles are included to the extent that they are allowed to pick up passengers at airports, such as taxis and private shuttle vehicles, and are used under contract to public transit agencies to provide public transportation services. Private merchandise delivery vehicles and delivery trucks (e.g., United Parcel Service vehicles) are not included within the scope of the proposed fleet rules.

Response 3-38: The commentator's opinion that the environmental analysis relies heavily on the MATES II report is incorrect. For additional information on this item, the commentator is referred to the response to comment #1-32.

Response 3-39: The SCAQMD disagrees with the commentator's opinion that the indirect air quality impacts from the proposed fleet vehicle rules are significant. It should be noted that the information cited by the commentator is from the executive summary portion of Chapter 1. Chapter 4 of the PEA contains a comprehensive analysis of potential adverse indirect air quality impacts and the conclusion that these impacts will not be significant is supported by substantial evidence. The commentator provides no evidence to dispute this conclusion. In the indirect air quality effects sections of Chapter 4 and Appendix F, the PEA presents analyses of potential indirect air quality impacts from removal of transit bus lines from service, longer fleet vehicle turnover rates, and additional fleet vehicle travel to centralized refueling sites. Potential impacts from longer fleet vehicle turnover rates are addressed in the response to comment #3-34, and potential impacts from additional travel to centralized refueling sites are discussed in the response to comments #1-106 and #3-67. In spite of the potential indirect impacts, the analyses showed that the proposed fleet vehicle rules would produce a net air quality benefit.

With regard to potential land use impacts, the SCAQMD disagrees that the proposed fleet vehicle rules will generate significant adverse land use impacts. Please see response to comment #1-13. See also responses to comments #1-1, #1-2, #1-7, and #1-10.

The commentator's opinion that the PEA did not analyze potential traffic impacts. Regarding traffic impacts, the commentator is referred to the responses to comments #1-72 and #3-40.

Response 3-40: The SCAQMD anticipates that, to the extent possible, alternative fuel refueling stations will be located at existing public fleet refueling sites (Please see response to comment #1-10). If additional refueling stations must be constructed at new locations, it is not known and cannot be known at this time where such facilities would be located. Therefore, it is speculative at this time to assume that the proposed fleet vehicle rules will lead to significant air quality, noise, transportation, or circulation impacts in a specific neighborhood. This conclusion is consistent with CEQA Guidelines §15145. It is anticipated that individual refueling sites, if required and when ultimately procured, will undergo a site-specific CEQA evaluation by the appropriate CEQA lead agency, typically the agency with general land use authority, such as cities or counties.

However, consistent with the programmatic nature of the PEA, the SCAQMD examined the potential basin-wide impacts to traffic/circulation that might result from public fleet vehicles travelling to different locations than they currently use for refueling. As presented in the indirect transportation/circulation section of Chapter 4 of the PEA, the SCAQMD evaluated the average increase in daily refueling trips that would occur if all heavy-duty fleet vehicles affected by the proposed fleet vehicle rules, except transit buses, traveled to different refueling sites than they currently use. Light- and medium-duty public fleet vehicles are not anticipated to require the use of different refueling sites than they currently use because they are expected to be gasoline-fueled LEV/ULEV vehicles. The analysis concluded that an average of 40 refueling trips would be made each day by heavy-duty vehicles to each site, which is below the significance criterion of 350 trips per site. See also response to comment #1-72

Response 3-41: The commentator has misunderstood the referenced text from the PEA. The conclusion that impacts will not be significant in the environmental areas identified is not based on the fact that no comments were received that refute these conclusions, they were based on the preliminary analysis contained in the initial study. Although comments were received on the NOP/IS claiming that that impacts in additional environmental areas would occur, these comments were not supported by any data, facts, or other information. Therefore, the SCAQMD stated that no information was received on the conclusions in the NOP/IS that refuted the conclusions arrived at in the NOP/IS. The SCAQMD continues to maintain that the analysis of potential adverse environmental impacts from implementing the proposed fleet vehicle rules is comprehensive and supported by substantial evidence. As discussed under response 1-10, if AFV refueling stations must be constructed at sites other than existing maintenance and refueling sites, it is anticipated that they will be

sited in appropriately zoned (industrial and commercial) areas, which are areas where previous and extensive soil disturbance has occurred. Since the proposed project would result in only minor modifications to equipment at existing facilities or minor construction in industrial or commercial settings, little or no site preparation is anticipated that could adversely affect geophysical conditions. For additional information on land use impacts the commentator is referred to the responses to comments #1-10, #1-13, #1-29, #1-31, and #3-40. With regard to noise impacts the commentator is referred to the response to comment #3-45.

Significant adverse geophysical impacts are not anticipated to occur for many of the same reasons significant adverse land use impacts are not expected. Public agencies that replace light- and medium-duty fleet vehicles with LEVs, ULEVs, and/or SULEVs, as specified in PR 1191, will be able to continue using existing reformulated gasoline refueling stations. Further, for heavy-duty vehicles affected by the remaining proposed fleet vehicle rules, it is expected that, to the extent possible, alternative fuel refueling stations will be sited at existing fleet refueling station locations. The analysis of potential adverse impacts includes an estimate of the number of alternative clean fuel refueling stations (see Chapter 4 and Appendix F), but it is not known and cannot be known at this time where alternative fuel refueling stations would be located. Therefore, potential geophysical impacts are considered speculative at this time. This conclusion is consistent with CEQA Guidelines §15145.

The fact that the Initial Study included a more global rule (PR 1190) does not mean that potential adverse environmental impacts were overlooked. PR 1190, in general, would have regulated a larger universe of fleet vehicles than would be regulated by the currently proposed fleet vehicle rules. This means that the Initial Study overestimated impacts rather than underestimated impacts. Finally, the rationale for preparing a program CEQA document is provided in responses to comments #1-1 and #1-2. See also response to comment #1-31.

Response 3-42: The SCAQMD disagrees with the commentator's opinion that "dismissal of 8 of 15 environmental topics in its initial study results in a defect in the Environmental Assessment." The commentator is referred to the response to comment #3-41.

Response 3-43: The SCAQMD disagrees with the commentator's opinion that the SCAQMD failed to consider the opinions expressed by the City of Los Angeles regarding land use impacts. As noted in the following responses to comments, #1-10, #1-13, #1-29, #1-31, and #3-40, the City of Los Angeles' statements were unsupported by data, facts, or other information. The SCAQMD' conclusion in the PEA that implementing the proposed fleet vehicle rules would not generate significant adverse land use impacts is supported by substantial evidence.

Response 3-44: The SCAQMD disagrees with the commentator's opinion that the SCAQMD failed to consider the opinions expressed by the City of Los Angeles regarding geophysical impacts. The City of Los Angeles' statements regarding geophysical impacts were unsupported by data, facts, or other information. The SCAQMD' conclusion in the PEA that implementing the proposed fleet vehicle rules would not generate significant adverse geophysical impacts is supported by substantial evidence. As discussed under response 1-10, if AFV refueling stations must be constructed at sites other than existing maintenance and refueling sites, it is anticipated that they will be sited in appropriately zoned (industrial and commercial) areas, which are areas where previous and extensive soil disturbance has occurred. Since the proposed project would result in only minor modifications to equipment at existing facilities or minor construction in industrial or commercial settings, little or no site preparation is anticipated that could adversely affect geophysical conditions. For additional information, the commentator is referred to the response to comment #3-41.

Response 3-45: It is anticipated that 81 percent of the affected replacement fleet vehicles (both light- and medium-duty vehicles regulated by PR 1191) will be either LEV, ULEV or a SULEV vehicles, as specified by PR 1191, that will be able to use existing conventional gasoline refueling stations. As a result, potential noise impacts from the proposed fleet vehicle rules, PR 1191 in particular, are expected to be unchanged from the existing setting.

It is expected that heavy-duty vehicles will likely comply with the proposed heavy-duty fleet vehicle rules by replacing vehicles with compressed natural gas-fueled vehicles. The prime mover to power gas compression at refueling stations is either an electric motor or an internal combustion engine (ICE). Electric motors are relatively inexpensive, don't require extensive maintenance, are very reliable, and do not have noise impacts associated with them. Electric motor compressors tend to be used at small- to medium-sized refueling stations.

Larger refueling stations, such as those used by transit districts, tend to operate compressors using ICEs to avoid the high compressor costs. The main advantages of ICE-driven compressors are that fuel costs are relatively inexpensive and they are independent of the electricity grid in the event of a power outage. The main disadvantage of ICE-driven compressors is that they are labor intensive, have higher maintenance costs, are not as reliable as electric motors, and are relatively noisy. It is anticipated that bus fleet operators, e.g., transit bus fleet operators will install ICE-driven compressors at existing fleet refueling/maintenance locations because they have trained onsite maintenance personnel. Existing refueling/maintenance bus fleet locations tend be in industrial or commercial areas where noise levels are already relatively high, due to industrial processes and vehicular traffic. Noise from refueling/maintenance locations would typically be attenuated substantially by

distance, air absorption, and other attenuation factors before reaching a community area. Finally, ICE-driven compressor will normally be installed and fitted with mufflers, silencers or other appropriate noise reduction equipment and located as far from the facility's perimeter as possible to reduce noise levels to comply with local noise ordinances and applicable OSHA or Cal/OSHA workplace noise reduction requirements. For all of the above reasons the proposed fleet vehicle rules are not expected to generate significant adverse noise impacts.

Response 3-46: Cultural resources impacts from implementing the proposed fleet vehicle rules are not significant for the same reasons that land use impacts are not significant. The commentator is referred to the responses to comments #1-10, #1-13, #1-29, #1-31, and #3-40.

Response 3-47: With regard to costs associated with the proposed fleet vehicle rules, the commentator is referred to the responses to comments #1-4, #1-6, and #1-18. With regard to the opinion that greater use of clean diesel technologies will result in a faster fleet vehicle replacement rate, the commentator is referred to the response to comment #3-34.

The SCAQMD disagrees with the commentator's opinion that alternative fuel vehicles have a reduced operating range compared to diesel vehicles. With regard to information on the operating range of alternative fuel vehicles, the commentator is referred to the responses to comments #1-15, #1-50, and #1-112.

Response 3-48: These comments allege that the term "alternative clean-fueled technologies" as used in the project description must include "advanced diesel technology." However, since alternative clean-burning fuels are inherently cleaner burning than diesel, and thus can potentially achieve greater emission reductions, it is legitimate for the project objectives to focus on alternative fuels. See also response to comment #1-16.

Response 3-49: With regard to clean diesel qualifying as an alternative clean fuel, the commentator is referred to the response to comment #3-48.

Response 3-50: The terms scaled and unscaled refer specifically to the fleet vehicle universe. The inventory of fleets was derived from a number of sources including direct surveys of public and private fleet owners and operators and information obtained from the California Department of Motor Vehicles, California Energy Commission, California Air Resources Board (CARB), U.S. EPA Region IX, and the U.S. Department of Energy. The estimate of the affected vehicle universe includes a 20 percent scale-up factor in the event that the initial fleet vehicle surveys underestimated affected public fleets. This scale-up factor was used to provide a "worst-case" analysis of potential adverse impacts from implementing the rules. When estimating the potential emission reduction benefits of the proposed fleet

vehicle rules, which is based on the total numbers of vehicles affected by the proposed fleet vehicle rules, the scale-up factor was not used to avoid overestimating the potential benefits of the proposed project. For additional information, the commentator is referred to the section entitled "The Proposed Fleet Vehicle Universe" in Chapter 4 of the PEA.

Response 3-51: Chapter 3 provides discussions of the existing environmental settings for the various environmental areas that were originally determined to be potentially adversely affected by the proposed fleet vehicle rules. Including a description of the existing environmental setting is required pursuant to CEQA Guidelines 15125. With regard to the existing situation for low sulfur diesel, little or no such fuel is produced or imported into the district. Further, low sulfur diesel does not meet the methanol equivalency provision contained in H&SC §40447.5, whereas by definition, methanol is an alternative clean fuel. For additional information, the commentator is referred to the responses to comments #1-16 and #1-34.

Response 3-52: With regard to the commentator's opinion that low sulfur diesel be included in the proposed project as an alternative clean fuel, please refer to the responses to comments #1-16, #3-48, and #3-51.

Response 3-53: The page cited by the commentator is part of the existing setting section (see response to comment #3-51) and discusses the relative physical and chemical characteristics of alternative clean fuels. For the analysis of potential hazard impacts resulting from greater use of alternative clean fuels, the commentator is referred to the section entitled "Hazards" in Chapter 4 of the PEA. See also responses to comments #1-8 and #1-120.

Response 3-54: As noted in response to comment #3-24, the SCAQMD does not consider the future availability of low sulfur fuel to be speculative. The commentator's opinion that the PEA for the proposed fleet vehicle rules did not include an analysis of clean diesel technologies is incorrect. Please refer to responses to comments #1-16, #1-34, #1-40, #2-4, and #3-21. With regard to costs associated with the proposed fleet vehicle rules, the commentator is referred to the responses to comments #1-4, #1-6, and #1-18.

Response 3-55: With regard to Table 4-6, the commentator is referred to the response to comment #1-91. The SCAQMD used Table 4-6 to show comparison of various performance indices for different fuels to illustrate their relative positioning. The information in the table was not used to assess the potential significance of environmental impacts of the proposed fleet vehicle rules. For the PEA, the SCAQMD did not consider emerging technologies that are not currently available on a widespread basis and did not include the effects of emerging control technology. With regard to diesel being a superior alternative, the Harvard study "Fueling Heavy

Duty Vehicles: Diesel or Natural Gas", January 2000, concluded that "the choice to use diesel or natural gas in heavy duty trucks is not straightforward".

Response 3-56: It was the SCAQMD's intention to consider technologies that are currently available on a wide spread basis and not emerging technologies and this is reflected in the PEA. There are various studies available that compare the relative characteristics of both alternative clean fuels and conventional petroleum fuels. A thorough search of references and the internet was conducted and the AIChE study was one of the most current that provided such a comparison.

Response 3-57: According to the Department of Energy, Clean Cities Fact Sheet, May 2000, "CNG buses cost $25,000 to $50,000 more than a conventional diesel bus (depending on the model and any special equipment that might be ordered), but CNG usually costs less than diesel fuel. At 25 cents per gallon savings, the typical CNG bus could pay for itself in just a little more than three years. Greater savings in fuel cost can result in even quicker paybacks." According to the DOE regarding maintenance costs, CNG buses require fewer oil changes and have less engine wear due to cleaner operation. Some transit agencies have reported CNG engines with no signs of needing $3,000 to $4,000 mid-life rebuilds (as is customary with diesel engines).

Response 3-58: Net energy efficiency in the AIChE study was defined to be a comparison of energy consumed in the production and distribution of each fuel with the energy available from its use. The commentator did not provide any data to support that advanced diesel has 40 percent more net energy efficiency as claimed.

Response 3-59: It should be noted that the Federal Code of Regulations (40 CFR 86.000-02) defines alternative fuels as "any fuel other than gasoline and diesel fuels, such as methanol, ethanol, and gaseous fuels." However, the PEA does analyze potential environmental impacts of green diesel technology (referred to here as clean diesel technology), including the use of low-sulfur diesel with add-on controls. The commentator is referred to the response to comment #3-7. Therefore, these impacts are adequately analyzed. For example, the analysis of environmental impacts includes an analysis of refinery modifications necessary to produce low sulfur fuel, and thus fully discloses potential adverse impacts of refinery changes to allow all diesel produced to consist of low sulfur fuel. The project objectives may appropriately emphasize clean alternative fuels since such fuels are inherently cleaner burning, and since equivalently clean-burning diesel is not yet available. For additional information, the commentator is referred to the responses to comments #1-16 and #1-34. See also responses to comments #3-5 and #3-6. With regard to greenhouse gas emissions, the commentator is referred to the response to comment #1-92.

Response 3-60: The commentator is referred to the responses to comments #1-92 and #3-59.

Response 3-61: The table modification was not based on CARB diesel. No emerging control technologies were considered in the AIChE study for any of the alternate fuels. The table was not a comparison of control technologies, but a comparison of the inherent characteristics of the fuels listed. For this reason, particulate traps were not included.

Response 3-62: With regard to relative toxicity of CNG and diesel, the commentator is referred to response to comment #1-99. With regard to nanoparticles, the emission test procedure utilized to quantify the number of nanoparticles generated from natural gas engines may have inadvertently caused the generation of a significant amount of these particles. The SCAQMD asserts that the test procedure used to determine nanoparticle generation should be refined and approved by CARB and U.S. EPA, and this testing should be applied to alternative fuel vehicles and advanced technology (i.e., low sulfur diesel in combination with particulate filter) diesel-powered before conclusions are formed regarding this particular pollutant.

Response 3-63: SCAQMD staff has discussed natural gas engine maintenance/reliability with major engine manufacturers, and based on their input, staff believes that natural gas engine technology has matured since its initial introduction, and very reliable products are commercially available at this time. For example, John Deere Power Systems advertises that their natural gas heavy-duty engines have "diesel like fuel economy, longer service intervals, easier servicing, less downtime, and longer engine life." Based on the above, staff does not believe that outsourcing of natural gas engine vehicle repairs will be a significant issue. For additional information, the commentator is referred to the response to comment #1-50.

Response 3-64: The commentators opinion that the Draft PEA did not consider "green diesel" technology is not accurate. According to comments received by the SCAQMD, green diesel technology consists of (1) optimized engine calibration to minimize NOx and other emissions; (2) exhaust after-treatment in the form of Continuously Regenerating Trap (CRT); and (3) the use of ultra low sulfur diesel. The commentator reports that this technology installed on a school bus has achieved 0.005 g/bhp-hr PM, 3.0 g/bhp-hr NOx, and 0.0 g/bhp-hr HC. The SCAQMD has not purposely omitted any developing clean diesel technology from its analysis. The analysis of clean diesel technologies in the PEA is not intended to be an exhaustive analysis of clean diesel technologies. Rather it is intended as a general representation of the type of clean diesel technologies under development and the anticipated impacts associated with the use of these technologies, which have been qualitatively analyzed in the Draft PEA. Accordingly, since the green diesel technology incorporates components of clean diesel technologies, the inclusion of the green

diesel technology in this Final PEA will not change any of the conclusions made in the Draft PEA regarding the environmental impacts associated with the use of clean diesel technologies. For the purposes of the impacts analyses in Chapter 4, it is assumed that "green diesel" technology falls under the auspice of the diesel particulate filter technology category. For additional information, the commentator is referred to Chapter 4 of the PEA. With regard to the possibility that methanol vehicles will be used to comply with the proposed fleet vehicle rules, the commentator is referred to the responses to comments #1-38, #1-88, and #1-90.

Response 3-65: The statement referenced by the commentator on page 4-33 of the Draft PEA is a reference to the fact that some infrastructure changes might be required, such as dedicated low sulfur diesel pipelines and storage tanks. It has been suggested that dedicated low sulfur pipelines and storage tanks might be necessary because the low sulfur fuel could be contaminated by residual sulfur or other impurities from diesel with higher sulfur. Although potential infrastructure changes related to low sulfur fuel are considered to be speculative at this time, it is likely that such infrastructure changes would not be required because PAR 431.2 would likely prohibit a person from burning, purchasing, selling, or offering for sale diesel fuel that is not low sulfur fuel. This means that the likelihood of contamination by high sulfur fuels would be minimal. As a result, the analysis of potential environmental impacts did not identify any infrastructure impacts from the use of low sulfur fuel, but see responses to comments #1-40, #2-4, and #3-21.

Response 3-66: In this comment the commentator concurs with the conclusion in the PEA that PM filters in conjunction with PM filters will not generate significant adverse environmental impacts. No further response is necessary.

Response 3-67: As explained in the response to comment #3-40, the SCAQMD anticipates that, to the extent possible, alternative fuel refueling stations will be located at existing public fleet refueling sites. If additional refueling stations must be constructed at new locations, it is not known and cannot be known at this time where such facilities would be located. Therefore, it is speculative at this time to assume that the proposed fleet vehicle rules will lead to significant localized air quality impacts.

Consistent with the programmatic nature of the PEA, however, the SCAQMD examined the potential basin-wide impacts to air quality that might result from public fleet vehicles travelling to different locations than they currently use for refueling. As presented in the indirect air quality section of Chapter 4 of the PEA, the SCAQMD evaluated the average emissions that would occur if all heavy-duty fleet vehicles affected by the proposed fleet vehicle rules, except transit buses, traveled an additional five miles for refueling at different sites than they currently use. Light- and medium-duty public fleet vehicles are not anticipated to require the use of different refueling sites than they currently use because they are expected to be

gasoline-fueled CARB-certified LEV or cleaner vehicles. In spite of the additional travel to refueling stations, the analysis showed that the proposed fleet vehicle rules would produce a net air quality benefit when the effects of using alternative clean fuel vehicles are taken into consideration.

Response 3-68: With regard to potential traffic impacts, the commentator if referred to the responses to comments #1-72 and #3-40.

Response 3-69: The SCAQMD disagrees with the commentator's assertion that the analysis of the safety and health risks posed by the use of natural gas is inadequate. The SCAQMD researched several known incidents involving natural gas as a motor vehicle fuel and discussed the results of this in the PEA. The commentator argues that this anecdotal data is insufficient, but has not provided or referenced additional data that should be evaluated.

Storage of CNG, LNG and LPG, including required buffer zones around storage facilities, is subject to the requirements of local building, fire and electrical codes that are typically modeled after state and federal codes. Local codes typically require that above ground storage vessels for flammable liquids or gases be located a minimum distance from the property line. Moreover, CNG is expected to be the clean fuel selected by the majority of the HDV operators. As discussed in Section 3 (Existing Setting) of the PEA, CNG is delivered to the facility via pipeline and, in case of "slow fill" systems, is compressed and dispensed directly to the NGVs, eliminating the need for storage vessels. Since "slow fill" systems are expected to be used by the vast majority of fleet vehicle operators the need for above ground CNG storage is expected to be limited to small quantities.

The commentator stated that a quantitative risk analysis for the various compliance options should be prepared. It is not known and cannot be known at this time where AFV refueling facilities would be located, however, they would typically be situated in industrially or commercially zoned areas similar to gasoline or diesel refueling stations. The SCAQMD is of the opinion that quantitative risk analyses are not appropriate at this time since these analyses are highly dependent upon site specific conditions. Similar to the response to comment 1-10 this conclusion is consistent with CEQA Guidelines §15145. It is understood that individual refueling sites, when ultimately procured, may need to undergo a site-specific CEQA evaluation that would include such a quantitative risk analysis.

Response 3-70: The commentator's opinion that SCAQMD responses to comments submitted by the City on the NOP/IS were non-responsive is incorrect. The SCAQMD carefully considered all responses submitted by commentators on the NOP/IS and prepare comprehensive responses to all comments submitted (see Appendix C of this PEA). The commentator has provided no information at all to indicate in what way the NOP/IS comments were unresponsive. For additional

information on why the proposed fleet vehicle rules are not anticipated to generate significant adverse land use impacts, the commentator is referred to the responses to comments #1-10, #1-13, #1-29, #1-31, #3-40, and #3-43. With regard to potential cost impacts of the proposed fleet vehicle rules, the commentator is referred to the SCAQMD's Economic Assessment. See also responses to comments #1-4, #1-6, #1-18, and #1-19.

Response 3-71: With regard to faster fleet turnover from the lower cost of using clean diesel technologies, the commentator is referred to the responses to comments #1-111 and #3-34.

Response 3-72: With regard to a fuel neutral alternative, the commentator is referred to the response to comment #1-16. See also response to comment #1-14. With regard to the possibility that methanol vehicles will be used to comply with the proposed fleet vehicle rules, the commentator is referred to the responses to comments #138, #1-88, and #1-90.

Response 3-73: With regard to project objectives the commentator is referred to the responses to comments #3-5, #3-6, and #3-10. With regard to preparing a program CEQA document for fleet vehicle regulatory program, the commentator is referred to the responses to comments #1-1 and #1-2.

Response 3-74: The documents included here have been incorporated into the administrative record.

COMMENT LETTER 4

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April 25, 2000

BY TELECOPIER
AND EXPRESS MAIL

Mr. Darren Stroud
Office of Planning and Policy
South Coast Air Quality
Management District
21865 East Copley Drive
Diamond Bar, CA 91765-4182

Re: EMA Comments On The Draft Program Environmental Assessment For The Proposed Fleet Vehicle Rules And Related Amendments

Dear Mr. Stroud:

Attached please find a copy of the comments of the Engine Manufacturers Association ("EMA") relating to the Draft Program Environmental Assessment ("PEA") that the South Coast Air Quality Management District ("SCAQMD") has prepared in connection with its Proposed Fleet Vehicle Rules and Related Amendments. Please ensure that each SCAQMD Board Member receives a copy of EMA's comments (additional copies are included for that purpose), and do not hesitate to contact me if you have any questions concerning this submission.

Very truly yours,

Timothy A. French

TAF:kz
Enclosures

cc: Jack Broadbent (by telecopier; w/encl.)
Henry Hogo (by telecopier; w/encl.)
Joe Suchecki (by telecopier; w/encl.)

SOUTH COAST
AIR QUALITY MANAGEMENT DISTRICT

Proposed Fleet Vehicle Rules and	)	**Proposed Rules 1191**
Related Amendments;	)	**through 1196, and**
Draft Program Environmental Assessment.	)	**1186.1 and amendments**
	)	**to Rule 431.2**

COMMENTS OF THE
ENGINE MANUFACTURERS ASSOCIATION

Dated: April 25, 2000

Of Counsel:

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SOUTH COAST
AIR QUALITY MANAGEMENT DISTRICT

Proposed Fleet Vehicle Rules and Related Amendments; Draft Program Environmental Assessment.	))))	**Proposed Rules 1191 through 1196, and 1186.1 and amendments to Rule 431.2**

Introduction

The Engine Manufacturers Association ("EMA") is the trade association representing the leading manufacturers of a wide array of internal combustion engines, including those compression-ignition engines utilized in heavy-duty on-highway fleet vehicles. Given its long-standing commitment to the development of sound, consistent, cost-effective and feasible emission control programs for heavy-duty engines and vehicles, EMA has very serious and significant concerns regarding the validity and efficacy of the suite of proposed fleet vehicle rules (i.e. Proposed Rules 1191, 1192, 1193, 1194, 1195, 1196, and 1186.1, and amendments to Rule 431.2) (collectively, the "Fleet Rules") that the South Coast Air Quality Management District ("SCAQMD") has scheduled for adoption over the next four months.

