

APPENDIX E

RESPONSES TO COMMENTS



COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

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JAMES F. STAHL
Chief Engineer and General Manager

June 30, 2003
File No: 31-380.10B

Dr. Sue Lieu
South Coast Air Quality Management District
21865 East Copley Drive
Diamond Bar, California 91765

Dear Dr. Lieu:

Comments on the Draft 2003 Air Quality Management Plan
Socioeconomic Report

The Los Angeles County Sanitation Districts (LACSD) welcome the opportunity for this review of the Draft Socioeconomic Report (Report) for the 2003 Air Quality Management Plan (AQMP). LACSD is a confederation of independent special districts serving the wastewater and solid waste management needs of about 5.3 million people in Los Angeles County. Our service area covers approximately 810 square miles and encompasses 78 cities and unincorporated territory within the county.

1-1

Although our comments contained within cover the entire document, the majority of our concerns focus on two issues. First, the Report tallies the benefits from 100% of the anticipated emissions reductions while only assessing the costs of measures yielding 30% of those reductions. The costs for obtaining 70% of the reductions were **not** calculated. Second, the Report draws significant conclusions on the Plan's benefits from one study correlating visibility to property values. We believe there were confounding factors not considered by the study's authors and thus the Plan's projected benefits may be overstated. The following expands on these two concerns as well as other comments on this document.

- The cost analysis is based on proposed control measures representing 30 percent of the emissions. Yet, the benefits analysis is performed assuming 100 percent of the anticipated emissions reductions (p.ES-5). This mismatch leads to the false conclusion that the socioeconomic benefits of the Plan far outweigh the costs.

1-2

- If individual EIRs and socioeconomic analysis are required for all control measures when they are considered for adoption (H&S Code Section 40440.8, Report p. 1-2), how will the AQMD perform those analysis for the proposed control measures they claim have no quantifiable costs (those representing 70 percent of the emissions)?



- 1-3
 - We are interested in learning how the visibility/property value study accounted for the confounding effects of high valued property close to beach areas. How did the investigators account for the fact that even in communities with low inland pollution, property near beach areas is generally more highly valued than those properties inland? The Beron visibility study estimated the visibility improvements to be roughly 12% of the total Plan benefits. The study methodology overlaid PM10 isopleths on top of Basin census tracts which included highly valued beach area property in the Basin that is coincident with cleaner air because of Basin meteorology. Therefore, it is possible that the District's estimate of the public's willingness to pay for improved visibility is overstated.
- 1-4
 - The Report states that to do a limited analysis weighing the air quality benefits of those proposed control measures with quantifiable socioeconomic impacts would not be meaningful. Nevertheless, it would be interesting to see if the air quality benefits of those "quantifiable" measures outweigh their calculable costs. There is no reason why the District can't present those numbers in addition to the numbers already presented in the Report that compare the benefits from 100 percent of the measures with the cost from control measures representing 30 percent of the emissions reductions.
- 1-5
 - The report states that more people will move into the Basin and more jobs will be created because of cleaner air. Actually, the majority of the jobs created as shown in Table 4-1 will be due to congestion relief. It is an error in logic to assume that cleaner air results in decreased congestion since it is the other way around. Second, people will not leave one area with dirty air to one with clean air if no job awaits them. The reason people will move into the Basin will be to find work, not to breathe air that will just barely meet the NAAQS.
- 1-6
 - The Report acknowledges (p.4-5) that the quantified Plan control measures that represent only 30 percent of the emissions reduction would slow down the job growth rate to 1.053 % from 1.069 % (projected amount without the 2003 AQMP). The report further states that jobs forgone from these quantified measures would be 0.2 % of the 2020 baseline. Since there will be costs associated with the remaining measures (mainly from the long-term strategies), it is likely that the job growth rate will be less than 1.053 %, and the jobs forgone will be greater than 0.2 % of the 2020 baseline. The report further acknowledges that there will be small business effects but these are not quantified. It is likely that the cost burden for many of the control measures could be shifted to small business. Finally, the Report erroneously states that cleaner air would bring the job growth rate to 1.098 % when (as shown in Table 4-1) over 80% of the jobs created will be due to congestion relief and not the hedonic impacts of cleaner air (which themselves may be overestimated).
 - The Plan may disproportionately impact smaller businesses which in recent history have been the vehicle for many minority groups to achieve economic well-being, thereby impacting those populations disproportionately compared to non-Hispanic Caucasians. This impact is not addressed in the Report. Furthermore, the Report acknowledges that the four-county region is transitioning away from heavy manufacturing to industries

- 1-6
cont
- powered by the smaller, entrepreneurial firms that will be the most disproportionately affected by these control measures (p 2-1).
- 1-7
- The Report (p. 5-1) states that there is an inherent bias in socioeconomic assessments because costs tend to be more easily measured than benefits. If that is the case, then a cost analysis of the un-quantified control measures that command 70 percent of the projected emissions reductions should be made.
- 1-8
- Correlation is not necessarily causation. The Report mentions frequently (p.5-2) the willingness to pay for visibility improvement among highly educated and higher income households. It is not clear if the visibility study took into account the innate increase in property value of coastal properties which are more highly valued even in communities with clean air, and which can only be afforded by higher income families with presumably higher levels of education.
- 1-9
- The median weekly earnings shown in Table 5-5 seem vastly underestimated. For example, that table shows the top wage earners making between \$694 to \$1218 per week. We believe that staff needs to provide further justification for these estimates. If the weekly incomes are underestimated, it is likely that the per capita disposable income impacts are equally underestimated.
- 1-10
- The Report states (p. 7-2) that the different Plan alternatives were compared against the baseline of "no control." Actually, the comparisons were made to the 1997/1999 AQMP which does have significant controls. This statement in the Report should be corrected.
- 1-11
- Because of the previously mentioned shift of Basin industries towards more smaller, entrepreneurial businesses, more of the cost burden for the control measures will be passed directly onto communities in the Basin (p 6-2). This increased cost burden could make the Basin less attractive in terms of drawing new residents and jobs, thereby making the Basin less competitive relative to other communities.
- 1-12
- The report states that anticipated increased industrial production translates to increases in exports (p 6-4). The Report further states the nature of the Basin industries is moving away from heavy nationalized industries towards smaller, more entrepreneurial businesses (p 2-1). Since these smaller operations tend to service local markets, increases in exports are less likely to occur especially considering that the majority of the control measures could hit disproportionately these smaller operations. Hence the Basin will be less competitive in the global market relative to other areas of the country due to decreased growth in exports.
 - The Report states that exports are projected to decrease by 0.18 % of baseline 2020 exports resulting from implementing quantified control measures. Again, these quantified measures, by the Report's own admission, constitute only 30% of the necessary emissions reductions. The decrease in baseline exports will be higher than stated in the report.

1-13

- The Report mentions that many communities often follow the SCAQMD's lead and implement many of the District's control measures (p 6-5). While this is undoubtedly true, they will not necessarily implement **all** of the District's controls. Furthermore, since the District has chosen to take the lead in air quality control implementation, people living in the District bear the solitary burden of being the first to force-fit many of these measures into their livelihood. While other communities may later adopt these same measures, they will not have to endure the costs of being the first communities impacted. Those communities that follow will benefit from the experience paid for by the District communities. Thus, even those communities that choose to adopt the same controls as the SCAQMD will be at an competitive advantage over those in the Basin.

Thank you for this opportunity to comment. If you have any questions or need further information, please contact Mr. Patrick Griffith at 562-699-7411, extension 2117.

Yours very truly

James F. Stahl



Gregory M. Adams
Assistant Department Head
Technical Services Air Quality Engineering

GMA:PG:tk

cc: Zorik Pirveysian
Elaine Chang
Laki Tisopoulos

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**RESPONSES TO COMMENT LETTER # 1
FROM COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY**

Gregory M. Adams
June 30, 2003

- 1-1. In the draft Socioeconomic Report released on May 22, 2003, the annual implementation cost of the draft Plan is projected at \$3.1 billion, on average (\$3.2 billion in the final Socioeconomic Report). This cost estimate represents 100 percent of the emission reductions and includes both quantified and unquantified measures. The cost of quantified measures represents only 30 percent of emission reductions intended for attainment. The costs for obtaining 70 percent of the reduction were calculated based on emission reductions in 2010 and the average cost-effectiveness of quantifiable measures. Therefore, the cost estimates do actually include the 70 percent of unquantified measures, but only as an estimate based on costs of quantified measures. Staff believes the conclusion that the plan's benefits outweigh costs is supported by the analysis.

Since the early 1970s, numerous studies have used property values to arrive at benefits from better visibility and air quality. Housing services include a diverse set of attributes priced (hedonic prices) in a complex way. Today, economists use a hedonic methodology as a standard technique to capture the prices of these attributes. The U.S. EPA has adopted this methodology in assessing benefits from improved visibility.

Hedonic prices are defined as the implicit prices of attributes that are associated with a good exchanged in the market. These implicit prices are then used to estimate demand functions or marginal willingness to pay (MWTP) functions for attributes, which was similar to what was cited in the draft Socioeconomic Report. The MWTP functions have been updated based on several recent empirical studies in the Chicago, Texas, and Los Angeles metropolitan areas. Second, the visibility study reflected most recent Census, housing, and air quality. Finally, the Berton et al. study was reviewed by the Scientific, Technical and Modeling Peer Review Advisory Group and published in a peer-reviewed journal.

- 1-2 The commentator is reminded that the Health and Safety Code 40440.8 applies to rulemaking only. Cost data is not available at this time for some measures which may rely on technologies or materials that have not been commercialized, or their control strategies are still in a conceptual stage. During the rule making process as more information becomes available regarding the control strategy and its associated cost, these measures will then be quantified. The District staff will conduct a thorough cost analysis during the rule development phase of each control measure included in the Plan.

- 1-3 The aesthetic visibility benefit of the 2003 AQMP is not the direct output of the Beron et al. study, but rather relies on the marginal willingness to pay function for visibility in that study. The visibility attribute along with many other attributes of a house and its community and environmental variables makes up the price of the house. The marginal willingness to pay function shows the price of visibility for a unit change in visibility. As with other attributes, a higher housing price will lead to a higher value for one-unit of improvement in visibility. The study was published in a peer-reviewed journal, Journal of Real Estate Finance and Economics, 22:2/3, 319-337, 2001. The study approach has been well-established for many decades and used for visibility assessments in different metropolitan areas by many noted economists in peer-reviewed journals.
- 1-4 The AQMP includes a comprehensive control strategy that is designed to bring the Basin into attainment. The AQMP must rely on existing control technologies as well as advanced pollution controls that, although are not quantifiable at this time, are promising and expected to bring the Basin into attainment. The air quality benefits of those quantified measures alone would not lead to attainment. Therefore, the analysis would not be meaningful.
- 1-5 We do not assume that clean air results in decreased congestion. Decreased congestion in terms of reductions in vehicle miles and hours traveled (VMT and VHT) is the result of implementing SCAG transportation control measures as forecasted by the SCAG transportation demand model. These control measures are part of the 2003 AQMP.

