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Arnold Schwarzenegger  
Governor

July 24, 2007

VIA OVERNIGHT TRACKING NO. 7991-8078-6742

U.S. Environmental Protection Agency  
Attention: Docket ID No. EPA-HQ-OAR-2006-0173  
EPA West (Air Docket)  
1200 Pennsylvania Ave., NW, Room B108  
Mail Code 6102T  
Washington, D.C. 20460

RE: California State Motor Vehicles Pollution Control Standards; Request for Waiver of Federal Preemption; Opportunity for Public Hearing, Docket ID #EPA-HQ-OAR2006-0173; 72 FR 21260 (April 30, 2007)

Dear Administrator Johnson:

In the responses by the U.S. Environmental Protection Agency (EPA) to comments seeking an extension of the noticed June 15, 2007 comment deadline, the Agency stated that it was not extending the deadline but could continue to communicate with stakeholders after June 15 to address particular issues as necessary per agency practice. See e.g. Document ID No. EPA-HQ-OAR-2006-0173-1237.<sup>1</sup> It is particularly appropriate for EPA to receive and consider this communication given that it is California's request that is being considered, the burden of proof is on the opponents, and those opponents were able to and did submit information attempting to meet that burden on the very last day of the public comment period. To not accept this communication would deprive California of a fair opportunity to provide its views on the opponents' efforts to meet their burden. Accordingly, California's Air Resources Board (ARB or Board) presents this letter and the enclosed documents set forth on the attached list of enclosures to address issues raised by the Alliance of Automobile Manufacturers (Alliance) on the last day of the comment period (Document ID 1297.2) (and not in any detail in their May 22 or May 30 testimony), issues raised on the last day by first-time commenter Association of International Automobile Manufacturers (AIAM, Document ID 1455.1), and others' related first-time comments, e.g. from General Motors (Document ID 1595.1). Since opponents have not separately or together met their burden on any of the findings EPA would need to make to deny this California waiver request, EPA must now promptly grant it.

<sup>1</sup> All Document numbers cited hereinafter are to the prefix Docket ID #EPA-HQ-OAR2006-0173- unless otherwise stated.

*The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.*

California Environmental Protection Agency

The course of this proceeding to date warrants a few introductory remarks. First, the handful of commenters opposing the waiver request ignore that they, not California, have the burden of proof in this proceeding. This is true for all the criteria under Clean Air Act Section 209(b), and the burden of proof is especially high on protectiveness. Second, the opponents also ignore that Congress saw California as a trailblazer and laboratory for innovation, and accordingly that Congress provided for California to set standards more stringent and sooner than EPA might, and to continue setting standards for pollutants that EPA had not addressed. Third, the automobile manufacturing companies that would have to comply with this rule have consciously chosen to make absolutely no showing, with concrete evidence, that these emission standards are not technologically feasible. This is telling, and forecloses EPA from credibly finding so on its own. Thus opponents have essentially attempted to jettison the fundamental criteria governing and limiting EPA's review under Section 209(b); a waiver denial based on that attempt would not stand.

#### I. Burden of Proof, Deference, and Agency Practice

It is important to review what the opponents have so painstakingly avoided in some cases and mischaracterized in others: EPA must give California deference on all waiver issues and the burden of proof is squarely on opponents.

With a sleight of hand, the Alliance attempts to remake the legal burden of proof standard into a burden on California to have provided something more than it provided to EPA in its December 21, 2005 submittal. Alliance June 15, 2007 comments, e.g. at III.A; see also NADA comments, Document ID 1671. As NRDC pointed out in its comments (Document ID 1672), this turns the concept of burden on its head, for the controlling D.C. Circuit opinion states:

“The language of the statute and its statutory history indicated that California’s regulations, and California’s determination that they comply with the statute, when presented to the Administrator are presumed to satisfy the waiver requirements and that the burden of proving otherwise is on whoever attacks them.” *Motor & Equip. Mfrs. Ass’n v. EPA*, 627 F.2d 1095, 1121 (D.C. Cir. 1979) (*MEMA*) (emphasis added).

And, continuing, as the Alliance quoted,

“California must present its regulations and findings at the hearing, and thereafter the parties opposing the waiver request bear the burden of persuading the Administrator that the waiver request should be denied.”  
*Ibid.*

California presented its regulations and findings to EPA on December 21, 2005 (e.g. Document ID Nos. 0004, 0004.1, 0004.2 and 0017); they are presumed to satisfy the waiver requirements. This alone carries California's "initial burden" (Alliance June 15, 2007 letter, III.B.), if that phrase could be properly applied here. The only burden at issue in this proceeding, then, continues to be the opponents' burden of proving – by clear and compelling evidence as to protectiveness (December 21, 2005 Support Document, n. 17) and arguably as to the other waiver prongs – that California does not satisfy the waiver requirements.

In fact, the structure and text of Section 209(b)(1) demonstrates that only the protectiveness prong requires California to first make a "determination" to place the burden on opponents; opponents' burden on the other two prongs has no such precondition. The first sentence of Section 209(b) directs EPA to grant a waiver for California standards if California "determines that the State standards will be, in the aggregate, at least as protective of public health and welfare as applicable Federal standards." The second sentence provides that no waiver is to be granted if EPA makes one of three findings, the first of which is that "the determination of the State is arbitrary and capricious." The other two findings that can justify a waiver denial are that California "does not need such State standards to meet compelling and extraordinary conditions," and that the California "standards and accompanying enforcement procedures are not consistent with section 202(a) of this part." Thus there is only one California determination needed for a waiver to be granted – the protectiveness determination. It is the protectiveness determination to which the *MEMA* court refers. *MEMA*, 627 F.2d at 1111. Once that determination is presented, as it was in California's December 21, 2005 letter, the burden shifts to the opponents to demonstrate that EPA should make one or more of the three findings that can justify a waiver denial. *Accord*, enclosed Item 141 LEV I Decision Document cited in the Alliance June 15 2007 comment, at pp. 22-26 (explicitly rejecting automobile industry opponents' argument that because they had "come forward with evidence that undercuts 'the statistical reliability' of the basic CARB analysis, the burden shifts back to CARB 'to support its methodology as reliable.'")

In its discussion of the burdens associated with Section 209(b), the Alliance cites *Engine Mfrs. v. South Coast Air Quality Management Dist.*, 541 U.S. 246, 256 (2004) for the proposition that the text of Section 209(a) precludes the invocation of the presumption against preemption. Alliance June 15, 2007 comment at p. 5. But as the Alliance well knows, the *Engine Mfrs.* decision has no bearing on the meaning of Section 209(b) because it construed the effect of Section 209(a) where no Section 209(b) waiver was sought.

Regarding deference, ARB has already established that EPA must apply substantial deference to California on all waiver questions, and that this applies equally if not more

so to our greenhouse gas emissions standards. See June 14, 2007 ARB comment (Document ID 1686) III.B.7. and V.B. and December 21, 2005 Support Document IV.C. (Document ID No. 0004.1). “Congress has decided to grant California the broadest possible discretion in adopting and enforcing standards for the control of emissions from new motor vehicles.” *MEMA*, 627 F.2d at 1119. See also legislative history traced in Environmental Defense comments, Section 1, Document ID 1459.

As discussed below, the Alliance and AIAM (e.g. June 15, 2007 comment at p. 15 bottom) repeatedly suggest waiver case law leaves plenty of room for EPA to maneuver and reverse course on applying the three permissible waiver criteria to California’s request. However, such reversals in the face of decades of consistent EPA waiver review and consistent, periodic Congressional approval thereof face a steep uphill battle. “It is well established that when Congress revisits a statute giving rise to a longstanding administrative interpretation without pertinent change, the “congressional failure to revise or repeal the agency’s interpretation is persuasive evidence that the interpretation is the one intended by Congress.” *Commodity Futures Trading Com’n v. Schor*, 478 U.S. 833, 846, 106 S.Ct. 3245, 3254 (1986) (citations omitted). We also believe such reversals would likely be inconsistent with the statute and its legislative history.

## II. California’s Protectiveness Determination

The opponents have utterly failed to meet their burden of demonstrating that California’s protectiveness determination was arbitrary and capricious, for two simple reasons. First, the Board made a proper and fully supported protectiveness determination in the California greenhouse gas rulemaking and submitted it to EPA. Second, California’s update to that determination, even if required, shows that our passenger vehicle program remains more protective in the aggregate than the federal program, despite opponents’ newfound claim to the contrary. We turn to these two reasons after first addressing an important procedural issue.

### A. EPA Cannot Rely on the June, 2007 Alliance/NERA/Sierra Report in Reviewing California’s Protectiveness Determination

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 – here in the Board’s September 24, 2004 Resolution 04-28 (Document ID 0010.107), confirmed by the Executive Officer in her August 4, 2005 Executive Order G-05-061 (Document ID 0004), as submitted to EPA December 21, 2005. Consistent with this, the thrust of the Alliance’s May 30 hearing testimony was the erroneous claim that California had not made a protectiveness determination at all. See Transcript (Document ID 0421) at pp. 58-61; refuted at p. 2 of

our June 14, 2007 comments. Therefore, a post-ARB rulemaking study such as the June 15, 2007 NERA/Sierra study (Document ID Nos. 1437, 1447, 1447.1-5) ("NERA/Sierra 2007") is irrelevant and not cognizable by EPA in reviewing protectiveness here.

The exclusion of this study in particular is warranted given that despite filing six bankers' boxes worth of comments during the two California public comment periods in 2004, opponents there failed to make the contention they now make three years later – that for every amendment to California's passenger vehicle program, the Board must perform a comprehensive reanalysis of protectiveness vis à vis the federal program. See NERA/Sierra 2007 at p. 2 (admitting they did not analyze combined effects previously). The opponents cannot have it both ways. They cannot argue on the one hand that ARB did not make a comprehensive protectiveness determination and that therefore EPA should remand the matter to ARB to do so, and on the other hand 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 – here ARB – rulemaking action, the statutory question of whether the Board's considered determination was "arbitrary and capricious" simply cannot be determined by post-rulemaking documentation; this is black letter administrative law:

The reviewing court may not consider new evidence that was not before the agency when it made its decision. See, e.g., *Lorion*, 470 U.S. at 744, 105 S.Ct. at 1607. "When the arbitrary and capricious standard is performing that function of assuring factual support, ... whether the administrator was arbitrary must be determined on the basis of what he had before him and not on the basis of 'some new record made initially in the reviewing court.'" *ADPSO*, 745 F.2d at 683-84 (quoting *Camp*, 411 U.S. at 142, 93 S.Ct. at 1244). *Center for Auto Safety v. Dole* 828 F.2d 799, 809-810 (D.C. Cir. 1987), *vacated on rehrg on other grounds*, 846 F.2d 1532 (D.C.Cir.1988).