4-1 EMA previously has made written (e.g. EMA correspondence dated January 20 and March 21, 2000) and oral submissions to SCAQMD regarding the fundamental problems and legal defects that are inherent in the SCAQMD's proposed Fleet Rules. To date, the SCAQMD staff has failed to address, let alone correct, those fundamental problems. Nevertheless, and in addition to those earlier submissions, EMA hereby submits these written comments in response to the SCAQMD's Draft Program Environmental Assessment (the "Draft PEA") for the proposed Fleet Rules.

4-2 As detailed below, the Draft PEA, like the proposed Fleet Rules to which it purports to relate, is invalid, inaccurate and wholly inadequate.

1. The Proposed Fleet Rules Are Invalid As A Matter of Law

In its Draft PEA, SCAQMD Staff cites to Health and Safety Code sections 40447.5 and 40919 as the supposed authority for its Fleet Rules. However, Proposed Rules (PRs) 1191, 1192 and 1193 are clearly inconsistent with section 40447.5. Accordingly, that statutory provision provides no basis for the proposed rules. Moreover, even if that were not the case, the Fleet Rules are also in direct violation of the express preemption provisions of Sections 209(a) and 177 of the federal Clean Air Act, as amended (the "CAA").

4-3

As currently drafted, PRs 1191, 1192 and 1193 are inconsistent with Health and Safety Code section 40447.5. That statutory provision purports to authorize the SCAQMD to require fleet operators "to purchase vehicles which are capable of operating on methanol or other equivalently clean burning [equivalent to methanol] alternative fuel." (Emphasis added.) Thus, the underlying statutory benchmark for section 40447.5 is the emissions performance from currently available motor vehicles and engines that operate on methanol. Without utilization of such a methanol benchmark, there is no non-arbitrary way to assess which of today's new heavy-duty motor vehicles and engines are "equivalently clean" to current methanol vehicles as mandated under the statute.

4-4

Contrary to this central tenet of section 40447.5, however, the proposed Fleet Rules make no effort to define an "alternative-fuel heavy-duty vehicle" by comparison to the emissions performance from current methanol-fueled vehicles and engines. Instead, the proposed Fleet Rules basically ignore the requisite methanol-based benchmark, and propose to define an alternative fuel heavy-duty vehicle simply as "a heavy-duty vehicle, urban bus or engine that uses compressed or liquified natural gas, propane, methanol, electricity, fuel cells, or other advanced technologies that do not rely on diesel fuel." (Emphasis added.) Thus, the Fleet

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4-5 cont. Rules' benchmark is simply a wholesale ban on any technology, no matter how advanced or "clean," that in any way utilizes diesel fuel. It also amounts to an abrogation of the "diesel path" just recently approved by the Air Resources Board ("ARB") as a part of its new urban bus rule. Such a ban, however, without any consideration at all of whether the banned technologies and

4-6 fuels might be equivalently clean to benchmark methanol-fueled engines and vehicles (and similarly without any regard to whether the Staff-favored technologies are in fact equivalently clean across their full emissions profiles, including CO and HC emissions) is inconsistent with and violative of section 40447.5. As such, the proposed Fleet Rules are unlawful and, quite obviously, should not be approved or adopted.

Health and Safety Code section 40919(e) also cannot justify or legitimize the proposed Fleet Rules. That section merely provides that air pollution districts may include in their attainment plans "[m]easures to achieve the use of a significant number of low-emission motor

4-7 vehicles by operators of motor vehicles.". This section, by its own terms, does not relate to heavy-duty vehicles or engines. Nor does it warrant or contemplate a ban on all diesel technologies or reformulated ultra-low-sulfur diesel fuels.

Just as significant, Staff also has overlooked Health and Safety Code section 40440(a) in

4-8 its effort to find some foothold for its proposed ban on diesel-fueled engines and vehicles. That statutory provision makes it clear that "[t]he south coast district board shall adopt rules and regulations that carry out the [attainment] plan and are <u>not</u> <u>in conflict with state law and federal</u> laws and rules and regulations." (Emphasis added.)

In this instance, as detailed above, the proposed Fleet Rules <u>are</u> in conflict with state law,

4-9 specifically section 40447.5 as well as ARB's rules and regulations, and also (as explained below) <u>are</u> in direct conflict with the express preemption provisions of the federal CAA.

4-9 cont.

More specifically, CAA section 209(a) provides in relevant part that,

> No state or any political subdivision thereof shall adopt or attempt to enforce any standard relating to the control of emissions from new motor vehicles or new motor vehicle engines ... No state [or subdivision thereof] shall require certification, inspection, or any other approval relating to the control of emissions from any new motor vehicle or new motor vehicle engine as condition to the initial retail sale ... of such motor vehicle, motor vehicle engine, or equivalent. 42 U.S.C. § 7543(a).

Similarly, section 177 of the CAA provides in relevant part as follows:

> Nothing in this section or in title II [the mobile source provisions] of this Act shall be construed as authorizing any ... state [or political subdivision] to prohibit or limit, directly or indirectly, the manufacture or sale of a new motor vehicle or motor vehicle engine that is certified in California as meeting California standards, or to take any action of any kind to create, or have the effect of creating, a motor vehicle or motor vehicle engine different than a motor vehicle or engine certified in California under California standards (a "third vehicle") or otherwise create such a "third vehicle." 42 U.S.C. § 7507.

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In direct contravention of these controlling provisions of federal law, the proposed Fleet Rules would effect a ban on the purchase and sale of medium and heavy-duty diesel-fueled engines and vehicles for use in virtually all public fleets. This would obviously prohibit, within the SCAQMD, the purchase and sale of new motor vehicles otherwise certified as meeting all applicable California standards. Indeed, inasmuch as one of the main thrusts of the Fleet Rules seems to be directed at an abrogation of California's statewide urban bus rule -- which expressly allows for the sale of the precise type of vehicles that PR 1192 would ban -- the Fleet Rules' contravention of CAA section 177 is quite blatant. Consequently, the Fleet Rules are invalid and unlawful. See e.g. American Auto Mfrs. Ass'n. v. Cahill, 152 F.3d 196, 200-01 (2d Cir. 1998).

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In sum, the Fleet Rules are violative of both state and federal law. Consequently, the Draft PEA (like the Fleet Rules themselves) is necessarily invalid as a matter of law, and so cannot satisfy the requirements of the controlling statutes, including, but not limited to, the California Environmental Quality Act ("CEQA"). Cal. Pub. Res. Code §§ 21000 et seq.

2. **The Draft PEA Is Necessarily Invalid Since The SCAQMD Has Drafted Only Three Out Of Its Eight Proposed Fleet Rules**

The SCAQMD's proposed Fleet Rules would require governmental agencies and certain other public fleet operators with fleets of 15 or more vehicles operating within the SCAQMD to acquire "alternative-fuel" vehicles when adding or replacing fleet vehicles. This fleet "program" -- which in essence amounts to a ban on diesel fuels and technologies -- purports to consist of the following eight proposed rules:

1191- Clean On-Road Light- and Medium-Duty Public Fleet Vehicles

4-12

1192 – Clean On-Road Transit Buses

1193 – Clean On-Road Residential and Commercial Waste Refuse Collection Vehicles

1194 – Commercial Airport Ground Access

1195 – Clean On-Road School Buses

1196 – Clean On-Road Heavy-Duty Public Fleet Vehicles

1186.1 – Alternative Fuel Sweepers

431.2 – Sulfur Content of Liquid Fuels

4-13

However, to this point, SCAQMD Staff has drafted and circulated for public review and comment only the first three (PRs 1191-1193) of the eight proposals. There has been no publicly circulated draft of any kind relating to any of the five other proposals. Accordingly, the supposed fleet "program" has not been fully drafted let alone made available for public review and comment. Any environmental impact report that purports to consider the "program" as a whole is therefore nothing more than a guestimate, at best. Indeed, without the benefit of the actual provisions of five-eighths of the regulatory "program" at issue, it is simply impossible to prepare a program-wide PEA that is capable of receiving fair and informed public commentary.

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It is, in fact, a clear violation of procedural requirements to demand public review and comment

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4-15 cont. on a PEA before the underlying program has even been drafted and made available to the public. Thus, the Draft PEA is again fundamentally invalid.

4-16 Similarly, even though the proposed Fleet Rules will be considered by the SCAQMD Board as separate proposals over a period of several months, the Draft PEA purports to evaluate the total impact of the entire series of proposed rules and amendments as one "program" – albeit an undrafted "program." Therefore, the benefits and detriments from each of the separate Fleet Rule are not reported in the Draft PEA. In addition, although the Draft PEA acknowledges that there will be substantial costs associated with some if not all of the proposed Fleet Rules, those significant costs are not even touched upon in the Draft PEA. Instead, SCAQMD Staff claims

4-17 that a separate socioeconomic impact analysis will be prepared and released to the public prior to the public hearing for each proposed rule. (Page C-1-23). But that analysis, to this date, has yet to be prepared and disseminated for review. This represents more than another example of SCAQMD's failure to provide needed information about the "program" as a whole to the public; this failure constitutes another clear violation of CEQA.

4-18 More specifically, the CEQA Guidelines (Title 14, §§ 15000 et seq.) (at § 15131) provide that the economic or social effects of a project may be used to determine the significance of physical environmental changes caused by the project. In this case, the proposed Fleet Rules would compel massive conversions of the South Coast's fueling and transportation infrastructures to natural gas. The "changes" likely to result from this mandated conversion and redeployment of societal resources most certainly will be significant. Thus, for the SCAQMD simply to ignore the economic and social effects of its program in its Draft PEA is inconsistent

4-19 with CEQA and wholly improper. It also deprives the public of any fair opportunity to consider

4-19 cont.

such costs and harms in submitting comments to the SCAQMD in advance of its closing of the comment period on the Draft PEA. This again constitutes an abuse of process.

3. The Availability Of Feasible Alternatives To The Proposed Fleet Rules Renders Them Invalid

The main purposes of an environmental impact report ("EIR") under CEQA are: (i) to provide public agencies and the general public with detailed information about the effect that a proposed "project" is likely to have on the environment; (ii) to list the ways in which the significant adverse impacts of such a project might be minimized; and (iii) to indicate feasible alternatives to such a project. See, e.g. Cal. Pub. Res. Code §§ 21002, 21002.1(a), and 21100.

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EIR's are required where a "project" may have a significant effect on the environment (i.e. a potentially adverse change in the environment). In certain circumstances, a "plan" may be submitted in lieu of an EIR. Such a "plan" must include a description of the proposed "activity," potential alternatives to the activity, and mitigation measures to minimize any significant adverse effects on the environment from the activity. Cal. Pub. Res. Code § 21080.5(d)(3). In addition, CEQA mandates that any regulatory activity for which such a "plan" is submitted "will not be approved or adopted as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment." Cal. Pub. Res. Code § 21080.5(d)(2)(A) (emphasis added).

In this case, as detailed below, there are feasible alternatives to the proposed Fleet Rules which will provide greater emission benefits while avoiding the significant costs and detriments that necessarily will result from the SCAQMD's proposed Fleet Rules. Consequently, the Fleet Rules are in violation of CEQA and so (for this reason among others) cannot be approved or adopted. See supra.

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4. The Draft PEA Improperly Rejects Viable Alternatives As Infeasible

As an initial matter, the Draft PEA eliminates consideration of several potential alternatives to the proposed Fleet Rules based on wholly insufficient grounds. For example, recommended alternative #2 -- Fuel Neutral Emission Standard -- is eliminated by Staff with the following simplistic and self-serving comment:

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> "The proposed fleet vehicle rules are considered fuel neutral because affected fleet owners have a range of clean fuels they can use for compliance. The only major fuel type not allowed by the proposed rules is clean diesel because the technology is currently not available." (Page 5-2)

This is simply not true. First, the Fleet Rules clearly are not "fuel neutral" inasmuch as they propose to ban the most popular and widely-used fuel for heavy-duty applications. Second, ultra low sulfur diesel fuel and after-treatment technologies can be readily available in the South Coast. Thus, purported issues relating to the current availability of clean-diesel technologies are not sufficient grounds for the rejection of this alternative, especially when leading fuel and engine manufacturers are vigorously pursuing this option and the proposed Fleet Rules are slated to be implemented over the next decade or even longer. Clean diesel vehicles that meet the same emission and performance standards as other fuels will have the same air quality benefits as the other fuels. Consequently, such vehicles should not be dismissed out-of-hand as the SCAQMD has done.

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SCAQMD similarly has rejected recommended alternative #7 -- Allow Fuel Cells -- on the following basis:

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> "Commercial availability of fuel cell buses is not expected for several years. Continuing to allow buses to be replaced by diesel-fueled buses is not consistent with the objectives of the proposed project." (Page 5-3)

The alternative of allowing transit and school bus operators flexibility to choose advanced diesel technologies now in anticipation of fuel cell technologies in the future is an

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alternative that should be carefully evaluated. A prohibitively expensive switch to one

4-24 alternative fuel (natural gas) that is followed within a decade by a switch to another alternative fuel will waste resources and require the construction of additional facilities with accompanying emissions detriments. Indeed, the Draft PEA acknowledges that fuel cell technology will be necessary to meet ARB's zero emission transit bus standards (page 2-13) and further

4-25 acknowledges that the proposed rules should allow for different compliance approaches (page 1-5). To pursue a series of Fleet Rules that will render impracticable necessary and desired investments in fuel cell technologies is unwarranted and unwise.

5. The Draft PEA Materially Understates The Detriments That Will Result From The Fleet Rules

4-26 The Draft PEA has properly recognized that there will be significant emission increases (or detriments) related to the construction and operation of the natural gas infrastructures and refueling stations that will be necessitated by the proposed Fleet Rules. The Draft PEA claims, however, that these significant adverse air quality impacts will be temporary, with all

4-27 construction activities ceasing within five years. (Page 1-14). A review of the various assumptions underlying the SCAQMD's calculations indicates that the Draft PEA makes several unrealistic assumptions concerning the overall infrastructure-conversion effort and the increased emissions that will result from the construction of new refining, transportation and refueling facilities. These unrealistic assumptions relate both to the timing and the amount of increased emissions in the worst-case.

For example, the Draft PEA assumes that:

4-28 1. Refueling stations will be constructed "uniformly over a five year period to accommodate the entire infrastructure needs for the total universe of vehicles affected by the proposed rule and related amendments. This five year period takes into account the assumption that

the affected fleet operators will build infrastructure needs early for their entire fleet, which will most likely be replaced over a longer period of time." (Page 4-16) and

2. The construction of all of the new refueling stations would require excavation and removal of an existing underground diesel or gasoline fuel tank. (Page F-2).

These assumptions are exceedingly simplistic and unrealistic. For example, under the proposed Fleet Rules, individual vehicle fleets will be replaced over an extended period of time. As a result, fleet operators will have to provide and maintain dual fueling facilities for their fleet. This will extend the time required for conversion of the infrastructure thereby extending the time and impacts of the detriments that will flow from the Fleet Rules. It also will require new fuel tanks in addition to (not solely in lieu of) those already in place, which in turn will require additional space and, if such on-site space is not available, additional facilities. Thus, given the unrealistic assumptions that serve as the basis for the Draft PEA it is clear that SCAQMD has significantly understated the detriments that will result from its proposed "program."[1]

4-28

6. The Draft PEA Misrepresents The Purported Benefits Of The Fleet Rules

The emission benefits of the proposed Fleet Rules are presented in Tables 4-7 and 4-8 on pages 4-12 and 4-13 of the Draft PEA. However, the emission reductions noted are not put into perspective with the air quality concerns noted in Chapter 3 -- the Existing Setting. For linear non-secondary pollutants, such as primary PM10 and CO emissions, it is sufficient to compare the emission changes to the overall inventory and put this comparison in the context of the current and expected future non-attainment situation. However, for pollutants that are formed

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[1] Additional unrealistic assumptions also make up the core of the Draft PEA. Indeed, contrary to SCAQMD's assumptions, refueling facilities will not be built on an even, phased-in schedule, as though orchestrated by a central planning bureau. These construction activities of necessity will be episodic and, to a large extent, random. Further, the assumption that each facility will be constructed over a single five-to-nine day period (Table F-1) is wildly unreasonable. Project delays, unavailability of subcontractors or supplies, and similar typical construction interruptions necessarily will extend the duration of these projects and will increase the number of projects that are on-going at any one time.

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4-30 cont.

through non-linear atmospheric transformations, such as ozone and the nitrate portion of PM10, the air quality changes due to the proposal must be evaluated with photochemical models. The Draft PEA does not even attempt to do this.

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Further, the benefits in reduced diesel particulate emissions noted in Table 4-8 of the Draft PEA, which supposedly range from 48 to 80 tons per year in the year 2010, need to be put into perspective with the current and expected future diesel particulate emissions in the absence of the proposed Fleet Rules. For example, the 1998 average daily emissions of diesel particulate are listed in Table 3-3 on page 3-16 as 77575.5 lbs/day, which is equal to 14,158 tons/year. Based on this calculation, the Draft PEA indicates that the proposed Fleet Rules will potentially yield reductions in diesel particulate emissions in 2010 of just 0.33 percent of current emission levels. This relatively miniscule benefit should be fully explained and compared with the more effective alternative programs (e.g. retrofit programs) that could be instituted in lieu of the SCAQMD's unlawful Fleet Rules.

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The Draft PEA also indicates that the heavy-duty vehicle NOx emission benefit in 2010 will be 467 tons/year, which is somewhat over one ton per day in the South Coast Air Basin. This is also just a small fraction of the NOx inventories referenced in the 1997 Air Quality Management Plan.

4-33

For heavy-duty vehicles, the expected reductions in criteria emissions are primarily NOx emissions. Surplus reductions in NOx emissions (beyond those required in the AQMP) may be problematical, however, because they may actually increase ozone formation in the South Coast Air Basin. It is well known that the chemistry of ozone formation is complex and non-linear. In particular, NOx reductions in a VOC-limited chemical regime can cause ozone formation to increase. Indeed, it has been clearly established that the ozone on weekends in the South Coast

Air Basin is now higher than the ozone on weekdays in spite of the fact that NOx precursor concentrations are substantially lower on weekends compared to weekdays. Also in recent years the highest ozone concentrations at many sites in the South Coast now occur on Sundays when the NOx precursor concentrations are the lowest of the entire week.

The ARB along with the Department of Energy and the Coordinating Research Council have major programs underway to understand this phenomenon and the policy implications that flow from it. In the process of evaluating data from the South Coast, it has been established that the VOC/NOx ratios in the Basin are in the VOC-limited chemical regime, that ozone formation from a given NOx level is enhanced on weekends, and that the extent of reaction as measured by photochemical indicators is consistent with VOC-limited conditions throughout the populated areas of the South Coast Air Basin. All these findings imply that surplus NOx emission reductions may actually increase ozone formation, and thus may be a detriment rather than a benefit as indicated in the Draft PEA. Because of the possibility that the proposed Fleet Rules could have an ozone detriment, it is incumbent on SCAQMD to at least evaluate the possibility. SCAQMD has the modeling capability to evaluate the impact of the proposed Fleet Rules on ozone and PM10 formation. If the proposed Fleet Rules do produce an ozone detriment, it means SCAQMD would have to find additional VOC reductions from stationary sources to offset these detriments in future AQMPs.

4-33 cont.

7. **The PEA's Calculations Of The Supposed Benefits To Be Derived From The Fleet Rules Are Flawed And Mistaken**

a. **Purported Heavy Duty Vehicle Benefits**

The Draft PEA contains an assessment of a "Baseline" case along with an inappropriately restricted number of alternatives. In this regard, the Draft PEA refers to the "Baseline" case as

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4-34 cont.

that which implements the proposed Fleet Rules (including somehow those which have not even been drafted). Thus, the Baseline is not the type of "no-control" case that typically serves as a true "baseline" in other regulatory analyses.

EMA's technical consultants (Air Improvement Resources, Inc. ("AIR")) have performed a detailed review of the Baseline as well as what SCAQMD refers to as "Alternative B." Alternative B is meant to reflect the ARB's recently-adopted urban bus rule, with an additional assumption that those same urban bus emission standards would eventually be implemented by either the ARB or U.S. EPA for heavy-duty trucks starting in 2007. The SCAQMD's effort at comparing the two alternatives is shown in Table 1 below.

4-35

Table 1. HDV Benefits (tons per year) of the PEA Proposal

	Baseline		Alternative B	
Year	PM	NOx	PM	NOx
2000	0	0	0	0
2001	4	99	4	86
2002	9	263	7	179
2003	14	288	11	193
2004	19	314	15	208
2005	24	339	18	223
2006	29	365	22	237
2007	33	390	22	252
2008	38	416	22	266
2009	43	441	22	281
2010	48	467	22	295

The SCAQMD's results would appear to show that the Baseline proposal provides greater PM and NOx emission reductions than Alternative B. However, due to inconsistencies in the manner by which SCAQMD estimated and compared the emission benefits between the two

4-36

alternatives, the SCAQMD's results and conclusion are mistaken. More specifically, and as detailed below, AIR's more thorough review of the emission benefits of the Baseline and

4-36 cont. Alternative B has revealed serious flaws in the SCAQMD's inventory modeling – flaws that affect the overall conclusions and validity of the Draft PEA.

b. Flaws Relating To SCAQMD's Preparation Of The Baseline Case

AIR's principal concerns with the SCAQMD's purported Baseline case can be summarized as follows:

4-37 1. Inasmuch as the ARB bus rule has been finalized, it should be incorporated into the Baseline case, so that the Baseline case estimates only the true incremental benefits of the raft Fleet Rules that actually go beyond the ARB regulations.

4-38 2. The SCAQMD table of supposed emission benefits for HD vehicles does not adequately identify the emission increases that will result from construction activities necessitated by the proposed Fleet Rules during the 2000-2004 time period. (See discussion, supra.) Benefits were presented in tons per year in table 4-8 of the Draft PEA and in Appendix E, and emission increases were presented later in the report in lbs/day, only for one year of the analysis: 2002. Benefits and detriments should be presented in the table in all years so that the reader can properly evaluate these impacts.

4-39 3. The Baseline case underestimates NOx benefits for 2001 and 2002. NOx benefits were estimated as the difference between the 4.0 g/hp-hr NOx standard and the 2.5 HC+NOx standard (1.5 g/hp-hr). However, the 2.5 g/bhp-hr standard includes both NOx and HC. Accordingly, NOx emissions alone under the 2.5g standard should be closer to 2 g/hp-hr, resulting in a difference of 2 g/hp-hr, not 1.5 g/hp-hr.

4-40 4. The maximum PM benefit case is unrealistic and should be dropped from the analysis. The data relating to these maximum PM reductions (page E-8) have not been validated, and the test cycle from which they were derived is not consistent with the other data reported in the Draft PEA.

4-41 5. As noted above, the supposed benefits, when calculated properly, should be put into context with the overall NOx and PM inventories in the South Coast Air Basin, so that interested parties can properly evaluate the relative significance of the fleet proposals at issue.

14

c. Flaws Relating To SCAQMD's Presentation Of Alternative B

AIR's principal concerns with "Alternative B" can be summarized as follows:

1. The most serious concern with Alternative B is that it uses a different base case than the SCAQMD's Baseline case. The Alternative B base case emissions are much lower than the base case emissions used in the Baseline Case above, so that the emission benefits of Alternative B are significantly underestimated, and cannot be adequately or fairly compared to the Baseline case. [2]

4-42

2. A second problem with Alternative B is that NOx benefits of 0.2 g/hp-hr are assumed even for vehicles that must meet a 0.2 g/hp-hr standard. In other words, if diesel vehicles must meet a 0.2 g/hp-hr standard, then alternatively fueled vehicles are assumed to meet 0.0 g/hp-hr. This is clearly not realistic.

4-44

d. SCAQMD's Miscalculation Of Supposed Benefits

Based on the work of AIR, set forth below is a description of the process that SCAQMD Staff used to estimate emission benefits for both the Baseline and Alternative B cases. Also based on the review conducted to date by AIR, necessary revisions are made to improve the accuracy of the emission model, and then re-derive and compare emission benefits for the two cases.

i. General Inventory Method Used

The Draft PEA estimates emissions benefits the following general equation:

4-45

Benefit (tpy) = Cumulative Sum [per engine benefit in g/hp-hr * conversion factor in bhp-hr/mi * Population/10 * Annual Miles / 908,000 grams/ton]

Benefits are estimated for three different types of heavy-duty fleet vehicles. Inputs and descriptions for these vehicles are shown in Table 2.

[2] To estimate emission benefits, emission inventories for a control case must be subtracted from a base case. To compare two different control programs, the control program inventories are different, but the base case inventories must be the same. In the case of the Baseline case and Alternative B, the base case inventories are not the same. For example, for PM, the Baseline case assumes continuation of the 0.1 PM standard, while Alternative B assumes implementation of a 0.01 g/hp-hr standard in 2007. This is a significant and wholly unreasonable (and unfair) inconsistency.

4-43

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Table 2. Emission Benefit Inputs for HD Analysis

Inputs	"HDV1"	"HDV2"	"HDV3"
Description	Truck	Urban bus	Non-contracted school bus
Population	16,197	4,650	4,428
Gasoline Fraction	0.05	0	0.33
Miles/Year	10,000	40,000	12,000
Conversion Factor (bhp-hr/mi)	2.6	4.3	2.6

The key to the SCAQMD's attempted calculation of supposed emission benefits is the manner in which the per-vehicle engine benefits are estimated for the two cases (Baseline and Alternative B). Estimated Baseline case emission benefits are shown in Table 3.

4-45 cont.

