

issue of EPCA preemption in the waiver proceeding. EPCA is very relevant to California's authority to regulate GHG emissions for reasons explained in NHTSA's April 2006 publication. EPA cannot intrude upon NHTSA's interpretation of the EPCA statute, because the power to interpret EPCA was committed by Congress to NHTSA and not to EPA.³⁷

AIAM agrees with CARB that EPA has consistently held that the Agency's inquiry under section 209(b) is modest in scope, in alignment with MEMA I. However, AIAM states that MEMA I is open to interpretation and that it does not necessarily stand for the proposition that EPA's waiver review starts and ends with section 209(b). The text of MEMA I suggests that while EPA is not *required* to look beyond the section 209(b) criteria there is nothing in section 209(b) that categorically forbids EPA from listening to constitutionally-based claims.

[scope] Several commenters suggest that the proponents of the waiver request, including CARB, argue that if EPA grants a waiver, then that signifies EPA approval of the regulations, and that once a waiver is granted, the regulations receive federal status taking them out of the realm of preemption. At the same time, the proponents of the GHG regulations argue the EPA's authority to decide the waiver request is very limited in scope. As such, it is clear that the proponents are trying to effectively foreclose any court or agency from determining whether the GHG regulations are preempted by EPCA. These commenters claim that it is incumbent upon EPA to determine whether its review of this waiver application will be narrowly confined to the strict statutory criteria of Section 209(b) or whether the regulations are preempted under EPCA

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or otherwise interfere with NHTSA's implementation of the federal CAFE program. If EPA chooses the former course, then it should explicitly state in its waiver decision that it is not addressing express preemption or conflict with EPCA, and that those questions are best left to the courts where the issue has been raised. EPA also needs to reject categorically CARB's "federalization" claim and make it clear that a waiver does not magically transform a state regulation into federal law. If EPA considers preemption under EPCA, EPA should deny the waiver since NHTSA has already determined that the regulation is preempted under EPCA and since *Massachusetts v. EPA* and EO 13432 envision inter-agency coordination on this issue. AIAM provides significant additional discussion on this issue citing to both case law as well as testimony and transcripts from proceedings associated with both *Massachusetts v. EPA* and the Vermont trial.

Letters:

Association of International Automobile Manufacturers (EPA-HQ-OAR-2006-0173-1455) p. 14-17

-) **EPA should coordinate with the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) with respect to its work on the California waiver request in order to ensure a consistent national approach for controlling GHG emissions and improving the fuel economy standards.**

37 Alliance of Automobile Manufacturers (EPA-HQ-OAR-2006-0173-1519) p. 10-11. [others?]

Executive Order 13432 makes it a matter of federal policy for EPA, NHTSA and other agencies of the Executive Branch to coordinate their work on the issue of motor vehicle GHG regulation within current statutory limitations. Although EO 13432 does not necessarily control waiver proceedings, EPA should still ensure coordination of the waiver request with NHTSA. This EO is consistent with the opinion of Supreme Court Justice Stevens in *Massachusetts v. EPA*, in which he stated that EPA and DOT should be able to "both administer their obligations and yet avoid inconsistency" between the CAA and CAFE standards. One commenter added that EPA should consult with NHTSA to determine whether *Massachusetts v. EPA*, EO 13432, or other circumstances would permit EPA and NHTSA to modify the timing or stringency of the state GHG standards through a public process, or to propose such modifications to California as a condition for approval of the waiver. If so, EPA also needs to determine whether it would commit to a full analysis of the economic, safety, and other consequences of the California GHG regulation in consultation with NHTSA, as would be required by the EPCA statute. Commenters provide additional discussion in support of their position on this issue.

Letters:

Alliance of Automobile Manufacturers (EPA-HQ-OAR-2006-0173-1519) p. 12-13.
General Motors Corporation (EPA-HQ-OAR-2006-0173-1595) p. 3-4.

If EPA decides that it can consider all the criteria contained in the EPCA statute, including "economic practicability" in consultation with NHTSA, the Agency needs to explain the legal status of EPA's consideration of those criteria. This is important because it appears that Section 209(b) does not permit EPA to consider EPCA in its evaluation of a California regulation

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authority to regulate CO₂ emissions may overlap with DOT's regulation of fuel economy, the that conflicts with EPA's goals or preemption provision. Although the Court held that EPA's by EPA. Also, the Court did not consider whether a state has free reign to enact a regulation the question of state authority to regulate GHG emissions or whether such efforts are preempted federal authority with DOT to regulate CO₂ emissions from motor vehicles, but did not address are better formulated. In *Massachusetts v. EPA*, the Court determined that EPA has concurrent sufficient reason to deny or hold in abeyance California's waiver request until EPA's own policies The need for coordination of federal GHG policy (as required under EO 13432) is

Letters:
Alliance of Automobile Manufacturers (EPA-HQ-OAR-2006-0173-1519) p. 13.

government contractors. *[DD – follow up with VT and late comments]*
level of quasi-judicial independence required by the demands of the Due Process Clause and not equal and public access to the finders of fact, who should be public officials, able to act with the hearings at which cross-examination would be permitted, and traditional safeguards to ensure confidential business information, access to compulsory process, a procedure for joint public 209(b). The joint EPA-NHTSA process would have to include procedures for the use of specifically adapted to the limited questions that EPA has traditionally considered under Section such a regulation. EPA's current procedures for considering California waiver requests are a CAFE-type regulation, such as the California GHG regulation, as well as the safety impacts of what types of fact-finding procedures should be employed in considering the economic impact of for purposes of approving or disapproving a waiver request. EPA and NHTSA should address

Court further observed that both agencies should be able to meet their obligations, yet avoid inconsistency. EO 13432 appears to be a response to these observations and along with the decision in *Massachusetts v. EPA* will help encourage a coordinated inter-agency approach. If EO 13432 and the *Massachusetts v. EPA* decision are to be given any effect, the waiver must be denied. AIAM provides additional discussion on this issue, noting that California's GHG regulations have been adopted by 12 states (which represent close to half the new vehicle market) and that by granting the waiver request, EPA would effectively be ceding to California the responsibility for balancing all of the national concerns that are implicated by enhanced fuel economy standards - a task that California did not perform in enacting these regulations.

Letters:

Association of International Automobile Manufacturers (EPA-HQ-OAR-2006-0173-1455) p. 20-21.

General Motors Corporation (EPA-HQ-OAR-2006-0173-1595) p. 3-4.

DOT has over 30 years of experience in the area of regulating motor vehicle fuel economy. However, California has no such prior experience regulation motor vehicle GHG emissions or fuel economy. Previously, substantial deference to CARB was in part based on their lengthy experience in analyzing and regulating sources of smog forming pollution. CARB's lack of experience in the area of GHG emissions is relevant to the degree of deference granted to CARB in this new and different area of regulation. EPA should hold the waiver request in abeyance while the Agency works with DOT and DOE to implement new federal policies in this area.

Letters:

General Motors Corporation (EPA-HQ-OAR-2006-0173-1595) p. 4.