Though reviewing agencies and courts may in rare circumstances admit new factual information that comes into existence – or analysis that only becomes possible – regarding a prior agency determination after it was made, neither exception applies to EPA's protectiveness review here. Opponents could have presented this novel combined study to the ARB in its rulemaking but did not. This tactic mirrors other of opponents' or their proxies' decisions to withhold potentially useful technical and cost information as a litigation strategy. See June 14, 2007 ARB comment VI.A & B., Item 140 McMahan Testimony cited in Vermont Defendants' Proposed Findings of Fact ("VDPFF," Document ID 1433.14) Nos. 927-935 (proxy working with GM withholding retail price equivalent factor information), and Item 140 Meszler testimony cited in

VDPFF Nos. 957-60 (GM withholding air conditioning data). We address the substantive issues presented in this NERA/Sierra 2007 below only in the event EPA chooses to violate fundamental fairness and principles of administrative law by relying on this new material.

#### B. The Board Made a Proper Protectiveness Determination

The Board made a proper and fully supported protectiveness determination in the California rulemaking. June 14, 2007 ARB comment, p. 2. During the rulemaking no one asked the Board to, or suggested the Board should, completely reanalyze its entire passenger motor vehicle program. That ARB 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.

When the Board made its initial protectiveness determination regarding these greenhouse gas regulations on September 23, 2004 (Document ID 0010.107), it had eight days earlier (September 15, 2004) reconfirmed its earlier protectiveness determination for the ZEV program's effect on the waived LEV program. See enclosed Item 142 September 23, 2004 ZEV waiver request letter (Document ID EPA-HQ-OAR-2004-0437-0002), Item 143 ZEV Resolution 03-04, adopted April 25, 2003 (Document ID EPA-HQ-OAR-2004-0437-0020), Item 144 Executive Order G-03-069 and its Attachment 4, dated December 19, 2003 (Document ID EPA-HQ-OAR-2004-0437-0032 and -0036), and Item 145 Executive Order G-04-062, dated September 14, 2004 (Document ID EPA-HQ-OAR-2004-0437-0005). When the Board reconfirmed its greenhouse gas protectiveness finding in August, 2005 (Executive Order G-05-061, Document ID 0004), EPA had already held hearings covering this ZEV protectiveness determination. See 71 FR 78190 (December 28, 2006). Thus, the Board's reconfirmed protectiveness finding for these greenhouse gas regulations occurred against the backdrop of: A) a waived LEV II and ZEV program, and B) a pending waiver of the 1999-2003 ZEV Amendments' impact on the LEV program.

Opponents' argument fails from its own simple logic, because they essentially argue that  $LEV + ZEV + GHG =$  a less protective CA 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. See also Center for Biological Diversity comment, Document ID 1485.1, p. 5 (given no prior EPA finding on this issue means EPA is to weigh only effect of additional regulations). Again, EPA's

review here is limited to whether California was arbitrary and capricious in its determination – clearly not the case given the extensive analysis in the respective rulemakings – which EPA is not to second-guess. See H.R. Rep.No. 294, 95<sup>th</sup> Cong., 1<sup>st</sup> Sess. 302 (1977) (Administrator is not to overturn California’s judgment lightly or substitute his judgment), as quoted in *MEMA*, 627 F.2d n. 54.

In addition, opponents’ expansive view of “in the aggregate” language here clashes with their constrained “pollutant-by-pollutant” analysis they claim is required for extraordinary and compelling conditions analysis (see III. below); the best way to reconcile them is as Congress has – to allow California to balance the relative risks posed by, and costs of controlling, various pollutants as it sees fit. H.R. Rep. No. 95-294 at 301-302 (1977), reprinted at 1977 U.S.C.C.A.N. 1077 (“There must be clear and compelling evidence that the state acted unreasonably in evaluating the risk of various pollutants in light of the air quality, topography, photochemistry, and climate in [California], before EPA may deny a waiver.”)

See also Item 140 Moye Testimony as cited in VDPFF No. 6 (Vermont adopted California passenger vehicle program because it provides greater air pollution reductions than default federal standards), Connecticut DEP comment (Document ID 2173) (stating California meets allowable broad inquiry), and Commonwealth of Massachusetts (Document ID 2246) (stating EPA’s Tier 2 vehicle emission regulations do not regulate GHGs).

### C. The Opponents Have Not Demonstrated that California’s Protectiveness Determination Was or Is Arbitrary and Capricious

Assuming *arguendo* that the Board had to now update its protectiveness determination, and respond to opponents’ new material, ARB has done so. Since the Alliance acknowledges that its fleet turnover and rebound analyses were not persuasive in the recent ZEV Waiver proceeding (Alliance June 15, 2007 at pp. 9-10), and knowing that their similar analyses in the federal litigation over these regulations have suffered serious damage, they throw both analyses together and hope for the best. June, 2007 NERA/Sierra 2007, Document ID 1447.1 and supporting documents and backup materials. But simply adding two unreliable analyses together does not make for a reliable one.

First, it is important for EPA and those who may review this proceeding for ARB to cut straight through to what this Alliance protectiveness argument and supporting NERA/Sierra 2007 analysis is really about, and what it is decidedly not about. Their argument is not about the relative numerical stringency – historically animating Congress’s 209(b) protectiveness concern reflected by unbroken EPA practice – 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 greenhouse gas standards versus non-existent federal EPA greenhouse gas 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: A) 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 B) 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). While the Board certainly thoroughly reviewed opponents' similar arguments in the respective rulemakings, it had good reason to accept its Staff's more reasonable and historically reliable analyses.

The Alliance's analysis is necessarily based on a variety of inputs, undisclosed as well as disclosed, such as GHG technologies' costs, the scrappage rate, and the magnitude of the rebound effect. California's inputs lead to dramatically different outputs. The arbitrary and capricious standard means that EPA must accept California's inputs, unless those inputs have no rational basis. The Alliance has made no attempt to make that showing, and therefore California's inputs, outputs, and protectiveness finding must be accepted by EPA. Nevertheless, we turn now to specific problems with the NERA/Sierra 2007 analysis.

To begin, 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 effectiveness purportedly detailed in a Sierra's 2004 report (p. 10, and p. 30, n. 15), and that ZEV costs were derived from several sources (pp. 30-31). 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 opponent's ZEV costs are derived to an unknown extent from "confidential cost information supplied by individual auto manufacturers" (pp. 12, 31) to which neither ARB 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 (see Figure 1 to NERA/Sierra 2007 at p. 12) – that ultimately produce their

exaggerated combined fleet turnover and rebound effects, which, in turn, comprise the inputs for their emissions model.

The composition and pricing of the fleet projected under the regulations is also indecipherable. 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. See Appendix D-1 to Attachment A to the NERA/Sierra 2007, Document 1447.2. On the other hand, they project a nationwide approach to the marketing of technologies and vehicles mandated under the GHG standard. See Attachment C to NERA/Sierra at p. 6 Document ID 1447.4. 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. See database "NVMM Inputs Mapping.mdb" provided in opponents' backup materials.

Even if the opponents' cost inputs were determinable, prior review of their 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. See Document ID EPA-HQ-2004-0437- Nos. 0005, 0020, 0021 (Item 146), 0032, 0036, and 0051 (Item 148), all enclosed, and again see 71 FR 78190 (December 28, 2006) Decision Document (June 14, 2007 ARB comment Item 30) at pp. 26-31. To recap, and as EPA noted (p. 30), ARB stated that NERA/Sierra 2001 costs were overstated, manufacturers would not necessarily be able to pass along all increased costs, small price increases can be addressed by a variety of market practices, and slight price increases in some years would not jeopardize net long-term criteria pollutant reductions. There is nothing in our critique of those prior ZEV fleet turnover and rebound analyses that would not also apply to 2012 and later model years. This is because the foundational NERA/Sierra 2007 ZEV cost projections are similar to those ARB analyzed previously, as follows.

In 2001, NERA/Sierra assumed \$500 for an incremental PZEV cost; ARB assumed \$200. For AT PZEVs: NERA/Sierra \$2,500; ARB \$3,282 for near term, \$1,086 in volume production. For full function or "pure" ZEVs: NERA/Sierra \$45,715 in 2003 to \$32,215 in 2020; ARB \$17,000. ARB found that using its more reasonable assumptions, and even without including upstream emission reduction benefits, there would be a net benefit in the South Coast in 2010 and 2020. ARB 2001 analysis, p. 42. In 2003, the comparable estimates were PZEVs: NERA/Sierra at least \$500, ARB \$100; AT PZEVs: NERA/Sierra \$2,500, ARB \$2,350 in the near term and \$700 in the long term,; and full function ZEVs: NERA/Sierra \$32,215 in the long term and ARB \$9,300 for battery electric vehicles. ARB's reduced estimated PZEV cost (\$200 in 2001 to \$100 in 2003), among other reasons, supported the Board's determination that the fleet turnover

effect would be less than the previous insignificant 2001 estimate. ZEV 2003 FSOR pp. 46-49 and Executive Order G-03-069 Attachment 4.

Given the Board's prior ZEV analyses and recent ZEV Independent Review Panel work, we see that the NERA/Sierra 2007 ZEV costs driving their subsequent models – again, to an unknown degree precluding EPA reliance – are again similarly grossly overstated. Their PZEV costs of \$350 (PC/LDT1) and \$500 (LDT2) are several times the Board's 2003 estimates; this cost difference alone would trigger hundreds of millions of dollars in cost differential versus ARB's analyses. See ZEV 2003 Executive Order G-03-069 Attachment 4 at p. 5 (noting ARB's changed estimate from \$200 to \$100 yields estimated \$350 million in cost difference.) Instead, the ARB-projected \$100 cost is generally spread to an automakers' product line and transparent to the consumer. The NERA/Sierra 2007 AT PZEV costs of between \$1,800 and \$5,500 (pp. 13, 31) are also several times the Board's 2003 long term cost of \$700. Finally, NERA/Sierra 2007 full function ZEV costs for 2012 and later model years ranges from \$8,000 for NEVs to \$60,000 for fuel cell electric vehicles, versus the ARB's prior costs of \$9,300 for full-sized battery electric vehicles and \$10,000 for fuel cell vehicles in the long term. And as pointed out in our 2001 and 2003 reviews, this 2007 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. Together, these vastly different cost assumptions are similar to those previously reviewed, and likely similarly skew the NERA/Sierra 2007 results, especially in the later years.

