Environmental Protection Agency

California State Motor Vehicle Pollution Control Standards; Waiver of Federal Preemption, Decision of the Administrator (2005 and Subsequent Model Year Zero-Emission Vehicles (ZEV))

I. INTRODUCTION

By this decision, issued under section 209(b) of the Clean Air Act, as amended (Act), 42 U.S.C. § 7543(b), the Environmental Protection Agency (EPA) today has determined that certain provisions of the California Air Resources Board's (CARB's) 1999-2003 amendments to the California Zero-Emission-Vehicle (ZEV) regulations as they affect 2006 and prior model years (MYs) are within-the-scope of previous waivers of federal preemption granted to California for its ZEV regulations pursuant to section 209(b) of the Act. EPA is also granting California's request for a waiver of federal preemption to enforce certain provisions of the ZEV regulations as they affect 2007 through 2011 MY vehicles. As explained below, EPA is also making a finding that although we believe it appropriate to grant a full waiver of federal preemption for the 2007 MY, we also believe it appropriate to consider the 2007 MY regulations (with one exception noted below) as within-the-scope of previous waivers of federal preemption, as they apply to certain vehicles that were already subject to the pre-existing ZEV regulations. EPA, by this decision, is not making any findings or determinations with regard to the 2012 and later model years under CARB's ZEV regulations. As further explained below, CARB has adopted four sets of amendments to title 13, California Code of Regulations (CCR), section 1962, entitled "Zero-

Emission Vehicle Standards for 2005 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles, and in parts of a CARB document incorporated by reference in section 1962(h). That document, which pertains both to ZEVs and hybrid-electric vehicles (HEVs), is titled "California Exhaust Emission Standards and Test Procedures for 2005 and Subsequent Model Zero-Emission Vehicles, and 2001 and Subsequent Model Hybrid Electric Vehicles, in the Passenger Car, Light-Duty Truck and Medium-Duty Vehicle Class.[1]

Section 209(a) of the Act provides:

> No State or any political subdivision thereof shall adopt or attempt to enforce any standard relating to the control of emissions from new motor vehicles or new motor vehicle engines subject to this part. No State shall require certification, inspection or any other approval relating to the control of emissions from any new motor vehicle or new motor vehicle engine as condition precedent to the initial retail sale, titling (if any), or registration of such motor vehicle, motor vehicle engine, or equipment.

Section 209(b)(1) of the Act requires the Administrator, after an opportunity for public hearing, to waive application of the prohibitions of section 209(a) for any State that has adopted standards (other than crankcase emission standards) for the control of emissions from new motor vehicles or new motor engines prior to March 30, 1966,[2] if the State determines that standards

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[1] CARB's 1999 ZEV amendments were approved by California's Office of Administrative Law (OAL) on October 28, 1999. The 2001 amendments were approved by the OAL on May 24, 2002. The 2003 ZEV amendments were approved on February 25, 2004. The fourth set of amendments were approved by the OAL on June 24, 2002.

[2] California is the only State which meets section 209(b)(1) eligibility criteria for obtaining waivers. See e.g., S. Rep. No. 90-403, at 632 (1967).

will be, in the aggregate, at least as protective of public health and welfare as applicable Federal standards. The Administrator must grant a waiver unless he finds that: (A) the protectiveness determination of the State is arbitrary and capricious; (B) the State does not need the State standards to meet compelling and extraordinary conditions; or (C) the State standards and accompanying enforcement procedures are not consistent with section 202(a) of the Act.

Previous waiver decisions have stated that State standards are inconsistent with section 202(a) if there is inadequate lead time to permit the development of the necessary technology, given the cost of compliance within that time, or if the Federal and State test procedures impose inconsistent certification requirements.[3]

With regard to enforcement procedures accompanying standards, the Administrator must grant the waiver unless he finds that these procedures may cause the California standards, in the aggregate, to be less protective of public health and welfare than the applicable Federal standards promulgated pursuant to section 202(a), or unless the Federal and California certification and test procedures are inconsistent.[4]

Once California has received a waiver for its standards and enforcement procedures for a

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[3] See, e.g., 43 Fed. Reg. 32,182 (July 25, 1978).

[4] See Motor and Equip. Mfr. Assoc., Inc. v. EPA, 627 F.2d 1095, 1111-14 (D.C. Cir. 1979), cert. denied, 446 U.S. 952 (1980); 43 Fed. Reg. 25,729 (Jun. 14, 1978). To be consistent, the California procedures need not be identical to the Federal procedures. California procedures would be inconsistent, however, if manufacturers would be unable to meet both the state and the Federal requirements with the same vehicle. See, e.g., 43 FR 36679-680 (Aug. 18, 1978).

certain group or class of vehicles, it may adopt other conditions precedent to the initial retail sale, titling or registration of these vehicles without the necessity of receiving an additional waiver.

If California acts to amend a previously waived standard or accompanying enforcement procedure, the amendment may be considered within-the-scope of a previously granted waiver provided that it does not undermine California's determination that its standards in the aggregate are as protective of public health and welfare as applicable Federal standards, does not affect its consistency with section 202(a) of the Act, and raises no new issues affecting EPA's previous waiver decisions.[5]

II. BACKGROUND

California's initial ZEV program was included as part of its first low-emission vehicle program known as LEV I. The ZEV component of this program had a ZEV sales requirement that phased-in starting with the 1998 model year with a 10 percent sales requirement by the 2003 model year. EPA issued a waiver of federal preemption for these regulations on January 13, 1993.[6] CARB subsequently amended its ZEV regulations in March, 1996, by eliminating the ZEV sales requirement for the 1998-2002 model years and retaining the 10 percent sales requirement for the 2003 and later model years. EPA issued a within-the-scope determination

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[5] Decision Documents accompanying scope of waiver determinations in 66 FR 7751 (January 25, 2001) at p. 5 and 51 FR 12391 (April 10, 1986) at p. 2, see also, e.g., 46 FR 36742 (July 15, 1981).

[6] 58 FR 4166.

for these amendments on January 25, 2001.[7]

By letter dated September 23, 2004, CARB submitted a request seeking confirmation that the amendments as they pertain to the 2003-2006 model years are within-the-scope of previous waivers and seeking a waiver of Federal preemption as the amendments pertain to the 2007 and subsequent model years (Waiver Request Letter).[8] The first set of amendments, the "1999 ZEV amendments, amended the existing requirement that at least 10 percent of a manufacturer's 2003 and subsequent MY passenger cars and lightest light-duty trucks (the LDT1 category) delivered for sale in California be ZEV vehicles with no emissions. The 1999 ZEV amendments added a new option for meeting the 10 percent requirement, including up to 60 percent of the ZEV obligation of a large-volume manufacturer - and 100 percent of the obligations of an intermediate-volume manufacturer - that could be met with allowances from partial ZEV allowance vehicles (PZEVs). The amendment specified the criteria for receiving a basic PZEV allowance as well as additional allowances for zero-emission vehicle miles traveled and low fuel-cycle emissions allowances. The 2001 ZEV amendments maintained a core ZEV component but reduced the numbers of vehicles required in the near-term, by providing extra credits – based on multipliers – for early model years ZEVs, and broadened the scope of vehicle technologies allowed – including the use of neighborhood electric vehicles (NEVs) with certain multipliers. The third set of amendments to the ZEV regulation, the 2003 ZEV amendments, delayed the start

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[7] 66 FR 7751.

[8] Docket entry OAR-2004-0437-0002 (Waiver Request Letter) and OAR-2004-0437-0003

of the percentage of ZEV requirements from MY 2003 to MY 2005, established an alternative compliance path for large-volume manufacturers that choose to focus on the development of fuel cell ZEVs, eliminated all references to fuel economy and vehicle efficiency from the 2001 ZEV amendments, confirmed the heavier light-duty truck (LDT2 – which is a LEV II light-duty truck with a loaded weight of 3751 pounds to a gross vehicle weight of 8500 pounds, or a LEV I light-duty truck with a loaded vehicle weight of 3751-5750 pounds) category into the calculation for a manufacturers fleet size with a phase-in starting in the 2007 MY which had been adopted by CARB in the 2001 amendments, and adjusted the credit structure for the various vehicles types. Finally, the fourth set of amendments include a requirement that 2006 and later MY battery EVs other than neighborhood electric vehicles (NEVs) be equipped with a conductive charger inlet port and an on-board charger, and a separate minor element from CARB's LEV II regulations which revised the standards for alternative fuel vehicles qualifying as partial ZEV allowance vehicles and for which CARB seeks a within-the-scope confirmation.

On January 18, 2005, a Federal Register notice was published announcing an opportunity for hearing and comment on CARB's request.[9] EPA received a request for a public hearing from the Alliance of Automobile Manufacturers (Alliance) and conducted a hearing on February 17, 2005.[10] The written comment period expired on March 29, 2005. EPA received written

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(Waiver Support Document).

[9] 70 FR 2860 (January 18, 2005).

[10] EPA-HQ-2004-0437-0142

comment from the Alliance and CARB.[11] After the close of the written comment period EPA also received a series of letters from the Alliance and CARB concerning the enforcement of the ZEV regulations for the 2007 MY since EPA had not acted upon CARB's request at the time of the letters.[12] Included in these letters was a new request from CARB to EPA seeking EPA's confirmation that the ZEV amendments as they affect the 2007 MY (with the exception of the LDT2 requirement) are within-the-scope of previous waivers.

III. STANDARD AND BURDEN OF PROOF IN WAIVER PROCEEDINGS

In Motor and Equip. Mfrs Assoc. v. EPA, 627 F.2d 1095 (D.C. Cir. 1979) (MEMA I), the U.S. Court of Appeals stated that the Administrator's role in a section 209 proceeding is to:

> consider all evidence that passes the threshold test of materiality and . . . thereafter assess such material evidence against a standard of proof to determine whether the parties favoring a denial of the waiver have shown that the factual circumstances exist in which Congress intended a denial of the waiver.[13]

The court in MEMA I considered the standards of proof under section 209 for the two findings necessary to grant a waiver for an "accompanying enforcement procedure (as opposed to the standards themselves): (1) the "protectiveness in the aggregate and (2) "consistency with section 202(a) findings. The court instructed that, "the standard of proof must take account of the nature of the risk of error involved in any given decision, and it therefore varies with the finding

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[11] EPA-HQ-2004-0437-0143 (CARB Supplemental Comments) and EPA-HQ-2004-0437-0145 (Alliance Comments).