Table 3. Baseline Emission Benefits (g/hp-hr)

Year	HDV1		HDV2		HDV3	
	NOx	PM (min)	NOx	PM (min)	NOx	PM (min)
2001	1.5	0.07	1.5	0.02	1.5	0.07
2002	0.24	0.07	0.24	0.02	0.24	0.07
2003	0.2	0.07	0.2	0.02	0.2	0.07
2004	0.2	0.07	0.2	0.02	0.2	0.07
2005	0.2	0.07	0.2	0.02	0.2	0.07
2006	0.2	0.07	0.2	0.02	0.2	0.07
2007	0.2	0.07	0.2	0.02	0.2	0.07
2008	0.2	0.07	0.2	0.02	0.2	0.07
2009	0.2	0.07	0.2	0.02	0.2	0.07
2010	0.2	0.07	0.2	0.02	0.2	0.07

ii. Benefits of HDV1s and HDV3s

The NOx emission benefits for 2001 are estimated as the difference between the 4 g/bhp-hr NOx standard and the 2.5 NOx + HC standard (actually, as noted above, this should be the

4-46 difference between 4 g/hp-hr and 2 g/hp-hr, since the 2.5g standard is HC + NOx, and HC emissions are expected to be about 0.5 g/hp-hr). The 2002 estimate is 10/12 times the 2001 estimate, and 2/12 times 0.2 – the assumed benefit of alternative fueled vehicles once the 2.5

4-47 NOx standard is implemented in October of 2002. For PM, the benefit is estimated as the

4-47 difference between the 0.1 g/bhp-hr standard, and an assumed alternative fuel PM level of 0.03 g/hp-hr. The 0.03 g/hp-hr level apparently is the average of certain 1993 DDC engines tested on methanol.

iii. Benefits for HDV2s

4-48 The estimated NOx benefits for these vehicles are the same as above. The PM benefits reflect the lower PM standard for urban buses (0.05); the same level of 0.03 is assumed for alternative fueled buses.

SCAQMD's estimated per-vehicle emission benefits for Alternative B are shown in Table 4.

Table 4. Alternative B Emission Benefits (g/hp-hr)

Year	HDV1		HDV2		HDV3	
	NOx	PM (min)	NOx	PM (min)	NOx	PM (min)
2001	1.5	0.07	1.5	0.02	1.5	0.07
2002	0.24	0.07	0.24	0.02	0.24	0.07
2003	0.2	0.07	0.2	0.02	0.2	0.07
2004	0.2	0.07	0.2	0	0.2	0.07
2005	0.2	0.07	0.2	0	0.2	0.07
2006	0.2	0.07	0.2	0	0.2	0.07
2007	0.2	0	0.2	0	0.2	0
2008	0.2	0	0.2	0	0.2	0
2009	0.2	0	0.2	0	0.2	0
2010	0.2	0	0.2	0	0.2	0

4-49

The estimated NOx benefits in Table 4 are the same as in Table 3 for the three vehicle types. The PM benefits are assumed to drop to zero in 2007 for HDV1s and 3s, and for HDV2s in 2004, because of the reduction in the PM standard from 0.1 to 0.01. However, the PM benefits are not being treated consistently. For example, the PM benefit for HDV1s in 2006 is 0.07, which is the difference in the 0.1 standard and 0.03. In 2007, the PM standard is assumed to be reduced to 0.01. The benefit should be 0.1-0.01, or 0.09. Instead, it is zero. A similar case could be made for HDV2s and HDV3s. Thus, it appears that Alternative B is not accurately reflecting

4-50

4-50 cont. the emission reductions of the ARB rulemakings as it claims to be, but rather only the remaining emission reductions of the SCAQMD's proposed Fleet Rules once the ARB rules are implemented. This is a misleading and unfairly skewed portrayal of Alternative B by SCAQMD.

4-51 Also, the NOx standard assumed for 2007 and later buses and HDTs is 0.2 g/bhp-hr. It is therefore not clear why a 0.2 benefit was assumed after 2006 for any vehicle type. Finally, SCAQMD multiplied the emission benefits for buses for Alternative B by 0.25, which accounted

4-52 for an assumption that, under the ARB rules, three-quarters of the buses would be alternatively fueled. However, the ARB assumed the opposite – it was assumed that most buses would in fact take the diesel path. This too has resulted in an unfairly skewed portrayal of Alternative B.

iv. Revision of Benefits

4-53 In light of the flawed and skewed manner in which the Draft PEA has tried to compare the Baseline Case with Alternative B, SCAQMD should estimate the benefits of the ARB bus and truck regulations separately from the SCAQMD proposal, so that the benefits can be directly

4-54 compared. Despite the SCAQMD's failure to make this clear comparison, AIR has attempted to use the spreadsheets just recently provided by the Staff to assess more accurately the emission benefits of both the SCAQMD "Baseline Case" and the ARB-derived Alternative B proposal.[3]

4-56 AIR also has used the information provided in the Draft PEA document on emission increases in

4-57 Appendix F to show year-by-year emission benefits and detriments. Table 5 shows the corrected and recalculated benefits of the SCAQMD's Baseline proposal, the significant detriments that will result from that proposal, and the overall net benefits in tons per year.

4-55 [3] Despite several requests, it was only within the past 10 days that SCAQMD made available to EMA's technical consultants the spreadsheet data that is so critically necessary to any thorough review and comment on the Draft PEA. As a result, SCAQMD has failed to provide the required review period under CEQA. See Cal. Pub. Res. Code § 21091(a). For this reason too, the Draft PEA is violative of CEQA and so invalid.

4-57 cont.

Table 5. Revised Benefits of the Baseline Proposal (tpy)						
Year	Total Benefits		Detriments		Net Benefits	
	PM	NOx	PM	NOx	PM	NOx
2000	0	0	6.2	13.0	-6.2	-13.0
2001	3.7	132	102.7	103.7	-99.0	1.3
2002	8.7	349	108.8	150.2	-100.1	168
2003	13.6	374	12.6	67.3	1.0	277
2004	18.6	399	13.7	75.4	4.9	294
2005	23.5	425	8.8	70.1	14.7	325
2006	28.5	450	10.2	62.6	18.3	357
2007	33.5	476	11.5	85.8	22	360
2008	38.4	501	12.8	110.0	25.6	361
2009	43.4	527	14.2	120.6	29.2	376
2010	48.3	552	15.5	131.2	32.8	391

As shown in this table, the initial benefits are higher than in the draft PEA document due to the change in the first two years' NOx benefit from 1.5 to 2.0 g/hp-hr. However, the significant detriments greatly reduce these overall benefits, for both PM and NOx.

4-58

The corrected benefits of Alternative B (the ARB urban bus rule as later expanded to trucks in 2007) are shown in Table 6, and are compared to the corrected net benefits of the SCAQMD's Baseline Proposal as set forth above. This analysis assumes that all fleets take the diesel path under the ARB's regulatory program, and that, similar to the SCAQMD's articulation of Alternative B, the 0.2/0.01 bus standards are carried-over to heavy-duty trucks starting in 2007. For simplicity, AIR has ignored the additional retrofit requirements of the ARB bus rule, but those requirements would obviously increase the comparative benefits of the Alternative B proposal even more.

Table 6. Benefits of Alternative B (tpy)						
Year	Alternative B		Net Baseline		Difference (B-Baseline)	
	PM	NOx	PM	NOx	PM	NOx
2000	0	0	-6.2	-13.0	6.2	13.0
2001	0	0	-99.0	1.3	99.0	-1.3
2002	0	0	-100.1	168	100.1	-167.8
2003	0	0	1.0	277	-1.0	-276.7
2004	2.9	110	4.9	294	-2.0	-183.6
2005	5.9	220	14.7	325	-8.8	-104.9
2006	8.8	330	18.3	357	-9.5	-27.4
2007	16.2	559	22	360	-5.8	198.8
2008	23.6	788	25.6	361	-2.0	427.0
2009	31.1	1018	29.2	376	1.9	641.6
2010	38.5	1247	32.8	390.8	5.7	856.2
Total	NA	NA	NA	NA	184	1375

4-58 cont.

4-59 The comparative analysis set forth in Table 6 demonstrates that while Alternative B yields no material benefits in 2000-2003, it also avoids the significant detriments that will result from the SCAQMD's "Baseline" proposal during that same period. Thereafter, the PM and NOx emission reductions resulting from Alternative B will increase quickly. More specifically, the PM benefits of Alternative B are a little less than the Baseline for a few years, but then rapidly catch up and exceed the Baseline. NOx emission benefits of Alternative B are zero for a few years, and then accelerate rapidly with the implementation of the 0.2 standard, first for buses, and then later for trucks. The last two columns of Table 6 show the comparative benefits of Alternative B over the SCAQMD Baseline case. Positive numbers indicate that the benefits of the ARB-based "Alternative B" exceed the Baseline that represents the proposed Fleet Rules. Negative numbers indicate that the Baseline benefits exceed the "Alternative B" proposal.

4-60

4-61 Unlike the SCAQMD estimates, both sets of estimated benefits here are estimated from precisely the same set of the base case emission standards, so they are directly comparable.

20

4-62 In the first few years, the "Alternative B" proposal is clearly superior because of the significant environmental detriments of the SCAQMD proposal. PM emissions are much higher with the Baseline case. In the middle years, the Baseline case results in lower emissions. In the later years, however, the "Alternative B" proposal again results in greater overall emission reductions.

4-63 Table 6 sums the cumulative differences at the bottom of the last two columns. This analysis clearly shows that the emissions benefits that would result from an Alternative B (ARB bus and later truck) proposal would significantly exceed the benefits derived from the proposed Fleet Rules by a wide margin. This is directly contrary to the information asserted in the Draft PEA and wholly undermines the SCAQMD's proposed Fleet Rules, especially given the significant early detriments (not to mention costs) of those otherwise unlawful proposals.

v. Relative Size of the Benefits

4-64 The misstated benefits of the Fleet Rules are stated in the Draft PEA in terms of tons per year. While this is not a fundamental problem, unlike many of the other defects in the Draft PEA, most inventories are estimated in terms of tons per day. Thus, the public may have the impression that the proposed Fleet Rules will result in sizeable emissions reductions, when this is clearly not the case. In 2010, for example the proposed Fleet Rules are estimated (albeit in an

4-65 overstated manner as noted above) to reduce emissions by 0.13 tpd for PM and 1.28 tpd for NOx. According to the 1997 AQMP, the 2010 inventories for these pollutants are shown in Table 7. The potential reductions therefore amount to only a few one-hundredths of one percent for PM.

4-65 cont.

Table 7. Reductions Compared to SCAB Inventories		
	NOx	PM
2010 Inventory (tpd)	697	462
2010 Reduction (tpd)	1.3	0.13
Percent Reduction	0.3%	0.03%

vi. Future Efforts

4-66 Conversations with the Staff (Dave Coel) have revealed that SCAQMD may revise its inventory analysis in a number of ways. One method mentioned is to use data more consistent with the future EMFAC2000 model, based on NREL test data. Prior to doing this, however, SCAQMD should lay out its assumptions for the Base Case and the Alternatives very clearly, and inform interested parties whether base case emissions or emission standards are the same for each alternative, and if not, why not. In that regard, AIR has proposed the following recommendations:

4-67 1. In the event that SCAQMD changes its emission analysis (as it must), additional time will be required to review and comment on the revised analyses. Indeed, such additional time is mandated under CEQA. See Cal. Pub. Res. Code § 21092.1.

4-68 2. The emission analysis should first estimate emission reductions from the Baseline and Alternative B (and other alternatives) using the current HDT and bus standards, without the ARB bus proposal. This analysis should incorporate the effects of HD retrofits as provided for in the ARB urban bus standards.

4-69 3. After comparing the above, a second set of emission reductions should be estimated for the Baseline, which include the incremental benefits ascribed to the ARB bus (and truck) proposal. These should also include detriments for every year.

22

4. The analysis of Baseline benefits should not have a 0.2 NOx credit for alternative vehicles when the assumed NOx standard is 0.2 g/hp-hr.

5. Regardless of which technique is used, the ARB-based "Alternative B" proposal will show much larger benefits than the SCAQMD Baseline proposal, and the Baseline proposal will continue to show significant short term detriments.

In sum, the AIR analysis of the current emission inventories, using the existing techniques developed by SCAQMD, raises serious questions about how the inventories were estimated, and how the inappropriately restricted number of assumed alternatives were compared. That analysis also shows that a properly considered "Alternative B" type of proposal would provide much greater emission reductions (at a significantly lower cost) than would be derived under the proposed SCAQMD Fleet Rules (the Baseline), without occasioning the significant attendant detriments of the Baseline proposal. Accordingly, for these reasons as well, the proposed Fleet Rules are clearly invalid under the applicable statues, including CEQA.

Conclusion

The proposed Fleet Rules are invalid under state and federal law. Moreover, pursuant to the relevant provisions of CEQA, the Fleet Rules cannot be approved or adopted since there are feasible alternatives which would substantially lessen the significant adverse effect that the Fleet Rules will otherwise cause to the environment and the economy.

For all of these reasons, therefore, the Draft PEA and the Fleet Rules fail to comply with CEQA and are otherwise in violation of controlling state and federal law.

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23

COMMENT LETTER 4: NEAL, GERBER & EISENBERG

Response 4-1: The SCAQMD disagrees with the commentator's opinion regarding the SCAQMD's authority to adopt the proposed fleet vehicle rules. As discussed in the following responses, the SCAQMD does not believe the proposed fleet vehicle rules are preempted. With regard to the SCAQMD's authority to regulate fleet vehicles, the commentator is referred to the responses to comments #1-16, #1-34, #1-37, #1-49, and #1-89.

Response 4-2: The SCAQMD disagrees with the commentator's opinion that the PEA for the proposed fleet vehicle rules is deficient, as explained in the following responses.

Response 4-3: The commentator asserts that Proposed Rules 1191, 1192 and 1193 are "clearly inconsistent" with Health & Safety Code §40447.5 ,but fails to state why. The SCAQMD has reviewed the relevant statutes and has not identified any inconsistencies. The commentator further states that the proposed fleet vehicle rules are in violation of the express preemption provisions of the Clean Air Act, §§209 and 177. Since §177 expressly applies to states other than California, it is inapplicable here. Section §209 does not purport to prohibit rules regulating fleet purchases, which are indeed required by other provisions of the Clean Air Act. The proposed rules do not set emission standards but simply require certain fleets to purchase the cleaner of available vehicles. Finally, §209(b) directs U.S. EPA to waive preemption for California except in specified circumstances. The state legislature has delegated specified motor vehicle authority to SCAQMD. Such authority is not covered by from the preemption of §209(a) and if it were covered, preemption can be overcome by a waiver from U.S. EPA. For additional information, the commentator is referred to the "Statutory Authority" section of Chapter 2 in the PEA. See also responses to comments #1-16, #1-34, #1-37, #1-49, and #1-89.

Response 4-4: The SCAQMD disagrees with the commentator's opinion that the proposed fleet vehicle rules are arbitrary. The statute refers to "equivalently clean burning alternative fuel." This language focuses on fuels and not control technology. It does not require the SCAQMD to allow use of add-on control technology that may meet equivalent emission standards if the fuel involved is itself neither "alternative" nor "equivalently clean burning."

Response 4-5: The proposed fleet vehicle rules do not effectuate a "wholesale ban" on diesel, regardless of how clean the technology. While bus providers subject to the SCAQMD's proposed urban transit bus fleet rule will not be able to use the "diesel path" provided in the CARB rule, this is not illegal. The CARB rule does not require use of diesel, but it allows it. CARB legal counsel specifically advised its Board when it was considering the CARB rule that the SCAQMD had authority to adopt a rule that would require selection of the alternative fuels path. It is not a violation of

Health & Safety Code §40447.5 to focus the proposed fleet vehicle rules on fuels rather than technologies.

Response 4-6 As noted in response to comment #4-5, the proposed fleet vehicle rules do not effectuate a "wholesale ban" on diesel, regardless of how clean the technology. The commentator is referred to the response to comment #4-5.

Response 4-7: The SCAQMD disagrees with the commentator's opinion that Health and Safety Code §40919 does not relate to heavy-duty vehicles. It uses the term "vehicles," which includes all vehicles that are operated in fleets, including heavy-duty. However, the SCAQMD is primarily relying on this section for PR 1191, the light and medium duty rule and PR 1194, which regulates airport taxis, shuttles, etc., that are typically light- or medium-duty vehicles. Health and Safety Code §40919 indirectly excludes diesel, because it requires "low-emission" vehicles. The Health & Safety Code, §39037.05, defines "low-emission motor vehicle" to exclude diesel vehicles.

Response 4-8: The proposed fleet vehicle rules are not in conflict with federal or state law. CARB counsel agrees that the SCAQMD has authority under state law to regulate fleets, including prohibiting the "diesel path" that the CARB rule allows. See also response to comment #4-5. The commentator is also referred to response to comment #4-3 for discussion of federal preemption. However, if a court were to hold the fleet rules preempted by the Clean Air Act, such preemption could be overcome by submitting the rules for approval by EPA pursuant to §209.

Response 4-9: The SCAQMD disagrees with the commentator's opinion that the proposed fleet vehicles are in conflict with state or federal law. With regard to Health and Safety Code §40447.5, the commentator is referred to the responses to comments #4-4 and #4-5. See also responses to comments #1-16, #1-34, #1-37, #1-49, and #1-89. With regard to the Clean Air Act, the commentator is referred to the response to comment #4-3.

Response 4-10: As noted in response to comment #4-5, the proposed fleet vehicle rules do not effectuate a "wholesale ban" on diesel, regardless of how clean the technology. The commentator is referred to the response to #4-5. With regard to CARB's urban transit bus fleet rule, the commentator is referred to the responses to comments #4-5 and #4-8. With regard to Clean Air Act §177, the commentator is referred to the response to comment $4-3.

Response 4-11: The SCAQMD disagrees with the commentator's opinion that the PEA for the proposed fleet vehicle rules is invalid. The validity of a CEQA document and its analysis of environmental impacts of a proposed project is independent of whether some other law prohibits the proposed project.

Response 4-12: As noted in response to comment #4-5, the proposed fleet vehicle rules do not effectuate a "wholesale ban" on diesel, regardless of how clean the technology. The commentator is referred to the response to #4-5. The commentator is also referred to the responses to comments #1-16, #1-34, and #1-38.

Response 4-13: The project descriptions in Chapter 2 of the PEA provide a description for each proposed fleet vehicle rule that is sufficient in detail to allow meaningful analysis of potential adverse environmental impacts. In addition to draft rule language being available for PR 1191, 1192, and 1193, draft rule language is available for PR 1186.1 and 1194.

Response 4-14: The SCAQMD disagrees with the commentator's opinion that a program environmental assessment covering all rules is inadequate for analyzing impacts from the individual rules. See also to the responses to comments #3-13 and #4-13. With regard to preparing individual EAs for each proposed fleet vehicle rule, the commentator is referred to the response to comment #1-20.

Response 4-15: The SCAQMD disagrees with the commentator's opinion that there has been a procedural violation of any CEQA requirements and that the PEA is invalid. There is no requirement in CEQA that the complete details of a project be finalized prior to preparation of a CEQA document. In fact, CEQA recognizes that the CEQA process should occur early in the planning process. CEQA Guidelines §15004(b) states, "Choosing the precise time for CEQA compliance involves a balancing of competing factors. EIRs and negative declarations should be prepared as early as feasible in the planning process to enable environmental considerations to influence project program and design and yet late enough to provide meaningful information for environmental assessment." Preparation of the PEA for the proposed fleet vehicle rules is consistent with CEQA Guidelines §15004.

Response 4-16: The potential adverse environmental impacts from the proposed fleet vehicle rules have been adequately evaluated in the PEA. With regard to the reasons for preparing a program CEQA document, the commentator is referred to the responses to comments #1-1 and #1-2.. With regard to the degree of specificity of the environmental analysis, the commentator is referred to the responses to comments #1-2 and #1-7.

Response 4-17: The commentator incorrectly asserts that the SCAQMD has violated CEQA requirements because the Economic Assessment was not made available to the public at the same time the PEA was made available. With regard to costs associated with the proposed fleet vehicle rules, the commentator is referred to the responses to comments #1-4, #1-6, #1-18, and #3-11. Further, CEQA provides that social or economic impacts are not to be considered significant effects on the environment (CEQA Guidelines §15064(e)).

There are no requirements in CEQA regarding preparing an economic analysis or the timing when it should be made available to the public. The commentator also incorrectly interprets the meaning of program. Pursuant to CEQA Guidelines §15168(a)(3) a program is, "In connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program,…" The Economic Assessment is one of the support documents of the program, not part of the program.

Response 4-18: The commentator incorrectly asserts that the PEA did not consider potential adverse environmental impacts to energy, transportation, and infrastructure changes. The PEA contains a comprehensive analysis of the physical environmental impacts from construction and installation of alternative fuel refueling stations. The commentator is referred to the "Air Quality" section in Chapter 4 of the PEA. With regard to the analysis of transportation impacts, commentator is referred to the responses to comments #1-72 and #3-40 and the "Transportation/Circulation" in Chapter 4 of the PEA. With regard to the analysis of energy impacts, the commentator is referred to the "Energy/Mineral Resources" section in Chapter 4 of the PEA. With regard to analyzing indirect physical impacts resulting from costs of the program, the commentator is referred to the response to comment #1-4, #1-52, #1-65, and #1-111. See also the "Indirect Air Quality Effects" section, which specifically includes analyses of economic impacts generating secondary or indirect air quality impacts. In particular the commentator is referred to the subsections entitled "Loss of Service," "Longer Fleet Turnover Rate," and "Centralized Refueling." Moreover, the infrastructure changes resulting from the proposed fleet vehicle rules would not be a "massive conversion of existing infrastructure since the rules on affect about 25 percent of the total fleet population in the district.

Response 4-19: The SCAQMD disagrees with the commentator's opinion that there has been an "abuse of the process" because the Economic Assessment was not available concurrently with the PEA. The commentator is referred to the responses to comments #1-19 and #4-17.

Response 4-20: The SCAQMD disagrees with the commentator's opinion that the fleet rules are in violation of CEQA because there are feasible alternatives that will provide greater emission benefits while avoiding the significant cost and detriments of the fleet rules. CEQA requires that an EIR (or EA) analyze feasible alternatives to the project if the environmental analysis determines that significant environmental impacts result from the project. The SCAQMD's PEA concludes that the only significant impact is a temporary air quality impact resulting from construction activities during the first two years of the project.

It should be noted that the reason this impact is significant is due to refinery construction as a result of refinery modifications necessary to produce low sulfur fuel pursuant to PAR 431.2. This significant adverse air quality impact would exist even

if advanced diesel technology were allowed to be used for all affected fleet vehicles. Thus, such an alternative does not avoid significant adverse environmental impacts as claimed by the commentator and, therefore, not necessarily the preferred alternative under CEQA. See also responses to comments #1-40, 2-4, and #3-21.

The PEA analyzes various alternatives including the "no project" alternatives and concludes that none of the alternatives will achieve the project objectives with substantially less environmental effects (Public Resources code §21002). The comment oversimplifies the CEQA process and an agency's ability to adopt a program even if there are significant environmental impacts provided a statement of overriding consideration is prepared. The commentator is also referred to the response to comment #1-14.

Response 4-21: The SCAQMD disagrees with the commentator's opinion that the PEA eliminates consideration of a fuel neutral alternative on "insufficient grounds." With regard to a fuel neutral alternative, the commentator is referred to the response to comment #1-16. See also responses to comments #1-14 and #3-7.

Response 4-22: As noted in response to comment #4-5, the proposed fleet vehicle rules do not effectuate a "wholesale ban" on diesel, regardless of how clean the technology. Currently after-treatment control technology is available for particulate matter. However, there are no known control technology at this time that will reduce nitrogen oxide emissions from diesel-fueled engines to the emission levels of alternative fuel engines. See also responses to comments #1-16 and #1-34. With regard to fuel neutrality, the commentator is referred to the response to comment #1-16. With regard to the availability of low sulfur fuel, the commentator is referred to the response to comment #3-24.

Response 4-23: Until "clean diesel" can be demonstrated to be equivalent to methanol or equivalently clean-burning alternative fuels, the proposed fleet rules is crafted in a manner consistent with state law and the definitions of equivalently clean burning "alternative fuels." With regard to whether or not clean diesel technologies meet the definition of methanol equivalency, the commentator is referred to the responses to comments #1-16 and #1-34.

Response 4-24: The commentator has misinterpreted the text cited on page 5-3. Alternative 7 was rejected for the following reasons. Because fuel cells are not expected to be commercially available in the near-term, heavy-duty vehicle fleet operators or owners would continue using conventional heavy-duty vehicles in the interim. This alternative was rejected not because of the fuel cell unavailability, but because of the continued use of conventional heavy-duty diesel vehicles during the interim period. It is the continued use of heavy-duty diesel vehicles that is inconsistent with the objectives of the proposed project, as is clearly stated on page 5-3, not use of fuel cells. Further, the definition of alternative fuel heavy-duty

vehicle contained in PR 1192 and 1193 specifically includes fuel cells. As a result, when fuel cells become commercially available, they will be a compliance option for affected fleets.

Based on input from fleet owners that plan to or are currently operating significant numbers of vehicles powered by natural gas, building natural gas infrastructure is a desirable strategy to smoothly transition towards the use of fuel cell technology. This is because, based on current research and development, natural gas refueling stations can be relatively easily modified to produce hydrogen, which is a very desirable fuel for use in fuel cells. Consequently, converting to natural gas fuels is not considered to be a "waste of resources" as claimed by the commentator.

Response 4-25: The commentator's opinion that the proposed fleet vehicle rules some how hinder the "necessary and desired investments in fuel cell technologies" is incorrect. The reason for this, as explained in response to comment #4-24, is that, based on current research and development, natural gas refueling stations can be relatively easily modified to produce hydrogen, which is a very desirable fuel for use in fuel cells.

Response 4-26: The commentator concurs that the PEA has properly "recognized" the potential significant construction emissions. However, the commentator incorrectly asserts that these significant construction emissions result from the construction of natural gas infrastructure. As noted in response to comment #4-20, significant construction air quality impacts in are generated primarily from refinery projects necessary to produce low sulfur diesel pursuant to PAR 431.2. The commentator also incorrectly asserts that the proposed fleet vehicle rules will generate significant adverse operational impacts. No such impacts were identified in the PEA. The commentator is referred to the analysis of potential environmental impacts from implementing the proposed fleet vehicle rules in Chapter 4 of the PEA.

Response 4-27: The page cited by the commentator is from the "Executive Summary" section in Chapter 1 of the PEA. Including an executive summary in a CEQA document is required pursuant to CEQA Guidelines §15123. The detailed and comprehensive analysis of potential adverse environmental impacts can be found in Chapter 4 of the PEA. See also Appendices E, F, and the Attachment to Appendix F. The assumptions underlying the analyses were not "unrealistic" but rather designed to provide an overestimation of the likely adverse environmental impacts to assure all impacts were accounted for.

