

(E) The adverse impact of California's GHG regulations on ozone precursor emissions through fleet turnover or rebound effects is significant and would lead to a regulatory scenario that is, in the aggregate, less protective of public health and welfare than the federal standards.

- (1) California's GHG emission standards will result in decreased air quality overall due to the rebound and fleet turnover effects. The combined cost effects of the ZEV quotas and the GHG emission standards lead to a highly significant fleet-turnover effect. This effect is not only well documented as a scientific and economic matter in air pollution policy and economic analysis circles, but California has conceded the existence of this effect. California's GHG standards also induce a sizable "rebound effect" by reducing the cost of driving. Basic economics predict that consumers will drive more as a result of government-mandated fuel economy standards that improve the fuel economy of the fleet of vehicles than the market would otherwise produce. Commenters provide additional discussion on this issue, citing the Sierra Report and noting that NHTSA has acknowledged this effect as well (see RIA at VIII-46 to VIII-54, March 2006). The Sierra report provides data demonstrating that CARB's LEV II program (including ZEV mandate and GHG standards) is less protective in the aggregate than EPA's Tier 2 program. The Sierra Study meets EPA's call in its ZEV waiver decision for a direct comparison of the federal motor vehicle emissions standards program and the comparable California program (embracing both the ZEV mandate and the GHG standards). This report also shows how long the disbenefits associated with the fleet turnover and rebound effects are predicted to last (beyond 2023 in most cases), and suggests (based on trend line analysis) when the comparative stringency of the California conventional pollutant standards and ZEV mandate standards will appear to exceed the combined effects of fleet turnover and driving rebound. This information shows that there will be a "long-term deficit" of many years of greater emissions caused by the California program as compared to if the federal program were operative in that State.

Letters:

- Alliance of Automobile Manufacturers (EPA-HQ-OAR-2006-0173-1297) p. 8-10.
Alliance of Automobile Manufacturers (EPA-HQ-OAR-2006-0173-0421-11) p. 60-61.
General Motors Corporation (EPA-HQ-OAR-2006-0173-1595) p. 4-5.
National Automobile Dealers Association (EPA-HQ-OAR-2006-0173-1671) p. 3.

- (2) CARB Executive Order G-05-061 makes the implausible claim that no appreciable fleet turnover effect will be felt at all. Cost increases of the magnitude cited by CARB in its waiver request (i.e., increases exceeding \$1,000 in the mid-term of the GHG program) can be expected to delay new motor vehicle purchases by

consumers in California or any properly functioning market. CARB suggests that its CARBITS model and a California Association of Governments econometric model demonstrate that the fleet-turnover and rebound effects are small, but CARB did not study CO effects or effects on air toxics. The Sierra report evaluates such effects and also finds them to lead to significant additional contributions to pollution caused by the California program as compared to the federal Tier 2 program. The report also finds the reduced protectiveness of the California program as compared to the federal program to be long-lived.

Letters:

Alliance of Automobile Manufacturers (EPA-HQ-OAR-2006-0173-1297) p. 10-11.

- (3) Through the use of the Fleet Population Model (a combination of the results from the New Vehicle Market Model (NVMM) and the Scrappage Model), the Sierra Report finds that the California Program (i.e., exhaust, evaporative, ZEV, and GHG standards) has the effect of changing the age distributions of the vehicle fleet. In 2020, sales of new vehicles in the regulated fleet are significantly lower than baseline sales in California as a whole as well as within the South Coast Air basin as a result of the California Program. The number of older vehicles is higher than the baseline because consumers retain their existing vehicles longer, rather than replacing them with more expensive newer vehicles. The Sierra Report provides significant additional discussion on this issue, including information on the models used (Appendices B and C), detailed emission results (Appendices E and F), and graphs to illustrate this trend.

Letters:

Sierra Research, NERA Economic Consulting, and Air Improvement Resource, Inc. (for Alliance of Automobile Manufacturers) (EPA-HQ-OAR-2006-0173-1447) p. 16-25, 38-57, 65-103.

- (4) Increasing the fuel economy of a vehicle can lower the vehicle's emission rates but also lowers the cost per mile of driving, leading drivers to travel more miles, thus increasing VMT, which is known as the "rebound effect." The Sierra Report concludes that by 2023, motorists are projected to drive approximately 14 million additional miles per day due to the California Program. This increase in VMT partially offsets any emission decreases due to improved fuel economy. The Sierra Report includes significant additional discussion on this issue, including a graphical illustration of the change in VMT between 2009 and 2023 and a description of the VMT model (Appendix D).

Letters:

Sierra Research, NERA Economic Consulting, and Air Improvement Resource, Inc. (for Alliance of Automobile Manufacturers) (EPA-HQ-OAR-2006-0173-1447) p. 20-21, 25-26.