[12] See EPA-HQ-2004-0437-0167 through 0171.

involved. We need not decide how this standard operates in every waiver decision.[14]

The court upheld the Administrator's position that, to deny a waiver, "there must be 'clear and compelling evidence' to show that proposed procedures undermine the protectiveness of California's standards.[15] The court noted that this standard of proof "also accords with the Congressional intent to provide California with the broadest possible discretion in setting regulations it finds protective of the public health and welfare . . ."[16]

With respect to the consistency finding, the court did not articulate a standard of proof applicable to all proceedings, but found that the opponents of the waiver were unable to meet their burden of proof even if the standard were a mere preponderance of the evidence. Although MEMA I did not explicitly consider the standards of proof under section 209 concerning a waiver request for "standards, there is nothing in the opinion that suggest that the court's analysis would not apply with equal force to such determinations. EPA's past waiver decisions have consistently made clear that:

> [E]ven in the two areas concededly reserved for Federal judgment by this legislation – the existence of 'compelling and extraordinary' conditions and whether the standards are technologically feasible – Congress intended that the standards of EPA review of the State

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[13] MEMA I, 627 F.2d at 1122.
[14] Id.
[15] Id.
[16] Id.

decision to be a narrow one.[17]

Congress intended that EPA's review of California's decision-making be narrow. This has led EPA in the past to reject arguments that are not specified as grounds for denying a waiver:

[17] See, e.g., 40 Fed. Reg. 23,102-103 (May 28, 1975).

> The law makes it clear that the waiver requests cannot be denied unless the specific findings designated in the statute can properly be made. The issue of whether a proposed California requirement is likely to result in only marginal improvement in air quality not commensurate with its cost or is otherwise an arguably unwise exercise of regulatory power is not legally pertinent to my decision under section 209, so long as the California requirement is consistent with section 202(a) and is more stringent than applicable Federal requirements in the sense that it may result in some further reduction in air pollution in California.[18]

Thus, my consideration of all the evidence submitted concerning this waiver decision is circumscribed by its relevance to those questions that I may consider under section 209.

Finally, opponents of the waiver bear the burden of showing whether California's waiver request is inconsistent with section 202(a). As found in MEMA I, this obligation rests firmly with opponents of the waiver in a 209 proceeding, holding that: [t]he language of the statute and it's legislative history indicate that California's regulations, and California's determinations that they must 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. 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

[18] 36 Fed. Reg. 17,458 (Aug. 31, 1971). Note that the "more stringent" standard expressed here, in 1971, was superseded by the 1977 amendments to section 209, which established that the California standards must be, in the aggregate, at least as protective of public health and welfare as applicable Federal standards.

request should be denied.[19]

The Administrator's burden, on the other hand, is to demonstrate that he has made a reasonable and fair evaluation of the information in the record in coming to the waiver request decision. As the court in MEMA I stated, "here, too, if the Administrator ignores evidence demonstrating that the waiver should not be granted, or if he seeks to overcome that evidence with unsupported assumptions of his own, he runs the risk of having his waiver decision set aside as 'arbitrary and capricious.'[20] Therefore, the Administrator's burden is to act "reasonably".[21]

IV. DISCUSSION

A. Within-the-scope versus a Full Waiver

1. 2006 and Earlier Model Years

Within CARB's Waiver Request letter and within their written Supplemental Comments, CARB requested EPA to evaluate their four sets of ZEV amendments, as they relate to 2006 and earlier MYs, as within-the-scope of existing waivers.[22] CARB references its initial low emission vehicle regulations (LEV I) and associated waivers for passenger cars and light duty trucks. The LEV I regulations included the original ZEV requirement that applied beginning in MY 1998, and that required ten percent of the affected fleet to be ZEVs by MY 2003. In 1996, CARB

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[19] MEMA I, 627 F.2d at 1121.
[20] Id. at 1126.
[21] Id. at 1126.
[22] See EPA-HQ-OAR-2004-0132-0002 and 0003, and 0143.

deleted the ZEV requirements for MYs 1998-2002. In 2001, EPA issued a within-the-scope confirmation that CARB's 1996 action was within-the-scope of previous waivers.[23]

CARB also references EPA waivers for its regulations affecting medium-duty vehicles and subsequent amendments to the medium duty vehicle standards,[24] and EPA's waiver of federal preemption in 2003 of California's LEV II program, to establish that the four ZEV amendments, as they affect 2006 and earlier MYs, are within-the-scope of these previous waivers.

Within CARB's initial waiver request letter CARB acknowledges that "there is no doubt that circumstances have changed substantially since adoption of the original ZEV requirements and issuance of the waiver covering those requirements in 1993. However, CARB maintains that EPA's waiver precedent practice and precedent on the within-the-scope mechanism suggests that EPA should evaluate the ZEV amendments and their "effect (at least through 2006) as within-the-scope despite the change in circumstances. In the waiver request letter, CARB points to its own ZEV 2003 rulemaking and anticipates that commenters may object to the within-the-scope characterization or treatment due to claims that either the ZEV technology is not feasible within the lead time allotted, or because various feasibility issues not explored in the adoption of the original ZEV requirements and EPA's waiver decision have now arisen.

CARB states that EPA's precedents on the within-the-scope mechanism make clear that

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[23] See 66 F.R. 7751 (January 25, 2001).

[24] See 58 F.R. 4166 (Jnauary 13, 1993), 63 F.R. 18403 (April 15, 1998), and 59 F.R. 48625

such claims (e.g. technological feasibility issues not explored in original waiver), as noted above, would not justify refusal to treat the ZEV amendments as within-the-scope. "This is because the within-the-scope inquiry is limited to an evaluation of the *effect of ARB's amendments* on ARB's original protectiveness determination and on the consistency of the original regulations with CAA section 202(a)." Rather than EPA performing a new evaluation of the original waiver in light of changed circumstances apart from the amendments, CARB suggests that EPA consider the technological feasibility of the amended standards in the context of a within-the-scope inquiry.

CARB also addresses comments provided by the Alliance at EPA's hearing on CARB's request. The Alliance had testified that the 1999-2003 ZEV amendments cannot be treated as within-the-scope of the previous ZEV waiver because the breadth and significance of the changes raise new issues regarding previous EPA waiver decisions and are inconsistent with section 202(a). CARB addresses the "new issues" argument of the Alliance by stating that the Alliance primarily relies upon its technological feasibility argument to support its contention that there are new issues, when in fact, CARB argues, "technological feasibility" is fully considered when EPA evaluates whether opponents of the within-the-scope request have met their burden of showing the amended regulations are not consistent with section 202(a). CARB states that the "new issue" that is relevant, and that requires a new waiver, is the element of the ZEV amendments requiring manufacturers of heavier light-duty trucks (LDT2s) subject to the ZEV requirements on a phased-in basis starting in the 2007 model year. Thus CARB points to its Waiver support

Document submitted with its Waiver Request Letter which indicates that "where compliance with waived standards is more feasible than compliance with the original standards, the amendments necessarily meet the lead time element of the consistency test for a within-the-scope determination.

CARB, in its Waiver Support Document, details the many respects in which the amendments enhanced the feasibility of the ZEV requirements for MYs 2005-2006 (including eliminating the percentage ZEV requirements for MYs 2003-2004) and later detailed the overall feasibility of the PZEV, ATPZEV and ZEV standards. For the 2003-3004 model years CARB notes that its 2003 ZEV amendments remove all percentage sales requirements for MYs 2003 and 2004, thus providing additional lead time before ZEV sales requirements are mandated in 2005. As the "Assistant Administrator concluded that the elimination of the MY 1998-2002 ZEV percentage sales requirement did not adversely affect the technological feasibility finding in the original ZEV waiver" the model year 2003-2004 ZEV requirements are identical and the conclusion on consistency should be identical as well. CARB states that there is enhanced flexibility for both the 2005 and 2006 model year requirements. While a nominal ten percent ZEV sales requirement remains, there are various options by which an individual ZEV will receive substantially more credit than under the pre-1999 ZEV requirements. CARB also notes that the original ZEV requirements (before the amendments which are now in front of EPA by

this decision) were premised on manufacturers being required to produce "full-function EVs." [25] Under the amended ZEV regulations, under the base path a manufacturer can comply with the 2005 MY ZEV requirements by producing only one-twelfth (8.3 percent) of the number of full-function EVs needed to comply with the pre-1999 ZEV requirements since each Type II full function EV generates 12 ZEV credits (for 2006-2008 the Type II full-function EV still generate 10 credits – still an order of magnitude greater than under the pre-1999 ZEV regulation). With the relaxation of the amendments with no ZEV sales requirements in MY 2003-2004 also came the opportunity for manufacturers to accumulate additional credits, often with substantial multipliers. CARB also notes that the ZEV amendments created the opportunity for manufacturers to earn ZEV credits from the production of neighborhood electric vehicles (NEVs) with a phase-in multiplier of 4.0 (this multiplier is reduced starting in 2004) compared to no multiplier under the pre-1999 ZEV regulation. CARB estimates that approximately 84,000 ZEV credits were produced by the production of NEVs in California for 2001-2002 MYs. CARB also notes that 60 percent of a large volume manufacturer's percentage ZEV sales requirement may not only be satisfied by PZEVS[26] but that such PZEVS are entitled to a multiplier of 4.0 for MY2000-2003 and 2.00 and 1.33 for MY 2004 and 2005 respectively. Thus, for the foregoing reasons CARB maintains that the ZEV regulations (after the amendments) are much easier to comply with than the pre-1999 ZEV regulations.

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[25] Waiver Support Document at p. 23.

[26] PZEVs are defined in CARB's regulations as those vehicles meeting the SULEV exhaust

As noted previously, the Alliance maintains that the 1999-2003 ZEV amendments reflect changes that are significant and include every modification since the previous waiver (or within-the-scope). The Alliance points to CARB's own acknowledgement that "There is no doubt that circumstances have changed substantially since adoption of the original ZEV requirements and issuance of the waiver covering those requirements in 1993.... Those changes were the driving force behind the substantial changes ARB has made to the ZEV requirements in the 1999 to 2003 ZEV amendments." The Alliance states that these changes include recognition that battery powered ZEV technology was unlikely to provide the necessary technical and cost advances to meet the regulations. These changes affect both the costs and expected emission benefits - even CARB acknowledges the many changes in costs. The changes that have occurred in terms of cost could not have been considered at the time of the Board's action in 1996, and thus new issues have necessarily arisen because of the major developments. Because the basic technology that CARB and industry anticipate to be used to meet the requirements has changed dramatically it means new issues since CARB could not have considered it before. In addition, the Alliance notes that under CARB's view of the waiver process, once a waiver has been granted, any subsequent developments that affect the technical feasibility, cost, or lead time would never require a new waiver so long as the amended regulations were deemed to be a "relaxation" compared to the original waived regulations. The Alliance maintains that under this approach there would be "no forum for determining if the amended application [regulation] is cost

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levels, zero evaporative emissions, 150,000 miles emissions warranty, etc.

effective, technically feasible, or compliant with the requirements of section 202(a) of the Clean Air Act." The Alliance also notes that the fact that CARB has repeatedly changed and modified the ZEV regulations is a tacit admission that the original requirements were not feasible and therefore inconsistent with the requirements of 202(a) of the Clean Air Act. The Alliance believes the revised regulations should be evaluated based on the information available now.

