Waiver of Federal Preemption

California Low-Emission Vehicle Standards

U.S. Environmental Protection Agency

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California State Motor Vehicle Pollution Control Standards; Waiver of Federal Preemption, Decision of the Administrator (Low-Emission Vehicle Standards Waiver)

I. INTRODUCTION

By this decision, issued under section 209 (b) of the Clean Air Act, as amended (the Act), 42 U.S.C. §7543(b), I am granting California its request for a waiver of Federal preemption to enforce amendments to its motor vehicle pollution control program. Those amendments [1] establish new standards, certification procedures, and enforcement procedures for

[1] The amendments are set out in Title 13 of the California Code of Regulations and the documents incorporated by reference within; § 1900; § 1904; § 1956.8 and the standards and test procedures incorporated therein; § 1960.1 and the incorporated documents entitled "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles" and "California Non-Methane Organic Gas Test Procedures"; § 1960.1.5; §§ 1960.5 and 2061 and the incorporated "Guidelines for Certification of 1983 and Subsequent Model-Year Federally Certified Light-Duty Motor Vehicles For Sale in California"; § 1965 and the incorporated "California Motor Vehicle Control Label Specifications"; §§ 2111, 2112, 2125, and 2139; and the document entitled "California Test Procedures for Evaluating the Emission Impacts of Substitute Fuels or New Clean Fuels" adopted and incorporated by reference in the "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Card, Light-Duty Trucks and Medium-Duty Vehicles."

1994 and later model year passenger cars and light duty trucks.[2]

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.

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[2] The instant waiver request (LEV waiver request) also included new standards for certain low-emission and ultra-low emission medium duty vehicles (MDVs). There is a pending waiver request from CARB for regulatory amendments pertaining to MDVs (Docket A-91-55), which was submitted to EPA before the LEV waiver request. Because my action on the LEV waiver request will precede my action on Docket A-91-55, I will defer action on the portions of the LEV waiver that add new standards and requirements for low-emission and ultra-emission MDVs until action is taken on the MDV waiver request. These portions pertaining to MDVs are: new subsection 1960.1(h)(2) of Title 13, California Code of Regulations (CCR); new subsection 3. j. (pages 25-29 of the "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles," incorporated by reeference in 13 CCR section 1960.1(k); the test procedures pertaining to MDVs in "California Exhaust Emission Standards and Test Procedures for 1985 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles," incorporated by reference in 13 CCR section 1956.8(b); and the test procedures in "California Emission Standards and Test Procedures for 1985 and Subsequent Model Heavy-Duty Otto-Cycle Engines and Vehicles," incorporated by reference in 13 CCR section 1956.8(d). Therefore, these MDV sections should not be considered as included in the CARB regulations referenced in Note 1 above.

Section 209(b)(1) of the Act requires the Administrator, after notice and opportunity for public hearing, to waive application of the prohibitions of section 209(a) for any State which has adopted standards (other than crankcase emission standards) for the control of emissions from new motor vehicles or new motor vehicle engines prior to March 30, 1966, if the State determines that the State standards will be, in the aggregate, at least as protective of public health and welfare as applicable Federal standards. The waiver shall not be granted, however, if the Administrator finds that: (A) the determination of the State that the state standards are, in the aggregate, at least as protective of public health and welfare as applicable Federal standards, 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. [3]

As previous decisions granting waivers of Federal preemption have explained, 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 period or if the

[3] California is the only state which meets the section 209(b)(1) eligibility requirement for receiving waivers. See, e.g., S. Rep. No. 403, 90th Cong., 1st Sess. 932 (1967).

Federal and State test procedures impose inconsistent certification requirements.[4]

With regard to enforcement procedures accompanying standards, the Administrator must grant the requested 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.[5]

After California has received a waiver of Federal preemption for its standards and enforcement procedures for a class of vehicles, it may adopt other conditions precedent to initial retail sale, titling or registration of the subject class of vehicles without the necessity of receiving an additional waiver of Federal preemption.[6]

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

[5] See, e.g., Motor and Equipment Manufacturers Association Inc. v. EPA, 627 F.2d 1095, 1111-14, (D.C. Cir. 1979), cert. denied, 446 U.S. 952 (1980) (hereinafter cited as "MEMA I"); 43 Fed. Reg. 25,729 (June 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 Fed Reg. 32,182 (July 25, 1978).