(F) EPA cannot rely on the June 2007 Alliance/NERA/Sierra Report in reviewing California's protectiveness determination since it was not submitted during the California rulemaking and since there are numerous problems with respect to missing data and erroneous assumptions.

- (1) Section 209(b)(1)(A) speaks in the past tense, to the "determination" made by the State and transmitted to EPA. EPA reviews the claimed arbitrariness and capriciousness of California's determination when it was made (in this case, it was submitted to EPA with the waiver request on December 21, 2005). The thrust of the Alliance's May 30 hearing testimony was the erroneous claim that California had not made a protectiveness determination at all. Therefore, a study such as the June 15, 2007 NERA/Sierra study is irrelevant and not cognizable by EPA in reviewing protectiveness here. During the two California public comment periods in 2004 opponents failed to make the contention they now make three years later - that for every amendment to California's passenger vehicle program, CARB must perform a comprehensive reanalysis of protectiveness vis à vis the federal program. The opponents cannot have it both ways - i.e., argue that CARB did not make a comprehensive protectiveness determination (and thus, EPA should remand the matter to CARB to do so), and also assert that an industry analysis released for the first time at the close of the waiver comment period justifies denying the waiver. Because EPA's protectiveness role here is essentially that of a court reviewing agency rulemaking action, the statutory question of whether the Board's considered determination was "arbitrary and capricious" simply cannot be determined by post-rulemaking documentation. CARB provides additional discussion on this issue citing to various portions of the Sierra Report, Alliance comment letters, previous submittals by CARB, and case law to support its position on this issue.

Letters:

California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-3601) p. 4-6.

- (2) Unknown but presumably critical inputs to the NERA/Sierra 2007 analysis are missing, and their omission renders any independent analysis impossible and further precludes EPA's reliance on the analysis. First, it is impossible to determine from either the main or backup materials what the opponents' assumed total cost increase per vehicle is for each model year, and what portion of that increase they attribute to the ZEV regulations versus the GHG regulations. The opponents have provided only bald statements that their analysis depends on the technology choices, costs, and

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(4) Even if the cost inputs in the 2007 Sierra Report were determinable, prior review of the opponents' similar ZEV analysis, and methodological flaws afflicting both their ZEV and GHG analyses, render any conclusions from this new combined analysis unreliable. The reasonableness of ARB's ZEV regulations has already been determined and opponents' ZEV assumptions implicitly rejected, at least through model year 2011. In support, CARB cites (and provides as an attachment) several items that document CARB's review of previous analyses in this regard, and notes that there is nothing in their critique of prior ZEV fleet turnover and rebound analyses that would not also apply to 2012 and later model years, since the foundational ZEV cost projections in the 2007 Sierra Report are similar to those CARB analyzed previously. CARB provides significant additional discussion detailing the cost

Letters: California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-3601) p. 9.

(3) The composition and pricing of the fleet projected under the regulations is indecipherable in the Sierra Research report. Under the ZEV mandate, the opponents expect the automakers will rely strictly on the California market for the pricing and cost recovery of their ZEV vehicles. On the other hand, they project a nationwide approach to the marketing of technologies and vehicles mandated under the GHG standard. These contradictory assumptions are not resolved in the opponents' projection of a fleet that combines these technologies and regulatory mandates. Indeed, the opponents do not specify at all their assumptions of how any of the ten automakers will modify their model offerings for California. CARB provides additional discussion on this issue, citing specific portions of the Sierra Research report and its appendices.

Letters: California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-3601) p. 8.

effectiveness purportedly detailed in Sierra's 2004 report and that ZEV costs were derived from several sources. Thus EPA cannot examine opponents' individual ZEV costs, opponents' GHG technologies costs, the combined compliance costs of ZEV plus GHG, or the relative weight of GHG costs versus ZEV costs in that combined cost. Second, the ZEV costs in the Sierra Report are derived to an unknown extent from "confidential cost information supplied by individual auto manufacturers" to which neither CARB nor other commenters, nor to our knowledge EPA, have been privy. This missing cost information in turn drives all of the opponents' models -- engineering cost, new vehicle market, scrappage, fleet population, and VMT that ultimately produce their exaggerated combined fleet turnover and rebound effects, which, in turn, comprise the inputs for their emissions model.

assumptions used by Sierra Research in previous analyses and CARB's response to those analyses and the associated assumptions regarding costs. CARB observes that the 2007 Sierra Research analysis appears to continue ignoring significant quantities of banked ZEV credits that will allow at least some manufacturers to postpone building any new pure ZEV vehicles until MY 2010 or beyond, reducing the incremental cost of the ZEV program in its early years and that these vastly different cost assumptions are similar to those previously reviewed and likely skew the 2007 results, particularly in the later years. CARB concludes that the opponents have apparently carried over their prior highly inflated ZEV and GHG cost inputs and that the models used do not appear to have changed substantially from those CARB fully critiqued in 2001.