The job impact of congestion relief was performed relative to the baseline condition under which there would be no reductions in VMT or VHT from transportation control measures, while maintaining everything else the same. The job creation is due to the reduction in the transportation cost for businesses and consumers. The savings can then be invested or spent elsewhere to stimulate the economy. Additionally, less congestion increases the amenity of the local area, which will then become more attractive to businesses and economic migrants in their relocation and migration decision.

- 1-6 One key area of uncertainty in the socioeconomic assessment is the lack of detailed data to project possible job impacts due to the unquantified measures that comprise 70% of the emission reductions of the draft Plan. Therefore, it is impossible to determine at this time the job impacts of the unquantified measures. On the other hand, the projected increases in growth rates from clean air would compensate for the reduced growth rates from implementing control measures. Further analysis on the economic impacts of the measures on particular industries or small businesses cannot be assessed at this time. This analysis will take place during the rule development process. The relatively large positive job impacts from congestion relief are due to the fact that transportation of goods and services occurs in every sector of the economy, thereby resulting in a much higher multiplier effect. Since all costs associated with the implementation of

- transportation control measures have been factored in the analysis, it is also appropriate to incorporate the benefits.
- 1-7 The inherent bias exists because there is no direct way to measure benefits of clean air because clean air is not a commodity purchased or sold in a market. Such bias does not exist on the cost side because control devices are sold and purchased in a market. This bias is not related to the quantified vs. unquantified benefits. An estimate of costs of the 70 percent unquantified measures is included in the analysis.
- 1-8 The aesthetic visibility benefit is the total willingness to pay for better visibility, whose value is based on the number of households, net household income, percent of college degree holders, and visibility improvement relative to the baseline air quality in each sub-region. The intent of the study was not to address housing affordability. Please see the response to Comment 1-3.
- 1-9 The median weekly earnings data was obtained from the National Occupational Employee Survey (Bureau of Labor Statistics). The medians mean that 50 percent of employees in those categories earn more than the weekly earnings presented in the table and another 50 Percent earn less. For more detail please visit http://www.bls.census.gov/cps/pub/wkyeng_2q96.htm and <http://stats.bls.gov/news.release/wkyeng.t03.htm>.
- 1-10 The Plan alternatives were based upon a comparison with the baseline situation under which no further control beyond today's level is proposed or the 2003 AQMP would not be implemented.
- 1-11 The AQMD is mainly responsible for controlling air pollution from stationary sources. Since early 1970s many rules have targeted large businesses such as power plants and refineries. These sources have made significant effort to reduce their emissions. Over the years, the AQMD gradually has moved its effort to smaller sources in order to further reduce emissions and bring the Basin into compliance with state and federal ambient air quality standards. The focus on controlling smaller sources presents a challenge in all aspects because there is a large number of these sources, and there is considerable variation among individual businesses. For example, in some industries, it is difficult to identify all potentially applicable sources. In others, turnover rates of these businesses can be very high. Impacts of measures upon small businesses will be conducted during the rule development process to minimize unnecessary adverse impacts. It is also anticipated that the increased cost burden from control measures will be offset by the benefits associated with cleaner air.
- 1-12 The local economy is made of national and regional industries. If a particular effect (e.g., clean air) results in increased production for a national industry, there will be increases in exports from this industry assuming there is no change in the export share of this industry. If a policy affects a regional industry, there would

be very few effect on the exports of this industry because a regional industry serves the local market primarily. For this reason, impact of competitiveness would vary by industry by policy. Presently the analysis is not performed at the sub-industry level; therefore, impacts on small operations are not known. Such impacts will be analyzed during rulemaking as more information on affected facilities becomes available.

- 1-13 The District is legally mandated by the federal Clean Air Act to attain ambient air quality standards by 2006 for PM10 and 2010 for ozone and to make continued progress towards federal and state 8-hour ozone and PM2.5 standards. Air quality in the district continues to improve, yet the greater Los Angeles area still experiences the worst air quality in the nation. This has necessitated that the District take a leading role in air quality control implementation as the challenges of attaining air quality standards are much higher than in most parts of the nation. The leading role has fostered creation of new industries which would lend themselves to those regions that would follow the District's footsteps to adopt similar regulations. In this process, the district has gained a competitive edge.



June 30, 2003

Dr. Sue Lieu
South Coast Air Quality Management District
21865 E. Copley Drive
Diamond Bar, CA 91765

Re: Comments on Draft Socioeconomic Report

Air Improvement Resource, Inc. has prepared comments on the Draft Socioeconomic Report for the 2003 Air Quality Management Plan on behalf of General Motors Corporation. The comments and this cover letter are being e-mailed to you today. If you have any questions concerning our comments, please call me at 586 786-0827.

Yours truly,

Jon Heuss,
Principal Scientist
Air Improvement Resource, Inc.

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**Comments on Draft Socioeconomic Report for the 2003 Revisions to the
Air Quality Management Plan for the South Coast Air Basin**

By
Air Improvement Resource, Inc.
Novi, Michigan

June 30, 2003

2-1

These comments are written to provide input to the South Coast Air Quality Management District on the Draft Socioeconomic Report for the 2003 Air Quality Management Plan (AQMP). While the level of sophistication and detail involved in the current Draft is markedly improved compared to earlier socioeconomic assessments, we are concerned that the health benefits assessment is still based on an evaluation carried out in 1996 for the 1997 AQMP (Chestnut and Keefe 1996). As noted in both the Executive Summary and in Chapter 8, improvements in the health benefits assessment that were proposed for future effort in 1997 have not been implemented as of 2003. This is a major shortcoming of the Draft. Since the major health benefits of the plan are ascribed to PM10 reductions and the nation has had a major increase in PM research over the past five years, it is critical that the results of that research be used to inform the policy decisions made in the South Coast Basin.

2-2

As discussed below, there are several key assumptions in the health benefits analysis that are of questionable validity. For example, it is well recognized that there is a wide difference in the toxicity of the various chemical components that make up ambient PM. In the health benefits assessment, it is assumed that all PM components are equally toxic. For example, the District acknowledges in the response to comments document that "for 2006, the focus of the strategy was to obtain the maximum identifiable particulate emissions reductions, regardless of component toxicity" (Response to Comments, at page 36-1).

2-3

We recognize there may not be time to carry out the needed update before the 2003 revisions are adopted. However, it is imperative that the latest knowledge of health effects from various PM components be used to prioritize the needed controls. In the next few years, critical decisions regarding the controls needed to attain the federal 8-hour ozone standard, the federal PM2.5 standards, and the state ozone and PM standards will be made. If these decisions are not made using the best available science, controls may be focused on the wrong pollutants or precursors leading to excessive costs and less than the expected benefits. For ozone, the issue relates to the optimum combination of VOC and NOx controls, both as to the extent of overall precursor reductions, the relative emphasis on VOC and/or NOx, and the timing of those reductions. For PM, the issue relates to the appropriate focus on fine versus coarse particles and within each size range, the appropriate focus on various chemical species.

Assumptions that need to be re-evaluated

- 2-4 The Draft indicates that based on numerous epidemiological studies in recent years, concentration-response functions were developed linking PM10 and ozone with observed health effects, referencing Chestnut and Keefe 1996. The Draft further notes that “The greater breadth of the epidemiology literature allows the characterization of more health effects than was possible in the past.” Indeed, there has been an outpouring of studies in recent years that report weak associations of PM and/or other pollutants with health outcomes. However, the interpretation of this literature is still controversial.
- 2-5 In using this literature to develop the health benefits assessment, a number of assumptions have been made. The first assumption is that ambient PM10 at current levels in California causes death and disease. A second assumption is that single-pollutant models can describe the risk. A third assumption is that all chemical components of PM are equally toxic so that decreasing any form of ambient PM10 will decrease the risk to human health. A fourth assumption is that the mass of PM in a 24-hour period is an appropriate metric to use to assess the impacts on morbidity and mortality. A fifth assumption is that the dose-response is linear with no threshold.
- There are differing views in the scientific community as regards the strength of the data to support each of these assumptions. AIR, Inc. provided a detailed summary of the range of viewpoints in a March 25, 2002 submission to ARB.¹ Since these comments are part of the public record in California, they will not be repeated here. Suffice it to say that to the extent there are problems with any of the five assumptions noted above, there is a corresponding uncertainty in the health benefits assessment.
- 2-6 In May 2002, the Health Effects Institute (HEI) notified interested parties that there were problems in the S-Plus statistical software package that had been widely used in time-series studies since 1996. Initially, there were two problems identified with the S-Plus software. First, the default convergence criteria used in fitting Generalized Additive Models (GAMs) could lead to miscalculation of the estimates of effect. Second, a programming shortcut used in calculating the standard error underestimated the true standard error. The combined effect of these problems was typically to overestimate the effect estimate and underestimate its standard error.
- After the problems with S-Plus were identified by the Johns Hopkins investigators and a preliminary re-analysis of National Morbidity, Mortality, and Air Pollution Study (NMMAPS) was made available, it was clear that many of the recent time-series studies using generalized additive models (GAMs) were suspect. Based on discussions with the Clean Air Scientific Advisory Committee (CASAC) in July 2000, the U. S. EPA developed a plan for re-analyzing the most important studies and providing a form of peer review for the results. EPA identified the key studies, informed the authors, and

¹ Review and Critique of CalEPA March 12, 2002 Public Review Draft “Draft Proposal to Establish a 24-hour Standard for PM_{2.5}” as part of the Review of the California Ambient Air Quality Standards for Particulate Matter and Sulfates, Air Improvement Resource, Inc. March 25, 2002.

provided a guideline for what re-analyses should be carried out. In addition, a Workshop was held in November 2002 to bring the principal authors together to present their preliminary re-analyses and discuss the results. A Special Panel was convened by the Health Effects Institute to review the submissions of new results from the authors, compile and discuss the results, and report their findings in a HEI Special Report.² That report was made available on the HEI web site in May 2003.

The HEI Panel included two commentaries in the Special Report – one on the NMMAPS re-analysis and a second on all the other re-analyses. The re-analysis of NMMAPS is particularly germane to the District’s health benefits analysis. The city-by-city PM10 associations in single pollutant models were highly variable, ranging from positive associations of up to 4 % per 10 µg/m³ in some cities to negative associations of up to 3 % per 10 µg/m³ in other cities. The combined result suggested that overall there was still a small association of the order of 0.2 % per 10 µg/m³. This, however, was half of the strength of the original NMMAPS PM10 association.

2-6
cont.