An important part of the Board's 2003 ZEV response to NERA/Sierra was that later model years' incremental costs (e.g. 2012 and later) drive significant jumps in the NERA/Sierra model output. Executive Order G-03-069 Attachment 4. The Board noted the considerable uncertainty associated with those later years' costs, given the appointment of the Expert Review Panel. Recent Board review of that Panel's work (enclosed Item 149) confirms the uncertainty of later year ZEV technologies and by inference their associated costs, and also continues to suggest that the Board will need to consider adjustments to later year full/pure ZEV requirements. See 2007 ARB Staff Report on ZEV Technology Review (enclosed Item 150) figure 6.1 and discussion at p. 14 bottom, and Board Resolution 07-18 (enclosed Item 151) at p. 4. The Board will consider changes in December of 2007 to ensure that the regulatory requirements are consistent with the state of technology development. Therefore, a 2020 analysis driven in any substantial degree by full ZEV costs – as we believe is the case here for NERA/Sierra 2007 – rests on highly speculative cost estimates rendering results unreliable.

Although NERA/Sierra 2007 fails to reveal the multitude of assumptions and modeling procedures the EPA would need to adequately evaluate the GHG portion of this new

study, we know from problems previously pointed out (June 14, 2007 ARB comment, p. 6) and from litigation that their GHG analysis is, like their ZEV analysis, both inaccurate and unreliable. Both analyses begin with an engineering cost model (NERA/Sierra 2007 at pp. 12 and 32) that is intended to compare the California automotive fleet with and without the California regulations for model years 2009 through 2023. The GHG portion of the engineering cost model relies, according to opponents, on reports prepared in 2004. NERA/Sierra 2007 at pp. 10 and 32, fn. 15. The referenced reports were prepared by Thomas Austin of Sierra. But neither NERA/Sierra 2007 nor its Attachment C (NERA/Sierra 2004) on which it relies appear to provide any detail regarding engineering costs of GHG reduction technologies, i.e. components used, associated expenses, reduction benefits, fleet penetration, etc. Instead, all EPA can deduce from NERA/Sierra 2007 are the conclusory assumptions from the engineering cost model that certain product lines will have "substitute[s]" for the California market. NERA/Sierra 2007 at p. 41.

Not only have the opponents apparently carried over their prior highly inflated ZEV and GHG cost inputs, NERA/Sierra 2007 likewise uses a series of models to project future effects of the combined regulations; the models do not appear to have changed substantially from those ARB fully critiqued in 2001 (Document ID EPA-HQ-2004-0437-0051) and in the current rulemaking (Executive Order G-05-061, Document ID 0010.84 and FSOR Comment & Response Nos. 418-477, 680-685, Document ID 0010.116). The flow chart in Figure 1, on page 12 of NERA/Sierra 2007, reveals that each model depends on the accuracy of the one that precedes it. Even if EPA and ARB are directed to the inputs used and assumptions made regarding greenhouse gas technologies' emission reductions, costs, and application to the fleet, a number of Mr. Austin's fundamental analytical assumptions in his engineering cost model have proven wrong, as described next.

First, Mr. Austin assumed that without the regulations automakers would continue making basically the same vehicles in 2009 through 2023 that they made in 2003. Austin Deposition Testimony, Vol. 1, November 1, 2006, pp. 231:13 – 232:11, enclosed Item 152. Subsequent announcements from General Motors, Ford and Chrysler, which were made after Mr. Austin's 2004 baseline report, indicate the shift in the marketplace and the automakers' accelerating divergence from Mr. Austin's baseline prediction:

"The challenges we cited in this space a year ago – . . . higher fuel prices, global competition – intensified and significantly weakened our business. The result was a loss of \$3.4 billion . . . Essentially, we are changing our business model . . . Fuel prices increased sharply through the year, reducing demand for some of our highest-profit trucks, and tilting our sales mix more toward lower-margin cars. . . Our integrated product development approach . . . is designed to reduce product lifecycles, . . .

GM is a leader . . . with more than 1.5 million flex-fuel vehicles already on the road. We have nine models that are E85-capable, . . . And, we have plans to add more than 400,000 E85-capable vehicles to our fleet in 2006.” GM Letter to Stockholders re 2005 Results at p. 3, enclosed Item 153.

“Full year truck sales were down 14 percent as higher gasoline prices and long-term demographic trends drove SUV sales lower and a soft housing industry weighed on full-size truck sales. Ford believes these factors will continue to weigh on these segments in 2007. New products should help mitigate these factors. . . . Conversely, passenger car sales and crossover utility vehicles (CUVs) should continue to benefit from demographic trends (notably the aging of the baby boomer generation) and higher gasoline prices.” Ford January 3, 2007 News Release, at p. 2, enclosed Item 154.

“The deterioration in operating results was primarily the result of negative net pricing, unfavorable product and sales market mix, and a decline in factory unit sales in the United States. These factors reflect the continuing difficult market environment in the United States during 2006 marked by an overall decline in market volume, a shift in consumer demand towards smaller, more fuel-efficient vehicles due to higher fuel prices, as well as the impact of higher interest rates. These negative factors were partially offset by the market success of the new models, most of which were launched in the second half of the year. Several of these vehicles target this shift in consumer demand . . . .” DaimlerChrysler February 14, 2007 Investor Relations Release at pp. 3-4, June 14, 2007 ARB comment Item 140 DX 2031.

See also June 14, 2007 ARB comment IV.A.4 and Items 79 (Expert Report of Maryanne Keller), 113 (KPMG Report), 114 (Deloitte Report), 123 (Dollars in Bank), and 86-100 and 103-109 (corporate executives’ statements and new technologies).

Second, Mr. Austin assumed there would be no relevant technological advancements before 2023. For example, in his 2004 report he singled out diesel engines as lacking any demonstrable technology for achieving NOx emission standards by 2012, and electrohydraulic continuously variable valve actuation as being in a relatively early stage of development. See FSOR Comment & Response No. 205; see also June 14, 2007 ARB comment Item 87 regarding Valeo Camless valve actuation. However, automakers are in the process of marketing diesel-powered vehicles that meet the NOx standards. See e.g. enclosed Item 155 BMW EfficientDynamics - Advanced Diesel - BMW North America, enclosed Item 156 ARB Executive Order A-003-0320 dated

November 9, 2006, and June 14, 2007 ARB comment Item 108 pp. 1-55 (articles citing GM, Ford, and VW intent to sell diesels meeting Tier II/Bin 5 and LEV II emission standards). None of the opponent's submissions indicate that either these vehicles or flex-fueled vehicles were included in the baseline fleet.

Third, Mr. Austin assumed his baseline fleet would achieve no better greenhouse gas emissions than what would otherwise be required under existing CAFE standards. Austin Deposition Testimony, Vol. 1, November 1, 2006, pp. 225:21-226:10. He also used these CAFE standards as the baseline for calculating the added cost of compliance with the GHG standard. *Id.* at pp. 228:6-21. Thus, he understates the improvements that will occur in the baseline fleets as the CAFE standards become more stringent and as automakers over comply with CAFE standards in response to consumer demand.

Fourth, while ARB's analysis made no explicit nationwide versus two-car compliance strategy assumption (FSOR Comment & Response Nos. 230-231), 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." Attachment C (September 2004 NERA/Sierra) to NERA/Sierra 2007 at p. 6. However, he later testified that the automakers would use a California-specific fleet. November 29, 2006 deposition of Thomas Austin at p. 723:10-15. In other words, the opponents rely on a scenario in their NERA/Sierra 2007 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. He acknowledged having overstated the cost of fuel-reduction technologies as a function of increased vehicle weight. Excerpted Austin May 2, 2006 Expert Report at p. 27, enclosed Item 157. He explained that his retail price mark-up factor of 2.05 times variable costs was incorrect. *Id.* at p. 28; see also Austin Deposition Testimony, Vol. 2, November 2, 2006, p. 258:1-13. He similarly admitted his projected costs of cylinder deactivation, discrete variable valve lift, hybrid engines, and transmissions were excessive. *Id.* at p. 29. NERA/Sierra 2007 does not correct these errors or acknowledge their existence. See NERA/Sierra 2007 p. 2, fn. 1 and p. 32.

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. See FSOR Comment and Response 271 at p. 179 and June 14, 2007 ARB comment Item 79 (Keller Report) at p. 18.

These errors demonstrate the significance of the opponents' failure to adequately support their engineering cost model. Their express and unqualified reliance on their 2004 reports indicates they likely failed to correct these and other stale and inaccurate inputs. From here on, the opponent's analyses simply compounds, through the frequent use of logarithmic equations (see e.g. NERA/Sierra 2007 supporting materials at NVMM\_ZEV.do), the errors introduced by their likely highly inflated compliance costs.

That first compounding occurs in the New Vehicle Market Model used by Dr. Harrison to help measure the fleet-turnover effect of higher priced new vehicles. This model 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. Dr. Harrison incorporates the erroneous price increases generated by the "Engineering Cost Model" to project future new car availability and prices under the regulation. NERA/Sierra 2007 at pp. 10 and 32, fn. 15. Dr. Harrison apparently accepted these figures without correction or question. See testimony of Dr. Harrison, June 14, 2007 ARB comment Item 140, vol. 5-B at pp. 28:17-23 and 57:11-22.

Dr. Harrison projects a baseline that essentially assumes a continuation of the "new vehicle sales, price, and characteristics information for the years 2001 through 2005." NERA/Sierra 2007 at p. 18. This period was unprofitable for General Motors, DaimlerChrysler and Ford, collectively. See enclosed GM Stockholder letter, and June 14, 2007 ARB comment Item 140 PX 567 (2005 Harbour Report) pp. 200 - 207. They also collectively lost market share to the foreign makers of smaller and more economical vehicles in this period. June 14, 2007 Item 140 un-itemized DX 2584 (Ward's U.S. Car Sales and Market Share). Dr. Harrison did not adjust his baseline, even though, as noted above, the automakers have admitted they must substantially modify the size, composition, and fuel economy of their fleets in order to survive.

Dr. Harrison apparently failed to include any of the new models that automakers intend to introduce, further biasing his projections. June 14, 2007 ARB comment Item 140, testimony of Dr. Harrison, vol. 5-B at pp. 28:17-23 and 57:11-22. In addition, Dr. Harrison failed to adjust his baseline for the shift in consumer demand that has occurred since 2001 through 2005. NERA/Sierra 2007 at pp. 18 and 46; Excerpt of November 15, 2006 Deposition of Dr. Harrison Deposition submitted with June 14, 2007 ARB comment (un-itemized) at p. 194:12-22. Increased consumer demand for vehicles that consume less gasoline, both to reduce global warming and to reduce operational costs, has been well-documented. See e.g. Momentum 2007 KPMG Global Auto Executive Summary "[F]our of five executives interviewed think fuel prices "will have a permanent significant impact on the kind of vehicles consumers buy." June 14, 2007 ARB comment Item 113, and see June 14, 2007 ARB comment IV.A.4.

The design of the New Vehicle Market Model further 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. NERA/Sierra 2007 at p. 45. He assigned dummy variables across different model years that will capture only small changes, since fuel economy tends to vary slightly over time. If there is a larger change over time, the effect will go undetected or be underestimated, since fuel economy improvements are 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.