The environmental analysis for the proposed fleet vehicle rules contained in the Draft PEA overestimates potential adverse environmental impacts for the following reasons. The estimate of the affected vehicle universe includes a 20 percent scale up factor in the event that the initial fleet vehicle surveys underestimated affected public fleets. Further, the analysis does not take into account the fact that a large number of

AFVs are already included in public fleets, that is, the analysis assumes all affected vehicles are diesel or gasoline vehicles. Finally, representatives from energy suppliers in the district have indicated that the SCAQMD's assumption of the number of AFV refueling stations that would be necessary to support implementation of the proposed fleet vehicle rules substantially overestimates the actual number that would be required. For additional information, the commentator is referred to the responses to comments #1-54, #1-66, and #2-9. See also response to comment #4-28.

Response 4-28: The SCAQMD disagrees with the commentators assertion that the impacts from construction of new alternative fuel refueling facilities have been understated and that they are based on "exceedingly simplistic and unrealistic" assumptions. Indeed, although the commentator believes the construction schedule assumed by the SCAQMD is "simplistic and unrealistic," he does not provide specific assumptions for the SCAQMD to evaluate that he feels would be more realistic. The commentator merely says that fleet vehicle replacement will occur over an "extended period of time" which will "extend the time required for conversion of the infrastructure." In neither case does the commentator define extended time or recommend what would be a more realistic time frame.

The SCAQMD cannot predict the specific schedules that would be followed for construction of new alternative fuel refueling facilities. Therefore, assumptions had to be made regarding the time over which new facilities will be constructed. These assumptions were chosen to provide a reasonable yet conservative estimate of the impacts. If, as the commentator asserts, construction of the new facilities were to occur over a period longer than the five years assumed for the analysis, fewer stations would be constructed each year, so the number of stations under construction at any one time would be less than the number assumed in the PEA. This would reduce the peak daily basin-wide emissions caused by the construction activities. Therefore, the assumption of a five-year period for constructing the new refueling facilities probably overestimates the impacts from emissions during construction.

The SCAQMD's assumption that construction of each station would require excavation and removal of an existing underground tank leads to the same estimated peak daily emissions as would the addition of a new tank for the following reasons. First, removal of an existing tank requires excavation to uncover any tanks next to the tank that is being removed to ensure that the tanks that will remain at the facility do not shift and are properly secured. Second, the space occupied by a tank that is removed needs to be backfilled, and the amount of material used to backfill the hole would be the same as the amount that would need to be excavated to install a new tank. Therefore, the total amount of material handled during removal of an existing tank would actually be greater than the amount handled during installation of a new tank. Additionally, a new underground tank would only need to be installed for methanol refueling. The other fuel types would likely be above-ground tanks since

they are pressurized or cooled. Since the SCAQMD assumed that a total of only five methanol refueling stations would be constructed out of a total of 325 alternative fuel refueling stations, the difference in peak daily construction emissions caused by the addition of a new tank would be negligible. With regard to the commentator's opinion that additional facilities will be required because of possible space limitations at existing maintenance and refueling facilities, the commentator is referred to the responses to comments #1-10, #1-29, and #1-31.

Response 4-29: The SCAQMD disagrees with the commentator's assertion that the assumptions regarding construction of alternative fuel refueling facilities are unrealistic. As described in Appendix F to the PEA, the SCAQMD evaluated the number of facilities that would likely be under construction at any one time in order to estimate the peak daily emissions from the construction activities. This evaluation considered the number that would need to be constructed during each year and the resulting average number that would be under construction each day. The SCAQMD then rounded up the total average number of facilities under construction each day to the next highest number to estimate the number to be considered in the air quality impacts analysis. Finally, in order to provide a conservative estimate of emissions, the SCAQMD assumed that the construction activities that cause the highest daily emissions would be taking place at all of the stations under construction at the same time.

Regarding the number of days required to construct each type of station, the SCAQMD's construction schedule in Table F-1 is intended to indicate the construction activities that would occur on each working day. While construction interruptions would extend the elapsed time required to construct the facilities, emissions would not be generated during days when construction is not taking place. Therefore, it is not necessary to consider construction delays in the estimation of maximum daily emissions during refueling facility construction. Again, the commentator provides no recommendation for a construction schedule for the SCAQMD to evaluate that would not be "wildly unreasonable."

Response 4-30: Regarding the calculation procedures in the PEA, the formulas are based on established guidance that CARB has provided to local air quality districts in determining emission reduction benefits from mobile source control programs, as well as additional input from CARB staff regarding the latest emission factors that should be utilized in these analyses. For additional information the commentator is referred to the response to comment #1-67.

With regard to modeling NOx contributions to the nitrate portion of PM10, there is no reason to perform modeling since the proposed project is expected to generate substantial NOx emission reductions from mobile sources at least through the year 2010. The commentator is referred to Appendices E for the data describing the benefits of the proposed fleet vehicle rules and Appendix F for data describing the

benefits of the proposed fleet vehicle rules, while taking into consideration potential adverse air quality impacts from the proposed rules. It should be noted that CEQA Guidelines §15126.2 requires a CEQA analysis to focus on significant effects on the environment. CEQA Guidelines §15382 defines significant effects on the environment, in part, as an, "**adverse** [emphasis added] change in any of the physical conditions within the area affected by the project…" As a result, there is no requirement that the benefits of the proposed fleet vehicle rules be discussed through photochemical modeling.

For additional information CO, the commentator is referred to the response to comment #1-113.

Response 4-:31 Although the proposed fleet vehicle rules are expected to result in reductions in criteria pollutants, primarily PM10 and NOx, they are also being promulgated to reduce toxic air contaminants. As noted in Chapter 2 of the PEA, the MATES II study concluded that 71 percent of the cancer risk in the district is attributable to diesel particulates. It is expected that the primary toxic benefits from implementing the proposed fleet vehicle rules will result from the use of natural gas powered heavy-duty vehicles instead of diesel powered vehicles. While the commentator may believe the benefits of the rules are small, they are an important start. The SCAQMD does not have authority to require mobile source retrofit programs, or to regulate mobile sources not in fleets. Thus, it would not be a meaningful comparison to retrofit programs. The PEA considers range of reasonable alternatives, which is all that CEQA requires. See also response to comment #1-14.

In addition to the above, photochemical modeling is not essential for CEQA purposes, given that the fleet rule proposals affect fleet vehicles that operate significantly in the district, it is more appropriate to compare emissions benefits from the proposed fleet rules with the emissions from the fleet vehicle population operating substantially in the district. As such, public fleets represent about 25 percent of the total fleet population in the district. The fleet population does not include transportation sources that travel in and out of the district or owned or operated by entities located outside of the district. The SCAQMD is prohibited from regulating fleets that do not operate substantially in the district. The SCAQMD also does not have authority to require retrofits. Moreover, particulate traps produce no NOx emission reduction benefits and uncertain toxic air contaminant emission reduction benefits. See also responses to comments #1-16 and #1-34.

Response 4-32: The district has the worst air quality in the nation and substantial further NOx emission reductions are necessary if the SCAQMD is to attain both the federal and state ambient air quality standards for ozone and PM10 (NOx is a precursor to both of the criteria pollutants). The SCAQMD has already substantially regulated stationary sources, particularly large emission sources, by applying stringent emission reduction or control requirements to these sources. As a result, to

continue progress in achieving the state and federal ozone and PM10 standards, the SCAQMD has to further regulate all sources over which it has regulatory authority, including small stationary emission sources and fleet vehicles. It should also be noted that, in response to recommendations made by numerous stakeholders at the fleet vehicle working group meetings, the emission reduction calculation methodology for PR 1192, PR 1193, and PR 1186.1 have been refined to more accurately reflect the emission reduction calculation methodology in the Carl Moyer program. As a result, anticipated NOx emission reductions between the years 2001 through 2010 are almost three times greater than originally estimated in the Draft PEA. The commentator is referred to Appendices E and F in the Final PEA.

Response 4-33: The commentator incorrectly asserts that "the expected reductions in criteria emissions are primarily NOx emissions." It should be noted that CEQA Guidelines §15126.2 requires a CEQA analysis to focus on significant effects on the environment. CEQA Guidelines §15382 defines significant effects on the environment, in part, as an, "**adverse** [emphasis added] change in any of the physical conditions within the area affected by the project…" As a result, there is no requirement that the benefits of the proposed fleet vehicle rules be discussed through photochemical modeling.

As indicated in Chapter 4 and Appendices E and F, the proposed fleet vehicle rules are also expected to generate substantial PM10 emission reductions. While concerns have been raised on the weekday/weekend ozone effects in the Basin and research is underway to understand this phenomena, NOx emission reductions would also provide benefits to the particulate matter air quality problem in the Basin. The Basin must attain the federal PM10 air quality standards by 2006 and the federal ozone air quality standard by 2010. Moreover, NOx reductions are consistent and necessary for continued progress toward attaining and maintaining the state and federal ozone standards. The 1997 AQMP for the South Coast Air Basin demonstrates that overall ozone air quality will continue to improve as NOx emissions are reduced to meet the federal PM air quality standards.

Response 4-34: In this comment, the commentator is confusing the proposed project, or what he refers to as the baseline case, with the No Project Alternative, i.e., a "no-control" case. To avoid this confusion, the following responses will continue to refer to the proposed project or proposed fleet vehicle rules instead of using the commentator's term, "baseline case." The commentator is referred to Chapter 5 in the PEA for a description and analysis of the No Project Alternative ("no-control"). With regard to the range of alternatives included in a CEQA document the commentator is referred to the response to comment #1-14. The PEA includes sufficient information to compare the various alternatives, including the No Project Alternative.

Response 4-35: The commentator's opinion that the SCAQMD's emission estimates are mistaken is incorrect. The intent of Alternative B is to determine emission benefits of the proposed fleet vehicle rules, while taking into account control programs that were proposed by CARB and U.S. EPA during preparation of the analysis, that could have an effect on emissions from fleets affected by the proposed fleet rules. This specifically include CARB's urban bus fleet rule and CARB/U.S. EPA research targets for more stringent NOx and PM emission standards for 2007 and subsequent model years for all heavy-duty engine. Subsequent to the preparation of emission benefit analysis as contained in the Draft PEA, for the proposed fleet rules, CARB adopted its urban bus fleet rule, which has been included in the refined baseline emission benefit calculation. Similarly, U.S. EPA recently published an NPRM for all heavy-duty engines that includes proposals for more stringent PM emission standards beginning in the 2007 model year and a more stringent NOx emission standard to be phased in between the 2007 and 2010 model years; this proposal will be included in the modified Alternative B emission benefit calculations. See also responses to comments #4-37 and #4-42.

Response 4-36: The SCAQMD disagrees with the commentator's opinion that emission benefits analysis is flawed for the proposed fleet vehicle rules and Alternative B. The commentator is referred to the responses to comments #4-37 through #4-44 for specific responses to the commentators comments on this issue.

Response 4-37: As noted in response to comment #4-35, CARB's urban bus fleet rule was not adopted at the time the analysis was under preparation, so it would have been inappropriate to incorporate its effects as part of the proposed fleet vehicle rules. To cover the possibility that CARB's rule would be adopted, Alternative B was created to consider potential effects on the SCAQMD's emission benefits calculations for the proposed fleet vehicle rules. Now that CARB's urban bus fleet rule has been adopted, its effects have been incorporated into the emission reduction calculations estimated for the proposed fleet vehicle rules. Moreover, the Staff Report for PR 1192 also identifies benefits of PR 1192 that are surplus to the benefits of CARB's urban bus fleet rule. Alternative B has been modified to exclude the effects of CARB's urban bus rule, but continues to incorporate the effects of the heavy-duty emission standards recently proposed by U.S. EPA. For additional information the commentator is referred to the responses to comments #1-47, #1-60, and #1-68.

Response 4-38: As is clearly indicated in the text in Chapter 4, Table 4-8 and Appendix E-1 (formerly Appendix E in the Draft PEA) identify only emission benefits from the proposed fleet vehicle rules. For a summary of the net overall effects on air quality of the propose fleet vehicle rules, which includes benefits and adverse air quality impacts, for the year 2002, the commentator is referred to Table 4-19. The net overall effects on air quality of the propose fleet vehicle rules, which

includes benefits and adverse air quality impacts, for all years, can be found in Appendix F.

Response 4-39: It is irrelevant for the purposes of CEQA if the benefits of a project are underestimated. Pursuant to CEQA Guidelines §15126.2 "An EIR shall identify and focus on the significant environmental effects of the proposed project." CEQA Guidelines §15382 defines significant adverse effect on the environment, in part, as, "'Significant effect on the environment' means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project. The emission reduction benefits of the proposed fleet vehicle rules have been included in the PEA to demonstrate to the public that although the proposed fleet vehicle rules may generate adverse environmental impacts, the benefits of these impacts outweigh potential adverse impacts. As noted in response to comment #4-32, the emission reduction calculation methodology has been refined based on public input, and anticipated NOx emission reductions are nearly three times the original estimate.

The applicable NOx emission standard for alternative-fuel heavy duty engines is 2.5 g/bhp-hr NOx, not 2.5 g/bhp-hr NOx + NMHC, in accordance with optional emission standards adopted by CARB for this time period.

Response 4-40: The SCAQMD disagrees with the commentator's opinion regarding the maximum PM benefit. This benefit is based on CARB input at the time the Draft PEA was prepared, indicating that in-use PM emission rates of natural gas heavy-duty engines are up to 22 times lower than what would have been expected from emissions data generated from the engine-based certification test procedure. Subsequent to Draft PEA preparation, CARB staff has provided specific in-use PM emission rates which will be used to refine the PM emission benefit calculation and, therefore, a range of PM benefits (minimum to maximum) will not be needed.

Response 4-41: The commentator is implying here that if one compares the emission reductions from the proposed fleet vehicle rules against the total emission inventories in the district, the emission reduction effects would be minor. This, however, would be true for any new rule or rule amendment promulgated by the SCAQMD. The measure of the benefits of SCAQMD rules is not how they compare against the total emission inventories, but whether they contribute to the SCAQMD's efforts to attain and maintain relevant state and federal ambient air quality standards or reduce population exposures to nonattainment or toxic air contaminant concentrations. Based on the emission reductions anticipated for the proposed fleet vehicle rules, they will achieve both of these measures. With regard to the air quality benefits from the proposed fleet vehicle rules, the commentator is referred to the responses to comments #4-31, #4-32, 4-39, and 4-40.

Response 4-42: As indicated in responses to comments #4-35 and #4-37, alternative B represents a different project scenario that eliminates from the propose project's emission benefits the emission from CARB's urban bus fleet rule and CARB and U.S. EPA regulatory activities relative to heavy-duty vehicles. Consequently, it is reasonable for the emission reduction benefits for Alternative B to be lower than for the proposed project.

Response 4-43: The commentator's opinion that the inventories for the proposed fleet vehicle rule must be the same as the inventory for Alternative B is incorrect. First, there is no such requirement in CEQA. Second, pursuant to CEQA Guidelines §15126.6(c), "The range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects." This implies that the characteristics of a project alternative will be different from those of the proposed project.

The 0.1 g/bhp-hr PM emission level as used in the proposed fleet vehicle rules' emission benefit calculation reflects the current adopted PM standard for heavy-duty engines. The 0.01 g/bhp-hr PM emission level as contained in the Alternative B emission benefit calculation reflects a CARB/U.S. EPA research target for a 0.01 g/bhp-hr emission standard in 2007. The commentator is also referred to the responses to comments #4-35 and #4-37.

Response 4-44: The NOx emission benefits on a per engine basis of 0.2 g/bhp-hr is based on the inherently low NOx emission characteristics of natural gas heavy-duty engines versus diesel heavy-duty engines. In addition, this emission differential is based on the SCAQMD's technical understanding that control technologies that could be applied to a diesel engines to reduce NOx emissions can also generally be applied to natural gas heavy-duty engines, to produce even lower relative NOx emission levels. As a result, staff anticipates that engine manufacturers will produce natural gas engines with appropriate emission control technology now and in the future to maintain the lower NOx emission levels of natural gas heavy-duty engines compared to their diesel counterparts. This would ensure that natural gas engines will continue to qualify for incentive funding as well as to provide a "clean air incentive" for vehicle fleets interested in improving air quality in their area of jurisdiction to purchase natural gas engines. Notwithstanding the preceding, the NOx differential between natural gas and corresponding diesel engines is uncertain at this time relative to a 0.2 g/bhp-hr NOx emission standard for all heavy-duty engines proposed for implementation in 2007. Therefore, to address this comment in an effort to refine the emission benefit calculation to ensure that emission benefits are not overestimated for Alternative B, the 0.2 g/bhp-hr NOx differential will be dropped for the 2007 and subsequent model years.

Response 4-45: The summary of the parameters used in the heavy-duty vehicle emission benefit calculation is generally correct.

Response 4-46: With regard to the NOx emission benefits, the commentator is referred to the responses to comments #4-39, 4-41, #4-44, and #4-45.

Response 4-47: With regard to the PM emission benefits, the commentator is referred to the responses to comments #4-40, 4-41, #4-43, and #4-45.

Response 4-48: With regard to the NOx and PM emission benefits, the commentator is referred to the responses to comments #4-39, #4-40, 4-41, #4-43, #4-44, and #4-45.

Response 4-49: With regard to the NOx and PM emission benefits relative to Alternative B, the commentator is referred to the responses to comments #4-39, #4-40, 4-41, #4-42, #4-43, #4-44, and #4-45.

Response 4-50: The purpose of Alternative B is to determine the emission benefits of the proposed fleet rules incorporating, at the time the emission benefit calculations were prepared for the Draft PEA, CARB's proposed urban bus fleet rule and CARB/U.S. EPA research targets (see responses to comment #4-35 and #4-37). The contention that implementation of a 0.01 g/bhp-hr emission standard for all heavy-duty engines by U.S. EPA/ARB would still result in 0.09 g/bhp-hr PM emission reduction for the proposed fleet rules is incorrect since the 0.01 g/bhp-hr PM level reduces diesel engine PM emissions to levels that are relatively close to corresponding alternative fuel engine PM levels.

Response 4-51: With regard to the NOx standard applied to buses in 2007 and later, the commentator is referred to response to comment #4-44. See also responses to comments #4-39 and #4-41.

Response 4-52: The 0.25 factor was based on SCAQMD staff analysis indicating that up to 75 percent of the urban bus fleet could eventually consist of alternative fuel buses in the absence of the proposed fleet rules, given alternative fuel implementation policies in place at larger transit agencies in combination with CARB's Proposed Urban Bus Fleet, which could potentially promote the use of alternative-fuel buses. (It should be noted that is was determined after the preparation of the Draft PEA that the CARB staff did not assume any alternative fuel buses would be used by transit agencies subject to their urban bus fleet rule for emission impact analyses purposes.) Given that LACMTA, the operator of the largest urban bus fleet in the district, and possibly other transit agencies, are currently considering the purchase of large numbers of diesel buses, staff believes that the 0.25 factor overestimates the eventual penetration of alternative fuel buses in the absence of the proposed fleet rules based on the volatile nature of decision making at these transit properties. Based on the above, staff is proceeding to refine the emission

reduction methodology to the extent the emission reductions for urban buses will be based on the estimated new purchases of diesel buses per year in the SCAQMD, based on the estimated current population of diesel buses of 3,400.

Response 4-53: The SCAQMD disagrees with commentator's opinion that comparison between the proposed project and Alternative B is skewed or flawed. CARB has already estimated the emission benefits of the urban bus fleet rule as part of the rulemaking process, and these benefits do not incorporate the SCAQMD's proposed fleet rules. CARB has not recently adopted truck regulations, so these benefits cannot be estimated at the present time.

Response 4-54: The SCAQMD disagrees with the commentator's opinion that there is not a clear comparison between the air quality benefits of the propose fleet vehicle rules and Alternative B. A clear distinction is made for the years 2000 through 2010 in the tables in both Appendix E-1 (formerly Appendix E in the Draft PEA) and Appendix F. The SCAQMD acknowledges that the commentator has used spreadsheets provided by the SCAQMD to more accurately assess the emission benefits of the proposed fleet vehicle rules and Alternative B.

Response 4-55: The Public Resources Code (§21091(a)) cited by the commentator simply states, "The public review period for a draft environmental impact report shall not be less than 30 days. If the draft environmental impact report is submitted to the State Clearinghouse for review, the review period shall be at least 45 days. (Note: pursuant to its certified regulatory program (PRC 21080.5) the SCAQMD is not required to send its CEQA documents to the state clearinghouse for review.) The Draft PEA and all of the supporting material on which it relied, was made available to the public on March 10, 2000, for a public review period of more than 45 days. Further, the entire text of the Draft PEA and the spreadsheets on which the analyses in the PEA are based and contained in the appendices to the PEA were available on the SCAQMD's website. The newspaper notice for the proposed fleet vehicle rules, prepared pursuant to CEQA Guidelines §21092(b)(3)(A), and the notices sent interested parties indicated that the CEQA document was available on the SCAQMD's website. Consequently, the spreadsheets on which the CEQA analysis relies was available to the public for 45 days.

Response 4-56: The SCAQMD acknowledges that the commentator has used spreadsheets provided by the SCAQMD to more accurately assess the emission benefits of the proposed fleet vehicle rules and Alternative B.

Response 4-57: SCAQMD staff acknowledges that the commentator has developed an emission benefit scenario, but insufficient detailed information is provided to follow the methodology used by the commentator to develop the net benefits of the proposed fleet rule for the 2000 to 2010 timeframe. Further, the analysis of air quality impacts in the PEA already concluded that significant adverse air quality

impacts would occur in 2001 and 2002 for both the proposed fleet vehicle rules and Alternative B. The commentator is referred to Table F-31 and Table F-32, respectively.

Response 4-58: SCAQMD staff acknowledges the general explanation of the emission benefit scenario developed by the commentator. See responses to comments #4-57 and #4-61.

Response 4-59: The commentator is referred to responses to comments #4-57 and #4-61.

Response 4-60: The commentator is referred to responses to comments #4-57 and #4-61.

Response 4-61: It is unclear what the purpose is of the comparison between the Baseline and Alternative B scenarios developed by the commentator. It appears that the commentator is attempting to compare the emission reduction potential of the proposed fleet rules versus CARB's adopted urban bus fleet rule in combination with U.S. EPA's proposed heavy-duty engine emission standards. This comparison is interesting but not relevant to the purpose of the proposed fleet vehicle rules and Alternative B, which is to determine the emission reduction potential of the proposed fleet rules with (Alternative B) and in the absence (Baseline Case) of CARB's urban bus fleet rule and the CARB/U.S. EPA PM and NOx research targets. The commentator is referred to Response to Comment #4-35.

Response 4-62: The commentator is referred to response to comment #4-61.

Response 4-63: The analysis prepared by the commentator does not undermine the analysis of potential environmental impacts from the proposed fleet vehicle rules. The commentator 's analysis is largely irrelevant as indicated in response to comment #4-61.

Response 4-64: The SCAQMD disagrees with the commentator's that there is a "fundamental problem" with regard to identifying emission benefits from the proposed fleet vehicle rules. Although Appendix E-1 (formerly Appendix E in the Draft PEA) presents direct emission reduction benefits from the proposed fleet vehicle rules without consideration of adverse air quality impacts) in tons per year, the net air quality effects of the proposed fleet vehicle rules (taking into consideration adverse air quality impacts) presented in Appendix F is provided in pounds per day.

Response 4-65: The commentator may believe that the benefits of the proposed fleet vehicle rules are small, but they an important step in controlling toxic air contaminant and criteria pollutant emissions from motor vehicles. With regard to the effects of

the proposed fleet vehicles on the emission inventories in the district, he commentator is referred to the responses to comments #4-31 and #4-32.

Response 4-66: Mobile source emission inventories are based on the most currently adopted emission factors, which is currently EMFAC7G. EMFAC2000 has not yet been adopted by CARB. It should be noted that use of EMFAC2000 would only increase benefits. The commentator incorrectly implies that the assumptions for the analyses in the PEA are not provided. The assumptions used for the analysis of environmental impacts are clearly provided in Chapter 4 and Appendices E and F of the PEA.

Response 4-67: As indicated in response to comment #4-32, the SCAQMD has refined the emissions reduction calculation methodology. Refining the emission reduction calculation methodology, however, does not change any of the conclusions in the PEA regarding impacts or mitigation measures. The commentator claims that any new information added to the PEA requires additional time for public review and then cites PRC §21092.1. PRC §21092.1 requires recirculation of a CEQA document when "significant new information is added to an environmental impact report…" Pursuant to CEQA Guidelines §15088.5 significant new information" requiring recirculation include, for example, a disclosure showing that:

(1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.
(2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.
(3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it.
(4) The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. (Mountain Lion Coalition v. Fish and Game Com. (1989) 214 Cal.App.3d 1043)

Based upon the above criteria, refining the benefits analysis methodology in response to public input to make it more consistent with the Carl Moyer program methodology does not trigger any criteria requiring recirculation of the PEA for the proposed fleet vehicle rules. Refining the benefits analysis methodology results in greater emission reduction benefits of the proposed fleet vehicle rules. Further, and as noted in response to comment #4-30, an analysis of the benefits of a project is not strictly required as part of an analysis of the significant effects of the proposed project.

Response 4-68: The emission analysis for the proposed fleet vehicle rules and the project alternatives in Chapter 5 of the PEA include CARB and heavy-duty engine

emissions standards adopted at the time these emission analyses were prepared for the Draft PEA. The incorporation of heavy-duty retrofits is not necessary since the proposed fleet rules pertain to emission reductions from the purchase of lower emitting vehicles. For additional information, the commentator is referred to the responses to comments #4-31 and #4-35.

Response 4-69: With regard to the emission reduction methodology, the commentator is referred to the responses to comments #1-47, #1-67, #1-68, and #4-35. See also response to comment #4-32.

Response 4-70: With regard to the NOx standard, the commentator is referred to the response to comment #4-44.

Response 4-71: With regard to commentator's revised analysis for Alternative B, the commentator is referred to the responses to comments #4-57 and #4-61.