EPA believes it is important to distinguish between the threshold issue of whether CARB's amendments should be subjected to either the within-the-scope criteria or the full waiver, and separately determining whether the same amendments actually meet the applicable criteria for actually confirming the within-the-scope request or granting a full waiver of federal preemption. As noted in the introduction, if CARB amends previously waived regulations the amendments may be considered within-the-scope of a previously granted waiver provided that it does not undermine California's determination that its standards in the aggregate are as protective of public health and welfare as applicable Federal standards, does not affect its consistency with section 202(a) of the Act, and raises no new issues affecting EPA's previous waiver decisions.[27] Therefore, despite the Alliance contention that there is no forum or opportunity to contest whether the amendments are technologically feasible, etc, there is an opportunity (as there was in this case) for parties to present evidence (based on information currently available) on whether CARB's amendments undermine its previous protectiveness

[27] Decision Documents accompanying scope of waiver determinations in 66 F.R. 7751 (January 25, 2001) at p. 5 and 51 F.R. 12391 (April 10, 1986) at p. 2, see also, e.g., 46 F.R. 36742 (July

determination and whether the amendments are not consistent with section 202(a). Although EPA agrees with the Alliance that there have been significant changes to CARB's ZEV program and that such changes should be evaluated, this conclusion does not require that CARB's amendments merit a full waiver consideration. EPA also agrees with the Alliance that changes to the ZEV program have been made that CARB's Board had not considered at the time of its initial ZEV program adoption and we also agree that those subsequent changes have not yet been considered by EPA. However, in determining whether amendments can be viewed as within-the-scope of previous waivers, EPA does not evaluate how "significant" the changes to the regulations are, or whether cost or emission benefit projections have changed, but rather it looks at whether CARB has either made minor technical amendments to previously waived regulations or whether the amendments can reasonably be viewed as modifying the regulations in order to provide manufacturers with additional compliance flexibilities or otherwise reduce the overall stringency of the requirements. For example, CARB's ZEV program includes credit provisions for neighborhood-electric vehicles (NEVs). Under the original ZEV program NEVs received a credit of one. Under the 2001 and 2003 amendments NEVs receive a "multiplier" that starts at 4.0 in the 2001 MY and is reduced over time to 0.15 in 2006 and later MYs. According to the Alliance, because CARB subsequently instituted a cap on the number of NEVs that can be used for compliance beginning with the 2006 MY, the stringency and costs of the ZEV requirements has been significantly increased. The Alliance maintains that the cost of using the NEV

15, 1981).

provisions has increased due to the reduction in the multiplier (will have to produce more NEVs to earn the same amount of credits) and that the market may not be able to absorb the potential increase in the number of NEVs. EPA believes it appropriate to examine the overall stringency and flexibility of the new ZEV requirements in comparison to the previously waived requirements. Although CARB has in some respects modified the NEV credit program it has also increased the number of NEV credits that may be generated in the near term and thereby increasing the flexibilities for manufacturers. In addition, CARB has provided several other credits provisions for PZEVs and ATPZEVs which provide additional flexibilities beyond the NEV credit provisions. The purpose of the within-the-scope process is not to isolate some instances where CARB has modified its program to better balance a credit scheme, but rather to examine whether the current ZEV credit program provides more flexibilities than the previous program which has a waiver of federal preemption. As noted below, if CARB had added additional pollutants or a new type of vehicle for the first time, then such requirements might be viewed as requiring a new waiver of federal preemption, even if the remainder of the new provisions could be treated as within-the-scope of a previous program. In this instance CARB has merely modified a broad credit program designed to afford manufacturers additional flexibilities.

EPA believes it is important to the viability of the waiver program to review such amendments as within-the-scope of previous amendments. Many of these amendments are made close to the time of implementation of the underlying regulations, when CARB, likely after

discussions with the manufacturers, has determined that the underlying regulations need minor revisions to work more appropriately. Were EPA to determine that these minor revisions and flexibilities required a full waiver, then CARB would be extremely reluctant to make such changes, particularly when they are close to or after the applicable date of the regulations. This is especially true given the Alliance's claim that such regulations could not be enforced until the waiver is granted. This would greatly undermine the effectiveness of California's program and prevent minor revisions designed to ease the burden on manufacturers. As such revisions, particularly compliance flexibilities, reduce the burden of the regulations compared to the original waived regulations, they can be considered as being within-the-scope of EPA's consideration of the waiver. Moreover, as discussed above, because EPA does review the protectiveness finding and consistency with section 202(A) in the context of the within-the-scope review, outside parties can have effective review of those issues.

On the other hand, if CARB were to amend its regulations by adding additional requirements such as broadening the definition of a vehicle manufacturer's fleet so that the ten percent sales requirement result in a higher number of vehicles or different types of vehicles being subject to the ZEV regulations then such amendments would be geared toward increasing the underlying stringency of the program and thus would require full waiver consideration. Similarly, if an amendment added a new pollutant or other emission standard were attached to the ten percent group of vehicles then such amendment would be considered by EPA under the full waiver criteria. But that is not what has happened for the 2003-2006 MYs.

For the 2003 through 2006 MYs, CARB has relaxed the ZEV regulation. First, CARB is delaying the ten percent sales requirement until the 2005 MY. As noted above, when CARB previously amended and delayed the implementation of the sales requirement until 2003 EPA subsequently confirmed that that amendment was within-the-scope of the initial waiver of CARB's ZEV regulations. CARB has also created a variety of provisions under the existing base compliance path in order for manufacturers to more easily meet the sales requirement, including the opportunity to meet significant portions of the sales requirement through the production of PZEVs and ATPZEVs and the use of other credits to meet the pure EV portion of the path. CARB has also created an alternative compliance path for those manufacturers that do not choose the base path. The alternative path also allows a significant use of PZEVs and ATPZEVs.

Therefore, EPA finds that there is no evidence in the record to suggest that CARB's ZEV amendments, as they affect the 2003 through 2006 MYs, should be considered under the full waiver criteria. EPA's evaluation of whether such amendments fulfill the requirements of a final confirmation of within-the-scope is performed below.[28]

2. 2007 Model Year

As noted above, in CARB's initial Waiver Request letter it sought confirmation from

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[28] With CARB's addition of the LDT2 category to manufacturers fleet sales count in 2007, and the ramp up of the ZEV sales requirement to 11 percent in 2009, EPA views such changes as not within-the-scope of CARB's previously waived ZEV program as the amendments have increased the stringency of the program.

EPA that its ZEV amendments – as they affect 2006 and earlier model years, are within-the-scope of existing waivers. Because there is a five-year phase-in of the percentage ZEV requirements for vehicles in the light-duty trucks (LDT2) class[29] beginning in the 2007 model year (when 17 percent of the LDT2s produced and delivered for sale in California by a manufacturer are subject to the ZEV requirements with subsequent increases of 17 percent through model year 2011) and that such vehicle category was not subject to the ZEV requirements that EPA previously took action on, CARB decided to seek a new waiver of preemption for the ZEV requirements as they apply to 2007 and subsequent model years.

On January 23, 2006 the Alliance submitted a letter to CARB stating "Because EPA has granted no such waiver [for CARB's ZEV amendments], the Alliance and its member believe that, at a minimum, the ZEV requirements for the 2007 MY cannot be enforced." A letter from CARB to EPA was submitted on February 21, 2006 stating that CARB expected EPA to have already completed action on its waiver request before the commencement of the 2007 MY. As a result of the above-mentioned letter from the Alliance, CARB requested that EPA confirm CARB's determination that the 2007 MY vehicles are within-the-scope of previous waivers of determination (the same position CARB had taken with regard to 2006 and earlier model years), except that CARB did not seek such a determination for the amendments as they affect the LDT2 category. CARB noted that in almost all other aspects of the 2007 MY program – with the

[29] A "LDT2" is a LEV II light-duty truck with a load vehicle weight of 3751 pounds to a gross vehicle weight of 8500 pounds, or a LEV I light-duty truck with a load vehicle weight of 0-3750

exception of the LDT2 phase-in requirement – there is no difference between the 2007 and 2006 model year programs. Several months later, on May 2, 2006, the Alliance sent a letter to EPA noting that nearly a year after the close of the comment period based on CARB's initial Waiver Request letter, CARB had sought to revise its original request. The Alliance notes that CARB's new request differs materially from the original request and that it would "effect a major change in the regulation actually approved by ARB, and intended by ARB to be forwarded to EPA for review." The Alliance states that CARB must "chose between (1) withdrawing its revision request (or having EPA deny it), or (2) submitting a completely revised preemption waiver application after amending its regulations in accord with state law." The Alliance contends that CARB's staff lacks the authority under state law to alter CARB rules. In addition, the public's right to comment under the Clean Air Act was nullified by CARB's mid-stream change and the Alliance suggests that the waiver application go through another round of notice and comment. The Alliance also seeks assurance that if EPA were to grant CARB's revision to its September 2004 waiver request (the revision seeking a within-the-scope determination for the 2007 MY) and that CARB be permitted to enforce its regulations before approval by EPA, then manufacturers should be permitted the ability to rely on the credit provisions of the regulations. On May 17, 2006 CARB submitted a letter to EPA in response to the Alliance letter of May 2, 2006. CARB notes that it has been EPA's "longstanding practice to issue a confirmation that amendments are within-the-scope of previous waivers without first noticing or conducting a

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pounds. See Title 13 California Code of Regulations section1962(j).

hearing.[30] With respect to the severability issues (see below), CARB notes "it frankly would be hard to imagine an instance in which a provision is more clearly severable that the LDT2 phase-in provision as it applies to the 2007 model-year vehicles." The ZEV regulation has a severability clause in section 1962(b) and CARB also points to the fact that for the 2005 and 2006 model years it administered requirements substantially similar to the 2007 model-year requirements without the LDT2 phase-in thus demonstrating the ability of the requirements to independently function. Lastly, in a letter dated June 2, 2006 from the Alliance to EPA, the Alliance maintains that the revised request is defective as the public must be afforded new notice and comment rights and comment on whether a particular request is or is not within-the-scope of a previous waiver. The Alliance also maintains that the CARB Board should be consulted before CARB is allowed to submit a revised request and also states that the revised request violates various state law requirements. The Alliance also states additional reasons for denying the revised request, including various policy reasons.