The second HEI commentary notes that the re-analysis changed the quantitative results anywhere from a small (<10 %) to a significant amount (>40 %) depending on the study. However, the re-analysis exercise raised several new issues. First, the Panel indicates that determining the appropriate degree of smoothing has become a central issue. Second, it is clear that the appropriate specification of weather is still an important issue. Third, there is less clarity about the degree of heterogeneity in the PM results from city to city. Fourth, the standard practice of choosing variables and choosing degrees of freedom using the Akaike information criterion (AIC) is not necessarily optimal.

These issues caused the Panel to note that the re-analysis provide a renewed awareness of the uncertainties involved in interpreting time-series studies. Since the appropriate degree of control for time is unknown and the appropriate specification of the affects of weather has not been determined, the HEI Panel indicated that this awareness introduces an element of uncertainty into the time-series studies that has not been widely appreciated previously.

2-7

As the District moves forward, the new information concerning the interpretation of time-series studies needs to be factored into the health benefits assessment and the evidence for and against the various key assumptions noted above should be re-evaluated. In particular, the evidence for toxicity of individual PM components needs to be carefully evaluated.

2-8

There are several important implications that arise from treating all PM as equally toxic. Historically, control programs for PM have focused on the chemical components present in the largest amounts by mass and the sources that are most controllable in terms of technology and political acceptability. If there is a wide range in the toxicity of individual PM chemical components as evidenced to date in controlled exposures of various PM components, the control program may reduce PM mass but not necessarily its

² Special Report: Revised Analyses of Time-Series Studies of Air Pollution and Health, Health Effects Institute, Boston, MA, May 5, 2003.

2-8
cont.

toxicity. A 2001 National Research Council Report on PM research progress³ underscores this point when it concludes:

“At present, there is a lack of a sufficient understanding of the most toxic particle constituents, the toxicological mechanisms through which they act, and the actual exposures experienced by people. In the absence of such understanding, a nationwide control strategy might reduce some kinds of PM exposures while failing to protect public health adequately, if the types of PM controlled are not the most important in causing adverse health effects.”

Because of the problems in interpreting the epidemiology, in order to focus the South Coast Plan on the PM components or other pollutants of greatest toxicity, the District should evaluate the evidence from controlled studies of the toxicity of individual PM components and gases.

Additional comments

2-9

There appears to be a mistake on Page 3-2 where the health benefit estimate in the Draft is referred to as the quantifiable health benefit of achieving at least the state ozone and PM standards. Presumably, the text should indicate that the estimate is based on meeting at least the “current federal” standards rather than the more stringent state standards.

2-10

Growth assumptions The focus of the plan is to demonstrate attainment of the federal PM10 standards by 2006 and the federal 1-hour ozone standard by 2010. Since insufficient specific controls to attain the 1-hour ozone standard are identified in the Draft AQMP revisions, a substantial component of the plan (70 % of the controls) consists of long-term measures that are still to be determined. An implicit assumption in the plan is that air quality standards can be achieved in the Basin with continued population and economic growth. However, within a few years, the District will be required to develop plans to meet the federal 8-hour ozone and PM2.5 standards. This will require additional emission reductions well beyond those included in the current plan. In addition, the State of California has even more stringent ozone and PM standards. The District has the tools to estimate the reduction in emissions needed to attain all these standards. In order to provide the policy makers with the information needed to choose the optimum path to acceptable air quality, estimates of the background of ozone and PM in the Basin and estimates of the PM, VOC, and NOx carrying capacities for the state standards should be developed. With this information, the likelihood of attaining all state standards in the presence of continued population and economic growth can be ascertained.

2-11

Key areas of uncertainty The section on key uncertainties on page ES-5 needs to include a discussion of the uncertainty in the health benefits due to differences in interpretation of epidemiology studies, differences in economic evaluation of health endpoints, and differences in PM toxicity. In addition, the significant uncertainties in

³ National Research Council, “Research Priorities for Airborne Particulate Matter: III. Early Research Progress (2001)” at page 145.

2-11
cont

model predictions due to uncertainty in model formulation and model inputs should be mentioned.

2-12

Visibility reduction benefits The visibility reduction benefit was derived from a recent study in the Basin. The uncertainties associated with this study and its use in the draft need to be discussed. How does the “willingness to pay” from this study compare to other estimates in the literature? How well did this study control for all other factors that influence housing prices? What is the uncertainty in the 45 % factor used to translate the willingness to pay results into a visibility reduction benefit?

2-13

Selection of possible alternatives The text on page ES-4 indicates that the draft will be helpful in choosing the alternative that provides the best balance of socioeconomic benefits and impacts. Given the major uncertainties noted above, the small differences in Tables 7-1 and 7-2 among the alternatives (other than the “no-plan” alternative) may not be significant or meaningful. Another factor that should be considered in evaluating the alternatives is the extent to which they help make expeditious progress toward attainment of state standards and upcoming federal standards. To determine this, it is not enough to assume that maximum emission reductions will be the optimum path to clean air. It is well established that ozone formation chemistry is non-linear and that the same amount of man-made ozone can be formed from many different combinations of precursors. PM10 is also a complex pollutant, but for different reasons. PM10 is a complex mixture of many different chemical substances ranging from carbonaceous material formed during combustion, to inorganic salts formed in atmospheric reactions from gaseous precursors, to metals, to crustal elements, to plant and animal parts. In order to choose the alternative that will improve public health and welfare in as cost-effective manner as possible, which should be the ultimate goal of the AQMP, the relative toxicity of various PM components should be taken into account. In addition, there are trade-offs between various precursor gases or between gases and PM components that need to be considered. If these factors are not considered explicitly, the AQMP will be less than optimum.

**RESPONSES TO COMMENT LETTER # 2
FROM AIR IMPROVEMENT RESOURCE, INC.**

Jon Heuss
June 30, 2003

- 2-1 Thank you for your comment. Depending on the funding availability, the District intends to commit itself to implement those technical enhancement projects identified in Chapter 8 of the Socioeconomic Report. These refinements would include the consideration of changes in life expectancy, the separate effects of different pollutants to help examine correlation between pollutants, the study of at risk populations to reduce double counting of health effects of pollutants, and to identify significant pollutant thresholds for health impacts.
- 2-2 There may be different toxicity associated with various chemical components that make up the total PM mass emissions. However, research has not advanced to the stage to associate quantifiable health effects with these components and hence the monetary valuation of health effects. Furthermore, the health based PM (PM10 and PM2.5) standards promulgated by the U.S. EPA were based on the health impacts of the total PM and not on the individual components.
- 2-3 At the current time, there is no published literature available concerning the health effects of the individual components of PM10. All available data is based solely on the total particulate mass. The 2003 AQMP models the effect of the various precursors on total ozone and PM. Therefore, the District already addresses the commentator's concerns about the effect of reduction in the various precursors on the overall air quality. As the state of the science moves forward, the air quality models will be updated to include improvements in order to ensure more accurate predictions of ozone and PM.
- 2-4 There have been numerous epidemiology studies showing associations between PM and other pollutants with health outcomes. The CARB has reviewed them and concurred with their findings. Please also refer to the response to Comment 2-2.
- 2-5 Research on regional differences in health outcomes of PM10 is not conclusive. Currently, all the health benefit assessment models use a single pollutant to determine the risk factor. Please refer to responses to Comments to 2-2 and 2-3 on PM chemical components. Epidemiology literature indicates that mortality and certain other health effects (e.g., chronic bronchitis) are more associated with long-term exposure to PM, which supports the use of annual average PM10 concentration as was performed in the Socioeconomic Report for the 2003 AQMP. Research on whether the dose-response functions are linear is not consistent to draw conclusions.

- 2-6 The district staff is aware of these findings.
- 2-7 The problem associated with the statistical software does not alter the association between air pollutants and health outcome, but the magnitude of association. However, this issue alone may not warrant a re-evaluation of all time-series studies. Please refer to the response to Comment 2-2.
- 2-8 Please refer to the responses to Comments 2-2 and 2-3.
- 2-9 The health benefit was accounted for up to the level of the state standards. Therefore, the cutoffs are the state, not federal standards.
- 2-10 Although there is currently no legal obligation to develop an attainment strategy with respect to the new 8-hour ozone and PM_{2.5} federal standards, staff has developed a preliminary analysis to determine the Basin's level of exceedences of these standards based on the attainment strategy commitments with respect to the federal one-hour ozone and PM₁₀ standards. Additional control strategies required reaching the federal 8-hour ozone and PM_{2.5} standards will be identified in the next AQMP. So will additional control for attaining the state ozone and PM standards.

There is no legal deadline for the District to meet the state standards at this time. The proposed modifications document provides additional concepts for long-term measures. However, control measures that could potentially result in the 70 percent of emission reductions in the proposed plan are not thoroughly identified (black box). State standards are more stringent than federal standards. It would be too speculative to generate estimates of PM, VOC, and NOX carrying capacities for the state standard at this time.

- 2-11 The risk factors used in the health benefit assessment represent median estimates. The Chestnut and Keefe (1996) report has detailed discussions on a range of values pertaining to various health endpoints. Please also refer to Appendix V to the 2003 AQMP (Modeling and Attainment Demonstrations) and the response to Comment 2-2.
- 2-12 The Beron et al. study (2001) used different functional forms and two estimators to address the uncertainty issue. The visibility benefit estimate from this study was larger than those from contingent valuation studies and also larger than that from an earlier hedonic study for the same geographic area. The study regressed housing prices on house-, neighborhood-, and air pollution-level attributes. The visibility coefficient gave the marginal effect of visibility on housing prices. Section 4 (Specification Error) of the Beron et al. study provides a detailed discussion on other factors that influence housing prices. The study ([Journal of Real Estate Finance and Economics](#), 22:2/3, 319-337, 2001) provides more details on the issue of the 45 percent adjustment factor.

The 45 percent factor was used to remove the possible embedding effects between visibility and health. For a detail discussion on its uncertainty, please refer to Loehman et al. [Land Economics, 70(4), 478-98, 1994].

2-13 Please refer to responses to Comments 2-2 and 2-3.

GATZKE DILLON & BALLANCE LLP

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1921 PALOMAR OAKS WAY, SUITE 200
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June 27, 2003

Dr. Sue Lieu
South Coast Air Quality Management District
21865 East Copley Drive
Diamond Bar, California 91765-4182

*By Telecopier and
U.S. First Class Mail*

Re: *Comments on the Draft Socioeconomic Report*

Dear Dr. Lieu:

This letter is submitted on behalf of the County of Orange ("County") in its capacity as the owner and operator of John Wayne Airport, Orange County ("JWA") located in Costa Mesa, California. This letter contains the County's written comments on the Draft Socioeconomic Report, issued by the South Coast Air Quality Management District ("SCAQMD" or "District"). The County appreciates the opportunity to provide its comments.¹

GENERAL COMMENTS

3-1

We are very concerned with the District's statements at Page 1-2 of the Report which indicate that socioeconomic impacts are somehow not required to be considered in connection with the preparation of this Air Quality Management Plan ("AQMP"). We respectfully disagree with this legal position for the following reasons. The California Clean Air Act specifically requires the District Governing Board to determine that the AQMP is a cost-effective strategy that will achieve attainment of the state standards by the earliest practicable date. CAL.HEALTH & SAFETY CODE §§40440(e), 40703, and 40913(b). In addition, the AQMP must include an assessment of the cost-effectiveness of available and proposed measures and a list of the measures ranked from the least cost-effective to the most cost-effective. *Id.* at §40922. Specifically, Section 40922 provides: "In developing an adoption and implementation schedule for a specific control measure, the District shall consider the relative cost effectiveness of the measure, as determined under subdivision (a), as

¹ The County has previously submitted comment letters on both the Notice of Preparation of the Environmental Impact Report as well as on the draft 2003 Air Quality Management Plan. Please see enclosed comment letters to Mr. Michael Krause from Ms. Lori Ballance, dated September 27, 2002, to Mr. Zorik Pirveysian from Ms. Lori Ballance, dated March 28, 2003, and from Ms. Lori Balance to Mr. Michael Krause, dated May 21, 2003.