[6] See 43 Fed.Reg. 36,679, 36,680 (August 18, 1978).

By letter dated October 4, 1991, the California Air Resources Board (CARB) requested that the Administrator grant a waiver of Federal preemption for the amendments to its motor vehicle pollution control program that establish four new categories of low-emission vehicles (LEVs) based on new, more stringent emission standards. On January 9, 1992, the Environmental Protection Agency (EPA) published a Notice of Opportunity for Public Hearing and request for comments regarding this waiver request.[7] EPA received two requests for a hearing,[8] and the

[7] 57 Fed. Reg. 909 (January 9, 1992).

[8] EPA received two letters requesting a hearing. The first letter was signed by officials of the Motor Vehicle Manufacturers Association of the United States, Inc. (MVMA), and the Association of International Automobiles Manufacturers, Inc. (AIAM) (Docket entry II-D-01); the second letter was from the American Petroleum Institute (Docket entry II-D-02).

The MVMA member companies as listed in their request letter were: Chrysler Corporation, Ford Motor Company, General Motors Corporation, Honda of America, Mfg., Inc., Navistar International Transportation Corporation, PACCAR, Inc., and Volvo North America Corporation. The AIAM member companies as listed in their request letter were: American Honda Motor Co., Inc., American Isuzu Motors Inc., American Suzuki Motor Corporation, BMW of North America, Inc., Daihatsu America, Inc., Fiat Auto U.S.A., Inc., Hyundai Motor America, Mazda Motor of America, Inc., Mitsubishi Motor Sales of America, Inc., Nissan North America, Inc., Porsche Cars North America, Inc., Rolls-Royce Motor Cars Inc., Rover Group USA, Inc., Subaru of America, Inc., Toyota Motor Sales, U.S.A., Inc., Volkswagen of America, Inc., Volvo North America Corporation, and Yugo America, Inc.

hearing was held on February 19, 1992.[9] The public comment period closed on March 24, 1992.

Subsequent to the close of the public comment period, EPA continued to receive copies of correspondence exchanged between CARB and counsel representing MVMA and AIAM and the General Motors Corporation (GM) pertaining to continuing discussions among these parties on CARB's pending waiver request.[10] To ensure all other parties interested in this proceeding remained fully informed of the new information and developments which could have a bearing on the Agency's review of the waiver request, all documents received from CARB and the industry parties were placed in the public record unless they contained information submitted under a claim of business confidentiality (also referred to as Confidential Business Information or CBI), as the Agency's regulations

[9] The transcript of this hearing is filed in the Docket of this proceeding (Docket entry IV-F-01).

[10] MVMA and AIAM jointly submitted comments to the Public Docket of this proceeding on March 27, 1992 (Docket entry IV-G-14) and on June 23, 1992 (Docket entry IV-G-37 and IV-G-38).

define this term.[11]

In addition, EPA received a filing dated June 21, 1992, from MVMA/AIAM, this time directed to EPA, which contained information the industry believed to be "highly relevant to CARB's waiver application."[12]

[11] EPA's regulations, at 40 C.F.R § 2.201(f) state:

> *Reasons of business confidentiality* include the concept of trade secrets and other related legal concepts which give (or may give) a business the right to preserve the confidentiality of business information and to limit its use or disclosure by others in order that the business may obtain or retain business advantages it derives from its rights in the information. The definition is meant to encompass any concept which authorizes a Federal agency to withhold business information under 5 U.S.C. § 552(b)(4), as well as any concept which requires EPA to withhold information from the public under 18 U.S.C. § 1905 or any of the various statutes cited in § 2.301 through § 2.309.

In an effort to ensure as much information as possible was placed in the public docket of this proceeding, EPA requested that all persons who chose to submit CBI as part of their comments also submit for the public docket a non-confidential version of the CBI which summarizes the key data or information. In most cases, parties who submitted CBI also submitted redacted, rather than summarized, versions of the CBI for the public docket

[12] This characterization was made preceding the actual filing of the information, in a letter from counsel for MVMA/AIAM to EPA. See letter from Stuart A.C. Drake, Kirkland & Ellis, to Charles N. Freed, Director Manufacturers Operations Division, dated March 20, 1992, Docket entry IV-G-02.