- C) The link between fuel economy and fundamental design characteristics of the vehicle has been a primary reason for maintaining a single, uniform national program for fuel economy.**

[this belongs in the GHG as a pollutant discussion] Unlike previously regulated gases such as CO and NO_x, which are products of imperfect combustion within the engine, CO₂ is an inevitable product of combustion of any hydrocarbon fuel and is formed in direct proportion to the amount of gasoline burned. Taken all together, the pathways for releasing the carbon in gasoline as gases other than CO₂ can account for only about 0.4% of the carbon. The remaining 99.6% of the carbon in gasoline must necessarily be emitted as CO₂. Therefore, regulations of carbon dioxide emissions from a vehicle measured on a per-mile basis are functionally the same as regulating the fuel economy of the vehicle. There are no practical catalytic exhaust treatment technologies or devices that could capture the CO₂ from the exhaust stream or convert it to a different benign compound to be emitted. The commenter provides additional discussion on this issue noting that the California regulation is so demanding that different designs would be called for and whole classes of larger vehicles would be expected to be eliminated or severely restricted in availability. It is an important goal to preserve a uniform national fuel economy program in order to avoid fragmentation of the U.S. automobile market and to continue to receive the

benefits of a large common market for automobiles throughout the U.S.

Letters:

General Motors Corporation (EPA-HQ-OAR-2006-0173-1595) p. 2-3.

(B) EPA does not need to, and is not empowered to, coordinate its work on the waiver request with NHTSA.

Congress considered both the arguments of the automobile industry and of California and the other states when it made its original waiver provision for California and subsequently strengthened that provision. California's right to seek waivers already represents a compromise between uniform national standards and states' rights, so there is no basis to argue further for uniform standards. (California Department of Justice provides a lengthy discussion of the legislative history of the CAA on this and similar points.)

Letters:

California Attorney General's Office (EPA-HQ-OAR-2006-0173-1433) p. 3-4.

National Association of Clean Air Agencies (EPA-HQ-OAR-2006-0173-1604) p. 3.

The EPCA does not diminish California's authority to adopt GHG emission standards for vehicles (or EPA's authority to waive preemption thereof), and is not relevant to EPA's consideration of the California waiver request. NHTSA itself argued that the issue of preemption

is not ripe until EPA decides the waiver issue, a decision that is separate from EPCA. When EPA issues the waiver, the foundation for NHTSA's analysis (i.e., that EPA lacks the authority to regulate vehicular GHG emissions) disappears under the weight of *Massachusetts v. EPA*. There is nothing in NHTSA's preamble discussion that provides any guidance on the issue of the preemption under EPCA and EPA must move forward on its own to act on the California waiver request.

Letters:

Attorneys General of Rhode Island, Washington, Arizona, Connecticut, Illinois, Maine, Maryland, Massachusetts, New Jersey (EPA-HQ-OAR-2006-0173-1462) p. 6.
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 22-23.
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-0422-6) p. 55-56.
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-0421-5) p. 39.
California Assembly Member Ira Ruskin (EPA-HQ-OAR-2006-0173-0421-7) p. 44-45.
California Attorney General's Office (EPA-HQ-OAR-2006-0173-1433) p. 3.
California Attorney General's Office (EPA-HQ-OAR-2006-0173-0421-2) p. 8-10.
Environmental Defense (EPA-HQ-OAR-2006-0173-0422-20) p. 194-196.
National Association of Clean Air Agencies (EPA-HQ-OAR-2006-0173-1604) p. 12.
Natural Resources Defense Council (NRDC) (EPA-HQ-OAR-2006-0173-1672) p. 8-9.
Natural Resources Defense Council (NRDC) (EPA-HQ-OAR-2006-0173-0422-19) p. 189-190.
Northern Sonoma County Air Pollution Control District (EPA-HQ-OAR-2006-0173-0421-20) p. 108.

Even though EO 13432 requires EPA to coordinate with NHTSA and other Executive Branch agencies on motor vehicle greenhouse gas regulations within current statutory limitations, EPCA/CAFE and NHTSA continue to have no bearing on EPA's waiver review criteria. Neither *Massachusetts v. EPA* nor this EO provide any support for changing EPA procedures that the public, CARB and other supportive commenters have relied upon. CARB provides additional

discussion noting that the Vermont trial waiver opponents appear to recognize the limited nature of this waiver proceeding and that additional arguments on the relevancy of EPCA/CAFE are provided as an attachment to their letter (Document #562 - briefing of the manufacturers' federal court challenge).

Letters:

California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 23.

The EPCA fuel economy provisions are not relevant to EPA's consideration of the waiver. The court in the Massachusetts decision expressly rejected EPA's arguments about federal fuel economy regulations and emphasized that EPA must base its decision to regulate mobile source greenhouse gases on specific language in the CAA, not other statutes. In addition, the court held that even though DOT's responsibility to set mileage standards may overlap with EPA's environmental duties (because compliance with GHG emission standards may be obtained through improved fuel economy), it "in no way licenses EPA to shirk its environmental responsibilities" to directly limit vehicle GHG emissions. It follows that EPA should permit California to enact and enforce its GHG emission limits.

Letters:

Attorneys General of Rhode Island, Washington, Arizona, Connecticut, Illinois, Maine, Maryland, Massachusetts, New Jersey (EPA-HQ-OAR-2006-0173-1462) p. 6.

California Attorney General's Office (EPA-HQ-OAR-2006-0173-1433) p. 1-2.

California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-0422-6) p. 55-56.

Connecticut Department of Environmental Protection (EPA-HQ-OAR-2006-0173-2173) p. 3.

National Association of Clean Air Agencies (EPA-HQ-OAR-2006-0173-1604) p. 11-12.

Pennsylvania Department of Environmental Protection (EPA-HQ-OAR-2006-0173-1352)

p. 2.

Puget Sound Clean Air Agency (EPA-HQ-OAR-2006-0173-1295) p. 4.

Western Environmental Law Center (EPA-HQ-OAR-2006-0173-1404) p. 8.

The automobile industry's litigation attack on California's standards is based on a fundamental misinterpretation of EPCA. First, the question of preemption arises only where a state law is clearly contrary to a federal law (such as *Medtronic v. Lohr*, 518 US 470, 485). Second, the explicit language of EPCA itself requires NHTSA to take into account "the effect of other motor vehicle standards of the Government on fuel economy" in setting NHTSA's fuel economy standards (49 USC section 32902(f)). Since Congress intended California's program to be included in "other motor vehicle standards of the Government," EPCA must take California's standards into account before setting its own. NHTSA has done this with many prior EPA and California emissions standards. *Massachusetts v. EPA* confirmed this precedent (127 S. Ct. 1461-62). Finally, nothing in EPCA allows a different approach to GHG emissions, and nothing in it allows a differentiation between federal and California emissions standards. Hence, NHTSA must take California's standards into account, not vice versa, and its standards do not bear on California's waiver. Commenter provides significant additional discussion on this issue citing to case law and portion of the CAA to support its position. Commenter provides a number of briefs that have been filed in the California federal court on the issue of EPCA preemption, noting that EPA should not be venturing into an issue outside its jurisdiction and that the federal courts in California, Vermont, and Rhode Island will answer this question in favor of the various states.