GATZKE DILLON & BALLANCE LLP

Dr. Sue Lieu
South Coast Air Quality Management District
June 27, 2003
Page 2

3-1
cont. well as other factors including, but not limited to, technological feasibility, total emission reduction potential, the rate of reduction, public acceptability, and enforceability.”

3-2 Consistent with these requirements, in our May 22, 2003 comment letter on the Draft Environmental Impact Report (“Draft EIR”) for the 2003 revisions to the AQMP, we requested a full socioeconomic report, which analyzed the full costs of any possible regulatory program on the airports and airline industry in terms of the increase in TONS of emissions reduced versus program and improvement costs. In addition to the program and improvement costs, we requested that the cost effectiveness analysis take into account the effect any emission reduction strategies will have on new entrant air carriers, and the importance of maintaining a competitive airline environment in the Basin. A regulatory scheme that would inhibit competition would probably result in significantly higher airfares to and from the Basin than other parts of the county, which could in turn have a seriously negative effect on the local economy.

3-3 After carefully reviewing the Draft Socioeconomic Report that was provided, we remain very concerned that these issues have *not* been adequately considered. The issues that we raised are not addressed in the Draft Socioeconomic Report, and as a result, we request that the Draft Socioeconomic Report be significantly revised, prior to being issued in its final form, to include consideration of these issues. Without careful attention and response to these issues, the District will be unable to structure appropriate and effective air quality regulations which might affect the operations of the air carrier airports in the Basin while minimizing the environmental impacts of those regulations.

SPECIFIC COMMENTS

EXPANSION OF REGULATORY AUTHORITY

3-4 The Draft Socioeconomic Report states, “the AQMD has proposed to expand its regulatory program to mobile sources, in some cases, pending legal authority. These proposed mobile source measures include a mitigation fee type program for federally mandated sources (e.g. trains, *planes*, and trucks), an emission fee program for port-related vehicles, and regulations for in-use off-road vehicles. These measures would be implemented between 2008 and 2010. (*Emphasis added.*)” See, Draft Socioeconomic Report, p. 1-1.

We continue to have a fundamental disagreement with the District regarding the extent of the District’s authority to regulate airports. Specifically, we continue to believe that, to the extent the District attempts to regulate aircraft related emissions, directly or indirectly (as is the case with

GATZKE DILLON & BALLANCE LLP

Dr. Sue Lieu
South Coast Air Quality Management District
June 27, 2003
Page 3

3-4
cont.

the mitigation fee program), any such regulation would constitute a constitutionally impermissible local intrusion into a federally preempted field of regulation. *People of State of Cal., v. Dept. of Navy* (1977) 431 F.Supp. 1271, 1281; *Washington v. General Motors Corp.* (1972) 405 U.S. 109, 92 S.Ct. 1396, 31 L.Ed.2d 727. The District's attempted indirect regulation of airport related emissions is an impermissible and unconstitutional intrusion into an area which is pervasively and exclusively controlled by federal law and federal authority. *City of Burbank v. Lockheed Air Terminal, Inc.* (1973) 411 U.S. 624, 633. The FAA similarly has suggested in previous correspondence to the District that the District lacks any regulatory authority to directly or indirectly affect or control aircraft operations at Basin Airports for air quality purposes and questions whether the airport proprietor has the authority to regulate airport pollution. See, letter from the FAA Assistant Chief Counsel, dated March 5, 1993, a copy of which can be provided upon request.

3-5

In addition to this fundamental legal disagreement with the District regarding this shift in regulatory control, the inclusion of this "planned-for" shift in responsibility for airports is improper in the Draft Socioeconomic Report. The SCAQMD admits that the costs of such a shift have not been quantified at this time, nor have the groups that may be affected disproportionately by such a shift been identified. *Id.* at p. 8-2. In fact, the District is so bold as to explicitly *defer* quantifying the costs and identifying which groups might be affected disproportionately until further AQMPs. Unless or until such information is obtained, and until the legal support for such a shift is provided, discussion of this proposed responsibility shift should not be considered further and this discussion should be deleted from the Draft Socioeconomic Report as speculation. In addition, any discussion of a mitigation fee type program for federally mandated sources must be deleted from the 2003 AQMP.

TRAFFIC CONGESTION RELIEF

3-6

In a number of places, the Draft Socioeconomic Report discusses traffic congestion relief. See, Draft Socioeconomic Report, p.2 A-5. The 2003 AQMP includes the State's strategy for reducing emissions from sources that are primarily under State and federal jurisdiction, including mobile sources such as aircraft. Of specific concern is the possible approach for the California Air Resources Board's ("CARB") long-term strategy directed towards airports. Again, the 2003 AQMP does not provide the specific language of this control measure and, instead, describes the measure in the following broad, non-specific terms: *Pursue Approaches to Reduce Emissions from Vehicles Traveling To and From Airports*. Although it is unknown what strategies would be proposed, specifically, to reduce vehicle miles traveled ("VMT") and related vehicle emissions, the County is specifically concerned with both the accuracy and completeness of existing data that SCAQMD is relying upon for emission reduction estimates.

GATZKE DILLON & BALLANCE LLP

Dr. Sue Lieu
 South Coast Air Quality Management District
 June 27, 2003
 Page 4

3-6
 cont.

It is important that in estimating reductions in the number of future airport generated trips, that CARB (and the District) be seriously concerned with both the accuracy and completeness of the existing data that it relies upon for these estimates. One of the currently or recently completed Technology Advancement Office ("TAO") projects referred to in the 2003 AQMP in Table 7-4 is the study of electric hotel shuttle service at LAX. We must emphasize that data obtained from LAX for purposes of estimating the percentage change that will result in airport generated trips through implementation of various proposed measures is clearly inapplicable to the other airports in the Basin. The average round trip for passengers traveling to and from JWA is fifteen (15) miles, substantially less than the average round trip for passengers traveling from LAX. If CARB's and the District's process for the development of measures for the Basin is based upon data that is inaccurate, then the AQMP itself will be seriously flawed; and it creates the risk that airports located, and the airlines operating, in the Basin will be faced with expensive regulatory requirements for air quality "problems" which may not exist, or which may be over described.

3-7

In addition, any measure by CARB or the District which may affect the operational capacity of one or more of the airports in the Basin might be perceived as providing air quality impact reductions at the constrained airport, but this does not mean that there has been a net air quality benefit in the Basin generally. If passenger traffic is reduced at one airport in the Basin because of regulatory constraints, that traffic may be served at another Basin airport or the displaced passengers may choose to drive to their ultimate destination. For environmental purposes, the significant difference is that those passengers will have to either drive further to reach the second airport to obtain the air service that they desire, or they will have to drive to their final destination, thereby increasing regional VMT and traffic congestion - with the concomitant negative impacts on air quality.

It is crucial that the Draft Socioeconomic Report be revised to appropriately and accurately reflect the potential impacts of any measures on traffic congestion, both positive and negative.

INADEQUATE COST-EFFECTIVE ANALYSIS

3-8

Although the Socioeconomic Report attempts to provide a preliminary analysis of the cost-effectiveness of the regulatory measures proposed, this preliminary analysis does not adequately address the public policy concerns which the District must consider. Certainly, it is imperative that before any further analysis is conducted regarding any of the measures provided in the 2003 AQMP directed toward airports and airlines, the District complete appropriate and complete analyses of the cost-effectiveness of all of the proposed measures as mandated by California law. It is important for the District to take a "hard look" at these issues and to provide airports in the Basin with information

GATZKE DILLON & BALLANCE LLP

Dr. Sue Lieu
South Coast Air Quality Management District
June 27, 2003
Page 5

3-8

which measures the full costs of any and all possible regulatory programs in terms of the increase in emission reduction costs versus program and improvement costs.

CONCLUSION

We would like to continue to work closely with the District in formulating any regulatory strategies relating to airport and aircraft emissions. In the meantime, if you have any questions regarding the issues addressed in this letter, please do not hesitate to contact us at your convenience.

Very truly yours,



Lori D. Ballance
of
Gatzke Dillon & Ballance LLP

LDB/lgh
Enclosures

cc: Airport Director, John Wayne Airport
Assistant Airport Director, John Wayne Airport
Deputy Director, Public Affairs, John Wayne Airport
Deputy Director, Operations, John Wayne Airport
Deputy Director, Finance and Administration, John Wayne Airport
Deputy Director, Facilities, John Wayne Airport
Deputy Director, Business Development, John Wayne Airport
Manager, Environmental/ Facilities Planning, John Wayne Airport
County Counsel, County of Orange
(w/enclosures)

**RESPONSES TO COMMENT LETTER # 3
FROM GATZKE DILLON & BALANCE LLP.**

Lori D. Balance
June 30, 2003

- 3-1 As mentioned in the draft report, there is no legal requirement for conducting the socioeconomic analysis of AQMP. The California Health and Safety Codes mentioned by the commentator apply to the assessment of the cost-effectiveness and the ranking order of cost-effectiveness only. Such information has been included in Table 6-7 in Chapter 6 of the draft 2003 AQMP. For those measures not listed in Table 6-7, no costs were able to be determined even after making every reasonable effort to quantify the impacts. However, during the rule development process of these control measures into rules, a detailed cost analysis will be conducted to determine the cost impacts from the control strategies on the affected industries.
- 3-2 The air transportation industry, including airports, is expected to incur an average annual cost of \$19 million from implementation of the long-term EPA concept strategy (formerly AIRPORT-1) and some SCAG transportation control measures. The long-term strategy would require the retrofit of engines and more stringent standards for new aircraft. Since the strategy would be applied to all federal sources across the nation, there should be no loss of competitiveness for the airline industry in the District.
- 3-3 Please refer to responses to Comments 3-1 and 3-2.
- 3-4 The mitigation fee program is considered as a substitute for certain concepts in the long-term measure (the black box). At this point, the proposed long-term strategies discussed in the Plan are still subject to change as to their specific implementation. While these are federally regulated sources in terms of tailpipe and off-road emissions, the District may suggest possible control mechanisms necessary for air quality attainment. There may be a potential for use regulations as well.
- 3-5 The final AQMP clarifies that the mitigation fees as proposed would come from U.S. EPA as grant monies or paid by facilities through federal rulemaking. There is no discussion on the “planned-for” shift in responsibility for airports in the AQMP or the Socioeconomic Report.
- 3-6 The reductions in VMT as assessed in the Socioeconomic Report are the result of implementing SCAG’s transportation control measures. These estimates are not origin-destination specific.