Letters:

California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-3601) p. 9.

- (5) There are a number of erroneous fundamental analytical assumptions associated with the engineering cost model upon which the 2007 Sierra Report relies. More specifically, this cost model relies on the opponents' 2004 reports that contain stale and inaccurate inputs and inflated costs. First, it was assumed that without the regulations automakers would continue making basically the same vehicles in 2009 through 2023 that they made in 2003. However, this is contradicted by subsequent announcements from GM, Ford, and Chrysler indicating a shift in the marketplace and the automakers' accelerating divergence from the baseline prediction. Second, it was assumed that there would be no relevant technological advancements before 2023. Third, it was assumed that the baseline fleet would achieve no better GHG emissions than what would otherwise be required under existing CAFE standards, which were used as the baseline for calculating the added cost of compliance with the GHG standard. Thus, the improvements that will occur in the baseline fleets are understated as the CAFE standards become more stringent and as automakers over comply with CAFE standards in response to consumer demand. Fourth, while CARB's analysis made no explicit nationwide versus two-car compliance strategy assumption, the opponents' analysis here appears to use the nationwide compliance scenario that they later rejected. Opponents rely on the automobile fleet that Mr. Austin hypothesized in his 2004 report (NERA/Sierra 2007 at p. 10). In that report, Mr. Austin assumed the same technologies and vehicles would be "rolled out by manufacturers on a national basis" but later testified that the automakers would use a California-specific fleet. In other words, the opponents rely on a scenario in the 2007 Sierra Report that they have since rejected as unrealistic. Finally, Mr. Austin admitted in the litigation reports he prepared in 2006 that many of his earlier assumptions were wrong and acknowledged having overstated the cost of fuel reduction technologies as a function of increased vehicle weight. As a result of highly

inflated compliance costs and overly pessimistic greenhouse gas emission reduction estimates, Mr. Austin determined - and NERA/Sierra 2007 presumably assumes - that some manufacturers would need to pull entire product lines from their California sales to achieve compliance, which simply makes no economic sense. CARB provides significant additional discussion on this issue, citing specific portions of the 2007 Sierra Report, previous testimony by Mr. Austin and others, and other reports and documentation in support of its position that the opponents have failed to adequately support their engineering cost model.

Letters:

California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-3601) p. 11-14.

- (6) The New Vehicle Market Model used in the Sierra Report by Dr. Harrison to help measure the fleet-turnover effect of higher priced new vehicles is intended to predict the difference in the mix of vehicles that will be available and acquired by consumers with and without the regulations for model years 2009 through 2023. This model uses the erroneous price increases generated by the "Engineering Cost Model" to project future new car availability and prices under the regulation and uses a projected baseline that essentially assumes a continuation of the "new vehicle sales, price, and characteristics information for the years 2001 through 2005." (Sierra Report, p. 18). This period was unprofitable for GM, DaimlerChrysler, and Ford, collectively. The baseline was not adjusted despite the fact that automakers acknowledged the need for substantial modifications to the size, composition, and fuel economy of their fleets in order to survive. It appears that none of the new models that automakers intend to introduce were included, further biasing the projections. In addition, the baseline was not adjusted to account for the shift in consumer demand that has occurred since 2001 through 2005. Increased consumer demand for vehicles that consume less gasoline, both to reduce global warming and to reduce operational costs, has been well-documented. CARB provides additional discussion, referencing numerous documents and testimony in support of its comments on this issue.

Letters:

California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-3601) p. 14.

- (7) The design of the New Vehicle Market Model used in the Sierra Report analysis biases the projected criteria pollutant effects. This model only permits estimations of the effect of fuel efficiency on new vehicle purchases indirectly and in a manner that likely underestimates its effect. Dr. Harrison assigned dummy variables across models of a given year that will not capture differences in fuel economy, only small changes since this varies slightly over time. If there is a larger change over time, the effect will go undetected or be underestimated, since fuel economy improvements are

California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-3601) p. 15-16.

- (10) The "Fleet Population Model" is described in the Sierra Report (p. 20) as "an important component for estimating the overall effects of the regulations on motor vehicle emissions." However, there is no explanation of the assumptions, tools, or methodology employed in this model. It is a black box. Moreover, it incorporates the false assumptions and distorted results of the three models on which it is based.

Letters:

California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-3601) p. 16.