Letters:

California Attorney General's Office (EPA-HQ-OAR-2006-0173-1433) p. 1-3.

California Attorney General's Office (EPA-HQ-OAR-2006-0173-3468) p. 1.

When Congress amended the CAA in 1977, it strengthened California's authority to adopt emissions standards. At this time, Congress already knew of EPCA's requirements and knew that emissions standards affected fuel economy, and nonetheless gave no indication that EPCA should limit California's authority under the CAA.

Letters:

California Attorney General's Office (EPA-HQ-OAR-2006-0173-1433) p. 2.

- (6) California's standards are not "de facto" fuel economy standards, as the automobile industry has asserted. California's emissions standards consider both air-conditioning emissions and the life cycle emissions of alternative fuels. Either of these areas could significantly help vehicles comply with California's standards, as could reductions in upstream emissions associated with fuel production for vehicles. California is committed to reducing emissions broadly, not regulating fuel economy.

Letters:

California Attorney General's Office (EPA-HQ-OAR-2006-0173-1433) p. 2-3.

National Association of Clean Air Agencies (EPA-HQ-OAR-2006-0173-1604) p. 1-2, 12.

The automobile industry has failed to prove, based on "clear evidence" (*Geier v. Am. Honda Motor Co.*, 529 US 861, 885--2000) that California's standards would "acutely interfere" with the balancing NHTSA would do in setting "maximum feasible" fuel economy standards (*Californians for Safe & Competitive Dump Truck Transport v. Mendonca*, 152 F.3d 1184, 1189-9th Cir. 1998). Moreover, given the activity in NHTSA and Congress, it is entirely speculative what fuel economy standards will be in the future. [DD note – this may be where we want to talk about the balancing act, competing goals and late comments, et

Letters:

California Attorney General's Office (EPA-HQ-OAR-2006-0173-1433) p. 3.

EPA may not rely on the nation's fuel economy laws in reviewing California's waiver request. As the Supreme Court has noted, the CAA is concerned with protection of public health and welfare, a statutory obligation independent of DOT's mandate to promote energy efficiency. EPA may not import consideration from other laws, such as EPCA, that the Supreme Court has plainly distinguished from the statutory purposes and text of the CAA. Environmental Defense provides significant additional discussion on this issue, summarizing a variety of state policy initiatives (e.g., the Global Warming Solutions Act or AB32, which limits GHG emissions from state sources) aimed at reducing GHG emissions in California, and emphasizing that the California GHG emission standards differ from DOT's fuel economy standards in that they foster both vehicle and fuel technology advancements (e.g., use of alternative fuels) that will reduce the total vehicle carbon footprint. Environmental Defense outlines three primary differences between the EPCA CAFE program and the California GHG emission standards: 1) the California regulations provide auto makers with credit from reductions in direct and indirect air-conditioning GHG emissions, whereas the federal CAFE program provides no such credit and does not recognize vehicle A/C GHG emissions at all (given that vehicle A/C is off during the federal test cycle; 2) the California regulations incorporate vehicle methane and N₂O emissions as well as CO₂ emissions, and even though N₂O and methane comprise a small portion of overall GHG emissions, they are potent GHGs that are not addressed through the federal CAFE program; 3) the California regulations incorporate well-to-wheel fuel GHG emissions through

the application of upstream fuel adjustment values to measured vehicle emissions, and the federal CAFE program has no comparable adjustment. Environmental Defense provides significant additional discussion on the issue of using and promoting alternative fuels and the significant contribution this approach can have to reducing GHG emissions.

Letters:

Environmental Defense (EPA-HQ-OAR-2006-0173-1459) p. 23-28.

Environmental Defense (EPA-HQ-OAR-2006-0173-0422-20) p. 197-199.

Even if California's regulations could be preempted by EPCA (which it is not), the CAA simply does not give the Administrator the authority to deny California's request based on such speculation. As indicated by the court in *Massachusetts v. EPA*, even though the regulatory purview of the EPA under the CAA and NHTSA under EPCA may overlap "there is no reason to think the two agencies cannot both administer their obligations and yet avoid inconsistency." In addition, the fact that there is overlap in technologies that reduce GHG emissions and technologies that improve fuel economy cannot be used as a rationale for denying the waiver request. California has received waivers for previous regulations that reference fuel economy in the same way that the current GHG emission regulations do. The Administrator cannot now reverse course by manufacturing a preemption, or any other argument, to deny a waiver for California's mobile source pollution control program.

Letters:

Center for Biological Diversity (EPA-HQ-OAR-2006-0173-1485) p. 10-11.

AIAM attempts to import EPCA/CAFE concerns into the 202(a) consistency analysis,

and then states that waiver proponents' argument that EPA may not review EPCA preemption cannot be reconciled with Vermont Defendants' argument that an EPA waiver federalizes California's emissions standards and takes "them out of the realm of [EPCA] preemption." [See *Issue 4.1, Point C below*]. CARB notes, however, that Congress provided that reconciliation with 49 U.S.C. 32902(f) (requiring NHTSA to consider the effect of other government standards) and limited review of California's emission standards under Section 209(b). Even though AIAM states that EPCA preempts the GHG regulations, there are very live issues not yet resolved on summary judgment motions in either Vermont or California federal courts. Indeed, one judge implied that *Massachusetts et al. v. EPA* would resolve the issue for Defendant, contrary to AIAM's similar amicus arguments in that case (see Enclosure 178; the issue is set for hearing on October 22, 2007).

Letters:

California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-3601) p. 31.

CLF, NRDC, EDF, and Sierra Club submitted comment in response to AIAM's supplemental comment of October 1, 2007 which offered AIAM's interpretation of Green Mountain. These commenters state the AIAM contends that Green Mountain supports its claim that EPA must consider whether California's standards conflict with EPCA and that the commenters disagree with this interpretation. The Green Mountain court held that an EPA-approved California emission standard is an "other motor vehicle standard of the Government" under EPCA, and is thus treated as a federal standard for purpose of EPA. However, the

commenters suggest that the suggestion that EPA must “consider [] the goals and purposes of EPCA” is not what the Green Mountain court held. Rather the Court made the “reasonable observation that the technological and economic factors that EPA considers when determining whether California’s standards are “not consistent with section 202(a)” are analogous to the technological and economic factors that NHTSA considers under an EPCA rulemaking.

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(2) Granting the CARB waiver request would result in a significant distortion to new car commerce without any commensurate environmental benefit. CARB's regulations would require vehicle manufacturers to meet fleet average emission requirements for passenger cars and small light trucks and for larger light trucks on a phased in schedule starting in 2009 and extending through 2016. To the extent that CARB's regulations impose mandates that either are too ambitious or technologically challenging, manufacturers may be forced to produce and distribute vehicles with compromised performance and other attributes. In California and throughout the United States, dealerships today now sell more vans, sport utility vehicles, and pick-

up trucks than passenger cars. In order to meet the California GHG standards, manufacturers may be forced to compromise vehicle performance attributes or reduce the delivery of certain models within California. The standards are effectively unenforceable, since any shortage of certain models in California will force individuals to turn to out-of-state dealers. Any government mandate involving fuel economy must only be imposed nationwide, must be based on sound scientific principles and data, and must clearly satisfy an economic cost/benefit analysis that accounts for all significant adverse effects on the economy.