EPA agrees with CARB that its 2007 MY ZEV regulations generally do not differ from the 2005-2006 MY regulations (with the exception noted already by CARB for the LDT2 requirement). While EPA believes it appropriate to review the 2007 MY ZEV regulations under the full waiver criteria, as initially requested, EPA also believes it is appropriate to review the provisions applicable to passenger cars and LDT1s as revisions that are within-the-scope of previous waivers.

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[30] EPA-HQ-OAR-2004-0437-0170 at page 3.

In most instances, when CARB submits a within-the-scope request, EPA issues confirmation of the within-the-scope finding without first inviting public comment. In such instances the public is still afforded the opportunity to object to the finding and to request an opportunity for a public comment process prior to the within-the-scope determination becoming final.

While EPA did request comment regarding California's within-the-scope request for the 2003-2006 MYs, EPA has not done so for CARB's later request regarding the 2007 MY provisions relating to passenger cars and LDT1s. However, as these provisions are very similar to the provisions for the 2005-2006 model years, EPA does not believe it is necessary to invite public comment regarding the within-the-scope request prior to deciding CARB's request. EPA has already received comment regarding the within-the-scope request for the 2005-2006 MYs and has additionally received comment from the Alliance (the only commenter opposing the 2005-2006 MY request) regarding CARB's within-the-scope request for MY 2007. Therefore, EPA does not believe that a further official request for comment is needed. The public will still be afforded an opportunity to object to the within-the-scope finding with respect to the 2007 MY. For purposes of today's decision, EPA has evaluated CARB's 2007 MY ZEV regulation under the full waiver criteria, but we have also evaluated the provisions, as they apply to passenger cars and LDT1s, under the within-the-scope criteria.

We note that to the extent the 2007 MY regulations are not treated as within-the-scope of previously waived regulations, the earlier regulations that are covered by the pre-existing waiver

would, as far as the requirements of section 209 are concerned, remain enforceable. Given that the revisions at issue in this decision document provide additional pathways to compliance than did the pre-existing requirements, it is questionable whether manufacturers would be in a position to meet the earlier requirements at this time. We recognize that a waiver issued during the implementation of a current model year may raise issues of compliance by manufacturers with regulations for that model year. Given that certification for most of the 2007 MY has already taken place, that manufacturers have likely sought executive officer approval of their 2007 vehicles according to CARB's 2007 MY ZEV regulations and such approvals have been issued, that manufacturers may be relying upon ZEV-type credits for various vehicles produced in the 2007 MY (as noted by the Alliance above). Such credits should be applicable for these engines under this decision.

B. Consideration of the Amendments Under the Within-the-scope of Previous Criteria for 2006 and Earlier Model Years (and the 2007 Model Year for Passenger Cars and LDT1s) and Consideration of the Amendments Under the Full Waiver Criteria for 2007 and Later Model Years

1. Public Health and Welfare

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

existing program may be considered within-the-scope of a previously granted waiver provided that the amendments do not undermine California's determination that its standards in the aggregate are as protective of public health and welfare as applicable Federal standards. Thus, in the within-the-scope context CARB may rely on the "protectiveness determination" that the CARB Board made at the time of the initial regulations (the regulations which subsequently received a waiver of federal preemption from EPA) and then CARB must only demonstrate why the protectiveness determination has not been undermined by CARB's amendments or any other intervening events such as the adoption of EPA regulations since the initial waiver of federal preemption.

As noted above, EPA has determined that CARB's ZEV program as applied to 2006 and earlier model years, and the 2007 MY for passenger cars and LDT1s, should be subject to the within-the-scope criteria. Thus CARB need only demonstrate that its prior protectiveness determination is not undermined by the new ZEV amendments for these model years. However, as the Alliance suggests that the full waiver criteria should apply to the 2007 and earlier model years, EPA therefore will also review the full waiver protectiveness criteria to those years. As explained below, EPA finds that CARB has met both the within-the-scope and full waiver protectiveness criteria for 2006 and earlier model years and 2007 for passenger cars and LDT1s, and CARB has met the full waiver protectiveness criteria for 2007 and later model years.

CARB not only argued that its protectiveness determination has not been undermined but in addition CARB's Board made a new protectiveness determination at the time of its 2003 ZEV

amendments stating that "the Board hereby determines that the regulations approved herein will not cause California motor vehicle emission standards, in the aggregate, to be less protective of public health and welfare than applicable federal standards.[31] In CARB's Request Letter it recounts that in CARB's 1996 ZEV amendments (which eliminated the ZEV sales requirements for 1998-2002), EPA subsequently determined in a within-the-scope determination that the 1996 ZEV amendments did not undermine the protectiveness of CARB's program since the fleet average NMOG requirement in the waived California LEV (LEV I) regulations impose more stringent standards than the comparable federal standards.[32] CARB also states that when EPA granted the LEV II waiver in 2001 it did so without considering any added emission benefits from CARB's ZEV program. By logical extension, CARB argues that the 2003 ZEV amendments do not undermine CARB's previous protectiveness determination since there have been no changes to applicable federal standards since the LEV II waiver and its comparison to EPA's Tier 2 program, which contains no ZEV requirement. In CARB's request letter it also anticipates that some parties may assert that the ZEV regulations would depress sales of new vehicles to the extent that emission increases would incur from the greater number of higher-emitting older vehicles on the road due to reduced "fleet turnover" and that this would more than offset the emission decreases attributable to the ZEV program. CARB states that in both its ZEV rulemakings it presented substantial analyses disputing these assertions and concluded that the

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[31] EPA-HQ-OAR-2004-0437-0020 (Resolution 03-04).

[32] Waiver Request Letter at page 21, citing 66 FR 7751 (January 25, 2001).

ZEV program would not increase emissions.[33] CARB also states, for purposes of within-the-scope analysis, that the 2003 version of the ZEV program should be compared not to "no ZEV program" but rather to what program EPA has already waived – the ZEV program before the 1999 amendments, in other words the ZEV program with a pure 10 percent ZEV sales requirement. It states that a 10 percent ZEV sales requirements would necessarily create a worse emission impact, from a fleet turnover perspective, than the 2003 ZEV program which allows cars costing less.

The Alliance states that as part of CARB's 2001 and 2003 ZEV rulemaking that industry submitted comments "demonstrating that the ZEV regulation reflecting the proposed amendments would ultimately increase rather than decrease emissions for the reasons stated above – reduced fleet turnover due to depressed sales of new cleaner vehicles. The Alliance submitted to EPA a report by the National Economic Research Associates and Sierra Research that was submitted to CARB during its rulemakings, and they also included an update to the report made in 2003. The Alliance notes that CARB's own rulemaking record (the Final Statement of Reasons, at p.58) acknowledges, under the scenarios considered, that in the South Coast Air Basin emissions would increase until 2020. The Alliance contends that CARB only focuses on the magnitude of the fleet turnover effect rather than its existence. The Alliance also

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[33] Waiver Request letter at p. 22 and footnote 26. CARB cites "ARB Staff Review of Report Entitled "Impacts of Alternative Sales Mandates on California Motor Vehicle Emissions: A Comprehensive Study" (October 31, 2001); Final Statement of Reasons for 2001 ZEV Amendments, pp. 80-108); Initial Statement of Reasons for 2003 ZEV Amendments, pp. 46-49;

states that it is not sufficient for CARB to argue that fleet turnover effect should be considered in the context of comparing the 2003 ZEV amendments to the pre-existing 10 percent ZEV sales requirement – rather the revised regulations (the 2003 ZEV amendments) meet the substantive criteria for a waiver.[34] EPA assumes that the Alliance meant that the 2003 ZEV amendments and CARB's motor vehicle program should be compared to the applicable federal motor vehicle standards as they exist today.

First, EPA notes that the Alliance has not argued that CARB's LEV II program is less stringent, in the aggregate, than the federal Tier 2 program. Even if the Alliance arguments regarding fleet turnover were accurate, they have presented no data comparing the resulting emissions from the two overall programs. In addition, the Alliance has provided no data to suggest when the effects of fleet turnover may or may not diminish, and whether a delay in fleet turnover will necessarily lead to a long-term deficit of emission reductions compared to the Tier 2 program, given that the fleet will eventually turn over and will need to meet the new requirements. CARB also responds to the NERA/Sierra Research Report by stating that major considerations by CARB in its 2001 review found that the cost increases assumed by NERA/Sierra Research were overstated, manufacturers will not necessarily be able to pass along all increased costs, small price increases can be addressed by a variety of manufacturing marketing practices and will not necessarily reduce new car sales. CARB found that its more

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Final Statement of Reasons for 2003 ZEV Amendments, pp. 57-62..

[34] Hearing transcript at p. 86.

modest price increase projections will have an insignificant effect on vehicle sales. CARB found that even with a slight price increase it would still result in an emission decrease.[35] CARB also found that the estimated savings resulting from the 2003 ZEV amendments (that will reduce the number of pure ZEVs that will be needed in 2005-2011), will be in the $375 million to almost $3.7 billion range. CARB provides additional arguments as to why fleet turnover effect will be minimal including manufacturer use of banked ZEV credits (and thus lesser need of selling new ZEV program vehicles) and a number of other factors.

As noted above, the court in MEMA I upheld the Administrator's position that, to deny a waiver, "there must be 'clear and compelling evidence' to show that proposed procedures undermine the protectiveness of California's standards.[36] The court noted that this standard of proof "also accords with the Congressional intent to provide California with the broadest possible discretion in setting regulations it finds protective of the public health and welfare.[37]

In this instance EPA finds that the Alliance has not meet its burden of proof that the ZEV amendments undermine CARB's previous protectiveness determination or that CARB was arbitrary and capricious in its protectiveness determination. CARB's rulemaking record and other statements submitted to EPA's record demonstrate that it carefully deliberated this issue and reached a reasonable finding based on an evaluation of available data.