- (11) The opponents' rebound model does not account for the effect increased purchase price has on automotive travel, even though this factor is accounted for in the purchase decision assumption. This inconsistent treatment conflicts with the assumption of an economically rational buyer. If the higher purchase price delays the purchase of a fuel efficient vehicle, then that same increased price must reduce the income available for travel once the purchase is made. The reduced funds for purchasing fuel in projecting the effects of improved fuel efficiency on driving behavior should have been accounted for. In addition, the increase in projected fuel prices that has occurred since Sierra's 2004 analysis should be accounted for. The opponents' back-up documents reflect projected gasoline prices of only \$1.56 per gallon between 2004 and 2020. This results in a further overestimation of the rebound effect.

Letters:

California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-3601) p. 16-17.

- (12) The models used in the Sierra Report to project the emissions of criteria pollutants incorporate all of the errors from the prior modeling and similarly lack the detail necessary to evaluate Sierra Research's methodology and additional assumptions. The authors have relied on unidentified off-model adjustments. They appear to have inflated VMT for older vehicles but the data needed to assess their assumptions and methodology appear to be missing. Their MOBILE modeling produces emissions over two times that of EMFAC but there is no explanation for this implausible result. Unlike the opponents' analyses, CARB's reasonable and well-supported feasibility and cost analysis provides the foundation for its modest fleet turnover and rebound projections that are more than offset by upstream emission reductions, thus showing a reduction in criteria pollutant emissions.

Letters:

California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-3601) p. 17.

usually spread across multiple models. Thus, the model design effectively predetermines that the coefficient for fuel efficiency will be slight and statistically insignificant (see July 2006 Supplementary Report of Dr. Kenneth A. Small, a long-time expert in transportation studies, June 14, 2007 ARB comment Item 33, pp. 12-13).

Letters:

California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-3601) p. 15.

- (8) The "nested logit" model, which Dr. Harrison uses to establish consumer demand (see Sierra Report, p. 40-47), is illogical and unsuited to this situation. It comprises a three-tiered decision tree, beginning with a buy/no-buy decision, followed by a "vehicle-type" decision, and concluding with a "vehicle attribute" decision. Each tier was arbitrarily assigned a "suitability" parameter in multiples of three, i.e., a value of 0.9 for buy/no-buy, 0.6 for the vehicle type, and 0.3 for discrete vehicle models. Under this structure, a person considering a small or mid-size SUV that sells for around \$25,000, will elect to buy a luxury SUV at \$40,000 or more before considering a sedan with lower greenhouse gas emissions in the same price range as the small or mid-sized SUV. This structural assumption not only biases the results but contradicts an implicit tenet of Dr. Harrison's projections, i.e., that increased purchase prices restrict purchase decisions.

Letters:

California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-3601) p. 15.

- (9) Errors in the Sierra Report analysis are further compounded with the scrappage model (Sierra Report, p. 18). This scrappage model is described as a "detailed empirical model of the effect of changes in new vehicle prices on existing vehicle scrappage rates." A particularly large error is introduced by omitting to model the economic value of vehicles with improved efficiency and lower GHG emissions. In addition, there is no premium assigned to the resale value of vehicles with lower GHG emissions. CARB provides additional discussion on this issue, including a rough computation to show that correction of these errors would eliminate any statistically significant effect of increased new vehicle prices on scrappage rates. CARB adds that the increased price of fuel reinforces the reasonableness of the analysis of operational cost savings and payback that CARB made in its rulemaking that the opponents' scrappage analysis conveniently omits this critical factor, and that increased operational savings from new vehicles should actually increase scrappage rates.

Letters:

1. Ozone

California's ozone precursor standards are nearly twice as stringent as the federal standards from now through 2019 (CARB cites the 2006 National Academy of Science (NAS) report - Figure 6-1 and pp. 177-184, and the text at 68 FR 19811 (April 22, 2003), both of which are provided as Enclosures 26-28 to this CARB letter.) The Alliance argument that California cannot show its program as a whole to be as protective as federal standards is incorrect. California's standards also reduce emissions through zero evaporative emissions requirements on the substantial number of partial zero-emission vehicles (PZEVs) that will be introduced to meet California's ZEV requirements. CARB notes that this same rationale was used by EPA when California's protectiveness finding was upheld in the recent approval of California's zero-emission vehicle waiver request (see Enclosures 29-30). CARB adds that numerous states opt into the California standards for the simple reason that they are more protective in the aggregate.

Letters:

California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 2-3.

California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-0422-6) p. 49, 63.

California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-0421-5) p. 25-26.

- (2) The fact that California has experienced significant reductions in most pollutants since 1977 should not preclude the continuation and/or expansion of the California mobile source program, particularly since it has been largely responsible for much of those reductions. There is nothing in the administrative record to suggest that California's progress in this regard could be sustained, or maintained, in the absence of continued aggressive regulation by California of motor vehicle emissions. Portions of California still face significant challenges in reducing air pollution and achieving attainment of the public health standards. In addition, while concentrations of pollutants are declining, the science respecting adverse environmental impacts has advanced to the point where greater emissions reductions are now known to be necessary (e.g., adoption of a more stringent NAAQS for PM_{2.5}).