Letters:

National Automobile Dealers Association (EPA-HQ-OAR-2006-0173-1671) p. 6-8.

Insert new arguments from AIAM of 10/1/07

SEE US/DOJ filing in 9th circuit – why EPA need not look at EPCA, etc – reconcile with VT and CA court processes

1. Public Health and Welfare

Under section 209(b)(1)(A) of the Act, EPA cannot grant a waiver if the agency finds that CARB was arbitrary and capricious in its determination that its State standards are, in the aggregate, at least as protective of public health and welfare as applicable federal standards.

Interpretations break down, how section will be addressed, CARB's initial statement (request letter, EO, ISOR, FSOR)

CARB's Board made a "protectiveness determination" at the time it adopted the motor vehicle GHG regulations.³⁸ Within its Resolution it found and resolved several items, including "Be it further resolved that the Board hereby determines that the regulations approved herein will not cause California motor vehicle emission standards, in the aggregate, to be less protective of public health and welfare than applicable federal standards."³⁹ This Resolution also references CARB's Initial Statement of Reasons and its finding that "The establishment of greenhouse gas emission standards will result in a reduction in upstream emissions (emissions due to the production and transportation of the fuel used by the vehicle) of greenhouse gas, criteria and toxic pollutants due to reduced fuel usage. CARB's Board also found within the Resolution that "Supplemental Analysis of the potential response of consumers (Consumer response) to the regulations was performed as part of the staff evaluation. The evaluation of consumer response indicates that the impact of vehicle price and increases on fleet turnover (changes to the average age of the motor vehicle fleet) as well as the impacts of lower operating costs on vehicles miles traveled (rebound effect) by consumers have minor impacts (less than one percent of the passenger vehicle emissions inventory) on criteria pollutants.

A. Necessity of Federal Standards for Point of Comparison

Since there are currently no federal standards to which the California GHG standards can be

³⁸ CARB Resolution 04-28, September 23, 2004. Docket entry xxx

³⁹ CARB Resolution at p. 15

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(2) The waiver request should either be denied or held in abeyance until after EPA has taken further regulatory steps and until California has met the requirement to perform a protectiveness analysis "in the aggregate." EPA is not free to make California's protectiveness determination on behalf of the State. If EPA cannot approve a waiver request as proposed, it must deny the waiver and send it back to the State for it to decide whether and how to modify its regulations. EPA lacks the option to hold in abeyance a waiver request on which California has not carried its initial burden. However, if EPA determines that it has the ability to do so (and justifies that ability in the context of Section 209(b) and administrative law), it must be based on:

Letters:
Alliance of Automobile Manufacturers (EPA-HQ-OAR-2006-0173-1297) p. 2, 5.
Alliance of Automobile Manufacturers (EPA-HQ-OAR-2006-0173-0422-8) p. 101-102.
Alliance of Automobile Manufacturers (EPA-HQ-OAR-2006-0173-0421-11) p. 58-59.
National Automobile Dealers Association (EPA-HQ-OAR-2006-0173-1671) p. 3.

(1) California has not carried its initial burden on the protectiveness issue and did not perform the required comparative analysis. Under Section 209(b)(1)(A), EPA must determine by the State that its regulations will be in the aggregate at least as protective as the federal program it would displace. California has not provided a quantitative comparison of its combined program of emissions standards (including its ZEV mandate and GHG standards), to the federal emissions standards program. California only offers a conclusory statement that questioned how its standards could be considered less protective of the federal standards. This assertion by California is devoid of any citation to the record or detailed supporting argumentation. In support of their position on this issue, the Alliance cites *MEMA v. EPA* and provides additional discussion, concluding that CARB must demonstrate entitlement to a waiver (including the supporting evidence) before EPA can assign any burden on the waiver opponents to demonstrate why it should be denied. The Alliance also notes that even though they are not required under the CAA to make this comparison, they have recently sponsored an analysis that demonstrates that the California program is in fact less "protective" as an aggregate matter than if federal regulations applied in California. (See: "Effectiveness of the California Light Duty Vehicle Regulations As Compared to Federal Regulations," Sierra Research, NERA Economic Consulting, and Air Improvement Resource, Inc., June 15, 2007; Docket # EPA-HQ-OAR-2006-0173-1447).

compared, California cannot meet the requirement of demonstrating in a non-arbitrary, non-capricious manner that its GHG standards make its new motor vehicle program at least as protective in the aggregate as the applicable federal standards.

1) a failure of the protectiveness demonstration under section 209(b)(1)(A), and 2) a premature submittal of a waiver application to regulate in an area that EPA has not yet set section 202(a) standards against which section 209(b)(1)(C) consistency could be measured. The Alliance provides additional discussion on this issue and asserts that this second objection underscores why the California waiver request should be denied, and not simply held in abeyance.

Letters:

Alliance of Automobile Manufacturers (EPA-HQ-OAR-2006-0173-1297) p. 37-38.

- (4) It is impossible at this time to determine whether the GHG regulations are at least as protective of public health and welfare since the federal standards are currently under consideration. California's GHG regulations are fundamentally different from regulations for which EPA has granted waivers in the past. These regulations address an issue of undeniable national and international importance and intrude into an area where there is a tremendous level of current federal activity. Pursuant to both *Massachusetts v. EPA* and Executive Order 13432, EPA is at this very moment addressing how greenhouse gas emissions are to be regulated from motor vehicles. That process will involve coordination among several federal agencies and will delicately balance a number of important, competing national goals. Until that process plays out, it is impossible for EPA to evaluate how the California GHG regulations will compare with federal regulation in this field.

Letters:

Association of International Automobile Manufacturers (EPA-HQ-OAR-2006-0173-1455) p. 3.

- 1) The claim by AIAM that EPA cannot weigh protectiveness without federal GHG standards in place, ignores the rich history of Section 209(b). Based on the opponents' logic, a mere EPA announcement that it is considering certain options for reducing new motor vehicle ozone precursor emissions would supposedly call into question California's prior protectiveness determinations, and require EPA to reject any pending waiver request on protectiveness grounds. However, that is not how the Section 209(b) waiver process and the Section 209(e)(2) authorization process work. CARB provides additional discussion on this issue noting that in 2006, EPA granted a Section 209(e)(2) authorization for California's new evaporative emissions standards for small off-road engines. In this case, EPA had not yet proposed corresponding federal standards and in its discussion of protectiveness, acknowledged that when California adopts standards in the absence of federal standards for the same source category, California's standards are by definition as or more protective. CARB adds that the opponents also indicate that the lack of measurable global warming impacts

from California's GHG standards would preclude EPA from ever having a standard that could be compared to California's, and concludes that the opponents' hypocrisy is clear; they want EPA to "wait" to compare California's standards to whatever standards EPA may eventually propose, while also arguing that nationwide standards as stringent as California's would still be ineffective.