Response 4-72: With regard to the emission inventories used for the analysis of environmental impacts, the commentator is referred to the response to comment #4-66. With regard to the analysis of project alternatives, the commentator is referred to the response to comment #1-14. With regard to commentator's revised analysis for Alternative B, the commentator is referred to the responses to comments #4-57 and #4-61. Finally, the SCAQMD disagrees with commentator's opinion that the proposed fleet vehicle rules are "invalid under the applicable statues [sic], including CEQA" for the reasons given in responses to comments #4-1 through #4-71.

Response 4-73: It is assumed here that the commentator's incorrect assumption that the proposed fleet vehicle rules are "invalid under state and federal law" refers to the SCAQMD's authority to regulate fleet vehicles. With regard to the SCAQMD's authority to regulate fleet vehicles, the commentator is referred to the responses to comments #1-16, #1-34, #1-37, #1-49, #1-89 and #4-3. With regard to the requirements for project alternatives, the commentator is referred to the responses to comments #1-14 and #4-20. With regard to economic effects, the commentator is referred to the responses to comments #1-4, #1-6, and #1-18. With regard to economic effects that result in physical environmental impacts from the proposed fleet vehicle rules, the commentator is referred to the responses to comments #1-4, #1-52, #1-65, and #1-111. The commentator suggests that a proper analysis of "Alternative B" would show that it provides greater benefits with less adverse impact than the proposed rules. But the commentator's suggestion depends on assuming CARB regulates trucks as part of Alternative B, but does not regulate trucks as part of the proposed project. In reality, whether CARB regulates trucks is not dependent on whether or not the proposed project is approved. It could happen with or without the proposed project. It is not a fair or accurate comparison to assume it will happen only without the proposed project. See also response to comment #4-61.

Response 4-74: The commentator incorrectly asserts that the Draft PEA and the fleet vehicle rules "fail to comply with CEQA and are otherwise in violation of controlling state and federal law. The SCAQMD disagrees with commentator's opinion for the reasons given in responses to comments #4-1 through #4-73.

COMMENT LETTER 5

M. CUBED

M.CUBED
POLICY ANALYSIS
FOR THE
PUBLIC AND PRIVATE
SECTORS

April 25, 2000

Mr. Darren Stroud
Office of Planning and Policy
South Coast Air Quality Management District
21865 East Copley Drive
Diamond Bar, California 91765

Re: Comments on the California Environmental Quality Act (CEQA) Analysis for Proposed Rules 1191, 1192, 1195, and 1196.

Dear Mr. Stroud:

On behalf of the Western States Petroleum Association (WSPA), M.Cubed offers the following comments related to the above-cited rule proposals.[1] M.Cubed is a consulting firm specializing in resource economics and public policy analysis.[2] In addition to myself, Richard McCann, PhD contributed to this document. Although this analysis was sponsored by WSPA, it reflects M.Cubed's opinions and judgements.

The Decision Analysis Framework

5-1 CEQA is based upon a web of laws and regulations, as modified over time by court decisions and administrative practices. However, its primary purpose remains the same as when it was originally drafted. That is, to inform decision-makers and the public about the possible consequences of proposed actions, and thereby improve society's ability to develop appropriate environmental policies. In this respect the value of any CEQA analysis is its contribution to an informed public debate, and an improved policy outcome.

[1] These comments were also submitted via e.mail prior to the end of the public review and comment period.

[2] Examples of similar M.Cubed work include participation in the ongoing CEQA analysis of Pacific Gas and Electric Company's proposed hydro-electric divestiture; examining the implications California utilities' divestiture of their fossil fuel generating facilities, as part of a CEQA process; and critiquing South Coast's previous CEQA analyses, including for the RECLAIM program.

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From this perspective M.Cubed examined South Coast's documents principally for their clarity and comprehensiveness, as well as the validity of the assumptions upon which the CEQA analysis was based.[3] The question we asked was: within the CEQA framework did South Coast's analysis provide adequate information with which to move forward with the proposed rule?[4] In this vein, although proposed rules 1191, 1192, and 1193 have been drafted there is little information available on the other proposals, making it extremely difficult to assess their implications.

5-2

Based on this evaluation there are a sufficient number of notable weaknesses to call into question the wisdom of adopting the proposed rules at this time. In particular, it is difficult to see how the CEQA document can be finalized until all the proposed rules have been formally drafted and commented upon. In this vein we recommend that before concluding its CEQA analysis South Coast (1) finalize all of the proposed rules; (2) fully address intervenors' comments and concerns; (3) provide a comprehensive assessment of the cumulative impacts of the proposed rules within the context of other emerging regulations; (4) develop a rule-by-rule analysis which would enable decision makers and the public to understand rule-specific incremental benefits and costs.

5-3

The remainder of this letter details our broad comments and concerns.

<u>The CEQA Analysis is Based on a Large Number of Flawed Assumptions</u>

South Coast makes a number of key assumptions which serve to drive the resulting analysis, but which are rarely adequately supported. In many, if not all, of these cases policymakers would benefit from a better understanding of alternative pathways (e.g., sensitivity testing), or uncertainties (e.g., risk analysis). For example,

5-4

(1) *South Coast's assumptions about vehicle turnover rates are not adequately supported by the information presented.* For example, the District provides no evidence that HDVs, "LEV/ULEV or cleaner LDVs/MDVs should be readily available at a relatively small incremental cost."[5] Instead, data from the Los Angeles Metropolitan Transit Agency, Sierra Research, and the Harvard Center for Risk Analysis suggest that alternative vehicle costs will be notably higher than existing vehicles. Nor has the District assessed how these up-front costs, whatever their magnitude, combined with potentially lower resale values, would affect the financial situations of the affected fleet owners and their

5-5

[3]See M.Cubed, *A Guide for Reviewing Environmental Policy Studies*, published by the California Environmental Protection Agency, Spring, 1994.

[4]In this vein most intervenors undoubtably found the sheer volume of material – much of which is irrelevant to potential rule outcomes – challenging. As a result our comments reflect a "macro" view of the world, and attempt solely to isolate key issues which may serve to mislead or inadequately inform rule participants.

5-2

[5]Appendix F, page 22.

5-5 cont.

resulting vehicle purchase patterns. Yet these factors would importantly impact assumed vehicle turnover rates. The District should fully examine alternative fuel vehicles' potential costs and the related behavioral consequences.

(2) *Rule 1191 could preclude the use of new low-emission diesel fueled vehicles entirely because the statute refers solely to gasoline and alternative fuels.* South Coast both assumes and appears to mandate that the rules result in adoption of a particular mix of non-diesel light-, medium-, and heavy-duty vehicles. However, other than a cursory examination of the energy content of different alternatives – and without much discussion of vehicle purchase and operational costs, or the resulting behavioral changes on the part of fleet operators – the District provides no support for its assumption or its mandate. As a result, policy makers are given no insight into the consequences of different fuel pathways, and fleet operators are shut-out from using cleaner diesel fuel technology which may emerge over the next five years.

5-6

(3) *South Coast's estimates of the universe of affected fleet vehicles is based on a mix of survey and other data as well as ad hoc evidence.* Although the estimate may reflect best available information, it would be useful to know how outcomes might change if the total number of vehicles was fifty percent higher, or lower, than assumed. For example, if the fleet population is actually much higher, total impacts would likewise be more substantial. If, on the other hand, there were fewer vehicles in the affected universe then the economies of scale implicitly assumed in the analysis may not be accurate, and the expected emission reductions would be lower. Better data on this issue as well as (1) will be available from the California Energy Commission (CEC) by early Summer.

5-7

(4) *South Coast both assumes that refueling stations would be constructed uniformly over a five-year period, and asserts that a maximum of three stations a year represents a worse-case scenario.* Neither of these assumptions are supported by any empirical evidence. An equally plausible outcome -- given continuing evolving technology; the expense associated with fuel conversion; and the need to spread infrastructure costs over as many vehicles as possible -- would be for fleet operators to retain their existing vehicles and associated infrastructure as long as possible before making new investments. Under this "tipping point" scenario South Coast's analysis in no way represents the "maximum short-term alternative clean refueling station construction emissions," but may more accurately reflect the "minimum" emissions from this activity.

5-8

5-9

In this vein, the District provides no evidence related to the characteristics of the existing fleet refueling infrastructure, how much of this infrastructure would be affected by the rule, and how conversion to new refueling systems might be coordinated in an efficient manner. That is to say, South Coast provides no information or insight into how the proposed rules would actually be implemented, which would to a large extent determine resulting costs and air quality benefits.

5-10

5-11

(5) *The District consistently points to existing public health and safety regulations to support their view that the new fuel structure, regardless of the additional environmental risks it may pose, will result in no noticeable impacts.* For example, South Coast suggests that the web of laws, regulations, and practices currently governing battery disposal provides sufficient evidence to believe that the additional supplies of toxic batteries generated in the region by the proposed rules will be disposed of properly. However, these regulations were designed and currently operate in a world in which South Coast's rules were not adopted, or even considered. As a result, their very existence cannot be deemed sufficient to adequately protect the public from the risks associated with an entirely new fuel structure, particularly one which could lead to an order of magnitude increase in battery use. Likewise, the dangers of ignorance, accidents, and regulatory avoidance are particularly acute during transition periods -- organizations which are not familiar with existing rules will be taking on new responsibilities, with concomitant possibilities for error. South Coast should explicitly address these transition effects in conducting its analysis.

5-12

(6) *To demonstrate water quality-related improvements South Coast assumes that fleet vehicles participate in used motor oil dumping in the same fashion as the overall universe of vehicles.* This is both counter to the District's assumption that regulations by their very existence cure all ills, and to the very structure of the proposed rules, which are based on the notion that fleet operators are better able to manage their fuel systems. In any event it seems likely that fleet operators dispose of their used oil in a more responsible fashion than the general public.

5-13

(7) *The District assumes a gasoline price which is more than 30 percent lower than existing prices.* Although fuel prices continually change, South Coast should seek advice from the CEC on the appropriate pricing method to adopt in the analysis.

The CEQA Analysis Reflects Many Inaccuracies and Inadequacies

(8) *South Coast inadequately treats the emission reduction potential of the proposed rules.* For example,

5-14

(9) South Coast does not account for the environmental implications of the reduction in vehicle turnover rates. An older fleet vehicle will result in higher aggregate emissions, both from delayed purchases of new, lower emission vehicles and from ongoing deterioration in on-board control devices. The District has excluded this factor from it's estimate of the net emission reductions associated with the proposed rules.[6]

5-16 (10) It is incorrect for South Coast to assign diesel and gasoline emissions the same index. Instead, the District should include an assessment of how lower sulfur diesel and advanced exhaust after-treatment will affect diesel emissions.

5-17 (11) In Appendix E the District compares the regulatory limits for new diesel engines with recent emission test data from new CNG engines, an "apples and oranges" comparison. New diesel engines must be certified at lower levels than the limits to pass, and test data has nothing to do with the CARB and U.S. Environmental Protection Agency (EPA) CNG certification compliance requirements. In this respect the District should only take credit for enforceable emissions benefits.

5-18 (12) South Coast states that the applicable PM limit for diesel HDDVs is 0.1 grm/bhp-hr, while the correct limit is 0.05.

5-19 (13) CNG refueling and venting greenhouse gas emissions have not be considered in the analysis.

5-20 (14) *While the District examines the implications of the additional trips caused by the lower energy content of alternative fuels,*[7] *it does not consider the congestion-related consequences of these new trips.* Nor does South Coast analyze the possibility that operators will enlarge their fleets substantially so as to maintain existing schedules, and thereby likewise increase regional congestion. Given the significant contribution traffic congestion can make to polluting air emissions -- long an emphasis in District policy -- this is a notable flaw.

5-22 (15) *South Coast does not address the potential for greater road wear and tear resulting from heavier alternative fuel vehicles, more trips, or more vehicles.* The need for additional maintenance would act to increase public sector costs; raise congestion levels; and induce additional polluting air emissions.

5-23 (16) *South Coast does not address the potential that, if transit operators slow their vehicle turn-over rates, the average age of buses within particular fleets will rise, which in turn will reduce the attractiveness of bus service in those areas.* This could lead to a reduced demand for mass transit service, and greater private vehicle use

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5-15 [6]M.Cubed also recommends that CO_2, methane, and PM be include in Tables 2-1 and 2-2.

5-21 [7]In addition, the District assumes that the vehicles on average would drive an additional five miles to re-fuel. This is an extremely conservative assumption. With less than fifty CNG refueling stations available within the District it is unrealistic to assume that on average a vehicle need only drive an additional 2.5 miles. South Coast should survey existing CNG fleet operators to determine the distance they currently have to travel to locate an off-site refueling station.

5-24

(17) *South Coast's treatment of schools buses under the proposed rules is inconsistent.* On the one hand the District states that removal of buses from service was not considered because proposed rule 1195 provides a financial hardship waiver. On the other hand the District counts the air quality benefits associated with the rule as if no schools will take advantage of the hardship provision. However, it is likely that every school bus operator may ask for an exemption. Accordingly, the District should not lay claim to any associated air quality benefits unless it can affirmatively show that the operators can afford to meet the new rules with existing resources.

5-25

(18) *South Coast states that "...almost 75 percent of the electricity used in the SCAQMD's jurisdiction is imported from out-of-district and out-of-state plants.* Thus there is a substantial amount of unused generating capacity within the SCAQMD's jurisdiction Any additional electricity needed to power new electric motors would most likely be provided by out-of-basin and out-of-state power plants."[8] The second sentence of this statement does not follow from either the first or the third. In any event, up to 70 new or repowered generators located in or near California are expected over the next decade. Many of these will be sited in the basin (e.g., San Bernardino), and will displace out-of region power imports.

The CEQA Analysis Inadequately Examines Alternative Fuel Hazards

5-26

(19) *Although South Coast raises some alarming issues about the hazards associated with alternative fuel vehicles, it does little to address possible associated outcomes* For example, "Unlike gasoline, methanol can ignite in enclosed spaces such as fuel tanks...;"[10] "There are conflicting data about the safety of compressor stations;"[11] "When maintaining CNG-fueled vehicles, there is a danger of releasing gas in the maintenance shop potentially creating explosive hazards."[12] The District asserts that these safety issues are either taken care of by existing regulations, or have been addressed through case studies. without providing any evidence that the improvements made at Baltimore Washington International, for example, have been widely adopted.[13]

[8]Appendix F, page 18

[9]Chapter 4 - Environmental Impacts and Mitigation, page 4-29.

[10]Chapter 4, page 4-81.

[11]Page 4-83

[12]Page 4-84. See also pages 4-86 on the hazards of LNG, and 4-88 on the risks associated with LPG.

5-27

[13]Likewise, the District should include accident and incident data for all of the fuels discussed in the report (e.g., diesel, CNG, LNG) in Table 3-25, and should identify any recent emergency incidents with CNG/LNG.

5-28

While overall risks associated with alternative fuels may be no greater than the existing system, they are certainly different. Fleet operators, fire departments, and other relevant organizations have much less experience handling alternative fuels, and, particularly during a transition phase, this will increase the probability that accidents will happen. Likewise, given fire departments' limited experience with CNG, additional training and new equipment will be needed. These potential costs and outcomes should be appropriately addressed in the analysis. Specifically, the District should obtain documented input from local and state fire experts and emergency response personnel on the relative hazards and training and equipment necessary to respond to alternative fuel accidents. This inquiry should include an investigation into the potential risks of emergency vehicles being stranded for lack of fuel in cases of earthquakes and fires when supplies of extremely flammable CNG are unavailable.

5-29

(20) *The District does not adequately address how the geographic distribution of fleets and fueling stations would affect public health and safety risks.* For example, depending on where the fueling centers are located, they may act to increase risks to the affected populations. Likewise, the additional stations and greater dispersion of vehicles caused by the need for more trips or vehicles could tax the emergency response system should more than one accident occur simultaneously.

The CEQA Analysis Does Not Sufficiently Investigate Potential Petroleum Sector Impacts

5-30

(21) *South Coast relies on a refinery EIR for CARB Phase II gasoline to estimate the impact of the low sulfur diesel requirement.* Since many refiners made investments to produce CARB diesel a few years prior to CARB Phase II it may be more useful to base diesel-related cost estimates on EIR's developed for these projects.

5-31

(22) *South Coast ignores the possibility that, given the increased demand for natural gas caused by the proposed rules, other alternative fuel regulations, and ongoing electric industry restructuring, additional pipeline capacity may be required in the region.* This, in turn, would result in construction-related impacts that were not considered in the analysis. Likewise, the quality of additional natural gas supplies may adversely impact emissions and vehicle performance. The District should investigate whether or not available supplies of alternative fuels consistently meet CARB specifications.

5-32

(23) *The low sulfur mandate could force greater reliance on foreign oil imports (e.g., Indonesia), with concomitant economics impacts.* This is because Alaskan and Californian oil tends to have higher sulfur content. Likewise, the sulfur will need to be disposed of, either profitably or at a loss. The resulting higher costs, in turn, would need to be collected from a consumption base that would be shrinking as a result of the proposed rules, thereby likely leading to higher fuel prices.

The CEQA Analysis Ignores Important Transition Issues

(24) *South Coast ignores the potential adverse consequences associated with the significant transition period caused by the proposed rules.* For example, many of the fleet operators will not have experience with alternative fuel vehicles, at least not on the scale prompted by the proposals. Likewise, alternative fuel vehicle performance may be substantially unknown, and over the short-term fleets could experience more break-downs. Since the alternative fuel vehicle infrastructure is much less developed than the existing diesel-dominated system, parts and adequate repair service may be difficult to find. These factors in turn could lead to additional congestion resulting from on-road break-downs; more emissions stemming from the need to shuttle shipments and repair services to and from disabled vehicles; an increased reluctance to purchase new technology; and adverse economic impacts related to reduced efficiencies and service slow-downs.

5-33

The CEQA Analysis Inadequately Examines Potential Cumulative Impacts

(25) *South Coast provides a superficial treatment of the potential cumulative impacts of the proposed rules.* Even within the narrow definition of "cumulative" asserted by the District (see below) very little information is provided on these potential impacts. For example, the District asserts: "The overall construction-related impacts of implementing the proposed fleet rules are expected to be similar or the same as for construction activities associated with gasoline and diesel fuels. Therefore, potential cumulative significant adverse hazard impacts are not anticipated from the implementation of the proposed fleet vehicles."[14] This statement ignores the fact that it is the proposed rules themselves that prompt the construction activity – absent the rules aggregate building would be much less for "traditional" as well as alternative fuels. Likewise, the District completely omits the consequences of the constant regulatory changes that are being imposed on the state's refineries from its analysis.[15]

5-34

(26) *Although South Coast understands that the proposed rules are part of ongoing efforts to alter California's fuel infrastructure, it does not address the cumulative implications of this activity.* For example, South Coast states that "With regard to HDVs, the proposed fleet would accelerate an existing trend of moving away from diesel-fueled HDVs to alternative clean fuel HDVs. Further, even without the proposed fleet vehicle rules, greater penetration of alternative clean fuel HDVs will occur because of CARB's existing

5-36

[14] Chapter 4, page 4-79

[15] Given the public response to higher gasoline prices, it seems particularly irresponsible for the District not to fully consider the cost consequences of the multitude of petroleum-related requirements currently emerging from both South Coast and CARB.

5-35

5-36 cont.

and future anticipated HDV standards."[16] Yet no further analysis is presented on how the entirety of these linked policies will affect the region's environment.

The CEQA Analysis Ignores Environmental Justice Issues

5-38

(27) *South Coast asserts that the proposed rule would contribute to "environmental justice."*[17] However, the CEQA document contains no analyses of the possible geographic or demographic consequences of the proposed action. For example:

5-39

- The additional alternative fueling stations induced by the rule are likely to be disproportionately located in areas with substantial industrial and commercial development, near low-income or minority communities.[18]

5-41

- Centralized refueling infrastructure could result in more refueling-oriented trips through these communities.

5-42

- Transit districts located in particular jurisdictions may be less able to afford replacement vehicles, thereby potentially reducing service to nearby residents, and maintaining older, higher emitting, fleets for longer time periods than other areas.

5-43

The District needs to fully investigate these and other equity issues so as to provide decision-makers with a comprehensive understanding of how the proposed rules affect the status of environmental justice in the Basin.

The Alternatives Assessment is Grossly Inadequate

5-44

(28) *South Coast is dismissive of possible project alternatives without giving any of them much consideration.* For example:

5-37

[16]Chapter 4, page 4-103. In this vein the District should assume that EPA's 2006/7 nationwide emission limits for new HDVs would be adopted by the end of this year and fully implemented by 2006.

[17]Although a single definition of environmental justice has not been widely adopted, it loosely refers to the inequitable distribution of human-induced environmental harms, particularly on low income and non-white populations.

5-40

[18]Similarly, battery disposal facilities may be disproportionately located in these areas. In this vein, as pointed out by the City of Los Angeles, the District has done very little to identify the geographic implications of the rule-induced fueling infrastructure. See Letter to Barry Wallerstein, Executive Officer, from the City of Los Angeles, December 14, 1999.

5-45 (29) While additional incentives may not be "...within the regulatory authority of the SCAQMD..."[19] the District certainly could work with other regulatory and legislative agencies to develop an effective market-based program, as well as harness available state funds in service of air quality improvements.

5-46 (30) Given the shifting nature of available technology, a phased-approach may provide the flexibility fleets need to select the appropriate fuel when it is available.

5-47 (31) Given emerging CARB regulations, without fully modeling the emissions implications -- and examining their relative cost-effectiveness and equity implications -- of both state and regional proposals it is difficult to assess what region-specific policies would be most appropriately adopted at this time.

5-48 The District should comprehensively re-evaluate the potential for alternatives to provide similar air quality benefits in a more cost-effective fashion.

Sincerely,

Steven J. Moss
Partner, M.Cubed

[19]Chapter 5, page 5-2.

WSPA Comments on CEQA Review of Proposed Rules 10

COMMENT LETTER 5: M. CUBED

Response 5-1: The SCAQMD is aware of the procedural and substantive requirements of CEQA. As a result, the SCAQMD prepared a program environmental assessment (PEA) for the proposed fleet vehicle rules pursuant to CEQA Guidelines §15168. The PEA complies with all relevant CEQA requirements and fulfills the letter and intent of serving as an informational document that "will inform public agency decision-makers and the public generally of the significant environmental effect of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project" (CEQA Guidelines §15121(a)).

Response 5-2: The commentator states that the PEA fails to describe with sufficient specificity specific rule language for each of the proposed fleet vehicle rules. The project descriptions in Chapter 2 of the PEA provide a description for each proposed fleet vehicle rule that is sufficient in detail to allow meaningful analysis of potential adverse environmental impacts. In addition to draft rule language being available for PR 1191, 1192, and 1193 at the time the Draft PEA was released for public review, draft rule language is currently available for PR 1186.1 and 1194. No additional adverse environmental impacts have been identified.

Response 5-3: Because the proposed rules constitute a regulatory program, a program CEQA document (CEQA Guidelines §15168) is the appropriate CEQA document. For additional information on the PEA for the proposed fleet vehicle rules, the commentator is referred to the responses to comments #1-1 and #1-2. See also response to comment #1-7. Responses to comments on the component of the individual fleet vehicle rules will be prepared and included in the Staff Reports for the individual rules. With regard to rule-specific analyses, the commentator is referred to the responses to comments #1-20 and #1-31. Appendix H provides responses to all comments received on the Draft PEA.

It is unclear what the commentator means in point #3 that the SCAQMD "provide a comprehensive assessment of the cumulative impacts of the proposed rules within the context of other emerging regulations." If the commentator is referring to CARB's urban bus fleet rule and recently proposed U.S. EPA standards for heavy duty vehicles, these have been accounted for in Alternative B. The intent of Alternative B is to determine emission benefits of the proposed fleet vehicle rules, while taking into account control programs that were proposed by CARB and U.S. EPA during preparation of the analysis, that could have an effect on emissions from fleets affected by the proposed fleet rules. This specifically includes CARB's urban bus fleet rule and CARB/U.S. EPA research targets for more stringent NOx and PM emission standards for 2007 and subsequent model years for all heavy-duty engine. Subsequent to the preparation of emission benefit analysis as contained in the Draft PEA, for the proposed fleet rules, CARB adopted its urban bus fleet rule, which has

been included in the refined baseline emission benefit calculation. Similarly, U.S. EPA recently published an NPRM for all heavy-duty engines that includes proposals for more stringent PM emission standards beginning in the 2007 model year and a more stringent NOx emission standard to be phased in between the 2007 and 2010 model years; this proposal will be included in the modified Alternative B emission benefit calculations.

With regard to potential cumulative adverse environmental impacts from the proposed fleet vehicle rules and CARB/U.S. EPA programs, significant effects of the proposed fleet vehicle rules, i.e., construction impacts, are not expected to accumulate because similar state and federal mobile source program construction impacts would occur, for the most part, in a later time frame, post 2007. Construction impacts from the proposed fleet vehicle rules would terminate by 2005. With regard to production of low sulfur fuel pursuant to PAR 431.2, modifications at district refineries would terminate by 2002, well before impacts from any state or federal programs would occur.

Response 5-4: The SCAQMD disagrees with the commentator's opinion that the assumptions used in the analysis of the proposed fleet vehicle rules contained in the PEA are unsupported. Responses to comments #5-5 through #5-13 respond to the specific assertions by the commentator on the assumptions used in the PEA.

Response 5-5: The commentator asserts that the SCAQMD should examine costs associated with the proposed fleet vehicle rules. With regard to costs associated with the proposed fleet vehicle rules, the commentator is referred to the responses to comments #1-4, #1-6, #1-18, and #3-11. In this comment, the commentator incorrectly states that the PEA does not take into consideration costs and how they will affect "resulting vehicle purchase patterns," i.e., indirect physical effects resulting from economic costs. With regard to analyzing indirect physical impacts resulting from costs of the program, the commentator is referred to the response to comment #1-4, #1-52, #1-65, and #1-111. See also the "Indirect Air Quality Effects" section, which specifically includes analyses of economic impacts generating secondary or indirect air quality impacts. In particular the commentator is referred to the subsections entitled "Loss of Service," "Longer Fleet Turnover Rate," and "Centralized Refueling."