Letters:

National Association of Clean Air Agencies (EPA-HQ-OAR-2006-0173-1604) p. 7.

National Association of Clean Air Agencies (EPA-HQ-OAR-2006-0173-0422-18) p.180.

Segway from protectiveness to C and E

Just as California has not demonstrated that its consideration of the relative "protectiveness" of the California and federal programs was well-informed, it cannot demonstrate that there is a "need" for state standards that are less protective than the federal standards. Standards that do not address the environmental conditions of concern are by definition not "needed" to address those conditions. Accordingly, CAA preemption under section 209(a) must also be enforced under section 209(b)(1)(B). [See related discussion under Issue 2.2].

2. Compelling and Extraordinary Conditions

Under section 209(b)(1)(B) of the Act, I cannot grant a waiver if I find that California does not need such State standards to meet compelling and extraordinary conditions. Under this criterion, EPA has stated in previous waiver decisions that "its inquiry is restricted to whether California needs its own motor vehicle pollution program to meet compelling and extraordinary conditions, and not whether any given standards are necessary to meet such conditions." [ZEV waiver as well] 40 As to the "need" for the particular standards that are the subject of the waiver request, EPA has historically stated that California is entrusted with the power to select "the best means to protect the health of its citizens and the public welfare."⁴¹

In its waiver request CARB restates its need for its own engine and vehicles programs to meet serious air pollution problems. It notes that the relevant inquiry is whether California needs

40 See, e.g., 49 Fed. Reg. 18,887, 18,889-90 (May 3, 1984).

41 H.R. Rep. No. 95-294, 95th Cong., 1st Sess., 301-02 (1977) (citing with approval in MEMA I, 627 F.2d at 1110).

its own emission control program as opposed to the need for any given standard as necessary to meet compelling and extraordinary conditions. CARB has repeatedly demonstrated the existence of compelling and extraordinary conditions in California. In its Waiver Request letter, CARB stated:

California, the South Coast and San Joaquin Air basins in particular, continues to experience some of the worst air quality in the nation. California's ongoing need for dramatic emission reductions generally and from passenger vehicles specifically is abundantly clear from its recent adoption of state implementation plans for the South Coast and other California air basins. The unique geographical and climatic conditions, and the tremendous growth in the vehicle population and use which moved Congress to authorize California to establish separate vehicle standards in 1967, still exist today.⁴²

[insert more from waiver request]

Commenters, including the Alliance, suggest that if EPA finds California fails to meet any of the three requirements under section 209(b)(1)(B) then EPA must deny a waiver to California.[footnote the MEMA discussion - " See also MEMA, 627 F.2d at 1121 (explaining that if the "Administrator makes any one of the [three statutory] findings with respect to a waiver request involving California 'standards' he must deny the request").] Therefore, if California's waiver request fails to meet any of the three requirements under this provision: a demonstration of "need"; a demonstration that the GHG standards would "meet" extraordinary and compelling circumstances; and the existence of conditions that are "extraordinary and compelling" then the section 209(b)(1)(B) is not satisfied.

⁴² Waiver Request Letter, p.27.

Letters:

Alliance of Automobile Manufacturers (EPA-HQ-OAR-2006-0173-1297) p. 12-26.

Alliance of Automobile Manufacturers (EPA-HQ-OAR-2006-0173-0421-11,12) p.59-70.

Utility Air Regulatory Group (UARG) (EPA-HQ-OAR-2006-0173-1497) p. 2-5.

Need –

California has not provided any documentation that motor vehicle carbon dioxide standards in the state of California are necessary to stem global warming. The California documentation merely points out that transportation sector emissions are substantial in the state as a share of the state's GHG inventory and that global warming is a problem. Both of these points are noteworthy, but hardly justification that "California needs such standards." In order for the waiver to be granted, EPA must determine that CO₂ emission standards are the only policy option available to California to meet compelling and extraordinary conditions. This is clearly not the case as California has in its policy toolbox a plethora of other options including countless fiscal policy, transportation management, and urban planning measures among other alternatives to address carbon emissions from the transportation sector. Despite the availability of these other options, California has arbitrarily and capriciously jumped to the one option that is statutorily preempted. There are countless studies that conclude that fiscal policy options and transportation management options are less expensive and more effective than command and control options such as tailpipe standards to address transportation sector fossil fuel energy use. Since California has provided no justification, nor can it make any legitimate argument, that automobile CO₂ emission standards are the only option available to the state to meet a compelling and

extraordinary condition, EPA has no choice but to deny the waiver.