Letters:

California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-3601) p. 18-19.

B. Since no Federal Standards – whether as protective or not (numerical comparison)

California's motor vehicle standards (including their GHG emission standards), are more protective than the federal standards since there are no corresponding federal GHG emission standards.

- (1) Commenters do not provide any additional discussion or supporting documentation. *[See related discussion on the protectiveness determination and comparing the California program in the aggregate to the federal program under Issue 2.1.2].*

Letters:

Attorneys General of Rhode Island, Washington, Arizona, Connecticut, Illinois, Maine, Maryland, Massachusetts, New Jersey (EPA-HQ-OAR-2006-0173-1462) p. 1.

Connecticut Department of Environmental Protection (EPA-HQ-OAR-2006-0173-2173) p. 1.

Fitz-Gerald, Joan; Colorado State Senator (EPA-HQ-OAR-2006-0173-0423) p. 2.

Lynch, Patrick; Rhode Island Attorney General (EPA-HQ-OAR-2006-0173-0422-11) P. 126.

National Association of Clean Air Agencies (EPA-HQ-OAR-2006-0173-1604) p. 9.

National Association of Clean Air Agencies (EPA-HQ-OAR-2006-0173-0421-27) p. 132-137.

Natural Resources Defense Council (NRDC) (EPA-HQ-OAR-2006-0173-0422-19) p. 186-187.

New Jersey Attorney General's Office (EPA-HQ-OAR-2006-0173-0422-12) p. 134.

New Mexico Environment Department (EPA-HQ-OAR-2006-0173-0421-25) p. 122-126.

Pennsylvania Department of Environmental Protection (EPA-HQ-OAR-2006-0173-1352) p. 3.

Pennsylvania Department of Environmental Protection (EPA-HQ-OAR-2006-0173-0422-15) p. 154.
Puget Sound Clean Air Agency (EPA-HQ-OAR-2006-0173-1295) p. 3.
Richardson, Bill; Governor of New Mexico (EPA-HQ-OAR-2006-0173-0857) p. 1.
Romanoff, Andrew; Colorado House of Representatives (EPA-HQ-OAR-2006-0173-0537) p. 2.
Sierra Club (EPA-HQ-OAR-2006-0173-1690) p. 2.
U.S. Public Interest Research Group (EPA-HQ-OAR-2006-0173-1463) p. 2.
U.S. Public Interest Research Group (EPA-HQ-OAR-2006-0173-0422-23) p. 222.

- (3) California's standards clearly are, in the aggregate, more stringent than EPA's (and thus more protective of public health and welfare), since the EPA standards have no GHG component. California's determination in this regard is well-founded, not arbitrary or capricious. Consequently, there is no basis for denying a waiver under Section 209(b)(1)(A). California's standards must be found to be more protective if: (1) GHG emissions constitute pollutants under the CAA, (2) California's program will lead to reductions in vehicle GHG emissions, and (3) those reductions render California's program more protective of public health and welfare than no reductions. There is no basis for delaying the decision on California's waiver to await federal standards and the proposal of national standards would have no impact on the situation. Even if and when federal standards are promulgated, EPA would have to leave it to California to determine whether the state's standards are at least as protective in the aggregate as the federal standards. EPA's role would be limited to determining whether the state's conclusion is arbitrary and capricious. Commenters provide additional discussion in support of their position on this issue citing to the *Massachusetts v. EPA* decision as well as existing California regulations and expected reductions from the California GHG emission standards.

Letters:

Center for Biological Diversity (EPA-HQ-OAR-2006-0173-1485) p. 5-6.
Conservation Law Foundation (EPA-HQ-OAR-2006-0173-1502) p. 4.
Natural Resources Defense Council (NRDC) (EPA-HQ-OAR-2006-0173-1672) p. 6.
Natural Resources Defense Council (NRDC) (EPA-HQ-OAR-2006-0173-0422-19) p. 186-187.
Western Environmental Law Center (EPA-HQ-OAR-2006-0173-1404) p. 5-7.

Below should be in compelling need section

- (4) There simply is no legal requirement that California prove a certain level of environmental benefit. That is particularly true in this instance, where the actual and anticipated impacts of global warming are complex and historically unprecedented,

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(5) Section 209(b)(2) does not excuse California from the need to perform a meaningful protectiveness analysis that takes account of the increases in currently regulated pollutants. This is clear from comparing the text of sections 209(b)(1) with section 209(b)(2). Section 209(b)(1) states that California can obtain a preemption waiver only if it "determines that the State standards will be, in the aggregate at least

Letters: Alliance of Automobile Manufacturers (EPA-HQ-OAR-2006-0173-1297) p. 2, 5-7.

(3) California cannot meet the aggregate protectiveness criteria based on a simple comparison of standards it establishes against a baseline in which there are no analogous federal standards. The notion that protectiveness is met whenever federal standards are non-existent would gut the requirement that California make a non-arbitrary, non-capricious determination that its standards are as protective as the federal program "in the aggregate." California has not offered the analysis required by the textual demand within the waiver application for a comparison of protectiveness in the aggregate or what California itself agrees is required - a comparison of the "entire set" of standards. The Alliance provides additional discussion on this issue and concludes that California should document properly the basis for its findings and conclusions or reformulate its waiver application to rely solely on fully documented findings and conclusions and justify its request at another public hearing.

Letters: Conservation Law Foundation (EPA-HQ-OAR-2006-0173-1502) p. 4-5.

and it is widely recognized that a number of efforts by governments, private entities, and individuals globally will be required to respond effectively. California need not show that the climate will in fact respond to its regulatory action. Its only obligation is to do what it already has accomplished - to show a rational connection between its action and the problem being addressed. California's standards satisfy another express Congressional purpose animating the Clean Air Act - that California serve as a "laboratory for innovation" in developing new air pollution control strategies. Congress never intended to impose an obligation on California to show that its regulations will in fact succeed. Rather, Congress gave the state the broadest possible discretion to regulate automotive pollution, with the expectation that lessons learned in California would benefit the rest of the nation. As there currently are no federal GHG standards, California's initial efforts, by definition, will perform the expected experimental function. Commenter provides additional discussion on this issue citing to case law (including *Massachusetts v. EPA*) in support of its position on this issue.

as protective of public health as applicable federal standards." Section 209(b)(2) states that "[i]f each State standard is at least as stringent as the comparable applicable federal standard, such State standard shall be deemed to be at least as protective of health and welfare as such Federal standard for purposes of paragraph (1)." Section 209(b)(1)'s proper harmonization with 209(b)(2) requires that where aggregate protectiveness is called into question, the State is no longer free to rely on a simple comparison based on stringency. Instead, a complete analysis of environmental protectiveness that directly compares net emissions under the federal and California programs must be undertaken. Failing to do so would be arbitrary and capricious.

Letters:

Alliance of Automobile Manufacturers (EPA-HQ-OAR-2006-0173-1297) p. 11-12.