These comments included specific descriptions of automobile technology needed to produce vehicles that would comply with the LEV standards, projections of the cost of compliance, and other product planning information.[13] This filing included material claimed to be CBI provided by GM, and a public version that excluded the CBI material. Because the industry asserted that this information was important to my decision in this matter, I thought it was equally important to receive comments on this filing from interested outside parties.[14] For this reason, EPA published a Federal Register notice to announce an "Opportunity for Written Comments on Additional Information Submitted to the Public Docket of the Low-Emission Vehicle Standards Waiver Request."[15] EPA

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[13]See Supplemental Comments of the Motor Vehicle Manufacturers Association of the United States, Inc. and the Association of International Automobile Manufacturers, Inc. on the Request For a Waiver of Federal Preemption for the California Low-Emission Vehicle Standards and Vehicle Test Procedures, dated June 23, 1992, Docket entry IV-G-37 and IV-G-38 ("MVMA/AIAM June 1992 Comment").

[14] As noted earlier, EPA had requested all persons, including GM, who chose to submit CBI to also submit to the public docket a non-confidential version of the CBI. EPA has reviewed GM's CBI submission and, while it contained information relevant to this proceeding, EPA has determined that the information contained only in the CBI submission would not affect the conclusions reached in this waiver decision. EPA further notes that, as discussed more fully below, the burden of proof in this proceeding lies on the opponents to the grant of this waiver. A corollary of that is that the consequences of failing to present information to the agency in such a way that it can be relied upon in a final decision (i.e., in a public form that is available in the docket) rest upon them as well.

[15]57 Fed. Reg. 32,217 (July 21, 1992).

allowed an additional period of thirty days in which comments could be filed; several parties (including CARB and GM) submitted additional written comments.[16] In addition, GM made additional submissions to the docket on some late-developing information which it considered important to the proceeding. Finally, at the request of the Assistant Administrator for Air and Radiation, various organizations and entities interested in this waiver request were invited to present their views at meetings with the Assistant Administrator for Air and Radiation held on November 30 and December 1, 1992 and were given the opportunity to submit brief written summaries of their positions by December 2, 1992. The organizations and entities attending the meetings or submitting written comments included numerous states, several environmental, groups, MVMA, the American Petroleum Institute, and the Ford Motor Company.[17]

On the basis of the record before me, I cannot make the findings

[16] Some parties filed comments which criticized this additional period of opportunity for written public comment. EPA believes, however, that it was appropriate to reopen the comment period so that interested members of the public could comment on the information submitted by the associations. Moreover, both the noted associations' June submissions and the comments received on this new information from some of the parties provided EPA with a more complete and more current assessment of the many technical issues in this waiver request, thus allowing the Agency to make the most informed decision possible.

[17] Memoranda summarizing these meetings and the written comments submitted in response to these meetings are in the Docket.

required for a denial of a waiver under section 209(b)(1) of the Act and applicable case law with respect to the amendments to California's motor vehicle pollution control program. Therefore, EPA is granting to the state of California a waiver of Federal preemption for these amendments.

II. BACKGROUND

By letter dated October 4, 1991, CARB submitted to EPA a request for waiver of Federal preemption to enforce certain amendments to its motor vehicle pollution control program.[18] These amendments set up new standards for various types of low emission vehicles, generically called "LEVs," which would be required in California beginning in the mid 1990's.[19] CARB states that the LEV program "will be the cornerstone of California's efforts to control pollution from motor vehicles in the coming

[18] Letter from James D. Boyd, Executive Officer, CARB, to William K. Reilly, Administrator, EPA, dated October 4, 1992 , Docket entry II-A-1 (hereinafter "CARB Waiver Request Letter").