- 3-7 As clarified in the revised AQMP, the measures that apply to airports as proposed by CARB staff have been moved to the long-term strategy as potential control concepts to be implemented by the U.S. EPA. Measures that would be implemented by the federal government would be expected to apply to all airports. Therefore, the concern that regulatory constraints at one airport within the District could increase traffic at another airport in the District is not supported by the proposed control measures in 2003 AQMP.
- 3-8 Please refer to responses to Comments 3-1 and 3-2.



MEMBERS:

Humboldt Bay Harbor District
Port of Hueneme
Port of Long Beach
Port of Los Angeles
Port of Oakland
Port of Redwood City
Port of Richmond
Port of Sacramento
Port of San Diego
Port of San Francisco
Port of Stockton



OFFICERS:

Michael J. Giari
President
Richard D. Steinke
First Vice President
Jerry A. Bridges
Second Vice President
Dianna L. Baker
Treasurer
Timothy N. Schott
Association Secretary

VIA FACSIMILE

June 30, 2003

Dr. Sue Lieu
South Coast Air Quality Management District
21865 East Copley Drive
Diamond Bar, CA 91765-4182

Subject: Comments on Draft Socioeconomic Report for the
2003 Air Quality Management Plan

Dear Dr. Lieu:

The California Association of Port Authorities (CAPA) appreciates the opportunity to comment on the Draft Socioeconomic Report for the 2003 Air Quality Management Plan (AQMP). CAPA is the trade association for California's eleven publicly owned deep water ports, and includes the Humboldt Bay Harbor District and the Ports of Hueneme, Long Beach, Los Angeles, Oakland, Redwood City, Richmond, Sacramento, San Diego, San Francisco, and Stockton.

CAPA members provide California's gateway for domestic and international trade and our Association is dedicated to maintaining a healthy, vital port system throughout the State. We are confident that by working in partnership with local air quality management districts, state and federal regulatory entities, and the maritime community, we can achieve significant emission reductions from port-related activities. We look forward to working with you to ensure that the final Socioeconomic Report is based on the best applicable data and that the measures proposed in the AQMP achieve the goal of significant emissions reduction while remaining feasible, equitable and cost-effective.

4-1

CAPA has significant concerns with the Draft Socioeconomic Report for the 2003 AQMP. While we appreciate the hard work of District staff in preparing the report, many areas lack clarity and it is at times difficult to discern which measures – or group of measures – is being discussed. Since the report frequently combines measures when discussing benefits and impacts,

4-1
cont.

it is impossible to understand which measures are being credited specifically with what benefits and costs.

4-2

Significant elements of the AQMP are not adequately discussed or appear to be ignored because they are speculative in nature at this time. Potential impacts from unknown mitigation fees on port-related sources (FSS-07 of the AQMP), for example, are not addressed at all. CAPA is quite concerned that additional mitigation fees will increase the cost of doing business at the Ports of Long Beach and Los Angeles, and that ports in other nations, other states, or other regions of California, will gain significant competitive advantage over those ports situated in the South Coast Air Quality Management District. Diversion of cargo will result in economic loss, as well as employment loss, to the region, and yet this issue is not addressed at all in the Socioeconomic Report. In addition, if cargo diversion is significant, some goods currently arriving via ship or rail may be diverted to trucks arriving from outside the region - not subject to SCAQMD regulation - greatly increasing emissions and traffic congestion.

4-3

The Ports of Long Beach and Los Angeles have for several years been investing heavily in on-dock rail and grade separations in order to encourage the use of rail as much as possible. Trains produce significantly less air pollution than trucks on a cargo ton-mile basis and the Ports of Long Beach and Los Angeles, in partnership with the State, have invested more than \$2 billion in the Alameda Corridor in order to lessen the adverse impacts, including air quality impacts, of port activities on the local community.

4-4

The impact of proposed mitigation fees on federal sources (FSS-07 of the AQMP), if applied to train movements could result in the diversion of cargo from rail back to trucks, resulting in thousands of additional truck trips and greatly increasing emissions. Likewise, cargo diversion from trains to trucks would result in increased congestion on local freeways, further impacting air quality and greatly reducing the traffic congestion benefits identified in the Socioeconomic Report. These potential impacts should be fully addressed.

4-5

In addition to concerns regarding the potential negative economic impact of FSS-05 and FSS-07 we note that the Socioeconomic Report fails to address the potential costs of the proposed cold-ironing of marine vessels. The feasibility of cold-ironing is still very much in question. If feasible, cold-ironing would require massive shoreside expense and in many cases very significant vessel retrofit. Cargo vessels also require large amounts of power to cold-iron at berth and power demand is expected to grow as vessel size grows. With the recent, and on-going, energy crisis we face in California, the potential impact to energy production, availability and cost should be considered and adequately addressed in this report.

4-6

Although we recognize that regional equity will be difficult if not impossible to achieve, we note that the LA CO South Sub-region (in which the ports are located) has the largest share of costs identified in the Socioeconomic Report, and enjoys one of the lower benefit levels of the AQMPO. Table 5-1 and Table 5-2, respectively, indicate a 5% Average Annual Benefit and an 18% Cost share for the quantified measures.

Dr. Sue Lieu

3

June 30, 2003

4-7

We strongly suggest that the SCAQMD recirculate a revised Socioeconomic Report that more fully addresses the potential costs of the AQMP. Although not a comprehensive list, CAPA believes current deficiencies include the failure to address potential diversions of cargo, and attendant jobs and economic benefit, to other regions of the state, other states or other nations; the potential for cargo diversions from rail to truck to lessen the traffic congestion benefits identified in the report; and the failure to adequately examine marine vessel proposals and their associated costs.

Again, we appreciate the opportunity to comment. If you have questions or concerns regarding CAPA's comments, please don't hesitate to call (916-444-7158).

Sincerely,



Tim Schott
Association Secretary

cc: All CAPA Members
John McLaurin, Pacific Merchant Shipping Association
Marc MacDonald, Pacific Maritime Association
Tom Chase, American Association of Port Authorities

**RESPONSES TO COMMENT LETTER # 4
FROM THE CALIFORNIA ASSOCIATION OF PORT AUTHORITIES**

Tim Schott
June 30, 2003

- 4-1 Table A-1 in Appendix A provides a list of control measures analyzed in the socioeconomic report. The socioeconomic report is designed to analyze the socioeconomic impacts from implementing the 2003 AQMP. As such, the benefits are related to air quality improvements resulting from implementing all the measures in the 2003 AQMP. During the rule development process, a socioeconomic analysis will be conducted on the individual measures as it becomes a proposed rule.
- 4-2 Control measure FSS-07 includes port-related mobile source such as ships, trains, trucks, and off-road equipment. Emission reductions and cost-effectiveness for the port-related measures are not quantified at this time because of the uncertainties associated with the proposed fee structure and the jurisdictional and implementation issues surrounding the mitigation fee program. A more thorough cost analysis will be conducted at the time these port-related measures are adopted.
- Finally, the commentators' concern regarding possible diversion of cargo from rail back to trucks is not supported. As currently proposed, FSS-07 would apply to port-related activities, regardless of the route or mode taken. So changing the transport mode, i.e., from rail to truck, would not necessarily be expected. However, these types of impacts will be evaluated at the time of rule development.
- 4-3 Your comment is noted.
- 4-4 Please see the response to Comment 4-2.
- 4-5 The costs and emission reductions for Control Measures FSS-05 and FSS-07 are not quantified. Please refer to responses to Comments 4-2 and 4-4. Cold-ironing is part of the least toxic alternative (Chapter 7 of the Socioeconomic Report). Its cost is included in the cost of this alternative. Other specific impacts of cold-ironing will be further evaluated and considered during the rule development process.
- 4-6 Your comment is noted. The benefit of the Plan for the Los Angeles County South sub-region is expected to be lower because relative to other sub regions it has better air quality.
- 4-7 Please refer to the response to Comment 4-2.



The Port of Long Beach

P. O. BOX 570 · LONG BEACH, CA 90801-0570 · TELEPHONE (562) 437-0041 · FAX (562) 901-1725

June 30, 2003

Sue Lieu
South Coast Air Quality Management District
21865 East Copley Drive
Diamond Bar, California 91765-4182

Subject: Comments on Draft Socioeconomic Report for the
2003 Air Quality Management Plan

Dear Dr. Lieu:

The Port of Long Beach (Port) appreciates this opportunity to comment on the Draft Socioeconomic Report for the 2003 Air Quality Management Plan (AQMP). We look forward to working with you and your staff to ensure that the final AQMP is based upon the best applicable data and analytical techniques and that the measures ultimately proposed represent the best possible combination of feasibility and cost-effectiveness. I am confident that, by working together, the maritime industry, the South Coast Air Quality Management District (District), the California Air Resources Board (CARB), and the United States Environmental Protection Agency (EPA) can achieve significant reductions in port-related emissions.

5-1

The Port is a major gateway for domestic and international trade. It is estimated that over 600,000 jobs in the five-county Southern California region is related to goods movement through San Pedro Bay. Trade through the Port of Long Beach generates an estimated \$4.8 billion in U.S. Customs revenues, \$4.9 billion in local, state, and federal taxes, and \$14.3 billion in annual trade-related wages. As a result, economic impacts of port-related trade are both significant and extensive. Because of the potential impact of AQMP-proposed measures on port-related economic activity, the Port has significant concerns with the Draft Socioeconomic Report for the 2003 AQMP. While we appreciate the hard work of District staff in preparing the report, many areas lack clarity and it is at times difficult to discern which measures – or group of measures – are being discussed. Since the report frequently combines measures when discussing benefits and impacts, it is impossible to understand which measures are being credited specifically with what benefits and costs.

5-2

Significant elements of the AQMP are not adequately discussed or appear to be ignored because they are speculative in nature. Potential impacts from measures, such as Mitigation Fee Program For Federal Sources (FSS-07), for example, are not addressed at all. The Port is quite concerned that additional mitigation fees will increase the cost of doing business at the Port and will give ports in other nations, states, or other regions of California a significant competitive advantage over San Pedro Bay ports located in the South Coast Air Quality Management District. Diversion of cargo will result in economic loss, as well as employment loss, to the

PRESIDENT'S "E" AND "E-STAR"
AWARDS FOR EXCELLENCE IN EXPORT



Dr. Sue Lieu
Page 2
June 30, 2003

5-2
cont.

region, and yet this issue is not addressed at all in the Socioeconomic Report. In addition, if cargo diversion is significant, some goods currently arriving via ship or rail may be diverted to trucks arriving from outside the region - not subject to SCAQMD regulation - greatly increasing emissions and traffic congestion.