C. Protectiveness in the Aggregate – actual analysis

Commenters generally note that in the aggregate, California's motor vehicle standards (including their GHG emission standards) are more protective than the federal standards since there are no federal GHG emission standards. *[See related discussion under Issue 2.1.1].* Some commenters also note that California has provided solid evidence in that regard and that its GHG regulations are neither arbitrary nor capricious.

Letters:

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

Maryland, Massachusetts, New Jersey (EPA-HQ-OAR-2006-0173-1462) p. 2-4.

Connecticut Department of Environmental Protection (EPA-HQ-OAR-2006-0173-2173)
p.1.

Fitz-Gerald, Joan; Colorado State Senator (EPA-HQ-OAR-2006-0173-0423) p. 2.

Lynch, Patrick; Rhode Island Attorney General (EPA-HQ-OAR-2006-0173-0422-11) p.
129.

National Association of Clean Air Agencies (EPA-HQ-OAR-2006-0173-1604) p.2,5-7,9.

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

New Jersey Attorney General's Office (EPA-HQ-OAR-2006-0173-0422-12) p. 134.

Pennsylvania Department of Environmental Protection (EPA-HQ-OAR-2006-0173-1352)
p. 3.

Puget Sound Clean Air Agency (EPA-HQ-OAR-2006-0173-1295) p. 3.

Richardson, Bill; Governor of New Mexico (EPA-HQ-OAR-2006-0173-0857) p. 1.

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

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

Sierra Club (EPA-HQ-OAR-2006-0173-1690) p. 2.

U.S. Public Interest Research Group (EPA-HQ-OAR-2006-0173-1463) p. 2.

- (1) During the rulemaking no one asked the Board to, or suggested the Board should, completely reanalyze its entire passenger motor vehicle program. That CARB did not do so of its own volition is irrelevant. What is relevant, sufficient, and controlling, is that the Board reviewed the incremental difference these greenhouse gas regulations would make to the then existing California passenger motor vehicle program as waived and as pending waiver at EPA. The opponents' argument that CARB has not made a proper protectiveness determination fails from its own simple logic, because they essentially argue that $LEV + ZEV + GHG =$ a less protective California program, and that California did not solve for this equation all at once. However, as shown above, California determined that $LEV + ZEV$ is at least as protective in the aggregate, and then determined that this existing program pending waiver review $(LEV + ZEV) + GHG$ remains at least as protective. The Board indeed solved the equation, and found California's program to remain at least as protective in the aggregate as the federal program. CARB provides significant additional discussion on this issue, citing to case law as well as the timeline and other details associated with CARB's protectiveness determination in support of their position. CARB reiterates that EPA's review in this context is limited to whether California was arbitrary and capricious in its determination.

Letters:

California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-3601) p. 6-7.

- (2) Assuming arguendo that the Board had to now update its protectiveness determination, and respond to opponents' new material (e.g., Sierra Report and Alliance letter dated June 15, 2007), CARB has done so. Since the Alliance acknowledges that its fleet turnover and rebound analyses were not persuasive in the recent ZEV Waiver proceeding and knowing that its similar analyses in the federal litigation over these regulations have suffered serious damage, the Alliance throws both analyses together and hope for the best. Simply adding two unreliable analyses together does not make for a reliable one. The argument by Alliance is not about the relative numerical stringency of LEV II and ZEV standards versus federal Tier II standards. EPA's prior acceptance of California's determination on that score stands; California's standards are more protective. The opponent's argument is also not about the relative numerical stringency of California's GHG standards versus non-existent federal EPA GHG standards that are only now under potential consideration;

California's greenhouse gas standards are clearly numerically more protective. Instead, the opponent's protectiveness argument here is entirely about: 1) a series of speculative events driven by disputed and unsupported compliance costs that would supposedly result - contrary to experience with previous emission reduction and automotive regulatory measures - in a substantial reduction in new motor vehicle sales (fleet turnover); and 2) Californians' theoretical desire to drive even more miles than already projected to reach increasingly distant destinations in the face of increasing traffic congestion (rebound effect). CARB notes that it thoroughly reviewed opponents' similar arguments in the respective rulemakings and had good reason to accept its staff's more reasonable and historically reliable analyses. CARB provides additional discussion on this issue, noting that EPA must accept California's inputs to its analysis unless those inputs have no rational basis. The Alliance has made no attempt to make that showing, and as a result, California's inputs, outputs, and protectiveness finding must be accepted by EPA.

Letters:

California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-3601) p. 7-8.

CARB's protectiveness determination stating that the California GHG regulations "...will not cause California motor vehicle emissions standards, in the aggregate, to be less protective of public health and welfare than applicable federal standards" was not arbitrary or capricious. The Alliance argument that California failed to make a protectiveness determination regarding California's motor vehicle program as a whole versus federal standards is incorrect. Commenter cites its protectiveness determination as included in its December 2005 waiver request (see ARB resolution 04-28 in Document ID 0010.107. See also Document ID 0004, p. 5). CARB did not act arbitrarily and capriciously in making this determination. The determination is based on extensive evidence in the administrative record (see Docket items 0010.44 and 0010.132 (Staff Report, Initial Statement of Reasons and Addendum) and Docket items 0010, 0010.3, 0010.11, 0010.41, 0010.43, 0010.115, 0010.158, and 0010.191 (supporting technical documents)).

Letters:

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

California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-0421-52) p. 251.

California has not carried its initial burden on the protectiveness issue and did not perform the required comparative analysis. Under Section 209(b)(1)(A), EPA must require preemption of California standards that are not based on a well-informed determination by the State that its regulations will be in the aggregate at least as protective as the federal program it would displace. California has not provided a quantitative comparison of its combined program of emissions standards (including its ZEV mandate and GHG standards), to the federal emissions standards program. California only offers a conclusory statement that questioned how its standards could be considered less protective of the federal standards. This assertion by California is devoid of any citation to the record or detailed supporting argumentation. In support of their position on this issue, the Alliance cites *MEMA v. EPA* and provides additional discussion, concluding that CARB must demonstrate entitlement to a waiver (including the supporting evidence) before EPA can assign any burden on the waiver opponents to demonstrate why it should be denied. The Alliance also notes that even though they are not required under the CAA to make this comparison, they have recently sponsored an analysis that demonstrates that the California program is in fact less "protective" as an aggregate matter than if federal regulations applied in California. (See: "Effectiveness of the California Light Duty Vehicle Regulations As Compared to Federal Regulations," Sierra Research, NERA Economic Consulting, and Air Improvement Resource, Inc., June 15, 2007; Docket # EPA-HQ-OAR-2006-0173-1447).

Letters:

Alliance of Automobile Manufacturers (EPA-HQ-OAR-2006-0173-1297) p. 2, 5.
Alliance of Automobile Manufacturers (EPA-HQ-OAR-2006-0173-0422-8) p. 101-102.
Alliance of Automobile Manufacturers (EPA-HQ-OAR-2006-0173-0421-11) p. 58-59.
National Automobile Dealers Association (EPA-HQ-OAR-2006-0173-1671) p. 3.