The “nested logit” model, which Dr. Harrison uses to establish consumer demand (NERA/Sierra 2007 at p. 40), is also 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. *Ibid.* 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. *Id.* at p. 47. 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. *Id.* at p. 40.) 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.

Errors further compound with the NERA/Sierra scrappage model. Dr. Harrison describes his scrappage model as a “detailed empirical model of the effect of changes in new vehicle prices on existing vehicle scrappage rates.” *Id.* at p. 18. He introduces a particularly large error by omitting to model the economic value of vehicles with improved efficiency and lower greenhouse gas emissions. In addition, he fails to assign any premium to the resale value of vehicles with lower greenhouse gas emissions. The following rough computation indicates that correction of these errors would eliminate any statistically significant effect of increased new vehicle prices on scrappage rates.

Dr. Harrison’s clients claim the GHG rule will increase fuel economy for passenger cars from 27.5 miles per gallon to 43.7 miles per gallon. Assuming gasoline in California costs \$3.00 per gallon, a new car owner would save more than \$600 after driving 15,000 miles, \$3000 after driving 75,000 miles, and, assuming a car lasts 200,000 miles, more than \$8,000 over the life of the car. The corresponding savings at \$2.50 per gallon would be more than \$500, \$2,500, and \$6,700, respectively. These savings

substantially, if not entirely, offset the added purchase price resulting from technology improvements.

The increased price of fuel reinforces the reasonableness of the analysis of operational cost savings and payback that ARB made in the rulemaking. See FSOR Comment & Response Nos. 247 and 265, see Item 13 to ARB's December 21, 2005 submission (Executive Order G-05-061, Attachment 3, August 4, 2005 ARB Staff Responses to Comments Raising Significant Environmental Issues Regarding The Proposed Regulations to Control Greenhouse Gas Emissions from Motor Vehicles, pp. 1-6, and see and compare EPA Interim Powertrain Report (June 14, 2007 ARB Comment Item 116) at Tables ES 1-4. The opponent's scrappage analysis conveniently omits this critical factor. Dr. Small noted the significance of Dr. Harrison's error; increased operational savings from new vehicles should increase scrappage rates. September 6, 2006 Supplementary Report, June 14, 2007 ARB comment Item 33, pp. 13-14.

The authors characterize the "Fleet Population Model" as providing "an important component for estimating the overall effects of the regulations on motor vehicle emissions." NERA/Sierra 2007 at page 20. However, they provide no explanation of the assumptions, tools, or methodology they employed in this model. See NERA/Sierra 2007 at pp. 19-20. It is a black box. Moreover, it incorporates the false assumptions and distorted results of the three models on which it is based.

The opponent's rebound model provides for the final incorporation of previous errors and their further compounding. While Dr. Harrison considered the impact of the increased purchase price predicted by Mr. Austin for the purchase decision, his report indicates he ignored its effect on automotive travel. NERA/Sierra 2007 at D. 2. page 61. This inconsistent treatment conflicts with his 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. Dr. Harrison should have accounted for the reduced funds for purchasing fuel in projecting the effects of improved fuel efficiency on driving behavior.

Dr. Harrison also should have considered the increase in projected fuel prices that has occurred since his 2004 analysis. NERA\_Rebound\_Input\_Data.zip/Raw Data.xls. The opponents' back-up documents reflect projected gasoline prices of only \$1.56 per gallon between 2004 and 2020. NERA\_DATA\_040922.zip/fuelforecast.cvs. The actual price of gasoline has proven to be far greater and the increase should increase the cost of travel and reduce the miles traveled. Indeed, "[t]he average American motorist is driving substantially fewer miles for the first time in 26 years because of high gas prices and demographic shifts, . . ." June 14, 2007 ARB comment Item 111. Having failed to adjust his stale and underestimated fuel costs, he further overestimates the rebound effect.

Of course, certain potential buyers are not economically constrained in choosing to purchase a vehicle with higher fuel economy. In that case, driving will still not increase after the purchase is made. This person was already driving as much as he or she desired. This fact was essentially confirmed by Doctors Small and Van Dender in their report to CARB referenced in the rulemaking proceeding. June 14, 2007 ARB comment, Item 31, pp. 41-44. They found that the rebound effect decreases as real per capita income increases, confirming that people pay less attention to operating costs as those costs become a smaller proportion of their income.

The models used to project the emissions of criteria pollutants (NERA/Sierra 2007 pp. 20-21, 63-100) incorporate all of the errors from the prior modeling and similarly lack the detail needed to evaluate their methodology and additional assumptions. As with the above models, and as reflected on page 76, the authors have relied on unidentified off-model adjustments. They appear to have inflated vehicle miles traveled for older vehicles (NERA/Sierra 2007 at p. 76), 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 (NERA/Sierra 2007 p. 78 versus p. 102), but there is no explanation for this implausible result.

Even if opponents' foundational support for their inflated greenhouse gas compliance cost estimates could now legitimately make its way into the docket, opponents cannot overcome the highly deferential treatment of California's feasibility and cost estimates (see Section IV.) that opponents themselves acknowledge – indeed virtually insist – that EPA must give to California's analysis. Alliance June 5, 2007 letter, Document ID 1519, Section I.A. Unlike opponents' analyses, ARB's reasonable and well-supported feasibility and cost analysis provide 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.

Turning from their new analysis, the Alliance concludes that it is implausible that ARB's estimated price increases would not lead to significant fleet turnover effects. Alliance June 15, 2007 comment, p. 10. In addition to the extensive rulemaking and later analyses we have already submitted and cited, simple math explains why it is plausible and reasonable to expect there to be a minimal impact on the normal fleet turnover rate. The baseline vehicle prices projected for 2016 (in 2004 dollars) were \$22,822 for a representative (Midsize class) PC/LDT1 and \$23,073 for a representative (Standard van class) LDT2. ISOR Addendum, Document ID 0010.132, Table 12.1-1, pp. 27-28. The price increases of \$1115 for PC/LDT1 and \$1341 for LDT2 that the Alliance cites are just 5% of these baseline vehicle prices. Yet per-capita personal income is projected to increase 16% during the 2009 through 2016 regulatory phase-in, averaging 2.2% growth annually. Center for Continuing Study of the California Economy, California

Economic Growth - 2006 Edition, p. 6-13, enclosed Item 158. By this common and simple measure, the price increases ARB projected are easily absorbed. See also FSOR Comment & Response No. 149.

#### D. EPA Cannot Require California to Wait for Federal GHG Standards Before Granting the Waiver

AIAM tries another tack on the protectiveness argument: that EPA cannot weigh protectiveness without federal greenhouse gas standards in place. AIAM June 15, 2007 comments, pp. 3-5. This argument entirely ignores the rich history of Section 209(b) (see e.g. Environmental Defense Section 3.), as the following hypothetical demonstrates.

EPA could announce tomorrow that it is merely considering, among many options to further reduce new motor vehicle ozone precursor emissions: A) mandating a zero-emission vehicle program that would require one-half of manufacturers' fleets to be ZEVs in 2016; B) doing nothing further on ZEVs because EPA considers mandating them infeasible; or C) a series of highly innovative approaches California never considered, including reducing toxics California doesn't regulate. By opponents' logic, that mere EPA announcement – like the *Massachusetts et al. v. EPA* decision and Executive Order 13432 here – would supposedly call into question California's prior protectiveness determinations, and require EPA to reject any pending waiver request on protectiveness grounds.

That is not how the Section 209(b) waiver process and the Section 209(e)(2) authorization process work. For example, late last year EPA granted a Section 209(e)(2) authorization for California's new evaporative emissions standards for small off-road engines (71 FR 75536 (December 15, 2006)). At the time of the authorization, EPA was working on, but had not yet formally proposed, its own first-time evaporative emissions standards for these engines (EPA's proposal for the federal standards was published May 18, 2007, at 72 FR 28098). In the discussion of protectiveness on page 10 of the Decision Document for the December 2006 authorization, the Acting Assistant Administrator saw no need to even mention EPA's work on its own rulemaking. Instead, he stated, "As CARB noted in its request letter, 'EPA has routinely stated 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.'" Neither did the anticipated federal regulations bar EPA's conclusion that there was no test procedure inconsistency: ". . . we nevertheless agree with CARB that no inconsistency can exist where one of the regulatory bodies to consider has no such test procedures." Decision Document at 24. See also 42 FR 3192, 3194 (January 17, 1977) (finding California SHED test procedures may make California hydrocarbon standard more protective than numerically equivalent federal standard but subjecting

that conclusion to potential reconsideration, which occurred at 42 FR 25755, 25756 (May 19, 1977).) And here, EPA has made no announcement regarding the potential stringency of its new motor vehicle greenhouse gas standards or its eventual regulatory approach. So at most, EPA could at some point require California to revisit its waived protectiveness determination once California has something against which to compare – a final federal new motor vehicle greenhouse gas standard EPA adopts under its Section 202(a) authority.

In addition, opponents' view that the lack of measurable global warming impacts from imposing California's greenhouse gas emission standards on individual state fleets or indeed the entire U.S. fleet (May 30, 2007 transcript, Document ID 0421 at p. 72) would preclude EPA from ever having a standard against which EPA could compare California's. Because opponents presumably are not arguing that EPA should consider setting standards under Section 202(a) more stringent than California's – if they are, they should state so – they are essentially arguing that any greenhouse gas emission reductions from standards EPA would set for the U.S. motor vehicle sector are not needed to reduce projected temperature increases in the U.S. from global warming. Such a national program would indeed not be "adequate to California's needs." *MEMA*, 627 F.2d at 1109 (as cited by Alliance June 15, 2007 p. 15).

The opponents' hypocrisy is clear; they want EPA to "wait" to compare California's standards to whatever standards EPA might some day propose, while also arguing that nationwide standards as stringent as California's would still be ineffective and (by implication) any federal standard less stringent will be even less effective. The technology-forcing nature of Section 209(b) precludes such games. Their argument would result in having no EPA standard, precluding a comparison and EPA's waiver review, rendering Section 209(b) a nullity; EPA must instead give 209(b) effect. See also IV.A. below (rebutting opponents' argument that California's standards cannot be consistent if EPA has not made an endangerment finding).

### III. Compelling and Extraordinary Conditions

The waiver opponents do not effectively rebut our fundamental point (May 22 slide 49 and testimony) that over the last 23 years, EPA has consistently applied the Section 209(b)(1)(B) criterion by considering whether California continues to need its own motor vehicle emission control program to address compelling and extraordinary conditions, rather than whether the specific standards in question are needed to address compelling and extraordinary conditions. June 14, 2007 ARB comment III.A. p. 7 and Item 36. The Alliance responds that, "Even if true, that is a strawman argument that the Alliance is not advancing." Alliance June 15, 2007 at 26. However, the issue is not whether the Alliance chooses to "advance" an argument, but whether it can demonstrate that EPA should not continue to follow its consistent precedents.