5-3

The Port has for several years been investing heavily in on-dock rail and grade separations in order to encourage the use of rail as much as possible. Trains produce significantly less air pollution than trucks on a cargo ton-mile basis and the Ports of Long Beach and Los Angeles, in partnership with the State, have invested more than \$2 billion in the Alameda Corridor in order to lessen the adverse impacts, including air quality impacts, of port activities on the local community.

5-4

The impact of proposed mitigation fees on federal sources, FSS-07, if applied to train movements could result in the diversion of cargo from rail back to trucks, resulting in thousands of additional truck trips and greatly increasing emissions. Likewise, cargo diversion from trains to trucks would result in increased congestion on local freeways, further impacting air quality and greatly reducing the traffic congestion benefits identified in the Socioeconomic Report. These potential impacts should be fully addressed.

5-5

In addition to concerns regarding the potential negative economic impact of FSS-05 and FSS-07 we note that the Socioeconomic Report fails to address the potential costs of the proposed cold-ironing of marine vessels. The feasibility of cold-ironing is still very much in question. If feasible, cold-ironing would require massive shoreside expense and in many cases very significant vessel retrofit. Cargo vessels also require large amounts of power to cold-iron at berth and power demand is expected to grow as vessel size grows. With the recent and on-going energy crisis we face in California, the potential impact to energy production, availability and cost should be considered and adequately addressed in this report.

5-6

Although we recognize that regional equity will be difficult if not impossible to achieve, we note that the Los Angeles County South sub-region, where the ports are located, has the largest share of costs identified in the Socioeconomic Report, and enjoys one of the lower benefit levels of the AQMP. Table 5-1 and Table 5-2, respectively, indicate a 5% average annual benefit and an 18% cost share for the quantified measures. Such a discrepancy between economic impact and environmental benefit does not reflect the principle that equitable levels of pollution control are established across sources that guides the development of the AQMP.

5-7

We request that the SCAQMD recirculate a revised Socioeconomic Report that more fully addresses the potential costs of the AQMP. Although not a comprehensive list, the Port believes current deficiencies include the failure to address potential diversions of cargo, and attendant jobs and economic benefit, to other regions of the state, other states or other nations; the potential for cargo diversions from rail to truck to lessen the traffic congestion

Dr. Sue Lieu
Page 3
June 30, 2003

5-7 | benefits identified in the report; and the failure to adequately examine marine vessel proposals and their associated costs.

Sincerely,



Robert Kanter, Ph.D.
Director of Planning

TAJ:s

cc: John McLaurin, Pacific Merchant Shipping Association
Marc MacDonald, Pacific Maritime Association
Tim Parker, Steamship Association of Southern California
Larry Keller, Port of Los Angeles
T.L. Garrett, Port of Los Angeles
Jim McGrath, Port of Oakland
Kathleen Metcalf, Chamber of Shipping of America
Tom Chase, American Association of Port Authorities
Tim Schott, California Association of Port Authorities

**RESPONSES TO COMMENT LETTER # 5
FROM THE PORT OF LONG BEACH**

Robert Kanter, Ph.D.
June 30, 2003

- 5-1 Please see the response to Comment 4-1.
- 5-2 Please see the response to Comment 4-2.
- 5-3 Please see the response to Comment 4-3.
- 5-4 Please see the response to Comment 4-4.
- 5-5 Please see the response to Comment 4-5.
- 5-6 Please see the response to Comment 4-6.
- 5-7 Please see the response to Comment 4-7.

Dr. Barry Wallerstein
 Attachment B: City of Los Angeles Comments on the Draft Socioeconomic Report

July 7, 2003
 Page 1 of 6

The City of Los Angeles has reviewed the proposed 2003 South Coast Air Quality Management Plan (AQMP), including the main document, appendices, Draft Environmental Impact Report (DEIR) and Draft Socioeconomic Report. The City Council and Mayor adopted a position to support the proposed 2003 AQMP and include the key concerns presented in this letter, including the attachments.

Please note that the City may have additional comments on the proposed measures during the rule development process.

CITY OF LOS ANGELES
 DRAFT 2003 AQMP COMMENTS
 SOCIOECONOMIC REPORT

1. General Comments

- 6-1 The control strategy proposed by the South Coast Air Quality Management District (SCAQMD) focuses first on attaining the PM₁₀ standard with NO_x reductions. The proposal by SCAQMD then focuses on attaining the ozone standard with additional NO_x and VOC reductions. An alternative control strategy that could cost substantially less would be to focus first on attaining the PM₁₀ standard with reductions of primary PM₁₀ emissions (e.g., dust, ammonia) in the eastern part of the South Coast Basin. Then, attaining the ozone standard would be based on lower PM₁₀ levels and NO_x and VOC reductions that are more achievable. Such an approach could benefit the region because it would rely on more feasible and less expensive strategies and, thus, should be fully evaluated by SCAQMD, California Air Resources Board (CARB) and Southern California Association of Governments (SCAG). The 2003 AQMP needs to specifically identify the lowest-cost, most feasible control strategy that still provides for expeditious attainment of the standards.
- 6-2 The Socioeconomic Report must provide information on direct cost to governments to implement control measures, lost revenues to government agencies from implementation of the plan that may result from, for example, decreases in business profitability, and costs to implement any mitigation measures that the SCAQMD may expect local governments to carry out.
- 6-3 The City is concerned that Los Angeles City and County will unnecessarily bear a disproportionate adverse financial impact from the AQMP. The City is concerned that other regions may not adopt similar control measures, which would create a competitive disadvantage for the South Coast Basin. One way to ensure that the AQMP does not reduce competitiveness is for measures to be implemented across the state or nationwide.
- 6-4 Within the Socioeconomic Report, SCAQMD should demonstrate the timing and geographic distribution of the anticipated costs and benefits on an annual average basis. For example, will the cost of compliance occur in the near term and health or other benefits at the same or

6-4 cont. a different time? As appropriate, provide additional information for individual sub-regions, to further present the geographic distribution of the costs and benefits. (e.g., Page 4-2, Table 4-1)

6-5 As explained further in the City's key concerns, the SCAQMD, CARB, SCAG, and United States Environmental Protection Agency (US EPA) must include local governments in outreach to stakeholders as the AQMP and rule development proceed. Local governments have valuable information to contribute to specific cost analyses, and will need additional information to fully evaluate proposed measures.

6-6 The City strongly supports continued improvements in the socioeconomic data, models and analysis methods in conjunction with input and advice from the Scientific, Technical, and Modeling Peer Review Advisory Group (STMPRAG). Because the work to be done is very complex, these improvements should begin immediately after adoption of the 2003 AQMP.

2. Specific Comments

Executive Summary

6-7 Please provide further information on why the Socioeconomic Report concludes that "the industries of construction and auto repair services and manufacturers of transportation equipment would experience additional jobs created due to additional demand for their products as required by on- and off-road control measures" or provide a reference to a discussion of this issue elsewhere, if possible. (Page ES-3, Paragraph 3)

6-8 It is important to fully evaluate the effect the AQMP will have on industrial competitiveness. Also the Socioeconomic Report should clearly explain how the benefits from clean air increase regional attractiveness (Page ES-4 and Paragraph 5)

Chapter 1: Introduction

6-9 The AQMP assigns the implementation of some control strategies to the US EPA. As appropriate, explain the process that will be used to secure a commitment from US EPA. (Page 1-1, Paragraph 3)

6-10 Please clarify that this is the California "Health and Safety Code Section 40440.8." (Page 1-2, Paragraph 3)

6-11 Some businesses may downsize, relocate or close their operations in the South Coast Basin to avoid the cost of complying with proposed control measures. This could result in reduced employment, sales tax, and other local government revenues. The Socioeconomic Report should address these potential impacts. (Page 1-7, Paragraph 1)

6-12 The Socioeconomic Report includes significant uncertainties with the projection of control costs for remaining long-term measures and the black box measures. The assumptions made should be fully described and justified and uncertainties estimated. Where specific estimates are not available, the City suggests providing a range of estimates, if possible. The City is concerned that using the average cost-effectiveness for quantified control measures as a surrogate cost for unquantified measures will not accurately assess impacts. The SCAQMD should seek input and advice from the STMPRAG as to an appropriate surrogate. (Page 1-7, Paragraphs 3 and 5)

Chapter 3: Benefits and Costs

6-13 While there may be some uncertainties about whether emission reductions will be achieved through controls adopted by SCAQMD, CARB or US EPA, the Socioeconomic Report should be clear about the projected air quality benefits and the expeditious attainment of the air quality standards. Presently, the description of quantified benefits is ambiguous when stating "there would be no improvement in ozone before 2010 and in PM₁₀ before 2005. However air quality would continue to improve." This text should be reviewed and made clearer. (Page 3-1, Paragraph 4)

6-14 In the text and in Table 3-1, please specify how the \$7.4 billion in benefits from the AQMP are disaggregated among each sub-region identified in this report and to whom the benefits accrue (e.g., residents, businesses, local governments, etc.). (Page 3-1, Paragraph 5 and Page 3-2, Table 3-1)

6-15 The Socioeconomic Report should discuss the limitations with using willingness to pay to determine a monetary value for visibility and should identify additional ways to assess the value of visibility, if possible. For example, while communities with fewer college graduates may place a lower monetary value on visibility than communities with more graduates, visibility may rank the same or higher on a priority (non-monetary) scale. (Pages 3-5 and 3-6)

6-16 To the extent possible, the analysis should use local statistics to determine inputs and interpret outputs. The use of information from the Association of Bay Area Governments to apportion work and personal trips should be justified or replaced with information from SCAG or other local study. (Page 3-8, Paragraph 2)

6-17 Please present the results for vehicle hours traveled (VHT) reductions for the sub-regions in the document or an appendix. (Page 3-8, Paragraph 3)

6-18 The daily VHT reductions from business trips should consider all appropriate business trips. By using the wage rate for truck drivers, the savings appears to apply only to truck drivers. Additional information should be included, such as, providing the benefit for other business trips or justifying the use of truck trips as a surrogate for all business trips. (Page 3-8, Paragraphs 3 and 4)