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[35] See CARB's 2001 Final Statement of Reasons at EPA-HQ-OAR-2004-0437-0075, including the long term reductions in regulated pollutants.

[36] MEMA I, 627 F.2d at 1122.

[37] Id.

Therefore, based on the record before me, I cannot find that CARB's ZEV regulations, as noted, would cause the California motor vehicle emission standards, in the aggregate, to be less protective of public health and welfare than applicable Federal standards.

2. Compelling and Extraordinary Conditions

Under section 209(b)(1)(B) of the Act, I cannot grant a waiver if I find that California does not need such State standards to meet compelling and extraordinary conditions. Under this criterion, EPA's inquiry is restricted to whether California needs its own motor vehicle pollution program to meet compelling and extraordinary conditions, and not whether any given standards are necessary to meet such conditions.[38] As to the need for the particular standards that are the subject of this decision, California is entrusted with the power to select "the best means to protect the health of its citizens and the public welfare.[39]

As noted above, EPA has determined that CARB's ZEV program as applied to 2006 and earlier model years (and 2007 MY for passenger cars and LDT1s) should be subject to the within-the-scope criteria. Thus CARB need not demonstrate that it needs "State standards to meet compelling and extraordinary conditions" for these model years. However, because the Alliance suggests that the full waiver criteria should apply to the 2006 and earlier model years, EPA will review the full waiver compelling need criteria for such years. As explained below, EPA finds that CARB has met the compelling need criteria for all relevant years.

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

[39] H.R. Rep. No. 95-294, 95th Cong., 1st Sess., 301-02 (1977) (citing with approval in MEMA I,

CARB has repeatedly demonstrated the existence of compelling and extraordinary conditions in California. In its Waiver Request letter, CARB stated,

> California, the South Coast and San Joaquin Air basins in particular, continues to experience some of the worst air quality in the nation. The unique geographical and climatic conditions, and the tremendous growth in the vehicle population and use which moved Congress to authorize California to establish separate vehicle standards in 1967, still exist today.[40]

EPA has not received any adverse comments to suggest that California no longer suffers from serious and unique air pollution problems. Based on this, CARB has demonstrated California's continuing existence of a compelling and extraordinary condition, justifying the state's need for its own motor vehicle pollution control program. Because EPA has not received adverse public comment challenging the need for CARB's own motor vehicle pollution control program, I cannot deny the waiver based on a lack of compelling and extraordinary conditions.

Rather than challenging CARB's need for its own motor vehicle pollution control program, the Alliance continues its argument regarding fleet turnover and its supposition of a net increase in emissions. It contends that "A regulation that results in net increases in emissions cannot logically be needed 'to meet compelling and extraordinary conditions." A finding by California that such a regulation (the ZEV regulations) is necessary, despite the increase in emissions, is arbitrary and capricious. As discussed further below, the Alliance also contends that CARB's ATPZEV provisions do not set a standard applicable to emissions consistent with

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627 F.2d at 1110).

202(a) (they do not set a "quantitative level of emissions") and thus the ATPZEV provisions are not necessary to meet compelling and extraordinary conditions.[41]

EPA has long held that the question under section 209(b)(1)(B) is not whether every element in CARB's regulatory program is needed to address compelling and extraordinary conditions, but whether conditions in California continue to justify separate emission standards for new motor vehicles.[42] EPA has previously recognized the intent of Congress in creating a limited review of California's determinations that California needs its own separate standards was to ensure that the federal government not second-guess the wisdom of state policy.[43] Therefore, CARB's decision to include its ATPZEV provisions in the ZEV program is a policy choice made by CARB and not relevant as to whether CARB has adequately demonstrated whether it has compelling and extraordinary conditions.

3. Consistency with Section 202(a)

a) The Standard of Review for Consistency

Under section 209(b) (1)(C)), EPA cannot grant California its waiver request if the Agency finds that California standards and accompanying enforcement procedures are not consistent with section 202(a) of the Act. Previous waivers of federal preemption have stated that California's standards are not consistent with section 202(a) if there is inadequate lead time

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[40] Waiver Request Letter, p.27.
[41] Alliance Comments, p. 10 and 18.
[42] See 49 FR 1887, 18889-18890 (May 3, 1984).
[43] 14 FR 23102,23103 (May 28, 1975).

to permit the development of technology necessary to meet those requirements, given appropriate consideration to the cost of compliance within that time. California's accompanying enforcement procedures would also be inconsistent with section 202(a) if the Federal and California test procedures were inconsistent.[44]

The scope of EPA's review of whether California's action is consistent with section 202(a) is narrow. EPA has previously found that the determination is limited to whether those opposed to the waiver have met their burden of establishing that California's standards are technologically infeasible, or that California's test procedures impose requirements inconsistent with the Federal test procedure.[45]

b) Are ATPZEVs an emission standard?

The ZEV regulations require that a specified minimum percentage of vehicles delivered into California must meet California's definition of an ATPZEV. The Alliance raises the issue that the ATPZEV category does not define a unique standard relating to the control of emissions. An ATPZEV is essentially a vehicle already meeting the PZEV requirements, including: exhaust emission levels (SULEV), the "zero" evaporative emission standards, certified OBD II standards to 150,000 miles, and a 15 year/150,000 mile emissions performance and defect warranties. The Alliance states that the additional "advance ZEV componentry" optional credit generating requirements for ATPZEVs (e.g. high pressure gaseous fuel or storage systems,

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[44] Discussion of section 202(a) is summarized in Section I above (" Introduction).
[45] See MEMA I, 627 F.2d at 1126.

hybrid-electric vehicle electric drive systems – regenerative braking, idle start/stop features, etc) has nothing to do with improving air quality, as they relate only to characteristics of the vehicle's powertrain and not to its emission capabilities. The Alliance maintains that such requirements have no basis under section 202(a) of the Clean Air Act. Section 202(a) authorizes EPA to establish "standards applicable to the emission of any air pollutant …[that] cause(s) or contribute[s] to air pollution…" Thus, the Alliance states the EPA is not authorized to issue regulations dictating or even encouraging manufacturers to utilize a particular type of technology in their vehicles. The Alliance also perhaps makes a separate argument when it states "Vehicles that can be certified to the same emission standards should stand on an equal footing under the regulations, regardless of the technology used to achieve those standards." The Alliance also acknowledges that the ATPZEV regulations are designed to drive the development of powertrain technology in a particular direction.

The Alliance maintains that section 209(a) preempts the ATPZEVs requirements since it preempts "any standard relating to the control of emissions from new motor vehicles." As noted by the Alliance, the Supreme Court has interpreted "standard" in this context as meaning any regulatory "criteria" that "relate to the emission characteristics of a vehicle or engine."[46] Such regulatory criteria can include provisions that "the vehicle or engine must not emit more than a certain amount of a given pollutant, must be equipped with a certain type of pollution-control

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[46] Engine Mfrs. Ass'n v. South Coast Air Quality Mgmt. Dist., 1214 S.Ct. 1756, 1761 (2004). (South Coast).

device, or must have some other design feature related to the control of emission."[47] The Alliance asserts that the design specifications of ATPZEVS are "plainly related to the control of emissions and are condition precedents to sale" – and thus are preempted by section 209(a). They do not provide any analysis as to why this is the case.

Once the ATPZEV provisions are preempted by section 209(a), the Alliance then concludes that such design specification standards are not the type to be waived by section 209(b), since they are not the type of standard permitted by the text, structure and history of the Clean Air Act and by several judicial cases. They also do not set "quantitative levels of emissions." (*MEMA I*). The Alliance states that design standards are authorized as carefully calibrated exceptions, and that under section 202(a) EPA is required to set "standards applicable to emissions" and that EPA may only regulate the design of a vehicle such as in 202(a)(5) and 202(a)(6). The Alliance claims tt is inconsistent for CARB to regulate in a way that EPA cannot.

In examining the text of the CAA, the Alliance states that the final phrase of section 302(k) – "and any design, equipment, work practice or operation standard promulgated under this Act" was added by the 1990 amendments and was a reconciliation with the Supreme Court ruling in Adamo Wrecking Co. v. United States, 434 US 275 (1978) (*Adamo Wrecking)*. In *Adamo Wrecking* the Court held that an "emission standard" is a "quantitative 'level' to be attained by use of techniques, controls and technology. Since that ruling, the Alliance maintains, Congress has specifically authorized instances when EPA is authorized to adopt

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[47] Alliance Comments at p.17.

"design, equipment, work practice or operational standards." Therefore, the Alliance states that the revised definition of section 302(k) is to take into account specific instances where design standards are otherwise authorized within the CAA.

CARB provides several responses to the Alliance claims that the ATPZEV provisions have no basis in the CAA because they reflect standards based on technology rather than standards applicable to the emission of any air pollutant. With reference to their Initial Statement of Reasons for the 2003 amendments at pages 11-12,[48] CARB explains that the function of the ATPZEV provisions, "The incentives provided to ATPZEVs under the regulation are primarily intended to accelerate the development and deployment of ZEV technologies in the marketplace.... Promoting the widespread adoption of these technologies in PZEVs will lead to performance improvements and cost reductions that are necessary for ZEVs to become mass-market vehicle in the future." CARB points to recently accelerated progress in key technology areas, including greater battery calendar life, cycle life capacity and specific power as manufacturers expand the use of batteries in some hybrid electric vehicles (HEVs); higher pressure gaseous fuel storage for CNG vehicles; and more efficient and less costly drive system motors and power electronics. CARB noted that the ATPZEV incentives are specifically designed to further the development and use of technologies and components that contribute to the commercialization of pure ZEV vehicles, including battery EVs and fuel cell vehicles. Therefore, CARB notes that hybrid electric vehicles and pure ZEV technologies such as fuel

cells share many of the same electric drive components, including traction motors and motor controllers; hybridization of fuel cell vehicles can improve performance and reduce cost and there is clear trend towards hybridization of fuel cell vehicles for these reasons; and increased volume production of electric drivetrain components will reduce the cost of critical components common to both hybrids and pure ZEVs. CARB maintains that this clearly demonstrates that the ATPZEV provisions are emissions-related.

EPA notes that in past waiver decisions EPA has stated that State standards are inconsistent with section 202(a) if there is inadequate lead time to permit the development of the necessary technology, given the cost of compliance within that time, or if the Federal and State test procedures impose inconsistent certification requirements.[49] When EPA solicited public comment on CARB's current ZEV amendments we did not formally seek comment as to how the "consistency with 202(a)" should be interpreted and whether EPA should examine additional consistency criteria other than what it has previously examined.