The Alliance also asserts that in the past, Section 209(b)(1)(B) has not presented a significant challenge “because California’s past assertions of authority were confined to solve the classic ozone, NOx, and PM problems that the topography of California made particularly acute.” Alliance June 15, 2007 at 15. But EPA’s 1984 conclusion to consider California’s need for its own motor vehicle emission control program as a whole directly resulted from claims by manufacturers that the particulate emissions standards in question did not constitute a unique or acute problem for California compared to other states. 49 FR 18887, 18890 (May 3, 1984). In addition, as we stated in our December 21, 2005 Support Document (p. 17) and in III.B.1. of our June 14, 2007 comment, even if EPA focused only on the potential impacts of the greenhouse gas regulations on criteria pollutants, the regulations come to EPA with a presumption of reducing criteria pollutant emissions driven by the net impact of upstream emissions reductions from reduced fuel throughput. We also identified minimizing the exacerbation of localized ozone and particulate problems as placing greenhouse gas control within easy reach of the original 1967 and strengthened 1977 waiver provision (June 14, 2007 comment pp. 8-9), which both the Alliance and AIAM arguments on “uniqueness” (Alliance June 15, 2007 p. 14-26, AIAM June 15, 2007 pp. 5-8) tellingly fail to discuss.

The crabbed reading of the text of Section 209(b)(1)(B) by the Alliance (June 15, 2007 pp. 12-26) and by AIAM (June 15, 2007 pp. 5-8) blithely ignores the fundamental teaching of *Massachusetts et al v EPA* that applies equally if not more so here:

While the Congresses that drafted § 202(a)(1) might not have appreciated the possibility that burning fossil fuels could lead to global warming, they did understand that without regulatory flexibility, changing circumstances and scientific developments would soon render the Clean Air Act obsolete. The broad language of § 202(a)(1) reflects an intentional effort to confer the flexibility necessary to forestall such obsolescence. See *Pennsylvania Dept. of Corrections v. Yeskey*, 524 U.S. 206, 212, 118 S.Ct. 1952, 141 L.Ed.2d 215 (1998) (“[T]he fact that a statute can be applied in situations not expressly anticipated by Congress does not demonstrate ambiguity. It demonstrates breadth” (internal quotation marks omitted)).” 127 S. Ct. at 1462. (Emphasis added.)

Given the “overwhelming indications in the legislative history that Congress intended California to enjoy the broadest possible discretion in selecting a complete program of emissions control” (*MEMA*, 627 F.2d at 1108, n. 22), Section 209(b)(1) must be read similarly to foreclose the narrow reading of Section 209(b)(1)(B) that opponents suggest.

But even assuming that EPA could evaluate California's regulations pollutant-by-pollutant, impact-by-impact, under the Alliance's new three-part test (pp. 12-13), opponents also failed to meet their burden on this issue. As we have shown, California does indeed: 1) "need" these standards to 2) "meet" 3) "compelling and extraordinary conditions." Again, 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. Opponents essentially acknowledge that this is indeed the issue. May 30, 2007 transcript, p. 63, citing May 22 transcript. But rather than address the issue, they sidestep it chasing their new and ultimately unavailing theory that California must demonstrate a modeled temperature reduction. Alliance June 15, 2007 comment IV.C., AIAM June 15, 2007 comment II.B.2. (Rebutted in our June 14, 2007 ARB submittal III.B.5). They do so because they have failed to demonstrate, much less argue, that the greenhouse gas reductions from these standards are not needed to reduce temperature impacts in California. That failure is fatal to their argument on extraordinary and compelling conditions.

By contrast, California has demonstrated that the greenhouse gas reductions projected from the subject standards are needed. June 14, 2007 ARB comment III.B.6. Our June 14, 2007 submission demonstrated that any and all greenhouse gas reductions are among those measures needed to reduce future impacts from global warming in California. 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. See e.g. Dr. Hanson Testimony in Item 140 referenced in VDPFF Nos. 65, 102-05, and Dr. Hansen Expert Report (June 14, 2007 ARB comment Item 46), paras. 66, 82.

By arguing that "meet" in Section 209(b)(1)(B) "essentially requires an analysis of redressability," (Alliance June 15, 2007 p. 13), opponents effectively concede California needs the greenhouse gas reductions from these regulations. The U.S. Supreme Court held redressable the harms to a single State from EPA's failure to regulate new motor vehicle emissions at an unknown level of stringency: despite the delay in federal standards' effect, and the impact of developing countries' emissions, "A reduction in domestic emissions would slow the pace of global emissions increases," and the risk of catastrophic harm "would be reduced to some extent...." *Massachusetts et al. v. EPA*, 127 S.Ct. 1438, 1458 (2007). These greenhouse gas standards likewise – and potentially to a greater degree than the hypothetical EPA standards in *Massachusetts* given the ability of other States to adopt California's standards under Section 177 – will slow that growth and reduce the risk.

If there were any remaining doubt of the need for the greenhouse gas emission reductions that will be achieved by California's pioneering program, the comments of the U.S. government on a recent IPCC draft report puts that doubt to rest:

Beyond the dynamic by which state standards can induce national action, state standards themselves can have a measurable impact. California's GHG emissions standards for motor vehicles have been adopted now by 10 other states, together comprising nearly 30% of the U.S. auto market. These standards would require a 30% reduction in new vehicle GHG emissions by 2016. If these standards survive a lawsuit recently filed by the auto manufacturers and dealers, they could ultimately force a significant reduction in the GHG emissions of new motor vehicles sold in the U.S. Ultimately, this would also be globally significant, given that U.S. light duty vehicles are responsible for about 4 to 5% of global carbon emissions. (Citation omitted). U.S. Government Review of the Second Order Draft IPCC Working Group III Contribution to the Fourth Assessment Report (AR4), "Climate Change 2007: Mitigation of Climate Change" (Sep. 14, 2006), pp. 299-300, enclosed Item 159.

See also VDPFF Nos. 987-991. It would be arbitrary and capricious for EPA to repudiate both the fundamental scientific fact that reducing greenhouse emissions reduces global warming impacts, and the U.S. position that actions such as these can have a measurable impact and that these exact regulations "would be globally significant." See also Connaughton statement, June 14, 2007 ARB comment Item 78.

Another of opponents' arguments on this issue – that California's conditions as affected by global warming must be unique among states (Alliance June 15, 2007 p. 14-26, AIAM June 15, 2007 pp. 5-8) – is easily dispatched. As we have emphasized, this issue need never be reached because EPA's 1984 diesel particulate waiver correctly determined that the use of the term "standards" in 209(b)(1)(B) requires EPA review of California's program as a whole (49 FR 18887, 18890, column 1 (May 3, 1984)), precluding review of unique conditions regarding, and impacts of standards for, particular pollutants (*Ibid.* column 3). But even if EPA were to examine whether compelling and extraordinary conditions justify the California greenhouse gas regulations, the now-recognized threat of global warming constitutes an extraordinary condition in the overall context of threats from air pollution. The threats to California from global warming were itemized in III.B.2 and 3. of our June 14, 2007 comments. Further, AIAM's claims states that "almost all" of CARB's hearing presentations focused on impacts outside of California are belied by May 22 slides 51-60 and May 30 slides 12-16.

Finally, the Alliance's overarching argument that 209(a) field preemption supports a narrow role for California to address unique conditions for every pollutant (Alliance June 15, 2007 pp. 2, 16) also fails. Rather than the Alliance's preference to give 209(a) broad preemptive effect in the guise of their constrained view of federalism, case law

holds precisely the opposite. On most matters – but especially on environmental matters – preemption provisions are to be narrowly construed in favor of state sovereignty. See Defendant’s JOP Brief in *Central Valley Chrysler-Jeep* at pp. 7-8 (Document ID 1433.2). That narrow construction was recently confirmed in *Air Conditioning and Refrigeration Institute v. Energy Resources Conservation and Development Commission*, 410 F.3d 492, 496 (9th Circ. 2005) (*ACRI*) (“Beginning with the presumption that Congress did not intend to supplant state law,” court holds that EPCA does not preempt California data submittal, marking regulations, and compliance and enforcement regulations applied to appliance manufacturers). Indeed, the Alliance filed jointly in support of *certiorari* precisely to challenge this narrow but proper view of preemption. See *ACRI*, 2005 WL 2652619, Supreme Court of the United States, Appellate Petition, Motion and Filing, enclosed Item 160. The Alliance et al. challenge proved unsuccessful (*cert. denied* 126 S.Ct. 2887), and *ACRI* remains good law counseling a strong presumption against preemption. Moreover, the Alliance view completely reads out the coordinate and typically leading role that Congress intended California to play in regulating new motor vehicle emissions.

#### IV. Clean Air Act Section 202(a) Consistency

##### A. Considerations of Factors Other than Feasibility and Lead Time Is Not Warranted or Permissible

It is no surprise that given opponents’ agreement that EPA’s review of California’s cost and model availability projections is limited (Alliance June 5, 2007 letter, Section I.A.), they resort to proposing another new waiver criterion – that consistency under Section 209(b)(1)(C) requires more than deferential review of technological feasibility and lead time issues with consideration of costs. As ARB and numerous others (e.g. NRDC Document ID 1672) have stated, no new test is warranted or permissible. *Massachusetts et al. v. EPA*, 127 S.Ct. at 1462-63 (rejecting EPA’s “laundry list” of reasons for declining to regulate greenhouse gases under 202(a) as “divorced from the statutory text.”).

Contrary to opponents’ argument (Alliance June 15, 2007 pp. 26-34, AIAM II.A. and p. 9), *Massachusetts et al. v. EPA* does not provide EPA with shelter to find inconsistency on the ground that EPA must by first make its own endangerment finding on greenhouse gases before granting California’s waiver request. That *Massachusetts et al. v. EPA* “contemplated activity at the federal level” and that Executive Order 13432 requires coordination among federal agencies is entirely irrelevant. There has been a great deal of federal activity and coordination on hydrocarbons, oxides of nitrogen, particular matter, toxics, and other motor vehicle emissions over the last three decades. Congress provided a mechanism for EPA to continually review standards for those pollutants and to set standards for others. Section 202(a). But that has been and

remains irrelevant to the scope and pace of California's authority under Section 209(b) to adopt standards "for the control of emissions." As we have stated, this is because Congress anticipated that California's standards would be "more stringent than, or applicable to emissions or substances not covered by, the national standards." H.R. Rep. No. 90-728 (1967), reprinted in 1967 U.S.C.C.A.N. 1938, 1958.<sup>2</sup> See also *MEMA I*, 627 F.2d at 1110-11 and Environmental Defense comments, Section 3.