Response 5-6: The commentator incorrectly states that the SCAQMD provides no support for its "assumption or its mandate." It is unclear from the comment, but it is assumed that "assumption and mandate" refer to the fact that PR 1191 precludes the use of diesel-fueled vehicles. Consequently, this assumption is unrelated to the assumptions used for the analysis of potential adverse environmental impacts contained in the PEA. PR 1191 relies on Section 40919(e) of the California Health and Safety Code regarding "low-emission vehicles." Under Section 39037.05 of the California Health and Safety Code, diesel-fueled vehicles are specifically excluded.

Further, there are no CARB-certified diesel vehicles that qualify as methanol equivalent. For additional information the commentator is referred to the responses to comments #1-16 and #1-34. However, the "consequences" of both alternative clean fuel use and clean diesel technology, including low sulfur diesel are analyzed in Chapter 4 of the PEA. See also response to #1-16, #1-38, #2-4, and #3-21.

Response 5-7: The commentator implies in this comment that the universe affected fleet vehicles may be incorrect, yet provides no better estimates. The SCAQMD has been in communications with CEC staff regarding a more enhanced fleet vehicle database. The CEC database is still under development and more likely information collected by SCAQMD staff would help in the development of the CEC database at this point. Regardless, it is expected that the universe of affected fleet vehicles is overestimated for a number reasons. The commentator is referred to the response to comments #1-54 and #1-66. See also response to comment #3-50.

It is unclear what the commentator means by the statement "the economics of scale implicitly assumed in the analysis may not be accurate." The analysis of impacts related specifically to the proposed fleet vehicle rules identifies construction of the infrastructure development to build AFV refueling stations as the primary source of potential environmental impacts from the project. (For the purposes of this discussions only the impacts resulting from amending Rule 431.2 are excluded.) The number of AFV refueling stations was estimated based on the number of fleet vehicles affected. As already indicated, the analysis likely overestimates the number of affected fleet vehicles to provide a "worst-case" analysis. No economies of scale were used to estimate the number of AFV refueling stations.

Response 5-8: The commentator incorrectly states that the analysis of environmental impacts from implementing the proposed fleet vehicle rules assumes a maximum of three AFV refueling stations per year would be constructed. The analysis assumed that a maximum of three alternative fuel refueling facilities under construction each day would occur, which represents a "worst case" scenario, rather than "three stations a year," as stated in the comment. Please refer to responses to comments 4-28 and 4-29.

Response 5-9: The SCAQMD disagrees with the commentator's assertion that the SCAQMD's analysis of short-term alternative clean fuel refueling station construction emissions may reflect the minimum emissions from this activity. The SCAQMD cannot predict the specific schedules that would be followed for construction of new alternative fuel refueling facilities. Therefore, assumptions had to be made regarding the time over which new facilities will be constructed. The normal useful lifetime for heavy-duty fleet vehicles affected by the proposed fleet vehicle rules ranges from about seven years for vehicles such as street sweepers collection vehicles to about 12 years for refuse collection vehicles and transit buses. Therefore, it would have been plausible to assume that construction of alternative

fuel refueling facilities would occur over a period as long as ten years or more. However, the SCAQMD assumed that all facilities would be constructed over a five-year period, in order to provide a conservative estimate of the numbers of facilities that would be under construction at the same time.

The SCAQMD does not agree that the "tipping point" scenario described in the comment would lead to higher short-term emissions. Since the commentator did not describe this scenario in detail and demonstrate how it would lead to higher short-term construction emissions, the SCAQMD presumes that the commentator meant that some fleet vehicle operators would delay replacement of vehicles for some time period, then replace more vehicles during one year than would normally be replaced and construct the alternative fuel refueling facilities required for these new vehicles. However, the SCAQMD's assumption of a five-year period for construction of all of the new alternative fuel refueling stations required for compliance with the proposed fleet vehicle rules accommodates this "accelerated" refueling facility construction rate. This is because the typical fleet vehicle lifetime of 10 years leads to an average replacement rate of 10 percent of the fleet vehicles each year, while the five-year construction period leads to construction of 20 percent of the required facilities each year. Therefore, the SCAQMD's assumed construction schedule would accommodate a vehicle replacement rate during each year that is twice as high as the average replacement rate. Please refer to responses to comments 4-28 and 4-29.

Response 5-10: The SCAQMD disagrees with the commentator's opinion that no evidence was provided concerning implementation of the rules. The SCAQMD cannot foresee with precise detail how the individual rules would be implemented, since this will differ from one fleet operator to another and would require substantial speculation. The SCAQMD has therefore made conservative assumptions in estimating the impacts from conversion of the existing infrastructure. Instead of considering changes to the existing infrastructure, the SCAQMD analyzed the impacts of essentially creating a new infrastructure in place of the existing infrastructure for HDV refueling. This results in overstating potential adverse environmental impacts.

Response 5-11: The commentator appears to question that the existing public health and safety regulations referenced in the PEA will sufficiently protect the public and provides improper battery disposal as an example of this concern. As stated in the PEA, most batteries (from 95 to 98 percent) are recycled, particularly because there is an economic incentive in doing so. In addition, the total number of electric vehicles that are expected to be used due to the implementation of the proposed rules is estimated to be only 750 with a yearly maximum of 100, so the overall number of batteries that might be improperly disposed of is minute relative to the total number of batteries disposed of each year. As a result, there is no reason to believe that existing battery and disposal facilities cannot handle this minor increase in battery

disposal and recycling. Similarly, the commentator provides no credible data facts, or other information supporting his opinion regarding why existing "laws, regulations and practices" would be insufficient to accommodate this minor change. As far as other hazards associated with the transition to alternative fuels are concerned, they are thoroughly addressed under the water resources, solid/hazardous waste and hazards sections of Chapter 4 of the PEA.

Response 5-12: There is no assumption implicit or explicit in the analysis "that regulations cure all ills." The analysis assumes current patterns of compliance (or noncompliance) with applicable regulations will continue. Fleet operators who convert their vehicles to electric vehicles avoid the use of motor oil and therefore the potential of motor oil entering into the environment whether intentional (via illegal dumping) or unintentional (via spillage or from leaking underground storage tanks). The SCAQMD does not have any evidence (either in favor of or to the contrary) that the likelihood of motor oil dumping from a fleet refueling facility differs from the overall vehicle universe. The commentator has provided no data, facts or other information to support his opinion that patterns of compliance will change, nor has he made any recommendations for the SCAQMD to evaluate regarding changes to patterns of compliance with applicable regulations. In any event, even if the commentator is correct that fleet operators are "more responsible" than the general public, this would not cause any significant adverse water quality effects from the proposed rules.

Response 5-13: The price of gasoline is subject to frequent change and has been highly volatile between when the research for the PEA was performed and when the comment was submitted by the commentator. The price of gasoline used in Table 4-6 of the PEA is only used for comparison purposes to the price of diesel to derive the value for the diesel fuel cost index. Since both the gasoline and diesel fuel prices were both obtained from the same sources and within the same timeframe, this information is appropriate for comparison purposes. Further, the analysis of environmental impacts from implementing the proposed fleet vehicle rules does not rely on the price of gasoline. This information is simply to provide information on the relative characteristics of alternative clean fuels, gasoline, and diesel.

Response 5-14: The commentator asserts that the PEA did not account for longer fleet vehicle turnover rates or consider deterioration of onboard control devices. On both counts the commentator is incorrect. In the "Indirect Air Quality Effects" section in Chapter 4 there is a subsection entitled "Longer Vehicle Turnover Rate" where the SCAQMD analyzed the potential delayed replacement (longer turnover rate) of heavy-duty vehicles. The analysis only included heavy-duty vehicles because LEV or cleaner light- and medium-duty vehicles are generally available at a relatively small incremental increase in cost. The air quality effects of longer heavy-duty vehicle turnover rates were then incorporated into the net air quality benefits of

the proposed fleet vehicle rules. In the years 2001 and 2002 construction air quality impacts for CO, VOC, and PM10 from refinery modifications necessary to produce low sulfur fuel exceed SCAQMD significance thresholds. After completion of the refinery modifications (the analysis conservatively assumes a two-year construction schedule) the overall air quality impacts from the proposed fleet vehicle rules are still a net emissions benefit through the year 2010, even when emissions from longer turnover rates are included in the analysis.

With regard to consideration of the deterioration on onboard control devices, the emission factors used for conventional diesel and gasoline light-, medium-, and heavy-duty vehicles are in-use factors, which are factors from vehicles with a specified number of vehicle miles traveled, e.g., 50,000. This means that deterioration of onboard control devices is already accounted for in the emission standards used by the SCAQMD. Finally, the emission reduction calculation methodology used by the SCAQMD is consistent with guidance provided by CARB.

Response 5-15: The emission benefits of the proposed fleet rules, for light- and medium-duty vehicles are HC, CO, and NOx, which are expected if the SCAQMD is requiring fleets to purchase cleaner vehicles in this category that are subject to more stringent HC, CO, and NOx emission standards. For heavy-duty engines, the emission benefits are expected to be lower NOx and PM levels, based on the intrinsically clean characteristics of natural gas combustion versus diesel fuel combustion, for mobile heavy-duty engine applications.

Response 5-16: The table considered available diesel technology not emerging diesel technology. As already noted, the index referred to here by the commentator is used only to provide information on the relative characteristics of the various alternative clean fuels compared to gasoline and diesel. The analysis of environmental impacts did not rely on this information.

Relative to the analysis of environmental impacts, the commentator incorrectly assumes that the PEA for the proposed fleet vehicle rules did not include an environmental analysis of low sulfur fuel and associated after-treatment technologies. Chapter 4 of the PEA includes a description of these technologies as well as a comprehensive analysis of potential impacts from these technologies. For additional information the commentator is referred to the responses to comments #1-16 and #1-38. See also responses to comments #2-4 and #3-21.

Response 5-17: With regard to the methodology for calculating emission benefits, taking into consideration of CARB's urban transit bus rule and U.S. EPA's recently propose heavy-duty vehicle standard, the commentator is referred to the responses to comments #1-47, #1-67, and #1-68, # 4-35, and #4-37. See also response to comment #4-32.

Response 5-18: The 0.1 gm/bhp-hr standard applies to heavy-duty engines and the 0.05 gm/bhp-hr standard applies to engines used for urban buses.

Response 5-19: The AIChE study (AIChE Appendix A) states that life cycle emissions (including methane emissions) of the alternate fuels were considered as part of the in the analysis.

Response 5-20: The commentator's opinion that the PEA did not consider transportation impacts from implementing the proposed fleet vehicle rules is incorrect. Potential indirect transportation/circulation impacts have been adequately evaluated in the PEA. As discussed in response to comment #1-106, the SCAQMD does not agree that additional trips will necessarily be required because of the lower energy content of alternative fuels. However, as presented in the indirect transportation/circulation section of Chapter 4 of the PEA, the SCAQMD evaluated the average increase in daily refueling trips that would occur if all heavy-duty fleet vehicles affected by the proposed fleet vehicle rules, except transit buses, traveled to centralized refueling sites. The analysis concluded that an average of 40 refueling trips would be made each day by heavy-duty vehicles to each site, which is below the significance criterion of 350 trips per site. Based on this estimate, the number of daily refueling trips made by heavy-duty vehicles subject to the proposed fleet vehicle rules would have to increase by a factor of eight to nine to exceed the significance criterion. Therefore, the SCAQMD does not anticipate that the proposed fleet vehicle rules will cause significant transportation/circulation impacts. Furthermore, as discussed in response to comment #1-50, the SCAQMD does not agree that fleet operators will increase their fleet sizes. For additional information, the commentator is referred to the responses to comments #1-72 and #3-40.

Response 5-21: The SCAQMD concurs that the assumption that all heavy-duty vehicles will drive an additional five miles per refueling trip is conservative since many fleet operators are anticipated to install alternative fuel refueling facilities at their existing refueling sites. For additional information, the commentator is referred to the response to comment #1-106.

The SCAQMD contacted a number of agencies or businesses regarding their experiences with AFVs. These include specific Southern California entities such as: Waste Management Industries with 30 CNG heavy duty trash trucks and 70 diesels; the City of Santa Monica with 200 CNG and LPG vehicles of which 32 are heavy duty trash vehicles; GTE with several hundred CNG vehicles; the City of Cypress that has operated an assortment of LPG vehicles for 20 years; and, the City of Oxnard with 35 transit buses. These entities typically have central maintenance and refueling facilities so that vehicles do not travel additional miles per refueling trip.

Response 5-22: As indicated in response to comment the SCAQMD does not agree that a significant number of additional trips will necessarily be required. The

commentator is referred to the response to comment #5-20. Further, as noted in comment #5-20, the analysis of potential additional trips concluded that there would not be a significant number of new trips per facility. Based on this conclusion, any additional wear on existing roadways would be undetectable compared to the wear from existing traffic levels. See also response to comment #4-18.

Response 5-23: The commentator incorrectly asserts that the analysis of environmental impacts from implementing the proposed fleet vehicle rules does not consider potential indirect effects of longer transit bus turnover rates. The commentator is referred to the "Indirect Air Quality Effects" section in Chapter 4 of the PEA, which specifically includes analyses of economic impacts generating secondary or indirect air quality impacts. In particular the commentator is referred to the subsection entitled "Longer Fleet Turnover Rate."

Response 5-24: The analysis of emission benefits from PR 1195 assumed that affected school bus fleets would comply with the requirement to replace diesel school buses with alternative clean fuel school buses. It is speculative for the commentator to assume that no diesel school buses would be replaced by an alternative fuel school bus. Assuming, however, that no school buses were replaced by alternative fuel buses, this would reduce the potential benefits of the proposed fleet vehicle rules. It should be noted that CEQA Guidelines §15126.2 requires a CEQA analysis to focus on significant effects on the environment. CEQA Guidelines §15382 defines significant effects on the environment, in part, as an, "**adverse** [emphasis added] change in any of the physical conditions within the area affected by the project…" As a result, there is no requirement that the benefits of the proposed fleet vehicle rules be discussed at all.

In addition to the above, if the analysis in the PEA assumed that all replacement and new school buses continued to consist of diesel school buses, potential adverse environmental impacts would be reduced because fewer alternative fuel refueling stations would be required. Assuming all new and replacement school buses would be replaced by alternative fuel buses provides a conservative "worst-case" analysis that maximizes impacts. Thus, the SCAQMD has disclosed to the public the maximum potential adverse impacts resulting from the proposed fleet vehicle rules.

Response 5-25: The commentator incorrectly asserts that the cited sentences from the PEA are inconsistent. The amount of power generated inside the district and imported from outside the district is based on a number of factors including lower cost power produced outside the district; operating conditions of the equipment (i.e., continuous operation or peak operation only); type of equipment, e.g., boilers, gas turbines, etc. Since the large majority of electricity used in the district is imported, it is expected that this situation will continue in spite of any increase in electricity demand that may be caused by the proposed fleet vehicle rules. This is the intent of the cited text.

The speculation that "up to 70 new or repowered generators located in or near California are expected over the next decade" is irrelevant and unrelated to the proposed fleet vehicle rules. If new or repowered electric power generating equipment are constructed in the SCAQMD, they would be subject to stringent emissions control requirements pursuant to either SCAQMD Regulation XIII or Rule 2005, which require best available control equipment, emission offsets, etc. As a result, significant adverse air quality impacts would not occur.

Response 5-26: Pages 4-83, 4-84 and 4-86 discuss potential problems and the mitigation measures that have been defined in the applicable codes that must be implemented for AFV refueling systems. With regard to the Baltimore bus fires (described on page 4-82 and 4-83), the National Highway Traffic Safety Board (NHTSB) concluded that the cause of the bus fires at Baltimore was due to a design flaw in the power steering and natural gas vent system of the El Dorado National bus that is manufactured in California. The problem was specific to the design of the El Dorado National bus and not necessarily generic to all CNG buses. Mr. Khalil Subat of El Dorado was contacted to discuss the problem and its solution. El Dorado redesigned and retrofitted the Baltimore buses and has incorporated the lessons learned from this incident into its new buses. El Dorado has notified its customer base of the problem and has encouraged them to retrofit the buses with the design flaw. According to Mr. Subat, an NFPA committee is aware of the El Dorado design problem and is currently reviewing the NFPA 52 code to see if the El Dorado problem requires the code to be revised. California buses will have to conform to whatever version of NFPA 52 is in force when they are manufactured. Older fleet vehicles may be subject to recalls if problems are discovered.

Response 5-27: There is no evidence that CNG buses pose any greater risk of fire or explosion than diesel buses. The commentator is referred to the response to comment #1-120 above for additional information concerning accident safety. The California Hazardous Material Incident Reporting System (CHMIRS) is currently (5/22/00) under construction and it was not possible to access it to determine if any of the hazardous releases cited in Table 3-25 of the PEA involved diesel, gasoline, CNG, LNG or other alternate fuels.

Response 5-28: With regard to fire hazards associated with alternative clean fuels and contacting local fire officials, the commentator is referred to the response to comment #1-8, which discusses the LAFD's ability to respond to alternate fuel incidents. With regard to emergency vehicles being stranded for lack of CNG fuel, emergency vehicles are specifically exempt from the proposed fleet vehicle rules. This has not been an issue in the Coachella Valley, as they have dedicated CNG refueling vehicles on standby for emergencies.

Response 5-29: With regard to siting AFV refueling stations the commentator is referred to the responses to comments #1-10, #1-29, and #1-31. With regard to

safety and hazard issues, the commentator is referred to the response to comment #3-69.

Response 5-30: With respect to past projects at district refineries to produce CARB diesel, modifications at district refineries were minor in nature, that either did not trigger a CEQA analysis or triggered an analysis demonstrating insignificant impacts in a negative declaration. Consequently, these projects were not considered for use as a model with which to analyze potential environmental impacts because it was determined that they might not necessarily be representative of refinery modifications necessary to produce low sulfur diesel and might not capture potential "worst-case" impacts. Since the Federal and CARB phase II specifications required major refinery modifications, these projects were determined to provide a more representative "worst-case" analysis of potential adverse environmental impacts from anticipated refinery modifications necessary to produce low sulfur fuel. See also responses to comments #2-4 and #3-21.

Response 5-31: The SCAQMD disagrees with the commentator's assertion that the future availability of natural gas has been ignored. Table 4-27 of the PEA, shows that the projected demand for the proposed fleet vehicle rules is estimated to be 2.75 percent of the total natural gas consumption within the SCAQMD jurisdiction. This implies that the natural gas usage as a result of the proposed fleet vehicle rules are insignificant in relation to the demand of the region. Other developments mentioned by the commentator that rely on natural gas in the region are part of the natural gas demand baseline The effects of future developments such as other alternative fuel regulations and electric industry restructuring, are considered speculative at this time and, therefore, are not considered by the SCAQMD.

The commentator further raises a concern regarding the quality of the natural gas supply due to increased future demand. The overall natural gas demand in the region is expected to increase from 0.72 trillion cubic feet (TCF) in CY 2000 to 0.78 TCF in CY 2010 (see Table 4-27 of the PEA). The SCAQMD does not anticipate that this increase in usage which translates to about 0.8 percent per year will significantly affect the quality of the natural gas supply.

Response 5-32: Currently, refiners obtain the majority of their crude feedstock from U.S. sources, including Alaskan North Slope (ANS) and California. Statewide, refiners rely on Alaska for 45 percent of their petroleum supply and California for about 50 percent. Foreign sources provide the balance. The specific level of crude imports from foreign countries depends on the specific transportation options and refinery capabilities available to a specific refiner. The demand for diesel fuel is likely to be reduced relative to baseline levels as a result of the full implementation of the proposed fleet vehicle rules, thereby reducing the marginal demand for imported crude. At the same time, diesel supply is heavily affected by choices that refiners make with respect to gasoline and aviation fuel demand, as well as baseline

diesel demand. Refiners are constantly monitoring market and relative price conditions to determine the precise amount of diesel fuel to refine and to keep in inventory. It is unlikely that PAR 431.2 or the proposed fleet vehicle rules will create substantial additional demand for foreign oil imports.

The sulfur levels of ANS crude have already been factored into the refinery specifications for most West Coast refiners. Sulfur recovery methods are anticipated to increase as a result of the PAR 431.2, although some higher sulfur diesel and distillate fuels may be exported for off-road market niches outside of California. The costs of sulfur removal and disposition are relatively small in relation to the overall capitalization of modern refineries in the district. It is projected that such investments could be amortized at less cents per gallon than the typical weekly or monthly price variation in the diesel market. It is expected that continued price volatility will exist in both the gasoline and diesel markets and that this volatility will be much greater than three to five cents per gallon. Higher fuel prices are expected in light of the general continuing expansion of the California and national energy demand as a result of the growth of the economy. This growing baseline energy demand includes the increasing demand for Sport Utility Vehicles and light- and medium-duty diesel trucks.

Response 5-33: The commentator incorrectly asserts that the SCAQMD has not considered "adverse consequences associated with the significant transition period caused by the proposed rules." With regard to operational changes during the transition to AFVs, including breakdown and repair issues, the commentator is referred to the responses to comments #1-50, #1-81, and #1-120. Further, a representative from Sunline stated that the average number of miles between breakdowns was substantially lower for their AFV vehicles compared to the breakdown rate when they operated heavy-duty diesel vehicles. Similarly, the LACMTA has indicated that downtime for their CNG buses is the same as for their diesel buses. Based on the information contained in the responses identified here, the commentator's conjecture that increased breakdowns will occur resulting in increased emissions from repair services is purely speculation and is inconsistent with the data presented in the PEA and the above-mentioned responses to comments.

Response 5-34: The commentator has misunderstood the text cited from page 4-79 of the Draft PEA. The cumulative impacts discussion does not refer to the potential hazards of the fuels to be used, but rather refers to potential hazards from the construction activities to build the AFV refueling stations. The construction activities associated with building AFV refueling stations are essentially similar to construction activities to build conventional gasoline or diesel refueling stations. Although the proposed fleet vehicle rules are anticipated to require construction activities that, in their absence, would not otherwise occur, there is no evidence that the cumulative effect of these construction activities would increase construction

hazards because, on average, only three CNG refueling stations would be under construction per day in widely dispersed areas of the district.

Response 5-35: With regard to costs associated with the proposed fleet vehicle rules, the commentator is referred to the responses to comments #1-4, #1-6, #1-18, and #3-11.

Response 5-36: The commentator incorrectly asserts that the analysis of environmental impacts does not consider penetration of alternative clean fuel heavy duty vehicles from CARB's urban transit bus rule or proposed standards for other heavy-duty vehicles. With regard to the methodology for calculating emission benefits, taking into consideration of CARB's urban transit bus rule and U.S. EPA's recently propose heavy-duty vehicle standard, the commentator is referred to the responses to comments #1-47, #1-67, and #1-68, # 4-35, and #4-37. See also response to comment #4-32.

Response 5-37: With regard to the methodology for calculating emission benefits, taking into consideration of CARB's urban transit bus rule and U.S. EPA's recently proposed heavy-duty vehicle standard, the commentator is referred to the responses to comments #1-47, #1-67, and #1-68, # 4-35, and #4-37. See also response to comment #4-32.

Response 5-38: The proposed fleet rules would reduce emissions from on-road mobile sources that travel primarily in residential and commercial areas such as transit buses, school buses, trash collection vehicles, street sweepers, and vehicles that are in government fleets used primarily in residential areas. Thus, in these areas it is expected that localized exposure to potential toxic air contaminants would be lowered.

Response 5-39: The commentator's assertion that new alternative fuel fueling locations are "likely to be disproportionately located in areas with substantial industrial and commercial development, near low-income or minority communities" is unfounded. With regard to siting AFV refueling stations, the commentator is referred to the responses to comments#1-10, #1-29, #1-31. As noted in these responses, AFV refueling stations are expected to be built at existing public agency maintenance and refueling facilities with a concurrent reduction in diesel fuel dispensing. As a result, the overall characteristics of existing maintenance and refueling facilities are not expected to change. As a result, the commentator's speculation that the proposed fleet vehicle rules will somehow generate disproportionate impacts to low income or minority communities is unsupported by any data, evidence, or other information and is inconsistent with the data and analyses presented in the PEA and these responses to comments.

Response 5-40: The fact that battery disposal facilities may be disproportionately located in low income or minority communities is a land use issue resulting from land use planning decisions by public agencies with general land use authority, i.e., cities or counties, and is not related to implementing the proposed fleet vehicle rules. As noted in response to comment #5-11, the amount of additional batteries anticipated to be disposed of or recycled as a result of implementing the proposed fleet vehicle rules is miniscule compared to the number of batteries disposed of or recycled annually. As a result, the proposed fleet vehicle rules are not anticipated to noticeably alter operations at battery recycling facilities in the district. Consequently, the commentator's opinion that environmental justice impacts near battery recycling facilities is unfounded and is inconsistent with the data and analyses presented in the PEA and these responses to comments.

Response 5-41: With regard to the potential for the proposed fleet vehicle rules to generate additional trips, the commentator is referred to the responses to comments #1-106 and #5-20. For the reason given in these responses, the SCAQMD disagrees with the commentator's opinion that increased vehicle trips will generate environmental justice impacts.

Response 5-42: The commentator incorrectly asserts that the PEA did not analyze potential impacts from longer bus fleet turnover rates, or loss of bus service. The commentator is referred to the "Indirect Air Quality Effects" section, in particular the subsections entitled "Loss of Service," and "Longer Fleet Turnover Rate." Based on the analyses contained in these subsections, there is no reason to believe, and the commentator provides no evidence to support the opinion, that bus riders would discontinue riding a bus because it is older than the average bus fleet vehicle. Further, the analysis indicated that approximately three buses per year for five years could be removed from service as a result of the incremental increase in costs to purchase an alternative fuel bus. The removal of 15 buses over a five year period is not expected to disproportionately affect low income or minority residents because, as indicated in the PEA, transit services are underutilized. For this reason, SCAG's RTP recommends that transit operators to restructure existing transit services away from least performing lines toward feeder services, smart shuttles, busways, etc.

Response 5-43: This comment is a general summary of the preceding comments. The commentator is referred to the responses to comments #5-38 through #5-42.

Response 5-44: The SCAQMD disagrees with the commentator's opinion that the alternatives analysis is "grossly inadequate." With regard to the requirements relative to an alternatives analysis, the commentator is referred to the response to comment #1-14.

Response 5-45: The SCAQMD will continue to work with other regulatory and legislative authorities and with private entities also, to develop additional programs to reduce toxic and criteria pollutant emissions.