[19] CARB has grouped all these vehicles under the rubric "low-emission vehicles." Additionally, one specific category of these new vehicles bears the designation "Low-Emission Vehicle."

years." [20]

There are several aspects to the LEV program. The regulations establish four new categories of light-duty vehicles (passenger cars and light-duty trucks) based on levels of exhaust emission standards. The vehicle categories, in order of increasing stringency, are called transitional low-emission vehicles (TLEVs), low-emission vehicles (LEVs), ultra-low-emission vehicles (ULEVs), and zero emission vehicles (ZEVs). Each vehicle category has specific exhaust emission certification standards for hydrocarbons (expressed in terms of "non-methane organic gases," or "NMOG"), carbon monoxide (CO), oxides of nitrogen (NOx), particulate matter (PM) and formaldehyde (HCHO). These standards would be effective as early as the 1994 model year, but the more stringently controlled categories would not have to be introduced until later model years when needed to meet an increasingly more stringent "fleet average"

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[20] See letter from James D. Boyd, Executive Officer, CARB to Charles N, Freed, Director, Manufacturers Operations Division, dated August 20, 1992, enclosing Supplemental Submittal of the California Air Resources Board and Appendices to Supplemental Comments, Docket entry IV-G-49, (hereinafter "CARB August 1992 Comments"), at 75-76. At the hearing, CARB acknowledged the technology-forcing nature of this program: "We wanted to push hard, and we think these regulations do push hard. They're clearly forcing the development of new technologies, and we wanted to do that because we've got countries (sic) where there's (sic) air pollution problems and it's only going to be solved if we have clean cars and near zero emitting cars." Hearing Transcript, Docket entry IV-F-01, p. 51.

requirement, as discussed below.

Beginning with model year 1994, each manufacturer's fleet of light-duty vehicles (including both passenger cars and small light-duty trucks (of up to 3,750 lbs. loaded vehicle weight)) is required to meet an average NMOG requirement that declines each year from a level of 0.250 gpm in 1994 to 0.062 gpm in 2003 and later years. (A similar declining NMOG fleet average requirement is established for larger light-duty trucks with a loaded vehicle weight of 3,751-5,750 lbs.) Manufacturers would decide how many vehicles to produce to what categories of standards for their light-duty vehicle fleet to comply with the fleet average requirements, subject only to a sales requirement for ZEVs. The ZEV sales requirement begins in model year 1998, when two percent of a manufacturer's sales of light duty vehicles must be ZEVs, and increases at certain points in succeeding model years until it reaches a maximum requirement of 10 percent of sales for model year 2003 and beyond. Small volume manufacturers (sales of 3,000 or fewer vehicles) are not required to comply with the ZEV sales mandate. The ZEV sales mandate applies only to light-duty vehicles (passenger cars and small light-duty trucks); it does not apply to the heavier light-duty trucks.

Manufacturers may earn marketable credits for having a sales-

weighted fleet emission average lower than the fleet average requirement. Manufacturers who do not meet the fleet average requirement will be assessed debits which must be made up within certain time limits. The availability (and marketability) of credits will allow more compliance options for manufacturers. For example, manufacturers may postpone initial participation in this program past the 1994 model year[21] and delay the introduction of the more stringent vehicle categories in later years. [22]

The following tables show 1) a comparison of various California LDV standards under this program to the federal standards; and 2) the LDV NMOG Fleet Averages (with an implementation schedule suggested by CARB showing one possible scenario for the composition of the LDV fleets for those years):

[21] Hearing Transcript, Docket entry IV-F-01, at 34.

[22] See CARB Staff Presentation Before the Air Resources Board - LEV/CF Status Update, dated June 11, 1992, Docket entry IV-G-31, at 4-5.

TABLE ONE – COMPARISON OF CALIFORNIA AND FEDERAL LDV STANDARDS

(50,000 Mile Useful Life)

Category	NMOG*(HC)	CO	NOx	PM	HCHO
Transitional Low Emission Vehicle	0.125	3.4	0.4	0.08	0.015
Low Emission Vehicle	0.075	3.4	0.2	0.08	0.015
Ultra Low Emission Vehicle	0.040	1.7	0.2	0.04	0.008
Zero Emission Vehicle	0.0	0.0	0.0	0.0	0.0
(FED) Tier I**	0.25(NMHC)	3.4	0.4	0.08	n/a
Tier II***	0.125(NMHC)	1.7	0.2	n/a	n/a

(All measurements grams per mile)

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* NMOG = NMHC + alcohols + carbonyls

** 56 Fed. Reg. 25748 (June 5, 1991).

*** See Clean Air Act, Section 202 (i). These standards are pending the results of a study required under the Act to be made by EPA on the need for further reductions in emissions from light-duty vehicles. The results of this study must be reported to Congress by June 1, 1997.