Letters:

Environmental Consultants of Michigan (EPA-HQ-OAR-2006-0173-0012) p. 3-4.

[more from autos, then responses from proponents]

Meet -

Under the 209(b)(1)(B) requirement that the standards be needed to "meet" compelling and extraordinary conditions, EPA must determine whether the standards will address and correct the conditions that California claims to exist. CARB's rulemaking documents did not identify any potential beneficial effects of these rules in connection with climate change. California's GHG regulations will not be "needed" to "meet" a particular condition since there is no analysis suggesting that the rules will have any discernible impact on that condition and will not achieve any perceptible improvement in environmental conditions inside California. Commenters provide significant additional discussion in support of their position on this issue. The Alliance and others include specific references to testimony at the May 22 and May 30 public hearings, the Green Mountain (Vermont) trial, and the Sierra Research Report and conclude that a regulation that accomplishes only "minimal directional improvement" toward a global issue, by California's own admission, does not rise to the level of a regulation that is necessary to meet compelling and extraordinary circumstances in California.

Letters:

Alliance of Automobile Manufacturers (EPA-HQ-OAR-2006-0173-1297) p. 18-19.

Alliance of Automobile Manufacturers (EPA-HQ-OAR-2006-0173-0421-12) p. 61-70.
General Motors Corporation (EPA-HQ-OAR-2006-0173-1595) p. 8.
Utility Air Regulatory Group (UARG) (EPA-HQ-OAR-2006-0173-1497) p. 2-5.

Extraordinary –

Global warming is not a compelling and extraordinary condition specific to California. The "extraordinary" aspect of Section 209(b)(1)(B) embodies a concept of uniqueness and to date, EPA has granted waivers for California to address the issue of localized urban air pollution caused by criteria and other health-related pollutants. In its interpretation of the term "compelling and extraordinary conditions" CARB describes a number of potential impacts to tourism, public health, water resources, agriculture, ecology, wildfires, droughts, heat waves, flooding, and other adverse effects, many of which could also be claimed by other States as resulting from climate change. CARB has not demonstrated that the negative impacts it would face from global climate change are "extraordinary" as compared to other States in the nation. Even though California can claim that it is more susceptible to some kinds of risks because it is a coastal state that does not differentiate California from other coastal states, of which there are many. Given the creation of field preemption in section 209(b) and the logic of the federalist system, the degree of peculiarity required to treat one State differently than all others for preemption purposes must be significant. The level of significance implied by the structure of the Act, as set against constitutional principles, requires that California face truly unique circumstances. The Alliance outlines four indicators that point to a different congressional intent

than California urges on EPA, including: 1) Section 209(b) confers a potential exemption from state-wide preemption only upon California; 2) legislative history indicates that the term "extraordinary conditions" refers to California's motor vehicle pollution problem and unique geography and topography, not global effects; 3) California falsely assumes that a previous determination of "compelling and extraordinary conditions" in California justifies a waiver in all cases; and 4) California has not satisfied the requirement under Section 209(b)(1)(B) by pointing to an effect that is not widely shared and sufficiently unique with respect to the nature or degree of the effect to be experienced. Both the Alliance and AIAM provide significant additional discussion in support of their position on this issue citing to case law, legislative history, and specific sections of the CAA.

Letters:

Alliance of Automobile Manufacturers (EPA-HQ-OAR-2006-0173-1297) p. 20-26.

Association of International Automobile Manufacturers (EPA-HQ-OAR-2006-0173-1455) p. 5-8.

General Motors Corporation (EPA-HQ-OAR-2006-0173-1595) p. 6-7.

National Automobile Dealers Association (EPA-HQ-OAR-2006-0173-1671) p. 3-4.

EPA has long held that the test under Section 209(b)(1)(B) is whether California continues to have a compelling need for its overall motor vehicle pollution control program, not individual pieces of it. In addition, "compelling and extraordinary conditions" are general terms that give California authority to address newly recognized threats to public health and welfare. EPA has also rejected the argument that the pollution problems have to be unique to California in order to