*Massachusetts et al. v. EPA* holds that not only are greenhouse gases "emissions" or "substances," they are "air pollutants" emitted from new motor vehicles and subject to regulation under Section 202(a). (The Alliance admits as much in its June 15, 2007 letter at n. 24.) Regardless of whether California actually needed this specific Supreme Court imprimatur to regulate greenhouse gases under the Act, there is no doubt that California, like EPA, now has that green light. Note that in analyzing the similar language of Section 209(e), the D.C. Circuit acknowledged that EPA had proposed to authorize California's nonroad engine standards before EPA itself had conducted its own study and made endangerment findings regarding those same engines' emissions. *Engine Mfrs. Ass'n v. U.S. EPA*, 88 F.3d 1075, n. 43 (D.C. Cir. 1996) (citing 56 Fed.Reg. 45,873, 45,875 (1991)). The court ultimately sided with manufacturers' argument that EPA can indeed review California's request without federal standards against which to compare for protectiveness or consistency. 88 F.3d at 1092-93.

Again, even if EPA were to err by deciding it must first make an endangerment finding before granting California's request, it can and must do so concurrently with granting the waiver. For EPA to decline to make an endangerment finding, it would need to ground that decision in the statute. *Her Majesty the Queen in Right of Ontario v. EPA*, 912 F.2d 1525 (D.C.Cir.1990) (*Her Majesty*) (holding EPA's postponement acid rain endangerment finding permissible given lack of state emissions information and statutory link to immediately notify states.) "In short, EPA may withhold an endangerment finding only if it needs more information to determine whether the

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<sup>2</sup> The Alliance's attempts to dismiss this legislative history – Alliance June 15, 2007 comment pp. 22-23 and n. 21 – are misplaced, since the same House Report acknowledged "...as passed by the Senate, section 208(b) provides for a waiver or preemption in the case of California, so that California could be permitted to establish ... (2) standards applicable to emissions not covered by Federal standards..." (1967 U.S.C.C.A.N. at 1956-57). Further, the House accepted the Senate version of the bill and "...the debate on the floor of the House indicates that the members shared the Senate's conviction that the waiver provision was intended to permit California to adopt an entire program of emissions control." *MEMA*, 627 F.2d at 1110, n. 31 (citations omitted). Moreover, all that the Alliance's "relevant" legislative history shows is that EPA's grant of a waiver to California was to be the equivalent of the failed proposal for federal promulgation of California's standards applicable to emissions not covered by Federal standards, a federal promulgation no longer needed given the California waiver provision ultimately legislated.

statutory standard has been met.” *Mass. v. EPA* 415 F.3d 50, 76 (D.C. Circ. 2005), J. Tatel dissenting (*reversed in Massachusetts et al v. EPA*, 127 S.Ct 1438).

If EPA were to agree with opponents here that before granting California’s request EPA must first make an endangerment finding, withholding that finding in this proceeding would require EPA either to determine “that greenhouse gases do not contribute to climate change” or to provide “some reasonable explanation as to why it cannot or will not exercise its discretion whether they do.” *Massachusetts et al v. EPA*, 127 S.Ct. at 1462. After reviewing the already overwhelming scientific evidence available to EPA when in 2003 EPA denied the greenhouse gas rulemaking petition, Judge Tatel – whose dissenting opinion in the D.C. Circuit opinion ultimately prevailed in *Massachusetts et al. v EPA* – observed, “I doubt EPA could credibly conclude that it needs more research to determine whether GHG-caused global warming ‘may reasonably be anticipated to endanger’ welfare.” *Mass. v. EPA*, 415 F.3d 50, 77 (D.C. Circ. 2005), J. Tatel dissenting (*reversed in Massachusetts et al v. EPA*, 127 S.Ct 1438). Given the IPCC 4<sup>th</sup> Assessment release, along with other overwhelming scientific evidence (now in the Docket) developed in the two years since Judge Tatel’s prescient observation, EPA clearly has the ability and duty to make that finding now. There is nothing in Executive Order 13432 (see Sec. 6(c)), or in its accompanying press release stating the President’s direction to “complete” a federal regulatory response to the decision by the end of 2008 (enclosed Item 161), that provides any legitimate justification to delay an endangerment finding.

Opponents’ misstatement of the law on consistency is complete with the Alliance’s purported characterization of the relationship of 209(a) and 209(b) as allowing California to receive a special exemption from preemption [only] when it “adopts standards comparable to and not in conflict with EPA’s approach....” Alliance June 15, 2007, p. 34. They essentially argue that Section 209(b) constituted a one-time (1967) Congressional approval of California regulating some pollutants first, while simultaneously requiring any post-1967 California regulation to be preceded both by a prior EPA endangerment finding, and by divination of when EPA has determined its final “approach” to regulating a particular pollutant. That interpretation would eviscerate the technology-forcing intent of Section 209(b). Indeed, the controlling case law holds precisely the opposite: California is “to act as a kind of laboratory for innovation,” *MEMA*, 627 F.2d at 1111, and “to blaze its own trail with a minimum of federal oversight,” *Ford Motor Co.*, 606 F.2d at 1297. *Accord, Engine Mfrs. Ass’n v. EPA*, 88 F.3d at 1079-80 and 1090 (D.C. Circ. 1996) (recounting prior cases and Congressional intent in extending the California exception to the nonroad sector) and *Motor and Equipment Manufacturers Association v. Nichols*, 142 F.3d 449, 463 (D.C. Circ. 1998). See also *Gregory v. Ashcroft*, 501 U.S. 452, 457-59, 111 S.Ct. 2395 (1991) (summarizing federalism principles and concluding “In the tension between federal and state power lies the promise of liberty.”) In sum, opponents read out this entire other

half of waiver law and history – the acknowledged benefit to the nation of California proceeding first. This purposeful omission does not withstand scrutiny.

#### B. The Record Is Devoid Of Evidence Supporting Opponents' Burden on Technological Feasibility and Lead Time

The opponents' omission of any substantive discussion of the limited technological feasibility and lead time issues EPA can consider in its consistency review is glaring – as is the failure of any individual manufacturer to step forward with such evidence – and precludes EPA from finding inconsistency. See Alliance June 15, 2007 comment pp. 35-36 (procedural discussion only), AIAM June 15, 2007 comment (minimal technical discussion at pp. 9-13), and GM June 15, 2007 comment (no technical discussion). In fact, not a single manufacturer from either the Alliance or AIAM has independently presented any substantive comment concerning the principal and proper focus of this proceeding – the technological feasibility and lead time for those manufacturers to comply with the subject greenhouse gas emissions standards.

As ARB anticipated (June 14, 2007 ARB comment, p. 24), the best the Alliance can muster on this controlling issue – after again incorrectly attempting to place an “initial burden” on ARB – is a laundry list of minor technical issues on which it claims it lacks information to properly comment. Alliance, June 15, 2007, n. 26. As we stated in our May 25, 2007 letter (Document ID No. 1258) and as the Alliance is well aware, these are among the many issues that have been exhaustively addressed in materials previously submitted to the Docket (e.g. the FSOR) and in the federal litigation. See e.g. June 14, 2007 ARB Comment Item 140 (Brueckner Deposition (AVL modeling), Cooper Deposition (AVL modeling), McMahon Testimony (diesel technologies and Europe), Duleep Testimony at 136-38 (AVL and premium fuel), Duleep Testimony at 125-28 (camless valve actuation), un-itemized 10-6-04 e-mail from AVL to ARB (AVL and premium fuel)), FSOR Comment 173 (diesel aftertreatment), FSOR Response to Comment 302 (noting many technologies are already on vehicles so prices can be quoted), June 14, 2007 ARB comment Item 83 (NRDC report noting LEV cost reductions), enclosed Item 162 NESCCAF Interim Report referenced in ISOR and June 14, 2007 ARB comment un-itemized NESCCAF Final Report and un-itemized DX 2609 (for Martec-quoted prices), and EPA Interim Powertrain Report, June 14, 2007 ARB comment Item 87 (citing NESCCAF cost estimates). The Alliance comments here essentially attempt to turn this waiver proceeding into a de novo EPA rulemaking; Section 209(b) precludes this.

AIAM's misleading statements on p. 12 regarding the need for six and seven years of lead time are placed into context by the previously submitted Deposition Testimony of Steve Albu (June 14, 2007 ARB comment Item 140) (stating most technologies are already developed and require only a few years of lead time). There is also of course

abundant evidence in the Board's official and controlling statement on lead time and other rulemaking issues, e.g. ISOR section 5 and FSOR Comment & Response Nos. 153, 297-303. Even the quotes AIAM cites are unremarkable, as six and seven years of lead time, to meet 2011 and 2012 standards, respectively, falls within the lead time as traditionally measured by both ARB and EPA – from no later than the Board's final adoption of the rule, here August, 2005. And again, AIAM notes that the comment concerned only some manufacturers, while industry-wide feasibility is of primary concern here.

AIAM's other lead time argument (pp. 9-13) completely misses the mark. AIAM sets up a logical impossibility: that California receives an EPA waiver before California adopts its standards. This may be because AIAM fundamentally misunderstands (n 2) the California regulatory process, since ARB's regulations indeed are not final and enforceable under state law until California's Office of Administrative Law (OAL) approves them and submits them to California's Secretary of State. Cal. Gov. Code Secs. 11349.3 and 11343-11343.8. Once the regulations are effective, ARB submits them to EPA with a request for a waiver or within the scope confirmation. Any other procedure would be premature and unworkable, as EPA would indeed be wasting its time reviewing draft regulations that may never come to fruition. In another but related context, EPA essentially agreed with California's argument on this score – EPA reviews final, OAL-approved California regulations. See 59 FR 48625 (September 22, 1994), Decision Document, pp. 33-41, enclosed Item 163. See also *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. New York State*, 17 F.3d 521, 533-34 (2nd Cir. 1994) (applying common sense approach upholding Section 177 states' ability to adopt standards before EPA grants California waiver so long as state does not enforce before waiver is granted).