TABLE TWO -- CARB LDV FLEET AVERAGE REQUIREMENT[23]

(Percentages of New California Vehicle Sales)

Year	CA NMOG FLEET AVG*	0.39	0.25	TLEV	LEV	ULEV	ZEV**
1994	0.250	10	80	10			
1995	0.231		85	15			
1996	0.225		80	20			
1997	0.202		73		25	2	
1998	0.157		48		48	2	2
1999	0.113		23		73	2	2
2000	0.073				96	2	2
2001	0.070				90	5	5
2002	0.068				85	10	5
2003	0.062				75	15	10

*Grams per mile
** Mandatory requirement

[23] As noted earlier, this is only one possible scenario. Particular low-emission vehicle categories are not legally required until the fleet average requirement drops below the NMOG standard for the vehicle category. This means that TLEVs are not required until 1995, LEVs are not required until 1999, and ULEVs are not required until 2000. Manufacturers who generate credits by producing greater numbers of cleaner vehicles than necessary to meet the NMOG fleet average in a given year may push these "deadlines" for introduction of LEVs and ULEVs even farther back. For example, by producing TLEVs in model year 1998 in numbers greater than necessary to meet the NMOG fleet average requirement for that year, a manufacturer could generate credits that would allow it to defer introducing LEVs in 1999, or ULEVs in 2000.

The amendments also include two measures which CARB alleges are designed to offer manufacturers relief to ease the burdens of compliance. First, the regulations establish interim in-use standards which are up to 30 percent less stringent than the corresponding certification standards for TLEVs, LEVs and ULEVs.[24] These interim in-use standards will apply to TLEVs introduced in model years 1995 and to LEVs and ULEVs introduced through model year 1998. Also for these periods, CARB will suspend compliance with the full useful life (i.e., 100,000 miles) standard, so the in-use regulations will only apply for 50,000 miles.[25] After the interim in-use standard period is over, the vehicle category certification standards will also apply to in-use performance over the vehicle's full useful life.

Second, the regulations establish a two-tiered NMOG standard for "flexible-fueled" vehicles (FFVs), which are vehicles capable of operation on both gasoline and an alternate fuel. Because CARB wants to encourage the use of FFVs, it will allow a FFV which is certified to a particular emission category using alternate fuel to be certified to the next less

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[24] In-use standards would apply to any vehicles tested by CARB after a period of actual owner mileage accumulation. In contrast, certification standards apply to new vehicles which have not yet been sold to the public.

[25] See CARB Staff Report, Docket entry II-A-3, at 21, Hearing Transcript, Docket entry IV-F-01 at 35.

stringent category using gasoline. For example, a FFV certified as a LEV using methanol (.075 grams per mile or gpm NMOG) need only meet the TLEV standards (.125 gpm NMOG) on gasoline. According to CARB, this will allow manufacturers to use less extensive emission control systems in FFVs without losing emission reduction benefit because the NMOG emissions from such vehicles are likely to exhibit a lower ozone forming potential than NMOG emissions from gasoline-fueled vehicles.[26]

In an additional step that CARB believes will encourage the development of alternate fuel vehicles, the regulations establish a mechanism for adjusting the NMOG emissions from vehicles powered by fuels other than conventional gasoline, based on whether the emissions from such vehicles are more or less ozone-reactive.[27] As described more fully below in Section IV., A., under these mechanisms, the mass NMOG emissions are multiplied by a reactivity adjustment factor ("RAF") to establish a reactivity-adjusted measure of NMOG emissions.

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[26] See CARB Staff Report, Docket entry II-A-03, at 21, Hearing Transcript, Docket entry IV-F-01, at 46-48.