Response 5-46: Staff has revised PRs 1191, 1192, and 1193 to provide a longer implementation period for smaller fleet operators to address concerns raised in connection with the need to develop the infrastructure necessary to implement these proposed rules. In addition, PRs 1186.1, 1192, and 1193 provide a technology availability exemption should an alternative fuel engine/chassis specification is not available.

Response 5-47: With regard to the methodology for calculating emission benefits, taking into consideration of CARB's urban transit bus rule and U.S. EPA's recently propose heavy-duty vehicle standard, the commentator is referred to the responses to comments #1-47, #1-67, and #1-68, # 4-35, and #4-37. See also response to comment #4-32. With regard to modeling the "emissions implications," the commentator is referred to the responses to comments #4-30 and #4-31.

Response 5-48: With regard to the requirements relative to an alternatives analysis, the commentator is referred to the response to comment #1-14.

COMMENT LETTER 6

WESTERN STATES PETROLEUM ASSOCIATION

WSPA
Western States Petroleum Association

Michael D. Wang
Manager
Operating and Environmental Issues

RECEIVED
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From: Office of the Executive Officer Date: 4-26-00
To: BARRY
Cc: BOARD
For your action by: _____ For your info. _____ Initial by _____
Please respond by: _____ Signature req. _____

April 25, 2000

RECEIVED
APR 2
SCAQMD
JACK BROADBENT

Dr. Barry Wallerstein
Executive Officer
South Coast Air Quality Management District
21865 E. Copley Ave.,
Diamond Bar, Ca.

Re: Comments on South Coast Air Quality Management District Fleet Rules

Dear Dr. Wallerstein:

The Western States Petroleum Association (WSPA) is a trade group representing about 30 companies that explore, develop, refine, market and transport petroleum and petroleum products. Many WSPA members have extensive operations in Southern California and have a vital interest in the Southern California economy. As you know, WSPA has been active in air quality issues for the past 30 years.

WSPA supports the need to improve air quality in the South Coast Basin. We agree that all sources should reduce emissions in an equitable and cost effective manner. Unfortunately, we still must oppose the District's set of proposed fleet rules because they are neither equitable nor cost effective.

6-0a WSPA is basing our analysis on the District's own statements that the rules will prohibit the use of diesel fuel for new vehicles and force the use of other fuels in a manner that, by definition, is not economic. By taking this arbitrary action to ban the use of new diesel vehicles, we believe the District will unnecessarily interfere with the market place, hinder the development of new emission control technologies and more importantly delay emission reductions that would otherwise occur except for these rules.

6-0b We understand that the District believes that its enabling authority in the Health and Safety code prohibits the use of diesel-fueled vehicles. We do not agree with this interpretation. The District's position is also inconsistent with the use of diesel fuel for medium duty vehicles in subsection (d) of Rule 1191 (i.e., CARB's list of vehicles that comply with the LEV, SULEV, and ULEV definitions). The District's inconsistency is striking. Either the District is empowered to allow diesel-powered vehicles under its rules or its is not. In either case, if the District continues to assert that the legislative authority is derived from Section 40447.5, it is unlikely that the District can arbitrarily allow diesel-powered vehicles in one regulation and prohibit its use in another. While

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6-0c we understand that we must make every effort to reduce emissions, to suggest to the Board that it should set an important policy to ban the use of diesel fuel in new light and medium duty vehicles for, as yet undefined incremental emission reductions is ill-advised. The District must, at a minimum, evaluate the incremental emissions benefit from prohibiting the use of diesel fuel as well as the economic impact.

6-0d With regard to providing lower sulfur diesel fuel to enable the use of advanced exhaust aftertreatment, WSPA is still supportive of a demand side rule whereby the fleet operator would be required to purchase the lower sulfur fuel. To date, three WSPA members, ARCO/BP, Equilon and Tosco have voluntarily announced their willingness to supply such fuel to fleets that intend to use exhaust aftertreatment.

6-0e In order to facilitate a more informed discussion, we would be most interested in working with the District and the California Air Resources Board to establish programs that provide equivalent or greater emission reductions in a more fuel neutral manner. We feel that such discussions could lead to research, technological innovation, and other approaches that would result in improved air quality much more rapidly and with a reduced economic impact

6-0f WSPA provided to the District (January 21, 2000) correspondence that calls into question the authority of the District to promulgate these regulations. We reiterate our concerns that the District may be preempted by federal legislation in this area. We continue to believe that fleet and fuel regulations are more properly developed at the State level for a variety of reasons including legislative authority and effects on intra- and inter-state commerce. In any event, the intent should be to reduce emissions without regard to fuel type -- an approach that should be used by any agency attempting to regulate in this area. WSPA will expand on this issue in a future letter to the District.

Specific Comments for Rule 1191:

6-0g **Emission Benefits**: It came as a significant surprise to find that the Preliminary Staff Report is not claiming any emission reductions in diesel exhaust particulates for Rule 1191. The Report spends considerable time discussing the MATES II Study, the identification of diesel exhaust as a Toxic Air Contaminant, and the role diesel plays in the estimated cancer risks only to find that this rule provides no diesel particulate emission reductions. MATES II estimated the mobile source hydrocarbon emissions at over 24 T/D or approximately 8,760 t/yr. Assuming all the hydrocarbon emission reductions are toxic – which they are not -- this amounts to less than 0.09% of the problem. Given that the District is justifying this regulation as needed to improve air quality and reduce toxic risk, the lack of any emission reductions attributable to this rule is very troubling. The lack of emission reductions, shows that the measure is not cost effective.

The Preliminary Staff Report also estimates the NOx reduction at 2 tons/year in 2010. The draft Environmental Assessment Document in Table 4-7 estimates that Rules

2

1191 and 1194 combined provide no measurable reduction of any pollutant until 2004. For purposes of comparison, CARB's Urban Bus Rule is estimated to provide almost 2,000 tons/year of NOx reductions and over 9 tons per year of diesel particulate reductions. Again, as in the previous instance, the lack of demonstrated emissions benefits coupled with the possibility of additional fleet operating costs demonstrates that the proposal needs reconsideration.

The emission benefits calculated by this rule assumes that by 2004 over 50% of vehicle sales will be ULEV's - in effect tightening the proposed standards from LEV to ULEV. Although this is likely the case for Light Duty Vehicles (LDV's), we question if this will be true for Medium Duty Vehicles (MDV's). We cite Footnote 2 for Table E-2 that suggests that over 50% of LDV's in 2004 will need to be ULEV's in order to comply with Corporate Fleet Averages required of auto manufacturers. However, no such similar explanation is provided for MDV's (Table E-4).

The report needs to provide a basis for assuming that over 50% of the MDV's after 2004 will be ULEV's. Likewise we question the assumption of the dramatic increase in ULEV's in medium duty vehicles from MY 2000 through 2003. All these assumptions are very important to the estimated emission benefits from Rule 1191 because the ULEV emission limits are considerably lower than the LEV limits. It is unclear whether the Report assumes this level of market penetration will apply to both light and medium duty vehicles or just light duty. We request that the District clarify this point.

6-0g cont.

c). Definitions:

Fleet Vehicles. Customarily, fleets are defined as a group of vehicles that are or could be centrally fueled. Due to the size of the District, it may be possible for individual vehicles owned and/or operated by a public agency to be widely separated by more than a hundred miles. We therefore recommend that the District amend its definition of fleet vehicles to only apply this rule to fleets that are or could be centrally fueled or that "exclusively return" to a central facility for fueling.

We have submitted this comment to you in the past but regrettably found that it had been ignored in the Public Comment Section of the Preliminary Staff Report.

d). List of Compliant Vehicles:

1. The original Rule 1190 required gasoline powered vehicles to be certified at one-half the emission limit otherwise required by California rules. The March 2000 Preliminary Staff Report does not address this issue making it impossible to tell if this is still the case. WSPA requests any final Staff Report clearly state the criteria for listing complying vehicles. This is another comment that had been submitted to you earlier but was ignored in the Preliminary Staff Report.

3

6-0g cont.

2. We appreciate the District's action to address our earlier suggestion that the criteria for tightening the emission limits for fleet vehicles from LEV to ULEV should be done separately for light and medium duty vehicles.

3. We also appreciate the District responding to our concern about the use of previously owned vehicles. We would still suggest that a provision be added to subsection (d) concerning this issue to eliminate any confusion in the future.

4. Finally, we appreciate the District's proposal that attempted to respond to our concern that there may be insufficient medium duty vehicles certified as a LEV and/or with alternative fuels to meet the needs of public fleets. We don't disagree with the general concept that would allow a fleet to purchase a higher emitting vehicle not otherwise allowed under the rule if the excess emissions are offset by purchasing cleaner than required vehicles. If this was the only situation covered by this rule we could support the approach. Unfortunately, the proposed rule will also apply to a diesel fueled medium duty LEV or ULEV that would arguably produce no excess emissions and therefore require no offsets. As the rule is currently written, a fleet that purchases a fully complying diesel vehicle would be treated unfairly because the fleet would still need to provide offsets. The fact that the proposed rule would mandate only the use of alternatively fueled vehicles to offset these fictional excess emissions adds insult to injury.

   Regardless of our above concern we have asked staff for their calculations on how they determined the proposed offsets. Until we have the District's calculations WSPA is unable to determine if they are appropriate.

f) Exemptions:

1. Proposed Rule 1191 exempts privately operated fleets unless subject to provisions in (c) or (c). It is unclear how subsection (c) or (c) would have the potential for including private fleets. If so, why is it necessary to add this condition to their exemption? If they do, would the District please clarify how this would occur? This again is a comment we had submitted earlier but found no response in the Preliminary Staff Report.

2. At a recent meeting several public works department representatives discussed the role of their vehicles in responding to emergency situations. They cited from earthquakes and major fires, where they were concerned that, if forced to purchase and use alternatively fueled vehicles, they may not be able to provide the services they are responsible to carry out. They provided examples where in such situations diesel fuel had been air lifted in to the location to enable them to continue doing their job. We suggest you carefully consider these comments especially as it related to the regulation of medium duty vehicles.

Specific Comments on Rule 1192

4

While WSPA understands that a new version of Proposed Rule 1192 was released on Wednesday, April 19, we have not had time to review it. Our comments below reflect the District's proposed rule that was released in March, 2000.

Need

The District has yet to show that their proposed Rule 1192 for transits buses provide incrementally greater cost effective emission reductions beyond what is already projected from CARB's urban bus rule. Until the District provides us information on the emissions benefits from each specific rule and the costs of each rule this evaluation will be impossible

Lack of District Authority to Regulate

6-0g cont.

We believe that the District has no authority to regulate transit bus fleets. Neither Section 40447.5 nor 40919 expressly reference transit bus fleets or for that matter heavy-duty vehicles in general. Section 40447.5 in particular would only allow the District to require certain owners and operators of public and commercial fleet vehicles to purchase vehicles which are capable of operating on alternative fuels and to operate on those fuels to the maximum extent feasible. The context of the statutes seems to have been more in keeping with attention to light and medium duty gasoline-powered vehicles. (Even then, the passage of time clearly has demonstrated that mandated use of alternative fuels has not resulted in emission reductions comparable with emission reduction gained from the use of reformulated gasoline and diesel fuels.)

In short, given: a) the general allocation of authority that exists in the Health and Safety Code (for ARB regulation of mobile sources); b) the express authority of the ARB to regulate transit buses reinforced by the vehicle code; c) the absence of any specific authority with respect to transit buses in the Health and Safety Code relating to District authority; d) passage of the recent transit bus rule by ARB that did not include any provision for local district regulation; and e) the fact that Proposed Rule 1192 is inconsistent with the ARB's fuel-neutral approach to transit bus emission regulation, we believe that a good argument can be made that neither the District nor other local air district can adopt local alternative fuel-only (or any other) emission control requirements.

Mandated Fuel Type

This rule mandates the purchase of only alternatively fueled urban transit buses that are operated by government agencies or operated by private entities under contract to governmental agencies that provide passenger service including intra- and intercity shuttle service. WSPA strenuously opposes the mandating of a specific fuel or engine technology instead of establishing an emission performance level and allowing fuels and

5

engines to compete fairly and equitably with out governmental interference. We believe other alternative control approaches are available to the District that achieves equivalent emission reductions without the disruptive effects of a mandate.

Definitions are vague and unreasonable

The rule provides no guidance on what it means to "operate" in the District. While the Rule states that it does not cover school transportation services, long-distance services (out-of-the District) and heavy-duty on-road vehicles not used for passenger service, further definition is needed to reduce confusion on the part of urban bus fleet operators. If a bus fleet visits the South Coast Air Basin (SCAB) on an intermittent basis (say, once per week?), does that count as "operates" within the District? What about once per day? If an operator has one or two buses visiting the District, does that bus trigger the requirement for the entire fleet?

6-0g cont.

Implementation Deadline

The rule would go into effect immediately upon adoption. We believe this is an unrealistic requirement. Instead, we recommend that a rule of this type be phased-in over a period of several years to help ensure a smoother and less disruptive implementation.

Alternative proposal

CARB recently adopted a rule that applies to urban bus fleets throughout the State. WSPA supported the adoption of this rule. Any action by the District to apply incrementally more rules on the urban bus fleets should be complementary to, and consistent with, the provisions of the ARB rule. It should be pointed out that many of the fleets may choose to comply with the alternatively fueled pathway in the ARB rule making the District's proposed Rule 1192 unnecessary. Thus, the most feasible choice for the District would be to work with ARB to perhaps extend its rule to include a larger number of weight classes -- thereby giving the District additional emission reductions.

WSPA stands by its commitment to improve air quality through feasible, realistic and sound solutions. The District's proposed Rule 1192 does not fulfill these criteria. That notwithstanding, we reiterate our commitment to work with you to develop a solution that meets the needs of the basin and can be implemented in a manner consistent with sound economics and statutory requirements.

Additional CEQA Comments

In addition to the comments submitted by M^3 et al that are being submitted under separate cover on WSPA's behalf, we have the following issues:

6

Page 3-23: Reference to the GRI study should be deleted.

6-1 California estimated risks from diesel particulate (as an air toxic) are presented in other CARB references. The GRI risk estimate based on diesel as a generic particulate has not been performed for other District rules and the documentation of the number is not presented. We know of no CARB or OEHHA based risk numbers for generic particulates.

Page 4-15: The derivation of an "Estimated Vehicle Toxic Risk Ratio

6-2 The derivation of an "Estimated Vehicle Toxic Risk Ratio" between diesel and natural gas powered vehicles is rather meaningless given the lack of data on particulate toxicity from natural gas engines. The toxicity of diesel emissions has been extensively studied in both animal toxicology and occupational epidemiology studies. Natural gas emissions have not been studied. Therefore, a comparison of this type is irrelevant until toxicity data is forthcoming from natural gas engines. The analysis presented assumes that carbonaceous particles from CNG engines are absolutely harmless and this is not known since they have never been studied. The comparison should be limited to emission from each source that have been equally characterized or the analysis should be deleted from the report.

Page 4-80: Comparison of toxicity of methanol, gasoline and methanol.

6-3 This section is incredibly misleading. It tries to make methanol appear to be less toxic than other fuels by stating that "diesel fuel and gasoline contain components that are considerably more hazardous than methanol". The toxicity of minor constituents is irrelevant. The obvious comparison is the oral toxicity between these fuels which would show that methanol is more hazardous. This comparison has been conspicuously left out.

6-4 The CEQA document and Staff Report make little mention of the hazards of CNG. We were informed by a participant at a recent District Workshop that the National Fire Protection Association rates CNG with a higher hazard rating than gasoline or diesel fuel. Paraphrasing, a speaker noted, "This series of rules will move transportation companies users into a fuel considered more hazardous from a fire standpoint by the NFPA." This opinion and the attendant risks should be spelled out very clearly in the CEQA document. Instead of answering this issue directly, the District attempted to dismiss the increased hazard of CNG by making reference to its high ignition temperature. That answer misses the mark. What is more important from a hazard standpoint are its physical properties as a gas which allow it to disperse immediately upon release and present an explosion hazard.

6-5 The CEQA document and Staff Report consistently downplay the risks from alternative fuels and stress the potential problems with petroleum based fuels. The Report seems

7

6-5 cont.

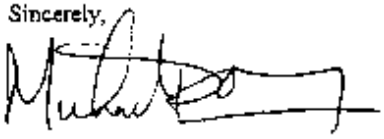
always to highlight the risks of petroleum products while minimizing the risks posed by alternative fuels. Consider, for example, methanol, a fuel that is included in the Health and Safety Code section cited by the District as the basis for its rulemaking. Methanol, like MTBE, is soluble in groundwater and will travel at a faster rate than diesel or gasoline. There are currently no drinking water standards for methanol, nor is that compound routinely monitored. While methanol is more biodegradable than many diesel and gasoline components, this characteristic can also be a source of problems in drinking water systems because water systems should not be contaminated with microbial nutrients. The District would be better served by a balanced look at hazards and risks posed by all fuel types.

6-6

In summary, based on the latest emission information in the Preliminary Staff Report, the issues we have raised, the complete lack of documentation in any socioeconomic document, WSPA encourages you to withdraw Rules 1191, 1192 and 1193 from the Board's consideration. We intend to formally send a request to the Board to reconsider the scheduled June hearing on any of these rules.

Should you have any questions, please feel free to contact me.

Sincerely,



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** TOTAL PAGE.009 **

WSPA
Western States Petroleum Association

Michael D. Wang
Manager
Operating and Environmental Issues

April 27, 2000

Mr. Darren Stroud
South Coast Air Quality Management District
21865 E. Copley Dr.,
Diamond Bar, CA

Re: Additional WSPA comments on SCAQMD Fleet Rules EIR

Dear Mr. Stroud:

The Western States Petroleum Association (WSPA) is a trade group that represents approximately 30 companies that explore, develop, refine, market and transport petroleum and petroleum products. WSPA is sending, under separate cover, our comments on the Staff Report and a review of the District's CEQA documents prepared by M^3. This letter provides additional WSPA comments on the District's California Environmental Quality Act (CEQA) analysis for its Proposed Rules 1191, 1192 and 1193.

6-7 **Page 4-8 Comparison of Conventional Fuels to Alternative Clean-Fuels.** The report attempts to use a simplistic AICHE comparison of gasoline and alternatively fueled light duty vehicles. We don't believe the AICHE analysis as originally developed is directly applicable for medium and heavy-duty vehicles. Given the gross nature of the assessment this analysis is misleading. *Because the Report does its own assessment we recommend this table be completely removed from the report.*

6-8 **Net Energy Efficiency:** It is widely accepted that diesel engines are some of the most energy efficient engines in operation today. Even when you look at the entire life-cycle as did a Harvard Center for Risk Analysis study one normally concludes that "the use of natural gas instead of diesel in heavy duty vehicles results in 5 to 10 per cent increases in green house gases." The District's staff report for Rule 1191 indicates that diesel contains 28% more energy per equivalent liquid gallon when compared to CNG. In Appendix G of this report it appears that diesel engines are more efficient than gasoline or CNG. *Given these facts and the District's apparent agreement with them, the Staff's conclusion and basis for ranking CNG energy efficiency higher than diesel is unsubstantiated. This conclusion must be further documented or withdrawn.*

6-9 **Greenhouse Emissions:** The report found that USEPA emission factors for gasoline and

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6-9 cont.

diesel mobile sources showed diesel having CO2 emissions 7 percent higher per MMBTU. Since diesel engines have more efficient than CNG, their CO2 emissions on a gram per mile basis are considerably lower than CNG. In addition, CNG refueling and venting emissions of methane, a very reactive greenhouse gas appears to have not been considered. A Harvard Center for Risk Analysis report concluded that even when considered on a life-cycle basis CNG was expected to produce higher greenhouse emissions.

All of the above factors suggest the District's report needs to be rewritten to improve its use and interpretation of data.

6-10

Page 4-12 Air Quality. Tables 4-7 and 4-8 present the accumulative air benefits from all the proposed rules. *We request the accumulative assessment break out the analysis by rule. In addition we suggest that carbon dioxide emissions be added to the analysis.* Such information has already been requested from the staff in earlier discussions.

6-11

Page 4-27 Project Specific Impacts – New CNG Compressors. On page 4-28 the report concludes that:

> "... the potential combustion emission increases from both existing and new stationary sources over current emission levels are not considered significant air quality impacts. Therefore, for the following reasons, these potential emission increases are not included in this air quality impact analysis."

The District's analysis is flawed and perhaps greatly oversimplified. *First we suggest that the report needs to assume that certainly some portion of these new compressors will use diesel fuel. If this is true, then the risks posed by these compressors need to be modeled.* Given the high unit risk factor, assigned by the State, for diesel particulates it may be inappropriate to assume that the air quality impacts from such diesel engines will be insignificant on the surrounding community.

6-12

Page 4-30 New Permitted Sources – Clean Diesel Technology. On page 4-32 of this section the report concludes that diesel engines meeting the low PM emission standards are one to one-and-a-half years away while NOx after treatment is four to seven years away. Based on presentations by District staff at recent workshops and meetings we believe the staff has concluded that such technology may in fact be available in a shorter timeframe. *We would request the draft report be amended to reflect these public comments of senior District staff.*

6-13

Page 4-73 Table 4-27 Total Projected Fuel Usage for the Proposed Rule. *This table is hard to interpret and needs to be further explained in the text of the report.*

Chapter 5 Project Alternatives.

6-14

Let us first observe that this entire Chapter was very disappointing. Supposedly, this

6-14 cont. analysis is to allow decision-makers to compare the impacts of approving the proposed projects with others. We challenge any reader to review this chapter and conclude that it fulfills this charge.

6-15 In particular we are concerned that Alternative No. 5 the CARB Urban Bus Rule was supposedly rejected because it is incorporated into Alternative B. Alternative B is so complicated and confusing the reader cannot come to any conclussion as to the comparative benefits from depending on CARB's rule to help reduce emissions from transit buses compared to PR 1192. *We strongly encourage the District to consider evaluating the CARB rule as an alternative along with its handling of lower sulfur diesel.*

6-16 **Page 5-4 Alternative A – No Project**. The proposed discussion is incomplete and should be substantially revised. Several very important programs are currently under way that will likely result in significant emission reductions. These programs were not considered. For example, one is the State's Toxic Air Contaminant program for diesel exhaust particulates. Under this program several other state-wide control measures are expected to be adopted. *The District needs to obtain from the CARB an estimate of their plans and include them in this Alternative.*

6-17 In addition, the Governor has proposed spending considerable funds to help clean-up school buses ($50 MM) and other diesel and gasoline powered combustion sources through the Carl Moyer Program. ($100/MM-Year). The SCAQMD's share of this money could easily exceed $50 MM/Year for the next 5 years resulting in a significant reduction in toxics. For example, assuming the cost to retrofit a HDDV with an exhaust PM aftertreatment device is $10,000 (worst case), the funds from the State could potentially retrofit over 5000 vehicles and reduce their PM emissions by 85% or more.

6-18 Finally, the No Project Alternative does not quantify the emission benefits from a new national diesel standard that EPA is expected to adopt before the end of this year. *We strongly encourage the District to quantify the emission reductions that are likely to result from these and other programs under this Alternative.*

6-19 **Alternative B – CARB HDV Standards.** This Alternative appears to somehow combine both the proposed fleet rules with the CARB's urban bus rule. It incorrectly states that CARB's rule doesn't become effective until 2004. In fact, transit fleet operators must begin retrofitting vehicles and meeting fleet averages as early as 2002. Those fleets selecting the alternative fuel path must purchase alternatively fueled buses beginning almost immediately. There is also no justification to assume under this Alternative that CARB will not adopt similar rules for other fleets prior to 2007 as contained in this alternative.

6-20 In addition CARB's Urban Bus Rule solely utilizes a demand side requirement for lower sulfur fuel. There is no mandate for all refiners to make the fuel. Conveniently, the report assumes no change in Rule 431.2 thereby ensuring the evaluation of this Alternative includes the increased refinery emission. The CARB rule depends on marketplace forces to provide the incentive to refiners to provide the fuel between now

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6-20 cont.

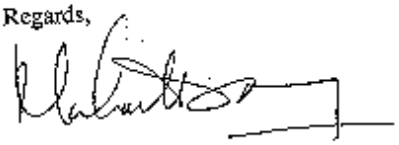
and when EPA adopts a nation-wide diesel sulfur standard. Since three companies have already voluntarily committed to supply such fuel, the estimated refinery modifications may be grossly overstated -- especially if this alternative were to merely apply the CARB demand-side fuel approach to all the fleets. Without any refinery modifications, for example, BP/Amoco has committed to make over 1,000,000 gallons of lower sulfur diesel available per day in the District. Without considering the other two refiners this amount is more than adequate to supply the needs of the impacted fleets over the next several years. By subtracting the PR 431.2 emission increases from the Alternative emission reductions described in Table 5-4 such a plan would provide more Combustion PM emission reductions than the proposed project and almost the same NOx emissions for considerably less cost.

6-21

We again request that the District include as an Alternative a district program based on the CARB urban bus rule along with the manner in which the supply of lower sulfur diesel fuel is handled.

Thank you for addressing these issues. We look forward to Staff's responses.

Regards,



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COMMENT LETTER 6: WESTERN STATES PETROLEUM ASSOCIATION

Response 6-0a: The proposed fleet vehicle rules will not "prohibit" the use of diesel, regardless of how clean the technology. While bus providers subject to the SCAQMD's proposed urban transit bus fleet rule will not be able to use the "diesel path" provided in the CARB rule, this is not illegal. The CARB rule does not require use of diesel. CARB legal counsel specifically advised its Board when it was considering the CARB rule that the SCAQMD had authority to adopt a rule that would require selection of the alternative fuels path. It is not a violation of Health & Safety Code §40447.5 to focus the proposed fleet vehicle rules on fuels rather than technologies. This approach is not arbitrary, but serves to encourage development of the cleanest fuels.

Response 6-0b: The SCAQMD believes that diesel does not qualify as an "equivalently clean burning alternative fuel," as defined in H&SC §40447.5. However, the SCAQMD has authority to allow alternative equivalent methods of compliance. The SCAQMD is required to allow such alternative methods of compliance and may choose not to do so where the use of clean fuels is well established and practical, as in transit areas. With regard to the SCAQMD's authority to regulate fleet vehicles, the commentator is referred to the responses to comments #1-16, #1-34, #1-37, #1-49, #1-89 and #4-3.