- (2) The waiver request should either be denied or held in abeyance until after EPA has taken further regulatory steps and until California has met the requirement to perform a protectiveness analysis "in the aggregate." EPA is not free to make California's protectiveness determination on behalf of the State. If EPA cannot approve a waiver request as proposed, it must deny the waiver and send it back to the State for it to decide whether and how to modify its regulations. EPA lacks the option to hold in abeyance a waiver request on which California has not carried its initial burden. However, if EPA determines that it has the ability to do so (and justifies that ability in the context of Section 209(b) and administrative law), it must be based on: 1) a failure of the protectiveness demonstration under section 209(b)(1)(A), and 2) a premature submittal of a waiver application to regulate in an area that EPA has not yet set section 202(a) standards against which section 209(b)(1)(C) consistency could be measured. The Alliance provides additional discussion on this issue and asserts that

(1) Under the CAA, it is the State's responsibility to demonstrate the reasonableness of its evaluation of the protectiveness issue. Despite this requirement, the Alliance commissioned an independent study from Sierra Research, NEFA Economic Consulting, and Air Improvement Resource, Inc. that provides the analysis that California did not perform. This study shows that, in the aggregate, the California program is less protective than the federal program. The results of this analysis would not change if weight is given to the influence of the new standards on future levels of radiative forcing since the standards do not impact radiative forcing. This study provides additional justification for continued federal preemption of the California regulation. The Alliance provides significant additional discussion on this issue, noting that the analysis compared emissions of five key pollutants - VOC, NO_x, PM_{2.5}, CO, and SO_x as well as the effect on five air toxics (acetaldehyde, benzene, 1,

With respect to currently regulated air pollutants, the California program is in the aggregate less protective than the federal program when the entire set of standards is considered.

INtheaggregate – in-use effects

Letters: Alliance of Automobile Manufacturers (EPA-HQ-OAR-2006-0173-1297) p. 2, 5-7.

(3) California cannot meet the aggregate protectiveness criteria based on a simple comparison of standards it establishes against a baseline in which there are no analogous federal standards. The notion that protectiveness is met whenever federal standards are non-existent would gut the requirement that California make a non-arbitrary, non-capricious determination that its standards are as protective as the federal program "in the aggregate." California has not offered the analysis required by the textual demand within the waiver application for a comparison of protectiveness in the aggregate or what California itself agrees is required - a comparison of the "entire set" of standards. The Alliance provides additional discussion on this issue and concludes that California should either document properly the basis for its findings and conclusions or reformulate its waiver application to rely solely on fully documented findings and conclusions and justify its request at another public hearing.

Letters: Alliance of Automobile Manufacturers (EPA-HQ-OAR-2006-0173-1297) p. 37-38.

this second objection underscores why the California waiver request should be denied, and not simply held in abeyance.

3, butadiene, formaldehyde, and acrolein) from 2009 through 2023. Based on this analysis, the Alliance concludes that in the aggregate, the California program would be significantly less protective.

Letters:

Alliance of Automobile Manufacturers (EPA-HQ-OAR-2006-0173-1297) p. 7-12.

Sierra Research, NERA Economic Consulting, and Air Improvement Resource, Inc. (for Alliance of Automobile Manufacturers) (EPA-HQ-OAR-2006-0173-1447) p. 1-31.

- (2) Sierra Research, NERA Economic Consulting and Air Improvement Resources completed a study in June 2007, which is summarized in a report entitled "Effectiveness of the California Light Duty Vehicle Regulations As Compared to Federal Regulations" (Sierra Report). The Sierra Report provides a detailed discussion of the methodologies and data used to estimate the effects of the California Program, focusing on the primary differences between the California Program and the Federal Program (i.e., the ZEV and GHG standards in California, which do not exist at the federal level). The results of the Sierra Report were developed using the U.S. EPA's MOBILE6.2 emission factor model and the analysis indicates that the California Program will result in higher VOC+ NO_x emissions in California than would occur under the Federal Program. Sierra Research performed the same analysis using CARB's EMFAC2007 emission inventory model and generated similar results. The Sierra Report also observes that results for the South Coast Air Basin also show the same effect, modeled with either MOBILE6.2 or EMFAC2007. In addition to VOC+ NO_x, emissions of several other criteria air pollutants and air toxics were analyzed. In general, Sierra Research found that these emissions would be higher under the California Program, modeled with either MOBILE6.2 or EMFAC2007, and that the only exception is emissions of sulfur oxides, which decrease as a result of lower gasoline consumption under the California Program. Commenter provides additional discussion on this issue, including details on the quantitative comparison and models used to determine the effects on the costs, new vehicle market, scrappage rates, fleet population, and vehicle miles traveled (VMT).

Letters:

Sierra Research, NERA Economic Consulting, and Air Improvement Resource, Inc. (for Alliance of Automobile Manufacturers) (EPA-HQ-OAR-2006-0173-1447) p. 1-31.

- (3) Both California and federal air quality regulations generally have been strengthened over time into an area of decreasing marginal benefits. Thus, the air quality benefits of California's program as compared to the federal program are not large. The Sierra Research/AIR/NERA study shows that the adverse impacts of the regulations tip the scales such that California no longer can meet the requirement that

its regulatory program in the aggregate will have the effect of meeting compelling and extraordinary circumstances. Miniscule temperature benefits over a century-long time horizon, on the order of thousandths of a degree, cannot offset the near term increases in ozone, PM2.5, NO_x, CO, and air toxics documented by Sierra Research, NERA, and AIR. California has offered no detailed evidence to demonstrate that it has met this requirement for approval of its waiver request. The lack of a comprehensive environmental analysis of the regulation is by itself sufficient reason to deny or hold in abeyance the regulation until this analysis is supplied and held forth for public comment.

Letters:

General Motors Corporation (EPA-HQ-OAR-2006-0173-1595) p. 9.

- (4) Any potential temperature benefits of California's GHG regulations would be reduced by the accelerating attention being devoted to the use of low carbon fuels (e.g., the California Low Carbon Fuel Standard and the Federal Renewable Fuels Standard). Significant reductions in greenhouse gases will be achieved through these programs and could reduce the benefits calculated for California's GHG regulations. Ultimately, very low carbon or no carbon fuels will be needed on a widespread basis if atmospheric greenhouse gas concentrations are to be kept below the levels that have been widely discussed under the United Nations Framework Convention for Climate Change (e.g., 450 ppm, 550 ppm, or 650 ppm CO₂). Low carbon fuels will be the requisite technology if large reductions in greenhouse gas emissions from motor vehicles are to be achieved. Proposals in Congress that would place caps on the aggregate level of carbon sold as transportation fuel would be sufficient to completely control greenhouse gas emissions from the sector without any need for motor vehicle fuel economy regulations.

Letters:

General Motors Corporation (EPA-HQ-OAR-2006-0173-1595) p. 9-10.

(D) The potential adverse impact of California's GHG regulations on ozone precursor emissions through fleet turnover or rebound effects is not as significant as manufacturers predict. The small potential impact of these phenomena are more than offset by the small but important reduction of upstream emissions from the regulations.

- (1) Regarding the "fleet turnover" effect, manufacturers argue that the California GHG regulations will raise new motor vehicle prices high enough for consumers to delay their purchase, thereby delaying the turnover to newer vehicles with lower criteria pollutant emissions and leaving older more polluting vehicles on the road longer.