In this instance the Alliance has argued that the consistency criteria also includes a broad requirement that CARB only be permitted a waiver for those types of standards which are permissible for EPA to promulgate under section 202(a). The Alliance does not make an argument that the ATPZEV requirements in particular are inconsistent with section 202(a), under the traditional technological feasibility criteria, although they do make such an argument with

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[48] EPA-HQ-OAR-2004-0437-0008.

regard to the PZEV requirements. The discussion regarding the feasibility of the PZEV requirements is set forth further below in the technological feasibility discussion.

Although EPA is not making a finding that such a requirement is included in the "consistency with 202(a)" criteria we nevertheless find it appropriate to address the Alliance's concerns.

Regarding whether the ATPZEV requirements are initially preempted under section 209(a) of the Act, there is no dispute from the commenters. As noted above, the Alliance maintains that the ATPZEV requirements are preempted by section 209(a) since its language stating that "any standard relating to the control of emissions from new motor vehicles" plainly applies to the ATPZEV design requirements. The Alliance referenced the recent Supreme Court interpretation of "standard" in this context to mean any regulatory "criteria" that "relate to the emission characteristics of a vehicle or engine."[50] Such regulatory criteria includes provisions that the vehicle or engine must have some design feature related to the control of emission.[51] CARB does not dispute the view that the ATPZEV requirements are preempted under section 209(a), and CARB notes that the ATPZEVs are "clearly...emission related." EPA agrees that the design provisions are related to the control of emission and are therefore preempted by section 209(a).

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[49] See, e.g., 43 Fed. Reg. 32,182 (July 25, 1978).
[50] Engine Mfrs. Ass'n v. South Coast Air Quality Mgmt. Dist., 1214 S.Ct. 1756, 1761 (2004).
[51] Alliance Comments at p. 17.

The Alliance proceeds to state that although the design requirements related to the control of emissions under section 209(a), that such requirements are not consistent with the language in section 202(a)(1) – "...standards applicable to the emission of any air pollutant from any class or classes of new motor vehicles...." Before turning to the two cases that the Alliance suggests will aid in the interpretation of the 202(a)(1) language (MEMA I and Adamo Wrecking), we believe it important to return to the South Coast decision wherein the definition of "standard" is supplied. The Court states:

"The criteria referred to in section 209(a) relate to the emission characteristics of a vehicle or engine. To meet them the vehicle or engine must not emit more than a certain amount of a given pollutant, must be equipped with a certain type of pollution-control device, or must have some other design feature related to the control of emissions. This interpretation is consistent with the use of "standard" throughout Title II of the CAA (which governs emissions from moving sources) to denote requirement such as numerical emission levels with which vehicles or engines must comply, *e.g.*, 42 U.S.C. section 7521(a)(1)(B)(ii), or emission-control technology with which they must be equipped, *e.g.*, section 7521(a)(6). *South Coast* at p. 1761.

If "standard" includes the type of design requirements that are preempted by section 209(a) than "standard" under section 202(a) ought to encompass the same requirements. The rules of statutory construction suggest that the same terms used within the Act should be read similarly. The Alliance fails to justify how the same requirement can be "related to the control of

emissions" but not "applicable to ..emission[s].[52] Indeed, if there is any difference, the language in section 209(a) seems to refer to a smaller universe than the language in section 202(a).

The Alliance furthers its argument that "standard" under section 202(a) does not include design standards by claiming that where Congress intended to authorize EPA to issue design requirements under section 202 it explicitly did so. The Alliance points to what it believes is the "plain text of the provisions authorizing EPA to adopt standards" to support its contention that emission standards are generally quantitative levels of emissions, except where the Act expressly authorizes design, equipment, work practice or operations. EPA notes that nothing on the face of section 202(a)(1) suggests that EPA cannot set design requirements.

In light of the Supreme Court ruling in *South Coast* noted above, we believe the phrase "standards applicable to the emission..." may include design requirements. An examination of the remaining provisions of section 202 reveals that design requirements were not only specified for some elements such as onboard vapor recovery (see 202(a)(5)) but the Congress generally envisioned the possibility of design requirements. Nothing in the entirety of section 202 states that EPA may only set design requirements where Congress has specifically authorized such requirements.

The Alliance points to the history of section 302(k), wherein the last portion of the sentence (added in the 1990 amendments to the CAA) – "... and any design, equipment, work

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[52] We note that section 202(a) refers to pollutants, but the Alliance does not claim that HC, CO and NOx, which are relevant to the ATPZEV requirement, are not pollutants.

practice or operational standard promulgated under this Act." – the Alliance suggests was added by Congress in order to reconcile the definition with the Supreme Court holding in *Adamo Wrecking*. The Court held in that case that procedures for demolition of buildings were not "emission standards" because it was not a quantitative "level." *Adamo Wrecking,* 434 U.S. at 286. The Alliance contends that since *Adamo Wrecking* Congress has specified precise instances when EPA is authorized to adopt "design, equipment, work practice or operational standards." Thus, the Alliance maintains that EPA is only authorized to set quantitative levels of emissions under section 202 unless Congress has specifically authorized design requirements. The Alliance also points to episodes in the Congressional history of section 202(a), including a statement made during a House floor debate in 1970 regarding a concern that EPA not go in and tell manufacturers how to make an automobile engine and a statement by Senator Nelson which states that "[T]his bill does not dictate technology....It issues a public challenge to the automobile industry to devote their vaunted technological and manufacturing resources to the task of meeting this goal." 1970 Leg. Hist. at 379 (Sept. 22, 1970). As a result, the Alliance notes, EPA set about to set performance standards and the D.C. in 1979 concluded, "Congress intended the word 'standards' in section 209 to mean quantitative levels of emissions." *Motor & Equip. Mfrs. Assn. v EPA ("MEMA)*, 627 F.2d 1095, 1112 (D.C. Cir. 1979).

First, regarding A*damo Wrecking* and Congress's response, EPA believes that the legislative history and judicial history show the opposite of the Alliance's view. Section 302(k) defines the term "emission standard" for purposes of the entire Act. If Congress had intended to

only allow the use of design requirements in specific provisions of the Clean Air Act, it is surprising to suggest that they would change the definition of emission standard as it applies to the entire Act. Congress could merely have adjusted those provisions where it specifically wished design requirements to be applicable.

Regarding the *MEMA I* case, EPA notes the irony of the Alliance citation of *MEMA I,* wherein the court chose to some extent define the term standard for purposes of section 209, for its support that Congress must have meant that the definition also applied to section 202.[53] EPA certainly agrees that term should be interpreted similarly in both sections; thus, as noted above, if the ATPZEV design requirements are preempted as standards under 209(a) then they also meet the definition of standard under 202(a). The issue in *MEMA I* was whether in-use maintenance instruction regulations set by CARB for motor vehicles were properly considered "accompanying enforcement procedures" by EPA during its waiver consideration, as opposed to treating the regulations as standards. The court held that it need not resolve the definition of standard as it is used in every section of the CAA, but did resolve that in-use maintenance instructions are not standards for purposes of 209(a). The court noted that classifying in-use maintenance regulations as "standards" "would make it virtually impossible for California to enact such regulations, and this in turn would frustrate Congress' intent to provide California with the broadest possible discretion in selecting the best means for protecting the public health

[53] Alliance Comments at p. 17

and welfare."[54] The *MEMA* court did not have the question of design requirements in front of it, and the language regarding "quantitative levels of emissions" was meant to distinguish standards from enforcement procedures, and thus is not directly on point.[55] However, the Supreme Court in *South Coast* has plainly spoken to this issue, and therefore EPA will abide by its holding that standards include elements of design.[56]

The Alliance also states even if the design standard were permissible under section 202(a), such features are unrelated to their emission characteristics and this is contrary to section 202(a)(1). EPA finds that the Alliance has not met its burden in demonstrating that the design standards are not "applicable to the emission of any air pollutant." As noted above, as a threshold matter the ATPZEVs do have an emission component in that they need to meet SULEV exhaust levels, zero emission evaporative requirements, etc.... In addition, CARB has identified a variety of long term emission benefits to be derived from the design standards it has set. EPA, as a general matter, does not second guess the policy decisions made by CARB and how best for California to achieve its air quality goals. Although the Alliance asserts that the

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[54] *MEMA I*, at footnote 35 on p. 1112.

[55] In reviewing CARB's request for a waiver for California's on-board diagnostics (OBD) requirements, however, EPA determined (with the agreement of the vehicle manufacturers) that the OBD requirements were standards, and not enforcement procedures, because, among other things, "they create direct requirements on the manner in which manufacturers build their vehicles." OBDII Waiver Decision Document at p. 22 (1996).

[56] Regarding the floor statement of Representative Rogers and Senator Nelson, the individual views of members of Congress do not override the language of the statute. But in any case, while EPA agrees that emission standards have usually been expressed in terms of performance, rather than design, that does not prevent design standards from being regulated where

advance ZEV componentry has nothing to do with improving air quality, CARB has clearly demonstrated that through the advancement of such componentry cleaner vehicles such as HEVs and FCVs will become more marketable which will in turn lead to emission reductions.

Therefore, based on the record before me, I cannot deny the waiver request based on the ATPZEV requirements being inconsistent with section 202(a). In addition, for purposes of EPA's within-the-scope confirmation, I cannot find that the ATPZEV requirements affect the ZEV regulation consistency with section 202(a).

c) Technological Feasibility and Cost of Compliance

Congress has stated that the consistency requirement of section 202(a) relates to technological feasibility.[57] Section 202(a)(2) states, in part, that any regulation promulgated under its authority "shall take effect after such period as the Administrator finds necessary to permit the development and application of the relevant technology, considering the cost of compliance within that time. Section 202(a) thus requires the Administrator to first determine whether adequate technology already exists, or if it does not, whether there is adequate time to develop and apply the technology before the standards go into effect. The latter scenario also requires the Administrator to decide whether the costs of developing and applying the technology within that time are feasible. Previous EPA waivers are in accord with this position.[58]

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appropriate.

[57] H.R. Rep. No. 95-294, 95th Cong., 1st Sess. 301 (1977).

[58] See, e.g., 49 Fed. Reg. 1,887, 1,895 (May 3, 1984; 43 Fed. Reg. 32,182, 32,183 (Jul. 25, 1978); 41 Fed. Reg. 44,209, 44,213 (Oct. 7, 1976).