[27] See CARB Staff Report, Docket entry II-A-03, at 19-20, 35-36; CARB Technical Support Document, Docket entry II-A-4, Part C; CARB Final Statement of Reasons, Docket entry II-A-07, at 59-68; Supplemental Submittal of California Air Resources Board and Attachments, dated March 25, 1992 (CARB March 1992 Comment), Docket entry IV-G-09, at 8-11. The RAFs were also the subject of numerous comments filed by members of the automobile and petroleum industries and were discussed at the EPA hearing. This topic is reviewed further below at pages 31-37.

CARB has also set up a program to periodically review the status of the LEV program. As stated by CARB, there will be a required report "at least biennially ... to identify any significant problems and to include proposals for any significant regulatory modifications. This will provide a structured mechanism for allowing consideration of modifications of the standards ... if the ARB's projections turn out to be overly optimistic." [28]

III. STANDARD OF PROOF

A. Standard and Burden of Proof in Waiver Proceedings

In Motor and Equipment Manufacturers Assn. v. EPA, 627 F.2d 1095 (D.C. Cir. 1979) (hereinafter referred to as "MEMA I", the U. S. Court of Appeals for the District of Columbia set out the role of the Administrator in a section 209 proceeding. This role is to :

> [C]onsider 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

[28] CARB Waiver Request Letter, Docket entry II-A-1, at 13-14.

denial of the waiver.[29]

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): the "protectiveness in the aggregate" and "consistency with section 202(a)" findings (See pp. 55-172, *supra*). The court instructed, "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 involved. We need not decide how this standard operates in every waiver decision."[30]

The court upheld the Administrator's finding that, to deny a waiver, "there must be `clear and compelling evidence' to show that the proposed procedures undermine the protectiveness of California's standards." 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...."[31]

With respect to the consistency finding, the court did not articulate a standard of proof applicable to all proceedings, but found that the

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

[30] Id.

[31] Id.

opponents of the waiver were unable to meet a standard based on the preponderance of the evidence. Although MEMA I did not explicitly consider the standards of proof under section 209 in connection with a waiver request for "standards", there is nothing in the opinion to 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: "Even 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 decision be a narrow one."[32]

Congress' intent that EPA review of California's decisionmaking be narrow has led EPA in the past to reject arguments that are not specified as grounds for denying a waiver:

> 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

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

> 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. [33]

Thus, the consideration of all the evidence submitted in connection with this waiver decision is circumscribed by its relevance to those questions which must be considered under section 209.

Finally, it is important to remember the MEMA I court's holding that the burden of proof in a section 209 proceeding is squarely upon the opponents of the waiver:

> The language of the statute and its legislative history indicate that California's regulations, and California's determinations that they comply with the statute, when presented to the Administrator are presumed to satisfy the waiver requirements and that the burden of proving otherwise is on whoever attacks them. California must present its

[33] See 36 Fed Reg. 17,458 (August 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.

See also MEMA I, 627 F.2d at 1116-17 (holding that EPA properly declined to consider the alleged anti-competitive effects of California's in-use maintenance regulations).

> regulations and findings at the hearing and thereafter the parties opposing the waiver request bear the burden of persuading the Administrator that the waiver request should be denied.[34]

With respect to the burden of proof on the issue of consistency with section 202(a), the automobile industry opponents of this waiver request have argued that because they "have come forward with evidence that undercuts 'the statistical reliability' of the basic CARB analysis, the burden shifts back to CARB 'to support its methodology as reliable."[35] For the reasons explained below, I find that the burden of proof has not shifted to CARB; rather, it remains squarely on the opponents of the waiver request.

The industry opponents assert that "the key decision that governs EPA's resolution of the present controversy"[36] is International Harvester Company v. Ruckelshaus, (hereinafter referred to as "International Harvester") 478 F.2d 615 (D.C. Cir. 1979). In International Harvester, the court was asked to review EPA's decision to deny applications by several automobile and truck manufacturers who sought a one-year suspension (i.e., delay) of the 1975 emission standards for light-duty vehicles

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[34] MEMA I, 627 F.2d at 1121.

[35] MVMA/AIAM March 1992 Comment, Docket entry IV-G-14, at 41, n. 17 and at 44.

[36] MVMA/AIAM June 1992 Comment, Docket entry IV-G-37, at 35.