CARB has examined this issue in depth and has concluded that any minimal fleet turnover effect in later years did not result in a net negative impact on criteria pollutant emissions. CARB cites its peer-reviewed study that used the CARBITS model to closely examine consumer response issues, including the fleet turnover effect (see Document IDs 0010.3, 0010.44, and 0010.132 (Addendum Section 12)). CARB noted that although this supplemental analysis concluded that in the later years of the regulation, fleet turnover may be delayed by up to 33 days, leading to an increase in ozone precursor emissions statewide of about 2.5 tons per day in 2020. This delayed turnover later would be offset by faster fleet turnover in the earlier years of the regulation. CARB also cites an additional expert report by Professor Kenneth A. Small (see Enclosure 31), which concludes that CARB's supplemental analysis uses sound models and has produced accurate results, but could have overstated the fleet turnover effect. CARB adds that in contrast, the manufacturers' fleet turnover analysis used aggregate sales data, no demographic information, and was not peer-reviewed, rendering it inferior to the CARBITS model (see Document ID 0010.116). In addition, Dr. Small concluded that the NERA new-vehicle purchase and use-vehicle scrappage models "have severe disadvantages relative to those relied on by the California Air Resources Board (ARB) in its Initial and Final Statements of Reason." CARB cites other experts, such as Dr. Dan Sperling who noted that manufacturers employ numerous devices to minimize if not eliminate sales disruptions, and provides expert reports by Dr. Sperling and Maryanne Keller as attachments to its letter (see Enclosures 35, 79-81). These reports support the main rulemaking economic analysis, which concludes that California's GHG regulations will create modest cost increases that manufacturers will absorb in the early years and apportion creatively over time to avoid substantial consumer cost increases and model unavailability. CARB also cites (see Enclosures 82 and 83) the NRDC September 23, 2004 AB 1493 Hearing Comments and the Hwang and Peak cost comparison paper (April 2006) for a historical discussion of manufacturers' exaggerated cost claims related to fleet turnover.

Letters:

California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 3-4.
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-0422-7) p. 89.

- (2) Regarding the potential for "rebound effect" (i.e., when drivers of new GHG-compliant vehicles use their operating cost savings to drive more than they would have otherwise, thereby increasing criteria pollutants), CARB has thoroughly evaluated this issue in two ways. Based on a CARB-commissioned study, when California household income and transportation conditions are accounted for, the rebound effect is small compared to other previous studies - about 4.4% in 2020. CARB attaches (number 31) the report by Small and Van Dender, 2005, as supporting

documentation. CARB notes that when it applied those results using EMFAC, there was an increase of about one-quarter of one ton statewide of reactive organic gases (ROG) + NO_x (see Document ID 0010.44 and 0010.132 - ISOR and Addendum, Table 12.4-1). Another method using a travel demand model and EMFAC found approximately the same results. CARB also notes that Dr. Small concludes that the CARB rebound assumptions are reasonable and may actually be overstated by a factor of two. (CARB cites p. 3 and p. 29 of the Small report, Enclosure 31). In contrast, the manufacturers' principal rebound analysis in the rulemaking (and relied upon in litigation) ignores numerous factors that affect VMT in California and assumes that the cost of gasoline dominates out-of-pocket costs. The manufacturers' sales data are stale, and the automakers failed to consider current trends, fuel prices, and consumer environmental concerns in predicting future purchase decisions. In addition, the manufacturers' analysis omits a critical coefficient reflecting the effect of real income on the rebound effect, an important consideration in a relatively high-income state like California (see Small report, Enclosure 31, p. 1, 2, and 12). CARB concludes that the manufacturers' other rebound analysis also suffered from substantial flaws.

Letters:

California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 4.

South Coast Air Quality Management District (EPA-HQ-OAR-2006-0173-1353) p. 4.

- (3) CARB cites analyses showing that its GHG regulations would reduce fuel going through the petroleum marketing and distribution infrastructure in and near California. As a result, the "upstream" emissions of smog precursors, NO_x and NMOG, would decrease, as would PM and CO from transportation, spills, and other events associated with that infrastructure. CARB has projected upstream emission reductions of between 3 and 7 tons per day of ROG+ NO_x in 2020 and a marginal positive impact on CO (see Document ID 0010.44 (ISOR), Section 8.4 and 0010.132 (Addendum), p. 18, 36-37). CARB also cites a more recent report by Mr. Michael Jackson (see Enclosure 34) that produced similar results and also estimated that the standards would reduce toxic air pollutants by 26.5 tons per year in 2020.

Letters:

California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 5.

South Coast Air Quality Management District (EPA-HQ-OAR-2006-0173-1353) p. 3.

- (4) CARB asserts that a number of conditions need to be met before the impact of fleet turnover and rebound will have the impact that manufacturers claim, including: manufacturers are not able to achieve the GHG reductions CARB has projected; there are no substantial additional penetration of technologies; highly expensive technologies are used to achieve the GHG reductions (e.g., hybrids); and

manufacturers are unable to pass on the extra cost to consumers causing entire product lines to be pulled from the market, reducing total number of vehicles available and increasing wait times for purchasing higher priced vehicles. This chain of events is highly speculative and relies almost entirely on technological feasibility and cost issues. CARB provides significant additional discussion on this issue, referencing the approach and tools used to complete its environmental and economic analyses (EMFAC, E-DRAM, and CARBITS) that were subject to CARB's extensive rulemaking process (as well as public input, public comment, and peer review). These results result in an estimated net reduction of criteria pollutants - about 2.8 tons per day statewide in ROG+ NO_x. CARB concludes that the manufacturers' arguments rely on analyses that were not the result of a public process, were rejected by CARB scientists and engineers, and contain numerous speculative links. In addition, CARB notes that the manufacturers' rebound and turnover analyses contradict each other to reach preferred results (e.g., assuming fuel efficiency is insignificant for purchasing decisions affecting turnover, but significant once someone has purchased that same more efficient vehicle), and CARB cites testimony at the Vermont trial to support its assertion about such inconsistencies. CARB concludes that the manufacturers' analyses are not credible and do not meet the burden to establish by clear and compelling evidence that CARB was arbitrary and capricious in its protectiveness determination.

Letters:

California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 5-7.

- (5) Even if VMT increases through 2030, total NO_x and VOC emissions are predicted to decrease without GHG regulations. Adding GHG regulations would reduce these emissions even further, more than offsetting any increase in driving.

Letters:

South Coast Air Quality Management District (EPA-HQ-OAR-2006-0173-1353) p. 4, 5.
South Coast Air Quality Management District (EPA-HQ-OAR-2006-0173-0421-18)
p.100.

- (6) There will be direct, upstream reductions of criteria pollutants since less gasoline fuel would be produced and distributed. Estimates by TIAX show that in 2020, reductions in terms of NO_x + ROC and PM is about 5 tons per day and 1 ton per day, respectively.

Letters:

Jackson, Mike; TIAX Corporation (EPA-HQ-OAR-2006-0173-0421-44) p. 217-218.