For example, a previous EPA waiver decision considered California's standards and enforcement procedures to be consistent with section 202(a) if adequate technology existed and if adequate lead time existed to implement the technology.[59] The Administrator in that decision said he would consider costs only if the technology did not yet exist. Subsequently, Congress stated that, overall, EPA construction of the waiver provision has been consistent with Congressional intent.[60]

It is important to note that, as previous waiver decisions have held, the cost of compliance is relevant only when the technology needed for compliance with California's standards does not exist.[61] This is because section 202(a) is concerned with cost of compliance during the period "necessary to permit the development and application of the requisite technology.

In MEMA I, the court addressed the "cost of compliance issue at some length in reviewing a waiver decision. According to the court:

> Section 202's "cost of compliance concern, juxtaposed as it is with the requirement that the Administrator provide the requisite lead time to allow technological developments, refers to the economic costs of motor vehicle emission standards and accompanying enforcement procedures. See S. Rep. No. 192, 89th Cong., 1st Sess. 5-8 (1965); H.R. Rep. No. 728 90th Cong., 1st Sess. 23 (1967), reprinted in U.S. Code Cong. & Admin. News 1967, p. 1938. It relates to the timing of a particular emission control regulation rather than to its social implications. Congress wanted to avoid undue economic disruption in the automotive manufacturing industry and also sought to avoid doubling or tripling the cost of

[59] See 41 Fed. Reg. 44,209 (Oct. 7, 1976).
[60] Id.
[61] See, e.g., 41 Fed. Reg. 42,209 (Oct. 7, 1976) and 55 Fed. Reg. 43,028 (Oct. 25, 1990).

> motor vehicles to purchasers. It, therefore, requires that the emission control regulations be technologically feasible within economic parameters. Therein lies the intent of the "cost of compliance requirement.[62]

Prior waiver decisions are fully consistent with MEMA I, which indicates that the cost of compliance must reach a very high level before the EPA can deny a waiver. Therefore, past decisions indicate that the costs must be excessive to find that California's standards are inconsistent with section 202(a).[63] It should be noted that, as with other issues related to the determination of consistency with section 202(a), the burden of proof regarding the cost issue falls upon the opponents of the grant of the waiver.

EPA received comment from the Alliance suggesting that two components of the ZEV regulations are not feasible, PZEVs and FCVs.

The Alliance states that when CARB adopted the PZEV standards in 1998 (1999 amendments) it did not demonstrate the feasibility of gasoline-powered vehicles being able to meet these standards (e.g., zero evaporative emissions, SULEV exhaust standard at 150,000 miles, a 15 year/150,000 mile emission warranty, etc). Although manufacturers have subsequently certified vehicles with engines 2.5 liters or smaller, the Alliance states that larger vehicles "face a much more difficult task of complying with the zero evaporative emissions

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[62] 627 F.2d at 1118 (emphasis in original). See also id. at 1114 n. 40 ("[T]he 'cost of compliance' criterion relates to the timing of standards and procedures.).

[63] See, e.g., 47 Fed. Reg. 7,306, 7,309 (Feb. 18, 1982), 43 Fed. Reg. 25,735 (Jun. 14, 1978), and 46 Fed. Reg. 26,371, 26,373 (May 12, 1981).

standard and the SULEV exhaust standard."[64] The Alliance contends that larger vehicles have more fuel on-board with larger tanks and associated issues that may result in more evaporative emissions and "breathing losses." The Alliance maintains that this is a real issue since "larger conventional gasoline vehicles will be required to meet the PZEV standards for most manufacturers to comply." As LDT2s are included in a manufacturers total fleet population count which is used to determine the ZEV sales percentage required, the requirement to build larger vehicles to the PZEV requirement as the LDT2 requirement is phased-in starting in the 2007 MY.

EPA first notes that the Alliance seems to base most of its technical argument merely on the fact that the larger vehicles will have a tougher time meeting the applicable standards because they are in fact larger. However, the Alliance presents no technical data or engineering explanation as to why technology, or modified technology, currently used on smaller vehicles that meet the PZEV requirement can not be applied to larger vehicles. While EPA recognizes that the surface area of fuel systems is likely larger on larger vehicles (and thus more difficult to control evaporative emissions) the Alliance presents no data or results that refute the technological feasibility of this requirement. The ability of larger vehicles to meet the SULEV exhaust standard, with higher exhaust flow rates, is subject to the same analysis. Again, the Alliance alleges that it is more difficult but not that it is infeasible or that any particular amount of lead time or considerations of cost should be taken into consideration. As CARB notes, the

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[64] Alliance Comments at p. 11

technological feasibility of the standards for PZEVs (and ATPZEVs) has already been demonstrated in commercially available vehicles. CARB identified a large variety of vehicles from many vehicle manufacturers, including 12 different engine families comprising 33 models produced by 11 different manufacturers for MY 2004.[65] CARB identifies various combinations of multiple catalysts, several oxygen sensors, exhaust gas recirculation and an air pump as technologies that will help achieve the PZEV emission levels. In addition, some manufacturers have already begun selling multi-bank (V6 configuration) SULEV engines at 3, 3.3 and 3.5 liter displacement. Some of these larger V6 SULEVS have also been certified to zero evaporative emission levels (Toyota Highlander HEV and Honda Accord HEV).[66] This would seem to indicate that technology is available for other manufacturers to employ and the Alliance has presented no evidence that this is not the case. In addition, manufacturers of LDT2s do not need to certify all of the larger LDT2s to the PZEV standard immediately. It is phased in between MYs 2007 and 2012, with 100% of the LDT2s, including smaller LDT2s, counted in the phase-

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[65] CARB's Waiver Support Document at p. 28-29

[66] See:
http://www.arb.ca.gov/msprog/onroad/cert/pcldtmdv/2007/toyota_ldt_a0140576_3d3_s2.pdf
http://www.arb.ca.gov/msprog/onroad/cert/pcldtmdv/2006/dcag_pc_a0030300_3d5_pz.pdf
http://www.arb.ca.gov/msprog/onroad/cert/pcldtmdv/2007/bmw_pc_a0080206_3d0_pz.pdf
http://www.arb.ca.gov/msprog/onroad/cert/pcldtmdv/2007/generalmotors_pc_a0061382_3d5-3d8_pz.pdf
http://www.arb.ca.gov/msprog/onroad/cert/pcldtmdv/2007/mitsubishi_ldt_a0860286_3d0_pz.pdf
http://www.arb.ca.gov/msprog/onroad/cert/pcldtmdv/2007/honda_pc_a0230434_3d0_pz.pdf

in. As the Court in *MEMA I* stated, "The statute does not say 'the Administrator shall grant a waiver only if' he makes the negative of the findings. That he must deny a waiver if certain facts exist does not mean that he must independently proceed to make the opposite of those findings before he grants the waiver regardless of the state of the record... The language of the statute and its legislative history indicate that California's regulations, and California's determination that they comply with the statute, when present to the Administrator are presumed to satisfy the waiver requirements and that the burden of proving otherwise is on whoever attacks them."[67] Therefore, as EPA finds that the Alliance has not met its burden of demonstrating that the PZEV requirements are inconsistent with section 202(a), I cannot deny the waiver on this basis.

The Alliance also notes that CARB has only has a Manufacturers Advisory Correspondence (MAC) effective through the 2006 model year, and that without an extension to the MAC there is no way for manufacturers to comply with the zero fuel system evaporative emission standard as written. EPA understands that CARB has issued a subsequent MAC (MAC 2005-03), which outlines an alternative procedure that can be used to certify 2008 and later model year vehicles certifying to the zero evaporative emission standard. As mentioned in MAC 2005-03 the alternative test procedure in MAC 2001-03 is acceptable for earlier model year vehicles. Therefore, EPA founds no basis for lack of PZEV feasibility based on any test procedures issues.

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[67] Waiver Support document at 18, citing EPA waiver decision at 40 FR 23102, 23104 (May 28, 1975) and decision document accompanying waiver decision at 58 FR 4166 (January 12, 1993).

EPA also received comment from the Alliance concerning the feasibility and cost of fuel cell vehicles, especially in the later years. As CARB notes, the widespread introduction of fuel cell vehicles (FCVs) will be possible only when the technology can be produced and sold at a price comparable to that of conventional vehicles. CARB acknowledges that considerable time is still needed for engineering development and for achieving necessary cost reductions. At the time of adoption of the 2003 ZEV amendments the regulation reflects CARB's expectation that initial commercialization of FCVs will not occur before 2012 and thus they adopted two "stages of development" prior to a third stage in model year 2012. CARB designed each stage to foster the placement of vehicles in order to push toward viable commercialization as quickly as possible.[68] CARB also notes its commitment to appoint an Independent Expert Review Panel to report to CARB's Board on the status of ZEV technology development to assure that the requirements of the MYs 2009-2011 will be evaluated and any mid-course changes made if necessary. EPA notes that this independent expert panel (Panel) conducted a ZEV technology symposium on September 25-27, 2006 in Sacramento, CA. As stated by Michael Walsh, the Chairman of the Panel, the objectives of the Panel are to provide an assessment of the technical and cost status and prospects of the main technologies currently under development for ZEVs and near ZEVs, including: battery electric vehicles (BEV), fuel cell electric vehicles (FCEVs), HEVs, plug-in HEVs, and hydrogen combustion engine vehicles (HCICEs). EPA understands that the Panel will produce a final report in early 2007 and that the CARB Board may make

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[68] Waiver Request Letter at p. 32

subsequent decisions that affect the ZEV programs and various phase-in requirements, including the FCV phase-ins.[69]

CARB states the EPA should only take costs into consideration as they affect the timing of emission standards as opposed to the expense associated with the technology to meet the standards themselves. Citing *MEMA I*, CARB states that the only relevance of costs in a section 209(b) waiver is in the context of technological feasibility, stating that standards, "shall take effect after such period as the Administrator finds necessary to permit the development and application of the requisite technology, giving appropriate consideration to the cost of compliance within such period." Thus CARB maintains that EPA has recognized that the only relevance of costs is there impact on timing, suggesting that if sufficient time is available to produce compliant vehicles than cost may only be relevant if it can be significantly reduce with extended lead time.[70] The Alliance takes a general position that the fuel cell vehicle (FCV) requirements are technically infeasible. The Alliance acknowledges that most manufacturers have elected to pursue the alternative path because they are pursuing the development of FCV technology for the future. The Alliance asserts that the FCV requirements are inconsistent with section 202(a) "because it is technically infeasible to produce and sell the required number of FCVs, especially as volumes increase in the future." The Alliance provides several reasons for its assertion that FCVs are technically infeasible, including: "the extremely high production

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[69] See EPA-HQ-OAR-2004-0437-0172.