(passenger cars and certain light-duty trucks) that the Clean Air Act allowed under certain circumstances. The Administrator stated affirmatively that: "[O]n the record before me, I do not believe that it is in the public interest to grant these applications, where compliance with 1975 standards by application of present technology can probably be achieved, and where ample additional time is available to manufacturers to apply existing technology to 1975 vehicles."[37]

The Administrator made his determination in the suspension proceeding by applying an EPA methodology to test result data submitted by the manufacturers in support of their applications. On its face, the manufacturers' data offered scant hope of compliance with the 1975 standards. However, because the data contained many uncertainties and inconsistencies regarding test procedures and parameters, the Administrator developed a plan to adjust the data systematically. After reviewing the adjusted data, the Administrator concluded that "compliance with the 1975 standards by application of present technology can probably be achieved" and so denied the suspension applications.[38]

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[37] Id. at 626.

[38] Id. at 626.

In reviewing the Administrator's denial of the suspension applications, the court found that even though the applicants had the burden of coming forward with data showing that they could not comply with the standards, EPA had the burden of demonstrating that the methodology it used to predict compliance was sufficiently reliable to permit a finding of technological feasibility, and failed to meet this burden.[39] The court reasoned that as the "underlying issue is the reasonableness and reliability of the Administrator's methodology ... [i]t is the Administrator who must bear the burden on this matter, because the development and use of the methodology are attributed to his knowledge and expertise. Where certain material lies particularly within the knowledge of a party he is ordinarily assigned the burden of adducing the pertinent information."[40]

The industry opponents compare the instant waiver proceeding to International Harvester, noting that "because EPA is now confronted with an array of data and analysis refuting CARB's position on the central question raised by its waiver application, EPA must require CARB to

[39] Id. at 648.

[40] Id. at 643.

respond to that data and analysis in kind, if it can."[41]

CARB, however, maintains that International Harvester does not compel a shifting of the burden of proof to CARB to show technological feasibility by refuting the industry data and arguments presented in this record. CARB asserts that the burden of proof remains with the industry opponents to show technological infeasibility.

Based on the court's decision in MEMA I,[42] I do not believe that the industry has shifted the burden of proof to CARB by virtue of the fact that the industry has presented information in opposition to the CARB request. Instead, as stated by the MEMA I court in the passage quoted above, California's regulations and determinations "are presumed to satisfy the waiver requirements and ... the burden of proving otherwise is on whoever attacks them."[43] The court in MEMA I also found that "the legislative history makes clear that the burden of proof lies with the parties favoring denial of the waiver. Petitioners lost the battle they now wage twelve years ago when Congress specifically declined to adopt a provision which would have imposed on California the burden to demonstrate that it met

[41] MVMA/AIAM June 1992 Comment, Docket entry IV-G-37, at 36.
[42] See above, Section III, at 18.
[43] 627 F.2d at 1121.

the waiver requirements."[44] Furthermore, the MEMA I court specifically rejected the manufacturers' contention that International Harvester required the Administrator to carry "the burden of demonstrating the reliability of CARB's technological feasibility studies"[45] and found that manufacturers had failed to provide evidence sufficient to support the conclusion that CARB had not provided adequate leadtime..."[46]

Any "burden" remaining is upon EPA to demonstrate a reasonable and fair evaluation of the information in this record in coming to the decision on the waiver request. 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. His 'burden' is the burden of acting reasonably."[47]

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[44] Id.

[45] Id. at 1126.

[46] Id. at 1126-27.

[47] MEMA, 627 F.2d at 1123.

IV. DISCUSSION

A. Public Health and Welfare

The criteria for review of the public health and welfare protectiveness issue as it pertains to both emission standards and accompanying enforcement procedures for which California requests a waiver have already been set forth in the introduction to this decision.

When CARB approved its LEV regulations in September 1990, it compared its standards to the existing Federal standards and found that "the regulations pertaining to motor vehicle emissions approved herein, in conjunction with the rest of the California motor vehicle emission regulations, will in the aggregate be at least as protective of public health and welfare as applicable federal standards."[48] Subsequent to this resolution, the 1990 amendments to the Clean Air Act were enacted on November 15, 1990. These amendments directed EPA to issue revised, more stringent emission standards for certain light duty vehicles; these new standards (called "Tier I" standards) were issued as final regulations on June 5, 1991.[49]

Because the Federal standards changed, the CARB Executive Director compared the LEV standards to the new set of Federal standards, and

[48] CARB Resolution 90-58, dated September 28, 1990, Docket entry II-A-5, at 13.