In reality, as demonstrated in June 14, 2007 ARB comment Item 125), there is no question that individual manufacturers can meet most, and in some cases all, of California's standards in the early years of implementation, and in many cases without doing anything beyond their current business plans. Here I also specifically point your attention to and enclose additional passages on this issue. Item 164 Bienenfeld Depo. at 182:20-24, 183:12-15, 186:10-18, 187:2-19 (acknowledges Honda can comply with standards through MY 2010, and possibly in 2011 applying earlier year credits); Item 166 Choe Depo. at 203:21-204:2, 215:25-216:7, 216:14-20 (acknowledges Nissan can comply with LDT2/MDV standard through 2011 MY and for PC/LDT1 with model mix shift); Item 167 Johnson Depo. at 144:4-17 (acknowledges Volkswagon can comply for MY 2009, and for MY 2010 with incremental changes in process); and Item 168 Love Depo. at 30:5-16, 90:14-24 (acknowledges Toyota can comply through 2011 MY). (While inconclusive for later years, other parts of these deposition passages indicate that these manufacturers are well on their way to applying the technologies projected in the ARB rulemaking.) And contrary to opponents' argument (Alliance June 15, 2007, p. 37), nothing in Section 209(b) precludes EPA from granting California's request through

only certain model years (e.g. 71 FR 78190 (December 28, 2006)), or from granting for only certain tiers of standards. See 72 FR 14546, 14548 (March 28, 2007) (deferring analogous Section 209(e) nonroad authorization decision on second tier of inboard-sterndrive marine spark-ignition engine standards). While ARB believes that given the deference to be accorded to California that EPA should rarely exercise these options, they are available.

Regarding later model years affected, documentation in the Vermont trial further supports ARB's analysis and further undermines opponents' unsupported technological feasibility, lead time and cost arguments. Testimony from Mr. K.G. Duleep (Duleep Testimony in June 14, 2007 ARB comment Item 140) and Mr. Tom Austin (whose analysis NERA/Sierra's previous and current fleet turnover and rebound analyses depends upon) and other evidence entered there establishes that the opponents' modeling suffers from numerous conservative assumptions compounded by methodological errors and inherent weaknesses.

Opponents' modeling is speculative because it locks in individual manufacturers' fleets. Duleep Testimony in June 14, 2007 ARB comment Item 140, as cited in VDPFF No. 178 (speculative to lock in individual manufacturer models far into the future given industry flux). It is also unsuitable for fleetwide analysis. *Id.* as cited in VDPFF Nos. 219-220, Heywood Declaration (enclosed Item 169) as cited in VDPFF Nos. 227, 230, and 232, and Ross Declaration (enclosed Item 170) as cited in VDPFF No. 236. Opponents' analysis also relies on numerous correction and adjustment factors (GM's Patton Testimony (enclosed Item 171), as cited in VDPFF Nos. 377-378), and Austin Testimony (enclosed Item 172), as cited in VDPFF Nos. 385-386.

More importantly, and as briefly addressed earlier in the protectiveness discussion at p. 12 above, opponents' modeling fails to model low-cost technologies available in the near- to mid-term technologies, and fails to model some higher cost technologies that while not obviously cost-effective for the mid-term, are being implemented by manufacturers for market and other reasons even now despite higher costs. See Duleep Testimony as cited in VDPFF Nos. 330 and 333 (omission of low-cost technologies as primary reason triggering Austin's projection of non-compliance and excessive projected manufacturer costs), Duleep Post-Trial Declaration (enclosed Item 173) paras. 17-22 and 26-29 (stating Austin ignored low-cost technologies), Austin Testimony (enclosed), as cited in VDPFF Nos. 359-63, 365 (in addition to omitting higher announced diesel penetration (p. 12 hereinabove), admitting excluding downsize turbocharged engines with direct gasoline injection, mild hybrids, continuously variable transmissions, electric power steering, packaging improvements, low rolling resistance tires, aerodynamic drag reduction, camless valve actuation, and HCCI).

The obvious feasibility of these omitted technologies for compliance with the later years of the near-term and for the mid-term standards is abundantly clear from our prior submissions and from a few additional ones enclosed with this letter. See June 14, 2007 ARB Comment Item 87 (camless valve actuation), 88 (variable flow turbo), 89 (HCCI), 90 (dual clutch transmissions), 91 (gasoline direct injection), 93 (aerodynamics), 103-104 (mild hybrid), un-itemized 2008 Ford Escape hybrid brochure (Atkinson-cycle engine with electronically controlled Continuously Variable Transmission (eCVT)), un-itemized 2007 GM 2.3L I4 Turbo LJ3 (current SAAB turbo model using regular gasoline contrary to opponents' claim that premium is needed), un-itemized 10-23-06 Automotive News article "Convergence 2006; Technology helps make cars greener" (Siemens' gasoline direct-injection system with fast-acting piezo injectors now in BMWs), un-itemized Duleep alt. fuels rebuttal report 6-13-06 p. 6 (concluding E85 vehicles are one low-cost compliance option for 2016 that would reduce overall compliance costs), un-itemized 1-8-07 Automotive News article Ford GTDI (Ford expected to offer new 4.4-liter turbocharged V-8 diesel engine in best-selling Ford F150 by late 2008), un-itemized Thermal Management 5-21-07 Automotive News article (Bosch citing thermal management with GDI and ISG as increasing market areas for meeting CO<sub>2</sub> concerns), June 14, 2007 Item 140 DX 2028 (DCC VP Lee touting diesel potential to reduce GHGs with potential 10% market penetration by 2020), June 14, 2007 Item 140 DX 2086 (GM announces intention to produce plug-in hybrid Saturn Vue Green Line as part of plan to produce new hybrid system annually), June 14, 2007 Item 140 DX 2320 (Honda clean diesel engine meeting Tier II Bin 5 emissions), June 14, 2007 Item 140 DX 2370 at pp. 30, 34 (Martec U.S. diesel analysis showing net gain to consumer – "Diesel Pays You Back"), June 14, 2007 Item 140 DX 2623 (ARB Executive Orders covering E85 vehicle certified to California standards including evaporative standards), June 14, 2007 Item 140 DX 2652 (GM's Stephens stating GDI, active fuel management, variable valve actuation and variable valve timing as building blocks to advanced combustion systems such as HCCI), enclosed Item 174 7-8-2007 Detroit Free Press "Efficient Engines at Ford" article (stating Ford downsized turbo-charged GDI concept car with dual-clutch Powershift electronically controlled and hydraulically actuated transmission and cylinder deactivation headed for North American market within next few model years), enclosed Item 175 Washington Post article "Consumers Shift Toward Smaller Engines," July 6, 2007 (citing Big 3 shift to four cylinder engines in mid-size market while maintaining power), enclosed Item 176 7-2-07 Automotive News "Driven to Diesels" article (stating Detroit 3 are racing to put diesel engines in their U.S. light trucks and that news reports indicate Nissan plans diesel for Titan and Toyota exploring diesel Tundra), enclosed Item 177 7-23-07 Automotive News article "M-B: We'll get greener" (in response to BMW's incorporation of ISG on the 1 series, Mercedes announcing intention to incorporate ISG on all model lines and citing three suppliers of ISG technology to five vehicle manufacturers), and Document 1823 (former DCC Senior Manager stating that Big 3 plans for meeting more stringent foreign

emission standards and their companies' June 12 announcements indicate they have knowledge and technology to implement higher standards here).

To the extent to which EPA considers safety, waiver opponents have not met their burden of showing any safety impact that would serve as a basis for EPA to deny the waiver. First, ARB considered and rejected all of the opponents' safety arguments as part of its administrative process. See e.g. FSOR Comment & Response Nos. 164, 167, 191-94, 272, 329, 333, 571, 622 (ARB stating that state authorizing legislation prohibits requiring weight reduction, that manufacturers can comply without reducing weight, and that opponents' own (Sierra 2004) analysis shows weight reduction is far from cost-effective therefore unlikely compliance option). Second, ARB has submitted to EPA expert reports that disprove any safety impacts from the regulations. First, David Greene's expert testimony and reports (with co-authors) demonstrate that there is no connection between increased fuel economy and highway safety. Leaving aside that opponents have provided no evidence that auto manufacturers will actually downweight their fleets as a means of compliance, Dr. Greene's research demonstrates that weight reduction can both improve safety and reduce greenhouse emissions simultaneously. In addition, at least one manufacturer concurs that it is inaccurate to say that smaller or lighter cars are less safe than other vehicles. See enclosed Stuart Johnson (VW) testimony at 188:11-14 and 189:1-2. Finally, opponents' VMT safety theory is entirely based on their flawed rebound and fleet turnover arguments – as further responded to above – and is therefore equally lacking in merit.

These items and ARB's comments submitted June 15, 2007 corroborate the main findings of the rulemaking as submitted with our December 21, 2005 request (pp. 20-33); combinations of available and planned technologies can be applied across manufacturers' fleets to meet the standards in every model year affected. Simply put, ARB's rulemaking projections not surprisingly are coming to fruition, while manufacturers' litigation consultants' pessimistic projections are outdated, unreliable, and – fortunately – coming to naught. Even if some manufacturers correctly foresee having to reduce some vehicle offerings in California – despite having provided no supporting evidence of that in the Docket – that would not be inconsistent under *International Harvester*. See 40 FR 23102, 23105 (finding that if basic demand applied to California it would apply with less stringency than federally) and Alliance June 5, 2007 comment I.A.. And applying the lead time test in *NRDC* (655 F.2d 318), California has shown that the few greenhouse technologies not already in production (HCCI, ISG, CVA) to meet the mid-term (2016) standards are well on their way toward integration in the fleet. In each case ARB has taken the extra step in this proceeding to supply the opponents' missing theoretical objection(s) to applying these technologies, identified major steps necessary to refine them (few needed since in pre-production now), and offered plausible reasons as to why those steps will be completed in time (manufacturers even now have five to eight years to incorporate technologies already in

pre-production). In addition, strong/full hybrids, passenger and light truck diesels, and E85 and other alternatively-fueled vehicles not assumed by ARB as needed for compliance are nevertheless being introduced and planned at levels exceeding ARB's baseline rulemaking projections (ISOR pp. 56 (hybrids), 63 (diesel) and 133 (alt fuel)), thereby contributing toward technical feasibility in the standards' final years.

Opponents' fundamental failure to meaningfully address the technical feasibility and lead time issues in this proceeding is fatal to more than their consistency argument. It also dooms opponents' protectiveness argument, which appears<sup>3</sup> to depend heavily on manufacturers' claimed inability to reduce their greenhouse gas emissions sufficiently without resorting to technologies costing several thousand dollars per vehicle. See NERA/Sierra pp. 10, 12, and 30.

#### V. Supplemental Questions Noticed April 30, 2007

California anticipated and responded to opponents' arguments on these issues and also incorporated them in the discussion above, but one of their specific arguments merits a brief response.

AIAM attempts to import EPCA/CAFE concerns into the 202(a) consistency analysis (pp. 12-13), 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." AIAM pp. 14-19. Though California was not a party to the Vermont action, we note 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). AIAM also states as "undeniable fact" that EPCA preempts these regulations, despite what it knows to be 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 enclosed Item 178 January 16, 2007 Stay Order in *Central Valley*, pp. 18-19; the issue is set for hearing on October 22, 2007.