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qualify as "compelling and extraordinary conditions." For these reasons, the waiver cannot be denied under Section 209(b)(1)(B). [See related discussion under Issue 3.2]. CARB adds that the waiver opponents do not effectively rebut its point that under the Section 209(b)(1)(B) criterion, EPA should continue (as it has over the past 23 years) to consider whether California needs its own motor vehicle emission control program (rather than considering only the specific standards in question) to address compelling and extraordinary conditions. CARB notes that EPA's 1984 diesel particulate waiver correctly determined that the use of the term "standards" in Section 209(b)(1)(B) requires EPA review of California's program as a whole. CARB adds, however, that even if only the potential impacts of the GHG regulations on criteria pollutants are considered, it would show an overall reduction driven by the net impact of upstream emissions reductions from reduced fuel throughput. The Alliance has ignored the fundamental teaching of *Massachusetts v. EPA*, which acknowledges the importance of regulatory flexibility, particularly in the context of the broad language of Section 202(a)(1). Given that Congress intended California to have broad discretion in designing a complete program, Section 209(b)(1) must be read similarly to foreclose the narrow reading of Section 209(b)(1)(B) that opponents suggest. The Alliance's overarching argument that 209(a) field preemption supports a narrow role for California to address unique conditions for every pollutant also fails. Rather than the Alliance's preference to give 209(a) broad preemptive effect in the guise of its constrained view of federalism, case law holds precisely the opposite. Preemption provisions are to be narrowly construed in favor of state sovereignty, particularly with regard to environmental matters. CARB provides significant additional discussion on this issue, citing to previous waiver decisions and

case law in support of its position.

Letters:

California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-3601) p. 19-22.

California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-0421-5) p. 30.

Natural Resources Defense Council (NRDC) (EPA-HQ-OAR-2006-0173-1672) p. 1-2, 6.

EPA should not reconsider its traditional deference to California on the issue of extraordinary and compelling conditions. In response to the assertion by the Alliance that California has no particular expertise in the field of climate change regulation, CARB asserts that California is at the forefront of combating emissions and cites (and provides as attachments 73-75 to its letter), the report "Our Changing Climate," the "Climate Action Team Report" and numerous other reports that demonstrate the leadership role that California has taken on global warming issues generally, and on vehicular GHG emissions in particular. No other state has committed the administrative, scientific, legal, and other resources, and has the public policy focus to global warming issues as California. Even though the impact of GHG emissions to ozone conditions alone are sufficient to justify California's GHG emission standards, EPA should defer to California on this issue if the Agency should further analyze extraordinary and compelling conditions.

Letters:

California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 12-13.

National Association of Clean Air Agencies (EPA-HQ-OAR-2006-0173-1604) p. 6.

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In direct response to comments by the Alliance, CARB notes that even assuming that EPA could evaluate California's regulations by pollutant and by impact under their three-part test (see Alliance letter p. 12-13), opponents failed to meet their burden on this issue. California does indeed: 1) "need" these standards to 2) "meet" 3) "compelling and extraordinary conditions." The regulations come to EPA with the presumption that this is the case. The burden is on opponents to show that these greenhouse gas standards are not among those measures needed to meet such conditions. [See related discussion under Issue 3.2]. The opponents' failure to demonstrate that GHG reductions are not needed is fatal to their argument on extraordinary and compelling conditions. By contrast, California has demonstrated that the GHG reductions projected from the subject standards are needed. CARB notes that a relatively small reduction in carbon dioxide emissions is scientifically important because of the nonlinear nature of the climate system, including the nonlinear nature of phenomena such as ice sheet disintegration and species extinction. CARB provides additional discussion on this issue, citing to previous CARB, Alliance, and AIMM submissions to the docket, as well as documents previously submitted (e.g., Dr. Hansen expert report, CARB Enclosure 46 and IPCC Fourth Assessment Report, CARB Enclosure 159).

Letters:
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-3601) p. 21-22
Opponents of the requested waiver cannot show that California no longer has a compelling or extraordinary need. In recent waiver requests, any suggestion that California did not need its

own motor vehicle pollution control program has been readily dismissed. In action on California's preemption waiver request for its LEV II program, for example, EPA stated "CARB has continually demonstrated the existence of compelling and extraordinary conditions justifying the need for its own motor vehicle pollution control program... no information has been submitted to demonstrate that California no longer has a compelling and extraordinary need for its own program." Commenter provides significant additional discussion regarding the legislative history, case law, and facts specific to California (e.g., population, geography, etc.) in support of its position on this issue.

Letters:

Environmental Defense (EPA-HQ-OAR-2006-0173-1459) p. 12-20.

NEED.

Rather than challenging CARB's need for its own motor vehicle pollution control program, the Alliance NEED - The waiver should be denied because California does not "need" separate GHG standards to address the phenomenon of global climate change to meet compelling and extraordinary conditions in that State. The "need" requirement in Section 209(b)(1)(B) authorizes the creation of regulatory standards specific to California only in cases where it is necessary to meet compelling and extraordinary conditions unique to that State. California cannot meet this high standard with respect to a global problem that does not affect

California in a unique way as compared to other States. GHGs are not localized pollutants that can affect California's local climate, or which are problematic due to California's specific topography. California claims that the standards are necessary to address conditions specific to the State including impacts to its coastline, snowpack, and ozone levels, all of which would be exacerbated by global warming. However, none of these conditions are "compelling and extraordinary" and are not unique to California as they affect many other states as well. Commenters provide significant additional discussion on this issue citing specifically to previous waiver decisions and relevant case law and more generally to constitutional principles, in support of their position on this issue.