[70] Waiver Support document at p. 28

costs based on each manufacturer's required production volume," "The immaturity of the technology makes it difficult to predict the capability of the fuel cell vehicles to meet regulatory and customer requirements" and "infrastructure obstacles"

The Alliance states that current FCV incremental costs are estimated around $1,000,000 per vehicle, and during the implementation time frame of the regulation it cites CARB's own estimate of the incremental costs at $120,000 to $300,000 per FCV. The Alliance cites the Department of Energy estimates that in order to perform a commercial fleet demonstration of 5000 vehicles, costs for fuel cell technology must decline to $45,000/kW. The Alliance also cites a 2004 National Academy of Engineers report on the hydrogen economy and represents that it "optimistically estimates that it will take at least a decade before the fuel cell system technology costs will drop to $100/kW for a plausible commercial option, and current technology development does not indicate the ability to reach this milestone." It cites the same report that "in spite of substantial R &D spending by the DOE and industry, costs are still a factor of 10 to 20 times too expensive." The Alliance believes the cost problem is made worse by states opting into California's program under section 177. After the 2011 model year CARB's regulations no longer allow manufacturers to count FCVs placed in section 177 states towards meeting CARB's quotas.

In terms of the ability of FCVs to meet regulatory and customer requirements, the Alliance raises the concern of hydrogen storage and the limited capacity of FCVs which is insufficient for consumers who want to travel more than 200 miles per tank. The Alliance notes

that advance storage technologies will be needed for automotive applications which will only increase costs further. The Alliance further notes concerns raised in a Department of Energy report that finds that the ability of FCVs to meet durability requirements (such as tolerance to rapid cycling and on-road vibration, reliable for 4000 to 5000 hours or so of noncontinuous use in hot and cold weather, and able to respond rapidly to transient demands for power) is far from certain when the "[c]urrent fuel cell lifetimes are much too short and fuel cell costs are at least an order of magnitude too high." The Alliance separately notes that the consumer demand for vehicles with higher costs, unproven newer technologies, reduced range, and limited fuel availability will be minimal. They raise specific concern with the later phase-ins of the FCV program, "In order to meet the 2015-2017 requirement of selling 50,000 FCVs, the vehicles must appeal to and meet the needs of many cautious, risk-averse buyers."

The Alliance also raises several infrastructure obstacle concerns. They cite the Fuel Cell Partnership report which states that establishing the hydrogen fuel infrastructure "entail(s) heavy costs, delayed returns on those investments, and major practical implementation challenges, particularly as the commercialization process broadens beyond initial introduction in California or elsewhere." The Alliance notes that hydrogen fuel costs are estimated at three or four times the cost of gasoline, when using natural gas as the base source. They also cite an article wherein it is noted that "A National Academy of Sciences committee estimated that the transition to a 'hydrogen economy' will probably take decades, because tough challenges remain These include how to produce, store and distribute hydrogen in sufficient quantities and at a reasonable

cost without releasing greenhouse gases."

Lastly, the Alliance points out that the CARB Board has acknowledged that its staff cannot forecast the volume of vehicles appropriate for future ZEV development and has established a panel of experts that will asses the technology advances for feasibility of the regulation. Thus, the Alliance maintains, CARB recognizes that it may not be feasible for automotive manufacturers to meet these regulatory requirements in the future. The Alliance concludes that "When there is a widespread industry issue with the technical feasibility of a new standard, EPA has in the past denied the issuance of a waiver until such time as the technology was more widely available." [71] In such instances, the Alliance states that when EPA has found that "the technology to meet the standards, although available in one sense, simply cannot be applied to production vehicles...." it has denied the issuance of a waiver until such time as the technology was more widely available."

CARB's last written comments (made essentially at the same time as the Alliance submission and without knowledge on the Alliance's full comments) state that "The Alliance makes conclusory, unsupported assertions regarding the technological infeasibility of other requirements (fuel cell vehicles), mentioning the need for manufacturers to produce fuel cell vehicles in the later years. Pages 28-32 of the Waiver Support Document addressed technological feasibility, updating the analyses in the Initial Statement of Reasons and the Final Statement of Reasons prepared for the 2003 ZEV rulemaking. No further response is needed at

this time."[72]

At the outset EPA notes the significant expenditures made by industry and its partners in developing fuel cell vehicles. EPA also notes that the Panel that was convened under the CARB Board's direction is an appropriate step toward monitoring the progress toward implementing FCV and other ZEV technologies. Given the significant hurdles that this technology still faces in terms of commercialization and costs (and the Alliance's primary concern with the later years of CARB's FCV requirements), EPA does not have enough current information to make a waiver determination regarding the commercial phases of the FCV implementation and therefore is not making a determination (and is not waiving preemption of) the ZEV amendments as they affect 2012 and subsequent MYs. EPA agrees with the Alliance that a waiver is inappropriate for the 2012 and subsequent model years until more is understood about whether the necessary technology will be available for commercial application of the FCV requirement beginning in the MY 2012.

With regard to the initial two phase-in periods for FCVs (2005 through 2008 – at most, 250 FCVs for the industry over the entire four year period; 2009 through 2011 – at most, 2,500 FCVs for the industry over the entire three year period) EPA finds that the primary focus of the ZEV amendments during this time period is to research and develop technology and introduce the vehicles in demonstration fleets as part of a pre-commercialization phase. EPA recognizes

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[71] Alliance Comments, p. 23.

[72] CARB Supplemental Comments at p. 11.

that even during these pre-production periods that the lead time and costs associated with meeting the manufacturer obligations may prove unreasonable. However, the Alliance has submitted no evidence to suggest that this is the case for California's FCV program or that such costs cannot be managed in a manner similar to techniques commonly employed during higher cost research and development periods.

EPA notes that the number of FCVs required over the first two phases of the program is a very small percentage of the total number of vehicles normally produced for sale in California. The numbers are similar to numbers for demonstration fleets that are often used by manufacturers to introduce new technologies and are unlikely to require significant sales of these vehicles in the general vehicle market. In addition, during these initial phases, FCVs produced for states that have adopted California's requirements under section 177 of the Act can be counted toward the FCV requirement in California. While costs for these vehicles, individually, are very large compared to typical vehicles, they are not extraordinary for demonstration vehicles, and would be expected to be covered by manufacturers as part of typical research and development activities that may be part of other on-going programs. They are also not extraordinary when compared to costs and revenues over the entire California fleet. EPA also notes that the FCV program represents one option for meeting California's ZEV requirements. Manufacturers may (and at least in the early years, some are expected to) meet standards using other options.

EPA plans to monitor closely both the Panel final report and any subsequent actions

taken by the CARB Board in order to determine whether it is necessary to revisit the feasibility of the 2009-2011 phase-in period. EPA finds that the Alliance has raised a series of significant concerns, including unproven newer technology, reduced range, limited fuel availability, etc. EPA believes these concerns are particularly pertinent to the commercialization phase-ins commencing in the 2012 MY. However, CARB has adequately demonstrated that manufacturers are now placing prototype vehicles into research and development applications that can be used to meet the initial requirements of the FCV program. EPA finds that the Alliance has not meet the burden of demonstrating that the FCV requirement during the 2005-2011 MY time period are technologically infeasible, giving due consideration to cost. Therefore, I cannot deny the waiver on this basis. Based on the record before me I cannot deny California's waiver based on technological infeasibility.

d) Consistency of Certification Procedures

California's standards and accompanying enforcement procedures would also be inconsistent with section 202(a) if the California test procedures were to impose certification requirements inconsistent with the Federal certification requirements. Such inconsistency means that manufacturers would be unable to meet both the California and the Federal test requirements with the same test vehicle.[73]

CARB states in its Waiver Request letter that the federal Tier 2 regulations require manufacturers to measure emissions from ZEVs in accordance with the California test

procedures.[74] CARB also states that there are no inconsistencies in the test procedures for PZEVs and ATPZEVs that would justify denial of a waiver.[75]

Because EPA received no comments suggesting that CARB's ZEV program requirements pose a test procedure consistency problem with federal test procedures, and based on the record before me, I cannot make a finding that CARB's test procedures are inconsistent with section 202(a). I cannot deny CARB's request based on this criteria.

4. New Issues

As noted above in section IV-A-1 (the discussion on whether the ZEV amendments as they affect the 2006 and earlier MYs – and 2007 MY with the exception of the LDT2 requirement - are within-the-scope of previous waivers of federal preemption), included in the threshold decision as to whether to consider CARB's amendments as within-the-scope is whether the amendments have raised new issues affecting the previous waiver decisions. As previously noted, EPA examines any new and current information when reviewing whether CARB's amendments undermine CARB's previous protectiveness determination or affect the ZEV program's consistency with section 202(a). Such new information pertaining to those two issues is not considered to be "new issues" with regard to the threshold question of whether new issues exist in order to subject the amendments to a new full waiver of federal preemption. If the amendments had increased the relatively stringency of the standards upon the manufacturers, or

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[73] See, e.g., 43 Fed. Reg. 32, 182 (Jul. 25, 1978).

[74] Waiver Request Letter at p. 24 – citing 40 CFR section 86.1811-04(n).

if the amendments had regulated or subjected new types of vehicles to be included in the ZEV program, or added additional pollutants to the program then likely new issues would have been created. However, in this instance no party has presented evidence or met their burden in establishing that new issues exist as a result of the ZEV amendments. Therefore, I cannot deny CARB's request for a within-the-scope determination based on this criteria.

V. DECISION

The Administrator has delegated the authority to grant California a waiver of Federal preemption under section 209(b) of the Act to the Assistant Administrator for Air and Radiation. Having given due consideration to all material submitted for this record, and other relevant information, I find that I cannot make the determinations required for a denial of a waiver under section 209(b) of the Act, and therefore, I hereby waive application of section 209(a) of the Act to the state of California with respect to its ZEV amendments, as set forth above, with respect to the 2007 through 2011 model years. In addition, I confirm CARB's requests for a within-the-scope finding with respect to the 2007 and earlier model years (with the exception of the LDT2 requirement in MY 2007). Lastly, in the alternative, I also find that the ZEV amendments as they affect the 2007 and earlier model years fulfill the requirements for a full waiver of federal preemption.

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[75] Waiver Request Letter at p. 32.

Dated: December 21, 2006.

William Wehrum
Acting Assistant Administrator
for Air and Radiation