- 6-19 Consider providing more information in terms of the savings in VHT per person and direct cost savings from reduced vehicle usage, such as by referencing the Regional Transportation Plan (RTP) prepared by SCAG. (Page 3-10, Paragraph 3)
- 6-20 In the description of the cost of quantifiable measures, please verify that federal funds may also be used to finance transportation projects (Transportation Control Measures or TCMs). (Page 3-11, Paragraph 2)
- 6-21 Please clarify whether the \$1.64 billion average annual control cost refers to implementation of TCMs or all quantifiable control strategies. (Page 3-12, Paragraph 2)
- 6-22 We are concerned with past cost estimates by SCAQMD for governments that were substantially lower than actual costs. For example, in the SCAQMD's analysis of the 1190 series Fleet Rules, the costs for compliance for governments for establishing alternative fuel infrastructure were severely underestimated. Infrastructure costs for Rule 1193 were estimated to be \$850,000 per site. The City of Los Angeles spent approximately \$8,000,000 for each of two recently constructed alternative fuel stations, with at least one-third of the costs for land acquisition. Site acquisition and preparation are often a significant cost in urbanized areas that should be considered in the Socioeconomic Report. Cost estimates in the Socioeconomic Report should be carefully reviewed to ensure that all relevant cost information is included. (Page 3-12, Paragraph 2)
- 6-23 The City is concerned that the City and County of Los Angeles will unnecessarily bear a disproportionate adverse financial impact from the AQMP. Hence, the Socioeconomic Report should explain the methodology for distribution of the potential control costs between counties and describe what provisions are in place to ensure that the control measures are distributed fairly among the counties. As recommended by the City, the AQMP should focus first on attaining the PM₁₀ standard with reductions of primary PM₁₀ emissions (e.g., dust, ammonia) in the eastern part of the South Coast Basin and then attain the ozone standard based on lower PM₁₀ levels and NO_x and VOC reductions that are more achievable. Such an approach could more evenly disperse the costs of control between counties and should be fully evaluated by SCAQMD, CARB and SCAG. (Page 3-14, Paragraph 1 and Page 3-15, Table 3-8)
- Chapter 4: Employment Impacts
- 6-24 The City is concerned that the AQMP as designed could unnecessarily lead to a "relative slowdown from implementing control measures" and fewer jobs from "the increased cost of doing business." Again, the SCAQMD, CARB, and SCAG need to identify the lowest-cost, most feasible control strategy that still provides for expeditious attainment of the standards. (Page 4-1, Paragraph 5)
- 6-25 Within the Socioeconomic Report, please explain the link between decreased congestion and creation of additional jobs. (Page 4-2, Paragraph 2)

- 6-26 Local governments need increased revenues from economic growth and activity to support a larger population. The Socioeconomic Report should clearly state the impact of the AQMP on population and the economy. The Socioeconomic Report states, "as the area becomes more attractive due to cleaner air, more people will move in and thus demand more services from governments." It further states that there will be a "reduction in personal income resulting from the overall jobs forgone in the economy." It needs to be very clear what is expected of local governments and the potential direct and indirect cost and employment effects resulting from any demands on local governments. How will the AQMP affect the ability of governments to accommodate population growth and provide more services? What are the assumptions in the Socioeconomic Report about the means to pay for transportation infrastructure investments? (Page 4-3, Paragraphs 1 and 2)
- 6-27 Given the various definitions of small business, the Socioeconomic Report should include a detailed analysis of impacts to each type of small business. (Page 4-5)
- 6-28 In the Summary of Employment Impacts, please provide the total combined impact from the AQMP. (Page 4-5, Paragraph 1)

Chapter 5: Impacts on Ethnic and Economic Groups and Communities

- 6-29 Please clarify which year(s) experiences the decrease in per capita real disposable income and what amount the per capita real disposable income is prior to the decrease. (Page 5-8, Paragraph 1)
- 6-30 Please provide the statistical significance for the differences between the income groups and the impact of cost increases to people. Statistical calculations should be provided in an appendix or similar. (Page 5-9, Paragraph 1)
- 6-31 Given the preliminary level of analysis in the Socioeconomic Report, the SCAQMD should use caution in declaring "the Hispanic population is consequently expected to benefit extensively from the draft Plan." (Page 5-9, Paragraph 2)
- 6-32 Please clarify the way costs for compliance with the control measures were calculated. Also explain why the southern portion of Los Angeles County and the Chino-Redlands area will experience higher implementation costs than other areas. (Page 5-9, Paragraph 3)
- 6-33 Please provide the job gains for Whites, Hispanics, and Whites and Hispanics combined. Clarify the types of jobs each ethnic group would be expected to have in their respective shares and the type of jobs foregone (i.e., by industry sector and/or income level). (Page 5-9, Paragraph 4)

Impacts on Competitiveness

- 6-34 Please add a description of the baseline projection. (Page 6-1, Paragraphs 3 and 4)

Dr. Barry Wallerstein
Attachment B: City of Los Angeles Comments on the Draft Socioeconomic Report

July 7, 2003
Page 6 of 6

6-35

The City opposes measures that divert revenues and create a competitive disadvantage on the region's ports and airports, and their surrounding communities, unless and until such measures can be implemented in an economically fair and equitable way (e.g., applied nationwide, as well as on international sources in this country) and have no detrimental impact on the region. The City is very concerned that measures in the AQMP, such as FSS-05 and FSS-07, could result in a shifting of cargo services to other regions. Explain in greater detail the effects quantified measures will have on business at the ports and airports, the local economy, demand for goods and services, as well as imports and exports. (Page 6-4, Paragraph 2)

Appendix A

6-36

Please specify the "respective agency." (Page A-1, Paragraph 1)

**RESPONSES TO COMMENT LETTER # 6
FROM THE CITY OF LOS ANGELES**

July 7, 2003

- 6-1 The control strategy for attaining the PM₁₀ standard relies first on existing regulations (i.e., rules reducing fugitive dust emissions as well as other rules affecting primary PM₁₀ and PM₁₀ precursors). In addition, only small additional primary PM₁₀ reductions (from short-term measures) are relied upon for PM₁₀ attainment.
- 6-2 Table 3-7 of the draft and final Socioeconomic Report shows that the direct cost to governments is \$250 million. It cannot be concluded whether governments would lose revenue since the net impact of control measures and air quality benefit is not analyzed due to the lack of detailed information on the majority of the long-term control measures (the black box). During the rulemaking process as more information becomes available, the AQMD staff will incorporate this information in a socioeconomic analysis for the individual rule.
- 6-3 As pointed out in Chapter 3, Los Angeles County could incur a larger portion of the costs because most of the affected emission sources are located in Los Angeles County. Among all the regions in the U.S., the South Coast Air Basin has the worst air quality. The control strategy in the 2003 AQMP is designed to bring the Basin into attainment. Thus, each of the control measures is needed to make the necessary emission reductions. The 2003 AQMP has many state and federal measures that would be implemented by the state and federal governments. These measures are expected to apply to other regions as well and thus are not expected to reduce competitiveness across the state or nationwide. Further the new federal 8-hour ozone and PM_{2.5} standards recently promulgated by the U.S. EPA are expected to expand the number of regions and states that are in non-attainment status. This will necessitate additional and expeditious emission reductions by these areas through the implementation of many of the measures already adopted by this region that will result in minimizing the disparity among this and other regions nationwide.
- 6-4 Figure 3-4 in Chapter 3 of the final Socioeconomic Report provides a trend of annual costs of quantified measures resulting from implementing the draft final 2003 AQMP. The benefits of the 2003 AQMP are calculated with respect to the benchmark years 2010 and 2020 for ozone and 2006, 2010, and 2020 for PM₁₀. The benefits for interim years are interpolated. The geographic distribution of the quantifiable costs, benefits, and job impacts for individual sub-regions are presented in Tables 5-1 through 5-3 in Chapter 5.
- 6-5 During the rule development process, the District will have a full public process to solicit input from local government as well as other stakeholders.

- 6-6 Thank you for your comment. The District staff will continue to make improvements to socioeconomic data, models and analysis methods. The District staff is committed to implementing future actions that are outlined in Chapter 8 of the socioeconomic analysis.
- 6-7 As additional purchases are made, manufacturers of products would fulfill additional demand by producing more products. Additional labor would thus be hired, thereby creating additional jobs. As discussed in Chapter 4, a number of on-and off-road measures would stimulate additional demand for transportation and auto services and thus benefiting the sectors producing these goods.
- 6-8 Chapter 6 of the draft Socioeconomic Report examines industrial competitiveness. Based on the economic theory, other things being equal, economic migrants and businesses are more attracted to places with cleaner air.
- 6-9 U.S. EPA has asserted that the District and the State cannot commit reduction obligations to the federal government. Consequently, the 2003 AQMP includes two attainment demonstration options relative to emission reductions associated with federal sources. Option 1 (in the final Socioeconomic Report) would rely on the federal government to achieve 68 tons per day of NO_x reductions whereas Option 2 (Less NO_x Reduction alternative) excludes any reductions from federal sources. While both options demonstrate attainment with the one-hour ozone standard by 2010, Option 2 would add to the emission burden facing the District when devising an attainment strategy for the PM_{2.5} and 8-hour ozone standards.
- 6-10 It is California Health and Safety Code Section 40440.8.
- 6-11 The job impact is analyzed in Chapter 4 of the Socioeconomic Report. Impacts on individual businesses such as downsizing, relocation, and shutdown cannot be analyzed in a prospective setting. Additional tools must be developed for the evaluation of impacts on sales tax and local government revenues.
- 6-12 Please refer to the response to Comment 1-1. As stated in Chapter 3 of the draft Socioeconomic Report (p. 3-15), a sensitivity test was performed to provide a range of cost estimates for the black during the public comment period.
- 6-13 Since the CARB has not committed NO_x and VOC emission reductions prior to 2010, it is assumed that there will be no ozone improvement prior to 2010. Improvements in PM₁₀ will start in 2005 as PM₁₀ measures are implemented. Even without the 2003 AQMP, air quality will continue to improve because of existing control strategies already adopted and being implemented.
- 6-14 Chapter 3 has extensive discussions on the bottom-up approach on disaggregating each benefit category by sub-region. The second paragraph on p. A-8 of Appendix A identifies to whom the benefits accrue.

- 6-15 Contingency valuation is the other approach to the visibility benefit assessment. Contingency valuation is conducted by showing scenes of different visibility levels to survey participants and asking for their willingness to pay value for better visibility. Please refer to Paragraph 1 on p. 5-2 for a discussion on determining factors for visibility.
- 6-16 SCAG did not have a study that apportioned work, commute and personal trips for vehicle miles and/or hours traveled. In the absence of such information, another study from the Association of Bay Area Governments was used. The District staff attempts to use every possible source of information in the AQMP Socioeconomic Analysis.
- 6-17 The daily VHT reductions in hours by sub-region that are used for the final socioeconomic analysis are as follows:

Business/Commute	2010	2020
LA CO Burbank	24,885	16,331
LA CO San Fernando	56,713	37,218
LA CO West	51,960	34,099
LA CO Central	55,693	36,549
LA CO South Central	32,065	21,043
LA CO South	45,121	29,611
LA CO East	84,301	55,323
LA CO Southeast	53,488	35,102
LA CO Island	0	0
LA CO Beach	23,936	15,708
LA CO North	28,175	18,490
ORANGE CO North	26,682	17,510
ORANGE CO Central	52,213	34,265
ORANGE CO South	57,251	37,571
ORANGE CO West	33,241	21,814
Northwest Riverside	46,139	30,279
Other Riverside	48,492	31,823
Chino-Redlands	74,550	48,923
Other San Bernardino	5,923	3,887
Total	800,828	525,546

- 6-18 The calculation of VHT reductions for business trips was based on the methodology in the transportation research literature. The use of the truck driver wage rate does not necessarily imply that VHT reductions from business trips apply only to truck drivers, but is simply used as a surrogate for all business trips.
- 6-19 VHT per person may not be applicable since not everyone commutes. The Socioeconomic Report already acknowledges SCAG’s contribution in the data compilation process in a number of places.