Opponents' arguments on these questions essentially boil down to a desperate attempt, in the face of a resounding defeat of the same failed EPA policy arguments at issue in *Massachusetts et al. v. EPA*, to show that greenhouse gases are just "too different" from previously regulated pollutants to allow California to proceed. That court's holding – combined with the text, structure, cases interpreting, and agency practice concerning, Section 209(b) – confirm that despite manufacturers' discomfort in having California and

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<sup>3</sup> See Section II.C. regarding inability to determining relative impact of ZEV and GHG standards as precluding EPA reliance on NERA/Sierra 2007 study.

EPA regulate greenhouse gases as one of many motor vehicle emissions, that is precisely what the Act authorizes and what a proper application of Section 209(b) requires.

## VI. Conclusion

Following the lead set by the U.S. Supreme Court in April, EPA now has an historic opportunity to follow waiver law and agency practice by granting California's waiver request. Since opponents have not separately or together met their burden on any of the findings EPA would need to make to deny this waiver request, EPA must promptly grant it. A timely decision – before the end of October – is especially warranted here given California's unrebutted technological feasibility findings at the heart of this matter and the public need for certainty that these greenhouse gas emissions standards will indeed apply to 2009 model year vehicles.

Please enter this letter and all items listed in the attached and provided herewith into the subject docket.

Sincerely,

/s

Tom Cackette  
Acting Executive Officer

Attch: List of Enclosures

cc: (via OVERNIGHT TRACKING NO. 7987-2535-6984)

Mr. David Dickinson  
Compliance and Innovative Strategies Division  
US EPA,  
1310 L Street, NW - Room 644  
Washington, DC 20005

**ENCLOSURES: ADDITIONAL DOCUMENTATION TRANSMITTED TO  
U.S. EPA ON COMPACT DISC REGARDING REQUEST FOR WAIVER ACTION ON  
CALIFORNIA'S NEW MOTOR VEHICLE GREENHOUSE GAS EMISSIONS  
RULEMAKING**

NOTES:

- Numbering continues consecutively from June 14, 2007 ARB comment
- Files on DVD are listed with the item number below.

141. Decision Document accompanying LEV I Waiver Decision (51 FR 4166 (January 13, 1993), January 7, 1993).
142. September 23, 2004 ZEV waiver request letter (Document ID EPA-HQ-OAR-2004-0437-0002).
143. ZEV Resolution 03-04, adopted April 25, 2003 (Document ID EPA-HQ-OAR-2004-0437-0020).
144. Executive Order G-03-069 and its Attachment 4, dated December 19, 2003 (Document ID EPA-HQ-OAR-2004-0437-0032 and -0036).
145. Executive Order G-04-062, dated September 14, 2004 (Document ID EPA-HQ-OAR-2004-0437-0005).
146. ZEV Notice of Decision and Response to Significant Environmental Issues, January 8, 2004 (Document ID EPA-HQ-OAR-2004-0437-0021) (referencing Executive Order G-03-069 Attachment 4).
147. ARB Staff Review of Report Entitled "Impacts of Alternative ZEV Sales Mandates on California Motor Vehicle Emissions: A Comprehensive Study," October 31, 2001 (Document ID EPA-HQ-OAR-2004-0437-0051).
148. ZEV Notice of Decision and Response to Significant Environmental Issues, December 7, 2001 (Document ID EPA-HQ-OAR-2004-0437-0077) (referencing ARB Staff Review in Item 147).
149. Status Report on the California Air Resource's Board's Zero Emission Vehicle Program, ZEV Technology Review, April 20, 2007.
150. Status and Prospects for Zero Emissions Vehicle Technology; Report of the ARB Independent Expert Panel 2007, April 13, 2007.
151. CARB Resolution 07-18, May 24, 2007 (regarding Item 149).
152. Deposition Testimony of Thomas C. Austin, *Central Valley Chrysler-Jeep, Inc. v. Witherspoon*, U.S. Dist. Ct. (E.D. Cal. – Fresno Div.), No. CIV-F-04-6663 REC LJO, Vol. I, November 1 and 29, 2006.
153. GM Letter to Stockholders re 2005 Results.
154. Ford January 3, 2007 News Release.
155. BMW EfficientDynamics - Advanced Diesel - BMW North America.
156. ARB Executive Order A-003-0320 dated November 9, 2006.

157. Excerpts of Expert Report of Thomas C. Austin in *Central Valley Chrysler-Jeep, Inc., et al. vs. Witherspoon*, U.S. Dist. Ct. (E.D. Cal. – Fresno Div.), No. CIV-F-04-06663-REC-LJO, May 2, 2006.
158. Center for Continuing Study of the California Economy, *California Economic Growth - 2006 Edition*, p. 6-13.
159. U.S. Government Review of the Second Order Draft IPCC Working Group III Contribution to the Fourth Assessment Report (AR4), "Climate Change 2007: Mitigation of Climate Change" (Sep. 14, 2006) (collation of U.S. Government Agency Panel comments, including U.S. EPA and U.S. Department of Transportation panelists).
160. Brief of *Amici Curiae* Alliance of Automobile Manufacturers et al. in support of the Petition for Certiorari, *Air Conditioning & Refrigeration Institute et al., v. Energy Resources Conservation and Development Commission et al.*, No. 05-331, October 14, 2005.
161. President Bush Directs Administration To Take The First Steps Toward Regulations Based On "Twenty In Ten" Goal, <http://www.whitehouse.gov/news/releases/2007/05/20070514-2.html>. (press release accompanying Executive Order 13432).
162. Northeast States Center for a Clean Air Future (NESCCAF), 2004. Reducing Greenhouse Gases from Light-Duty Vehicles. Interim Report, March 2004. (Referenced in ISOR/Staff Report, Document ID 0010.44, final September 2004 version submitted with June 14, 2007 ARB comments).
163. California State Motor Vehicle Pollution Control Standards; Waiver of Federal Preemption Notice of Decision, 59 FR 48625 (September 22, 1994), and Decision Document, pp. 33-41.
164. Excerpted Deposition Testimony of Robert Bienenfeld, *Central Valley Chrysler-Jeep, Inc. v. Witherspoon*, U.S. Dist. Ct. (E.D. Cal. – Fresno Div.), No. CIV-F-04-6663 AWILJO, September 14, 2006.
165. Excerpted Deposition Testimony of Robert Brown, *Central Valley Chrysler-Jeep, Inc. v. Witherspoon*, U.S. Dist. Ct. (E.D. Cal. – Fresno Div.), No. CIV-F-04-6663 AWILJO, September 26, 2006.
166. Excerpted Deposition Testimony of Glenn Choe, *Central Valley Chrysler-Jeep, Inc. v. Witherspoon*, U.S. Dist. Ct. (E.D. Cal. – Fresno Div.), No. CIV-F-04-6663 AWILJO, August 31, 2006.
167. Excerpted Deposition Testimony of Stuart Johnson, *Central Valley Chrysler-Jeep, Inc. v. Witherspoon*, U.S. Dist. Ct. (E.D. Cal. – Fresno Div.), No. CIV-F-04-6663 AWILJO, September 20, 2006.
168. Excerpted Deposition Testimony of Michael Love, *Central Valley Chrysler-Jeep, Inc. v. Witherspoon*, U.S. Dist. Ct. (E.D. Cal. – Fresno Div.), No. CIV-F-04-6663 AWILJO, August 3, 2006.

169. Declaration of John B. Heywood, Ph.D., *Green Mountain Chrysler- Plymouth-Dodge, et al. Crombie et al*, U.S. Dist. Ct. (Vermont), Civil File No. 05-302 & 304, Document 483, Filed June 15, 2007.
170. Declaration of Marc H. Ross, *Green Mountain Chrysler- Plymouth-Dodge, et al. Crombie et al*, U.S. Dist. Ct. (Vermont), Civil File No. 05-302 & 304, Document 482, Filed June 15, 2007.
171. Excerpts from Trial Testimony of Mr. Kenneth J. Patton in *Green Mountain Chrysler- Plymouth-Dodge, et al. Crombie et al*, U.S. Dist. Ct. (Vermont), Civil File No. 05-302 & 304, Volume 10-B (April 30, 2007) (GM emissions model can model four-wheel-drive without correction factor and can model cold start phase.).
172. Excerpts from Trial Testimony of Mr. Thomas Austin, in *Green Mountain Chrysler- Plymouth-Dodge, et al. Crombie et al*, U.S. Dist. Ct. (Vermont), Civil File No. 05-302 & 304, Volume 7-A, 7-B (April 23, 2007) and 8-A (April 24, 2007).
173. Declaration of K.G. Duleep, *Green Mountain Chrysler- Plymouth-Dodge, et al. Crombie et al*, U.S. Dist. Ct. (Vermont), Civil File No. 05-302 & 304, Document 481, Filed June 15, 2007.
174. "Efficient Engines at Ford," Detroit Free Press, July 8, 2007.
175. "Consumers Shift Toward Smaller Engines," Washington Post, July 6, 2007.
176. "Driven to Diesels; Powerplants boost fuel economy in light-duty trucks," Automotive News, July 2, 2007 ("About 40 percent of the 796,000 Ford F-series trucks sold in the United States last year were diesel-powered" and showing consumers more than willing to pay premium, counter to Austin analysis that diesels not cost-effective).
177. "M-B: We'll get greener; Stop-start technology slated for entire lineup," Automotive News, July 23, 2007.
178. Memorandum Opinion and Order on Defendants' Motion for Summary Judgment on the Issue of Ripeness and/or Mootness and Order For Stay of Further Proceedings, *Central Valley Chrysler-Jeep, Inc. et al. v. Witherspoon*, Document 606, Case 1:04-cv-06663-AWI-LJO Filed January 16, 2007.
179. Excerpts from Trial Testimony of Alan Weverstad, in *Green Mountain Chrysler- Plymouth-Dodge, et al. Crombie et al*, U.S. Dist. Ct. (Vermont), Civil File No. 05-302 & 304, Volume 1-B (April 10, 2007) (diesels as greenhouse gas compliance option).
180. Excerpted Deposition Testimony of Kenneth Ludvigsen, *Central Valley Chrysler-Jeep, Inc. v. Witherspoon*, U.S. Dist. Ct. (E.D. Cal. – Fresno Div.), No. CIV-F-04-6663 AWILJO, July 13, 2006.
181. Excerpted Deposition Testimony of Mark Maher, Kenneth, in *Green Mountain Chrysler- Plymouth-Dodge, et al. Crombie et al*, U.S. Dist. Ct. (Vermont), Civil File No. 05-302 & 304, November 17, 2006.

182. Excerpted Deposition Testimony of Karl Heinz Zwica, *Central Valley Chrysler-Jeep, Inc. v. Witherspoon*, U.S. Dist. Ct. (E.D. Cal. – Fresno Div.), No. CIV-F-04-6663 AWILJO, August 2, 2006.