Response 6-0c: The proposed fleet vehicle rules will not "prohibit" the use of diesel, regardless of how clean the technology. See response to comment #6-1. The SCAQMD disagrees with the commentator's opinion that emissions benefits from the proposed fleet vehicle rules is "undefined." The Draft PEA for the proposed fleet vehicle rules includes a comprehensive analysis of the emission reduction benefits of the proposed fleet vehicle rules in Chapter 4 and Appendices E and F. The commentator is referred to these sections.

Response 6-0d: The proposed amendments to Rule 431.2 are expected to prohibit a person from burning, purchasing, selling, or offering for sale diesel fuel that is not low sulfur fuel. The PEA has included an analysis of the environmental impacts from producing low sulfur fuel in Chapter 4 of the PEA. See also responses to comments #2-4 and #3-21.

Response 6-0e: The SCAQMD will continue to work with other regulatory and legislative authorities and with private entities also, to develop additional programs to reduce toxic and criteria pollutant emissions.

Response 6-0f: With regard to the SCAQMD's authority to regulate fleet vehicles, the commentator is referred to the responses to comments #1-16, #1-34, #1-37, #1-

49, #1-89 and #4-3. The SCAQMD does not agree that it is required to focus its rules only on emissions rather than fuels. Alternative fuels are inherently cleaner, and have greter potential for further long-term emissions reductions, also increasing demand for clean fuel vehicles will further their development.

Response 6-0g: This comment relates specifically to individual requirements contained in the specific proposed rules. This comment is not related to the environmental analysis so no response is necessary. This comment, however, has been forwarded to rule development staff.

It should be noted, however, that PR 1191 does not tighten the standard from LEV to ULEV until 50 percent of the vehicles sold in each category (i.e., light- or medium-duty) are ULEVs. While this may not occur in 2004, as predicted, PR 1191's structure means that any associated costs of compliance with the stricter standard also will not occur until later if that is the case. Thus, the benefits of PR 1191 may be delayed, but so will the associated costs.

Response 6-1: The analysis of environmental impacts does not rely on the GRI study nor was it performed for the proposed fleet vehicle rules. The GRI information was obtained from the MATES II report. The GRI study simply provides additional evidence of cancer risks in the district and the need for reducing toxic air contaminants.

Response 6-2: The toxic analysis uses the toxic air contaminant listing of diesel and other toxic compounds found in exhaust emissions of natural gas vehicles. The analysis is consistent with the current listing in that for diesel emissions, particulate matter emissions are used as a surrogate for all known toxic compounds emitted at the tailpipe. For natural gas vehicles, each individual toxic compound emitted is analyzed.

Response 6-3: The SCAQMD disagrees with the commentator's assertion that the comparison of methanol versus diesel and gasoline is misleading. The commentator further states that the toxicity of minor constituents (the SCAQMD assumes the commentator refers here to minor constituents in gasoline and diesel fuel) is irrelevant, which is incorrect. Gasoline and diesel fuel contain for example aromatic compounds, such as benzene, toluene, ethylbenzene and xylene isomers in gasoline and polycyclic aromatic hydrocarbons in diesel, that are either suspected or known carcinogens. Moreover, over the past decades many releases have been discovered from underground storage tanks (USTs) storing petroleum fuels that threaten usable groundwater supplies, prompting stringent regulatory requirements for USTs and extensive soil and groundwater cleanup efforts.

As far as oral toxicity is concerned, Table 4-29 of the PEA summarizes the hazards of methanol and gasoline. One of the criteria considered is toxicity as it relates to

ingestion. The table shows that both methanol and gasoline are extremely toxic, but that there is little likelihood of direct ingestion for either one.

Response 6-4: The risk of explosion has both a severity component and a frequency component. CNG systems have more rugged tanks and are less likely to rupture in an accident. See response to comment #1-120 concerning safety statistics and DOE comments on comparing CNG and diesel risk of fire and explosion.

Response 6-5: The SCAQMD disagrees with the commentator's opinion that the Staff Reports and the PEA minimize the hazards associated with alternative clean fuels. The references cited contend that the overall fire and explosion risks of alternate fuels and petroleum products are comparable. Each have unique handling problems that have to be dealt with.

The SCAQMD has not attempted to downplay the risks of alternative fuels versus petroleum products. As discussed in the PEA, the majority of the conversions to alternative fuels will consist of conversions to CNG for heavy duty vehicles. Chapter 4 of the PEA provides a detailed discussion of the hazards posed by CNG and identifies some case studies of accidents associated with CNG refueling facilities. The commentator has not provided any technical details or references that substantiate his opinion that the analysis of the hazards described in the PEA are incorrect or biased in any way.

Response 6-6: As stated in Chapter 4 of the PEA, because methanol is subject to rapid biodegradation and volatilization, contamination of an underground water supply is unlikely unless the aquifer is small, near the surface and the spill very large. The comparison of methanol to MTBE is irrelevant overall, because, although the solubilities are high for both compounds, methanol is readily biodegradable under naturally occurring conditions while MTBE is highly recalcitrant to biodegradation. Because methanol biodegrades relatively quickly under aerobic conditions, natural attenuation is likely to occur in most surface water and subsurface environments.

The commentator states that there are currently no drinking water standards for methanol, which supports the assertion that this compound is of lesser concern than for example the toxic aromatic compounds present in gasoline and diesel (see response to comment #6-3).

The commentator further correctly states that methanol is more biodegradable than many diesel and gasoline components. However, the assertion that the high biodegradability of methanol will contaminate the drinking water with microbial nutrients appears to be misguided. Methanol is degraded in the subsurface by indigenous microorganisms and uses in that process nutrients (e.g., compounds containing nitrogen or phosphorus) that are already present in the aquifer.

The SCAQMD has not attempted to downplay the hazards posed by methanol or any other alternative fuel. In its conclusion of its evaluation of methanol in Chapter 4 of the PEA the SCAQMD states for example: "……hazards associated with methanol are approximately equivalent or less compared to gasoline and diesel. Therefore, increased usage of methanol with a concurrent decline in usage of gasoline or diesel will not significantly alter existing hazards associated with mobile source fuels."

Response 6-7: The AIChE table was included to show the relative comparison of alternate and conventional fuels for various performance indices. The information in the table was not used to assess the potential significance of environmental impacts of the proposed fleet vehicle rules. The table assumes that all of the indices such as fuel cost, vehicle cost, etc., have equal weight when forming an average score. By including this table, the SCAQMD is not affirming that all these indices have equal weighting. The only column added to the table was for "diesel", which was not included in the 1997 AIChE report. It was included to show how conventional diesel may have ranked if it had been included in the 1997 study using criteria, data, and technology comparable to what was available at that time. For additional information, the commentator is referred to the responses to comments #1-92 through #1-96.

Response 6-8: Net energy efficiency in the AIChE study was defined to be a comparison of energy consumed in the production and distribution of each fuel with the energy available from its use. See also responses to comments #1-91, #1-92, and #1-95

Response 6-9: With regard to greenhouse gas emissions, the commentator is referred to the response to comment #1-92.

Response 6-10: The commentator is referred to Appendix E-1 (formerly Appendix E in the Draft PEA), which shows the accumulated air quality benefits of each of the proposed fleet vehicle rules. With regard to specific pollutants that will be analyzed and reported, see response to comment #5-15.

Response 6-11: The CEQA Guidelines indicate that the degree of specificity required in a CEQA document depends on the type of project being proposed (CEQA Guidelines §15146). The detail of the environmental analysis for certain types of projects cannot be as great as for others. For example, the environmental document for projects, such as the adoption or amendment of a comprehensive zoning ordinance or a local general plan, should focus on the secondary effects that can be expected to follow from the adoption or amendment, but the analysis need not be as detailed as the analysis of the specific construction projects that might follow. As a result, the Draft PEA analyzes impacts of a regulatory program with a degree of specificity commensurate with the degree of specificity of the entire proposed fleet vehicle program.

The responsibility of proper siting of alternative fuel refueling stations and the compressors that will power them belongs to the local public agencies with general land use authority, i.e., cities or counties. It is not known and cannot be known at this time where such facilities would be located. Since modeling is highly dependent upon the location of the source and the distance to the nearest receptor, it would be speculative for the SCAQMD to perform site-specific analyses at this stage of the project. This conclusion is consistent with CEQA Guidelines §15145. It is understood that individual refueling sites, when ultimately procured, may need to undergo a site-specific CEQA evaluation by the appropriate CEQA lead agency, typically the agency with general land use authority, such as cities or counties. CEQA Guidelines §15168(c)(1) recognizes this possibility by stating, "If a later activity would have effects that were not examined in the program EIR, a new initial study would need to be prepared leading to either an EIR or a negative declaration." This means the necessity to prepare CEQA documents for site-specific projects subsequent to preparation of a program CEQA document does not make the program CEQA document inadequate or deficient in any way.

Response 6-12: Although the SCAQMD has been encouraged by fleet vehicle working group participants that clean diesel technologies, primarily after-treatment technologies, may be available sooner than suggested in the PEA, there have been no data, evidence, or other information provided to the SCAQMD to substantiate claims that these technologies will actually be available sooner. As a result, it would be mere speculation at this point to assume they would be available sooner that stated in the PEA.

Response 6-13: Since the commentator does not state in what ways he has trouble interpreting Table 4-27, it is difficult to provide additional explanation in the text.

Response 6-14: This commentator does not specify in this comment in what ways Chapter 5 in the PEA is "disappointing." The alternatives analysis in the PEA complies with all relevant CEQA requirements. See also response to comment #1-14.

Response 6-15: At the time the Draft PEA, CARB's urban transit bus fleet had not been adopted. The emission reduction benefits of CARB's rule, based on what was available at the time were accounted for in Alternative B. Now that CARB's rule has been adopted, its emission reduction benefits have been removed from Alternative B and incorporated into the emission benefits estimates for the proposed fleet vehicle rules. Further, Alternative B has been modified by eliminating the heavy-duty vehicle standards currently under consideration by CARB and incorporating the heavy-duty vehicle standards proposed on May 17, 2000. The U.S. EPA heavy-duty standards are very similar to the standards under consideration.

Response 6-16: The commentators opinion that the No Project Alternative "is incomplete and should be substantially revised" is incorrect. CEQA Guidelines §15126.6(e)(2) state in part, "The 'no project' analysis shall discuss the existing conditions at the time the notice of preparation is published…" Consequently, it is inappropriate to include as part of the No Project Alternative that were not adopted at the time the NOP/IS was circulated for public review. CARB has not yet even adopted a plan for control of diesel particulates. Therefore, it is not possible to say what controls pursuant to this program are reasonably expected to occur in the foreseeable future.

Response 6-17: While Carl Moyer Program monies could be used for retrofitting to reduce PM emissions, nitrogen oxide emissions would not be reduced to levels seen with alternative fuel engines. Purchases of new diesel engines would not reduce nitrogen oxide emissions substantially compared to purchases of alternative fuel engines.

Response 6-18: As noted in response to comment 6-16 it is inappropriate to incorporate into the No Project Alternative standards that were not adopted at the time the NOP/IS was circulated for public review. Although there is guarantee that the federal standards will be adopted by the end of the year as claimed by the commentator, the recently proposed federal standards have been incorporated into Alternative B. For additional information, the commentator is referred to the responses to comments #4-37 and #5-47.

Response 6-19: The statements regarding CARB's transit bus rule were based on the proposed rulemaking and they will be revised to reflect the adopted rule. Relative to other potential CARB regulatory actions, these would be considered "speculative" under CEQA. See response to comment #5-47.

Response 6-20: It is not clear what the commentator means by when he says CARB's urban bus rule "utilizes a demand side requirement for lower sulfur fuel." Presumably this means that refineries will voluntarily produce low sulfur fuel. If this is the case, this does not necessarily mean that district refineries will not have to modify equipment or their refining process to produce low sulfur fuel. This is also the case with regard to refineries that have committed to producing low sulfur fuel. Therefore, the implication that there would be no impacts from producing low sulfur fuel is not supported by any evidence. Consequently, "subtracting" the PAR 431.2 air quality impacts from the analysis of the proposed fleet vehicle rules or any of the applicable alternatives would underestimate potential adverse environmental impacts.

Response 6-21: With regard to CARB's urban bus rule, the commentator is referred to the responses to comments #4-37 and #5-47.

COMMENT LETTER 7

INLAND EMPIRE DISPOSAL ASSOCIATION

RYAN. 800 725 8744 P.01

I E D A
INLAND EMPIRE DISPOSAL ASSOCIATION

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Post-it® Fax Note 7671	Date 4/25/00	# of pages 3
To Darren Stroud	From Paul Ryan	
Co./Dept. SCAQMD	Co. IEDA/IEDA	
Phone #	Phone # 909 735 5987	
Fax # 909 396 3324	Fax #	

April 21, 2000

Barry R. Wallerstein, D. Env.
Executive Director
South Coast Air Quality Management District
21865 E. Copley Drive
Diamond Bar, CA 91765-4182

Dear Doctor Wallerstein:

7-1 Members of the association at their Board Meeting of April 19, 2000, concluded, after reviewing Rule 1193 and the Draft Program Environmental Assessment (PEA), that it is imperative for the South Coast Air Quality Management District (SCAQMD) and the solid waste and recycling industry to establish a standing technical working group.

7-2 It has been the observation of the association members that the SCAQMD must address a myriad of issues in the broader context of integrated waste management to integrate and maximize concurrent emission reduction opportunities for both criteria and air toxic pollutants. Evidence in the public record indicates the SCAQMD staff and solid waste and recycling industry needs ongoing dialog to fully evaluate the complexity of integrated waste management systems and the social and economic impacts that influence and/or control the volatility in the marketplace of the South Coast Air Shed.

7-3 As an example, the Draft PEA does not mention the significance of transfer and/or processing and how these operations fit in to the "Fleet Vehicle Universe". It is impossible to determine how big the "Fleet Vehicle Universe" is and the fleet mix that will be impacted by the rule making process.

7-4 As another example, the Draft PEA mentions both medium duty vehicles (MDVs) and heavy duty vehicles (HDVs) in various fleet vehicle categories for refuse hauling. Rule 1193 limits rule making to heavy duty vehicles. It is not clear what the rule making status of MDVs will be. Could we conclude that MDVs will be in limbo or possibly exempted from regulation?

7-5 Members of the association believe that important procedural issues need to be discussed to establish an institutional framework whereby the rule making process becomes an integral part of each solid waste and recycling non-profit trade association's business meeting activities. We understand the need and necessity to establish an administrative mechanism to bring draft rules and procedures to local associations to enhance the rule making process. Therefore, it is our desire to integrate this institutional framework as a regular proceeding prior to presenting the SCAQMD Board with agendized policy considerations.

7-6 We hope you will see the value in establishing this mutually beneficial relationship. We would like to discuss this matter with you and your staff as soon as possible.

Sincerely,

Paul F. Ryan
Executive Director

cc: Jack Broadbent, Deputy Executive Officer
Elaine Chang, Dr. PH, Assistant Deputy Executive Officer
Henry Hogo, Planning and Rules Manager
David Coel, Program Supervisor

RYAN. 800 725 8744 P.01

Post-it® Fax Note 7671 | Date 4/25/00 | pages 1
To Darren Stroud | From Paul Ryan
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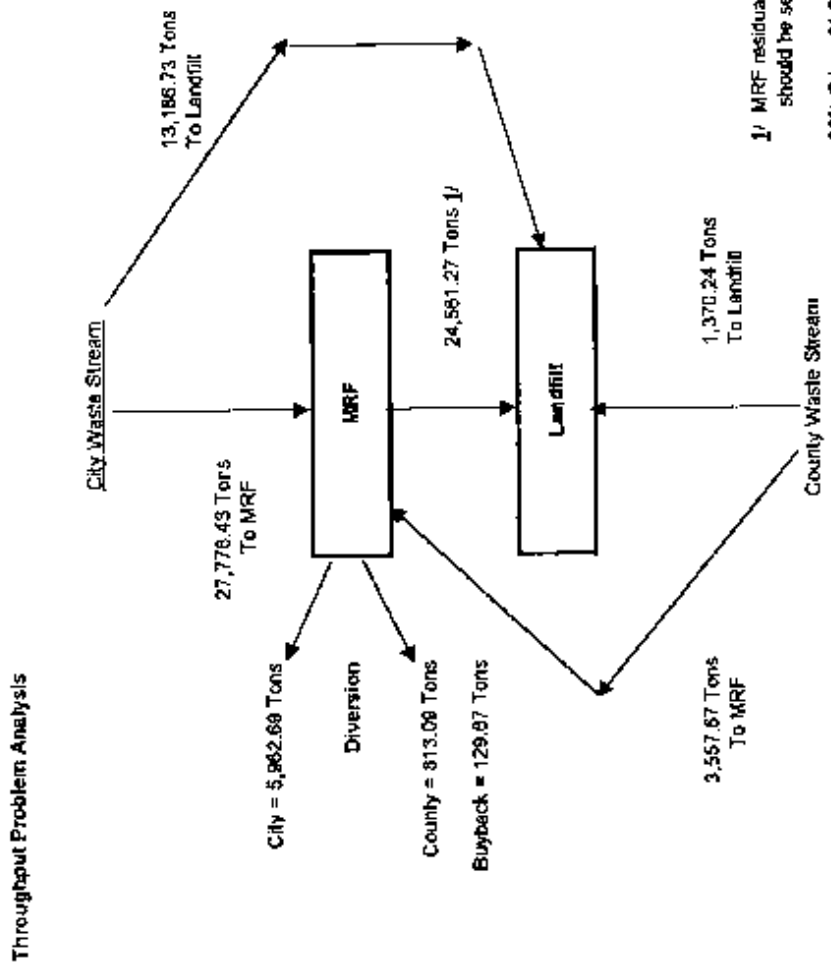

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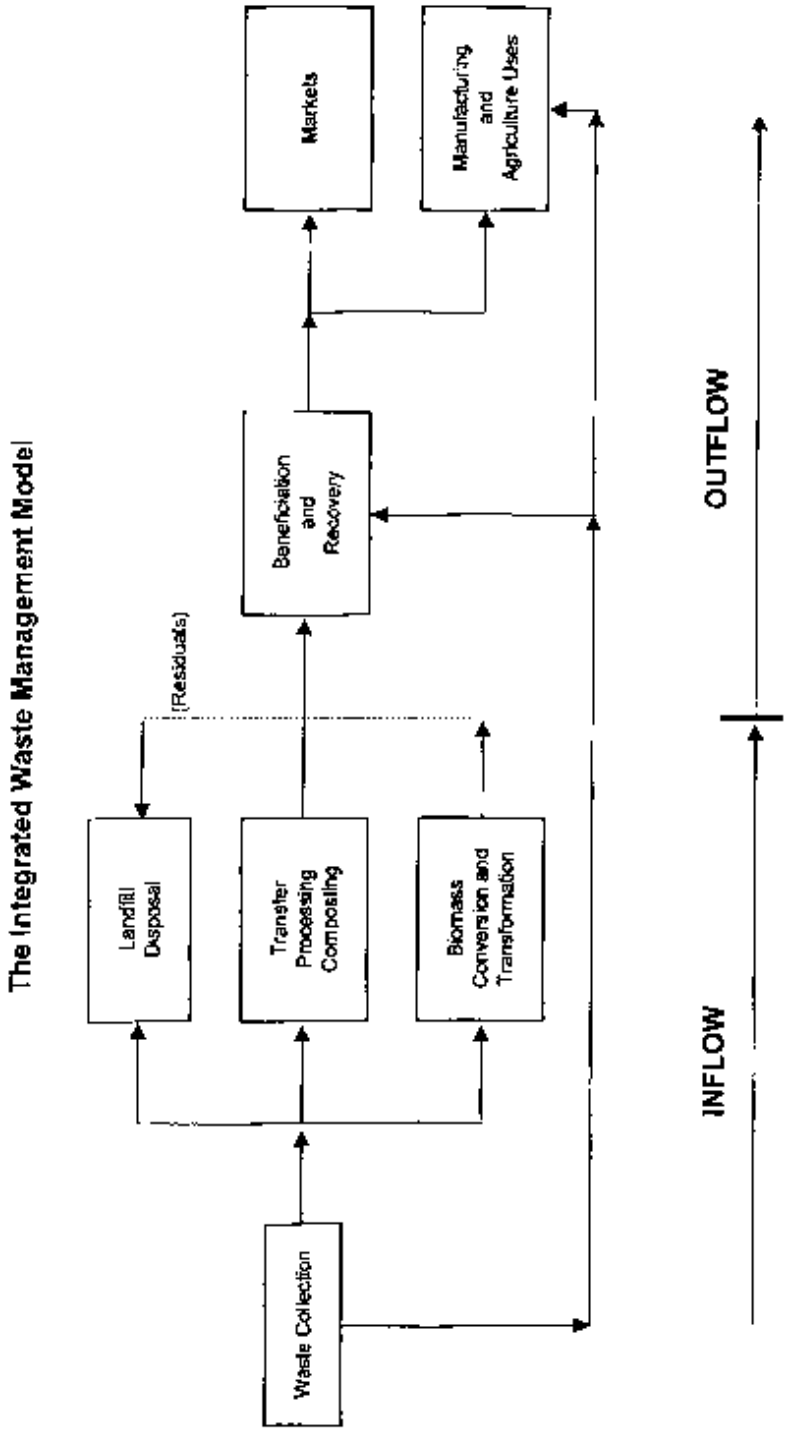

RYAN. [illegible] 725 8744 P.03

Subj: **SIC Codes**
Date: 4/7/00 12:43:41 PM Pacific Daylight Time
From: PRyan67356
To dcoel@aqmd.gov (Dave Coel)

Dave Coel:

One can generally find most of the waste collection, transport, disposal and recycling businesses by the following SIC Codes:

421200 Refuse, local collecting and transporting without disposal
495301 Hazardous waste collection and disposal
495302 Refuse collection and disposal services
495303 Waste disposal sites, non-hazardous
495399 Refuse systems (tire haulers, wood recyclers, paper collectors, etc.)
495900 Sanitary services, not elsewhere classified
951102 Waste management programs (recycling and processing, etc.)

To get a reasonably good cross match, we recommend using Dunn & Bradstreet listings, city business license listings, CD ROM telephone directories, city and county permitting and franchise information and trade association directories and listings.

You most likely will find that if you get a multi level of cross match references you will have at least 95% of the target businesses in each business sector.

If you have questions about this information or would like to discuss this matter further, please give Kelly Astor, CRRC General Counsel (714) 634-8050 or myself a call.

Paul Ryan
CRRC- Southern District
Director of Regulatory Affairs
(909) 735-5967

[illegible] Tuesday, April 25, 2000 America Online: PRyan67356 Page: 1

COMMENT LETTER 7: INLAND EMPIRE DISPOSAL ASSOCIATION

Response 7-1: In addition to establishing a general fleet vehicles working group, the SCAQMD has established a refuse haulers working group specifically to address issues and reach consensus to the extent possible on the requirements contained in PR 1193.

Response 7-2: The SCAQMD and refuse haulers have met and continue to meet regarding the issues cited by the commentator. In addition, since the release of the PEA for public review and comment, the SCAQMD has also released an Economic Assessment for the proposed fleet vehicle rules. The commentator is encouraged to review this report.

Response 7-3: PR 1193 covers transfer vehicles, rolloffs, and refuse haulers. The commentator is referred to Table 4-4 in Chapter 4 of the PEA for information regarding the number of refuse vehicles affected by PR 1193.

Response 7-4: There are several definitions of medium-duty vehicles. However, PR 1193 covers vehicles with gross weight of 14,000 pounds and greater.

Response 7-5: Based on more recent discussions in the PR 1193 meetings, it was stated that fleet operators would prefer to see a list of compliant engines and be able to select a compliant engine in their procurement. This would be the most efficient business manner for the operator. Staff is providing that list under the latest versions of PR 1193.

Response 7-6: As noted in comment #7-1, the SCAQMD has already established a refuse haulers working group. Staff is available to meet with the commentator at his convenience.

COMMENT LETTER 8

ALLEN J. BRADLY

South Coast Air
Quality Management District
21865 E. Copley Drive
Diamond Bar, California
91765-4182

Attn: Mr. D.W. Stroud:

I'm concerned about a statement in your 3/11/00 Environmental Public Notices - 2635, more curious, than anything; that statement is, "Air quality impacts From short term construction activities, was the only environmental category identified as having adverse impacts associated with the proposed project." I don't really understand. 8-1

You see, in 1949 I contracted a infectious disease From a air borne microorganism, known as Valley Fever, which is stabilized by a natural crust of algae and lichen in desert soil, until disturbed by man and his quest to build everywhere. 8-2

I was housed in a State of California entity at that time.

I've been trying to contact a lawyer to assist me in a legal action against this entity; For building a prison on environmental hazardous Land, a direct violation of environmental justice, an extension of the equal-protection guarantees of the "Constitution and Title VI of the Civil Rights Act," also a direct 8-3

8-3 cont. violation of the "California Clean air Policy", and a 1994 Presidential executive order reaffirming this concept as National Policy.

8-4 I'm not sure as to when I'll be released, but I would like to hear from someone in your office as soon as possible, or a lawyer, or the Natural Resources Defence Council. Being incarcerated makes it hard to find someone to handle my case.

Thank you for your time and consideration.

Sincerely:
Allen J. Bradley

Dated: March 13, 00

COMMENT LETTER 8: ALLEN J. BRADLEY

Response 8-1: The analysis of potential adverse environmental impacts identified construction air quality impacts from the proposed fleet vehicle rules as significant. The analysis in the PEA concluded that modifications to refineries that would enable them to produce low sulfur diesel would result in significant adverse construction air quality impacts in 2001 and 2002. This means that emissions from activities such as grading, installation of equipment, etc., exceeded mass daily significance thresholds established by the SCAQMD to determine air quality impacts from a project.

Response 8-2: Although Valley Fever is a serious disease, it is not found at Basin refineries. It is more typically found in the Central Valley of California. As noted in the PEA, construction is expected to occur at existing facilities, either existing refineries or existing public agency maintenance and refueling facilities.

Response 8-3: These statements do not refer to the environmental analysis contained in the PEA. No further response is necessary.

Response 8-4: These statements do not refer to the environmental analysis contained in the PEA. No further response is necessary.