- 6-20 Information on the financing of transportation control measures was supplied by the SCAG. SCAG provided the percentage of funding from each level of government, including the federal government, for each transportation project.
- 6-21 The \$1.64 billion cost is referred to all quantifiable measures. Please note that the annual average control cost of all quantifiable control measures has been revised to be \$1.63 billion from 2002 to 2020 in the final Socioeconomic Analysis.
- 6-22 Projected costs may deviate from actual costs due to technological change and site differentials, among others. The District is working with the CARB to study the actual costs of three AQMD rules. The CARB provided the cost data on the measures over which it has jurisdiction. The cost of control measures under the AQMD jurisdiction does not include contingency, construction associated with the re-design of a facility to accommodate the new required device, and permitting.
- The average construction cost of a refueling station was estimated at \$850,000 to \$1,700,000 for Rule 1193–Clean On-Road Residential and Commercial Refuse Collection Vehicles. Land acquisition and preparation may vary from one site to another. This rule is not part of the 2003 AQMP. Thus, the Socioeconomic Report for the 2003 AQMP does not include Rule 1193. During the AQMP process, fuel type is, in general, not specified in control measures. Such information is considered during rulemaking.
- 6-23 Chapter 3 has an extensive discussion on how costs of control measures were distributed among sub-regions. Please refer to the response to Comment 6-1.
- 6-24 The draft Socioeconomic Report also analyzed a range of potential control strategies that could feasibly meet the 2003 AQMP objectives. For more details please see Chapter 7 (Assessment of CEQA Alternatives). It should also be noted that there are sizable benefits associated with clean air.
- 6-25 The job creation is due to the reduction in the transportation cost for businesses and consumers. The savings can then be invested or spent elsewhere to stimulate the economy. Additionally, less congestion increases the amenity of the local area, which will then become more attractive to businesses and economic migrants in their relocation and migration decision.
- 6-26 The direct and indirect impact assessment is performed separately for quantifiable measures and benefits. Quantifiable measures represent 30 percent of the emission reductions intended for attainment while quantifiable benefits assume 100 percent emission reductions. Chapters 4 through 6 present the total impact of quantified measures and benefits separately on the local economy. Cleaner air will bring additional jobs and population into the area. This will lead to an increase in tax revenue which, in turn, can be the source for providing additional

services. Please refer to Paragraph two on p. 3-11 regarding funding for transportation infrastructure investments.

- 6-27 Small businesses are more highly concentrated in non-manufacturing than manufacturing sectors. Since affected facilities are not exactly known at this time, additional analyses of small businesses affected by each control measure will be performed during the individual rule development process.
- 6-28 The employment impacts of quantifiable benefits and measures are analyzed separately and presented in Table 4-1 of Chapter 4.
- 6-29 The magnitude and directional change in per capita real disposable income will vary by year. The baseline per capita real disposable income (without the 2003 AQMP) is projected to be \$22,171 in 2010 and \$23,936 in 2020 (in 1992 dollars).

Per Capita Real Disposable Income

Years	Baseline	Quantified Control Measures
2002	\$20,648	\$20,666
2003	\$20,871	\$20,874
2004	\$21,083	\$21,085
2005	\$21,287	\$21,349
2006	\$21,488	\$21,522
2007	\$21,719	\$21,732
2008	\$21,896	\$21,892
2009	\$22,034	\$22,003
2010	\$22,171	\$22,129
2011	\$22,410	\$22,310
2012	\$22,571	\$22,490
2013	\$22,756	\$22,693
2014	\$22,937	\$22,896
2015	\$23,155	\$23,123
2016	\$23,344	\$23,309
2017	\$23,569	\$23,533
2018	\$23,727	\$23,688
2019	\$23,896	\$23,854
2020	\$23,936	\$23,915

- 6-30 Statistical significance does not apply in this instance. When various segments (various categories of benefits and costs) of the 2003 AQMP are simulated through REMI, the magnitude of their impacts indicates the significance of modeling results. The modeling results presented in absolute values and in isolation can be significant. Because of the relatively large size of the local economy, these values in relative magnitude and in totality (e.g., as a percent of a baseline parameter) can be relatively small.

- 6-31 Your comment is noted.

- 6-32 Please refer to pp. 3-10 to 3-12 and pp. 5-3 to 5-4 in the draft Socioeconomic Report for the explanation.
- 6-33 Please refer to Table 5-4. There are no published data available on ethnic jobs by occupation.
- 6-34 Please refer to Appendix C.
- 6-35 Please see the response to Comment 4-2.
- 6-36 This should be the second to the last paragraph on p. A-1. The respective agency means the agency that is responsible for the control measure implementation.



Western States Petroleum Association
Credible Solutions • Responsive Service • Since 1907

Michael D. Wang
Manager, South Coast Region,
Legal, Toxics, Tax, and Pipeline

July 2, 2003

Elaine Chang, Dr. PH.
Deputy Executive Officer
South Coast Air Quality Management District

Susan Lieu, Ph.D.
Program Supervisor,
South Coast Air Quality Management District
21865 E. Copley Ave.,
Diamond Bar, Ca.

Re: Comments on Socioeconomic Document

Dear Dr. Chang and Dr. Lieu:

On behalf the Western States Petroleum Association, I am pleased to provide you with these brief comments on the Socioeconomic Report on your Air Quality Management Plan. We appreciate the hard work and difficult task that the District undertook to evaluate the economic and social impacts associated with the AQMP.

Estimates of Future Costs

7-1

The Socioeconomic report indicated that only 30% of the emission estimates were quantified. While we understand the problem associated with the "black box" for measures that are to be developed, extrapolating costs for the remaining 70% of emissions using the cost basis for the 30% of emission controls that are identified is a simplistic and overly optimistic process.

7-2

We know from past experience that costs for future technology, especially for emission controls on stationary sources, increase through time. This is a fact having been demonstrated repeatedly in the rule development process, in the rising costs of controls included in previous AQMPs, and most obviously in comparing the cost estimates for attainment that have been included in previous AQMPs. Hence, any extrapolation of cost estimates for the "black box measures" must include a significant new technology factor of perhaps 50%-100% - even 500% -- especially because the District will be depending upon the installation of unproven and untried technology. Incremental costs of control could be even higher.

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July 2, 2003
Page 2

7-2
cont.

To address this issue, the District should provide a range of AQMP control costs (low, median and maximum). Such an estimate would be a more accurate representation of the uncertainty that currently exists in the cost estimates and also provide the Board with a better understanding of the range of costs that are associated with efforts to improve air quality. Such an analysis, conducted on both an average and incremental basis, will allow the public to better understand the socioeconomic implications of the AQMP.

Cost effectiveness calculations

7-3

The District must take more care in developing individual cost effectiveness (C/E) determinations. All C/E determinations should include a range of costs and the specific emission reductions (in tons per day reduced) that are being credited in the AQMP/SIP. In other words, C/E determinations should only use emissions that are AQMP or SIP creditable and for only those emissions that the district intends to take credit in the SIP. We cite as an example of inappropriate cost effectiveness determinations, Proposed Rule 1105.1 (included in this AQMP as CMB-09) where the District is including within its Cost Effectiveness determination emissions that are not in the inventory. Instead of basing the cost effectiveness determination on primary PM-10 (i.e., filterable solids), the District is incorrectly adding to this analysis, ammonia emissions that are not in the SIP, and a condensable sulfate fraction that is an artifact of the test method. In other words, the district has through this calculation intentionally and artificially improved the cost-effectiveness determination by including either "pseudo-particulate" emissions or other emissions that are not creditable. In addition, as WSPA has noted previously, the District's discounted cash flow methodology for calculating cost effectiveness produces an unrealistic and artificially-low value for C/E because, contrary to clear and specific US-EPA and Cal-EPA guidance, it ignores the time-value of the funds required to implement emission reduction projects.

Uncertainty Analysis

7-4

The District's cost benefit analysis is incomplete. The benefits of the AQMP have been documented based on the various Standards documents that have been prepared in the past. However, the costs are not well defined, nor is there any comparison of the uncertainty within the analysis. While we have suggested that the District propose a range of costs, an uncertainty analysis reflecting the "softness" of both the estimates and the range of potential costs is also needed. Again, the intent is not necessarily an increase in precision but rather to present better comparisons for the public and for policy makers.

We appreciate the opportunity to comment, and expect the District to take measures necessary to address these comments in a substantive manner.

Sincerely,



**RESPONSES TO COMMENT LETTER # 7
FROM WESTERN STATES PETROLEIUM ASSOCIATION**

Michael D. Wang
July 2, 2003

- 7-1 Your comment is noted.
- 7-2 Based on a suggestion received from the public, a sensitivity analysis was performed by selecting the lowest and highest cost-effectiveness values from four types control measures, which were then used to approximate the cost of the Long Term Tier I and II Measures. The sensitivity test showed that the total cost of these measures could range from \$430 to \$2,606 million annually.
- 7-3 The cost-effectiveness values presented in the draft 2003 AQMP are preliminary and will be revised during the rule development process. Emission reductions for each control measures are discussed in Chapter IV of the draft 2003 AQMP. State laws do not limit cost-effectiveness analysis for the AQMP/SIP creditable emissions only. Since the emissions are real, it is appropriate to consider the benefits and costs of reducing them. It should be noted that emission reduction estimates for control measures are based on AQMP inventories; therefore, they are all SIP creditable by default. During rule development, cost-effectiveness is based on actual emission reductions (not necessarily the same as SIP creditable reductions). This approach for rulemaking is fairer, because it reflects the latest cost and inventory data. The Proposed Rule 1105.1 cost-effectiveness includes both filterable PM10 and ammonia slip or condensable sulfate, but not the combination of the latter two.
- The District has used the Discount Cash Flow (DCF) methodology for calculating cost-effectiveness since the 1987 AQMP. The DCF method represents an approach to evaluating the effectiveness of various alternatives. The DCF method considers the same parameters (including time value of funds) as other methods.
- 7-4 Please refer to pages 3-10 to 3-12 in Chapter 3 for the cost analysis methodology. The uncertainty associated with cost analysis is related to the assumptions, not the methodology. These assumptions will be re-visited during rulemaking as more information is developed.