Letters:

Alliance of Automobile Manufacturers (EPA-HQ-OAR-2006-0173-1297) p. 14-17.
Alliance of Automobile Manufacturers (EPA-HQ-OAR-2006-0173-0421-12) p. 61-70.
Association of International Automobile Manufacturers (EPA-HQ-OAR-2006-0173-1455) p. 8.
General Motors Corporation (EPA-HQ-OAR-2006-0173-1595) p. 6-8.
Utility Air Regulatory Group (UARG) (EPA-HQ-OAR-2006-0173-1497) p. 2-5.

Commenters generally note that climate change poses a threat to each state's economy, environment, and public health. California's need for action is strengthened by the Supreme Court decision in *Massachusetts v. EPA* as well as the release of the IPCC Fourth Assessment Report on May 4, 2007.

Letters:

Conservation Law Foundation (EPA-HQ-OAR-2006-0173-0422-24) p. 224-233.
Fitz-Gerald, Joan; Colorado State Senator (EPA-HQ-OAR-2006-0173-0423) p. 2.
New Mexico Environment Department (EPA-HQ-OAR-2006-0173-0421-25) p. 122-126.
Richardson, Bill; Governor of New Mexico (EPA-HQ-OAR-2006-0173-0857) p. 1; and

Romanoff, Andrew; Colorado House of Representatives (EPA-HQ-OAR-2006-0173-0537) p. 2;

MEET?

Given that mobile sources account for almost half of California's GHG emissions, it is vital for the state to be able to regulate GHG emissions from the transportation sector. Doing so would help achieve reductions in the most cost-effective and equitable manner. The automobile industry must accept more responsibility for reducing GHG emissions since other industries in California have taken steps to reduce these emissions and are already much more heavily regulated in this regard. Utilities have already taken steps to reduce their GHG emissions. Sempra Energy notes that it has converted over 1,200 vehicles to natural gas fuel, has assisted others with similar conversions, and has provided natural gas vehicle fueling infrastructure, including 16 refueling stations that are accessible to the public. In addition, San Diego Gas & Electric is supporting the development and use of zero emission and hybrid electric vehicles and electric transit. If motor vehicle GHG emissions cannot be reduced as expected in California, policymakers have already indicated that they may seek to force consumers and businesses in other sectors of California's economy to make up the difference. As a result, those consumers and businesses may be unduly burdened by the need to reduce GHG emissions by more than their fair share. Approval of the waiver not only makes good sense from a public policy perspective, it is essential to ensure fair implementation of AB 32. Accordingly, commenters support

California's request for a preemption waiver that will allow California to promptly implement its motor vehicle GHG emission standards. Some commenters provide additional discussion, noting that CARB has submitted voluminous documentation in support of its waiver request, which EPA must approve since California has shown that its protectiveness determination is not arbitrary and capricious, that the standards are needed to meet compelling and extraordinary circumstances, and that the standards are consistent with the CAA.

Letters:

Attorneys General of Rhode Island, Washington, Arizona, Connecticut, Illinois, Maine,

Maryland, Massachusetts, New Jersey (EPA-HQ-OAR-2006-0173-1462) p. 3.

Fresno, City of (EPA-HQ-OAR-2006-0173-0421-23) p. 115-117.

Pacific Gas and Electric Company (EPA-HQ-OAR-2006-0173-2280) p. 1-2.

Pacific Gas and Electric Company (EPA-HQ-OAR-2006-0173-0421-14) p. 84-86.

San Joaquin Valley Air Pollution Control District (EPA-HQ-OAR-2006-0173-1256) p. 2.

Sempra Energy (EPA-HQ-OAR-2006-0173-0421-13) p. 81-83

South Coast Air Quality Management District (EPA-HQ-OAR-2006-0173-1353) p. 1.

(5)

Letters:

EPA and other government agencies have acknowledged the importance of addressing global warming and GHG emissions. The President's Council of Environmental Quality has called for "more efficient vehicles" and the "need to work on every aspect" of addressing energy usage and global warming (White House press release 20070531-17). Granting California's waiver request would be an effective step in that direction.

Letters:

California Attorney General's Office (EPA-HQ-OAR-2006-0173-1433) p. 1, 5.

- (7) EPA should grant the waiver since it would encourage technological innovation and the production of more fuel-efficient vehicles. Previous experiences with regulating mobile source emissions have shown that the automotive industry is highly innovative and is capable of making further emission reductions and improvements to efficiency. Commenters provide additional discussion describing specific