[49] 56 Fed. Reg. 25,724 (June 5, 1991).

issued Executive Order G-673 setting his forth his determination that California's standards are still, in the aggregate, at least as protective of public health and welfare as the applicable Federal standards including the new Tier I standards and the cold temperature CO regulations required pursuant to section 202(j) of the Clean Air Act.[50] As the basis for this conclusion, CARB has asserted that the amended California standards are either equal to or more stringent than the corresponding Federal standards. The CARB waiver request letter includes a series of tables showing an extensive comparison of these sets of standards.[51]

In its request, California noted that there are four exceptions to its determination that each of its emissions standards is equal to or more stringent than its Federal counterpart. These exceptions concern the three federal standards for which there is no California counterpart: 1) the proposed (but now final) Federal cold CO standards, 2) the Federal standards for total hydrocarbons, and 3) the Federal particulate matter standards for non-diesels; and 4) the absence of a 100,000 mile NOx standard for non-diesel California passenger cars and light-duty trucks certified to the 0.25 gpm NMHC standard.

CARB stated in its request letter that:

> the overall stringency of the California program greatly outweighs these relatively minor and

[50] CARB Executive Order G-673, October 2, 1991, Docket entry II-A-9.

[51] CARB Waiver Request Letter, Docket entry II-A-1, at 9-10 and accompanying tables.

> limited instances. Furthermore, as the California fleet average NMOG requirement declines (i.e. grows more stringent) year-by-year, the number of vehicles subject to the substantially more stringent California low-emission vehicle standards will consistently increase. Accordingly, my determination that the California emission standards as amended by the low-emission vehicle regulations will be, in the aggregate, at least as protective of public health and welfare as the applicable federal standards is clearly not arbitrary or capricious.[52]

No comments were received from any party that questioned CARB's protectiveness determination on the basis of the limited differences between the programs described above.

Several trade associations representing the petroleum industry and one petroleum manufacturer have commented to EPA about their concerns with the fuel components of this program which could affect the CARB protectiveness determination.[53] As stated by the American Petroleum

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[52] CARB Waiver Request Letter, Docket entry II-A-1, at 9-10.

[53] See generally, comments from American Petroleum Institute (Hearing Transcript at at 136-142, Docket entries IV-F-09 and IV-G-10); Western States Petroleum Association (Hearing Transcript at 113-136, Docket entries IV-F-07, IV-F-08 and IV-G-13); the Eastern States Petroleum Advisory Group (Hearing Transcript at 142-146, Docket entries IV-F-10 and IV-G-07); the Mobil Oil Corporation, Docket entry IV-G-08; and additional comments from American Petroleum Institute, Docket entry IV-G-79.

Regarding fuels, I note that the reactivity adjustment factors are not necessary to establish the technological feasibility of California's program because CARB demonstrated the technological feasibility of its program based on Indolene.

Institute (API),

> [F]irst, [CARB's] proposal lacks reactivity factors [to adjust NMOG emissions from alternative-fuel vehicles to account for their lower reactivity], which are critical to verifying the program's viability. Second, the methodology used to determine reactivity adjustments factors (RAFs) is technically flawed. Because the information submitted by California in its October 4, 1991 waiver request is incomplete, California cannot make the required determination under section 209(b) that the proposed emission controls are more protective than the federal standards. ..... As a result of CARB's oversimplifications and technical errors, its methodology yields erroneous results, which could result in an arbitrary and capricious determination of the LEV program's protectiveness.[54]

Some background on CARB's particular RAF procedures is necessary to provide the context for this contention that the CARB protectiveness determination is improper. Throughout this proceeding, CARB has affirmatively noted that the fuel to be used in LEVs is important to the manner of the vehicle's compliance with the standards. The CARB test procedures offer manufacturers a choice of fuels on which to test their vehicles for compliance with the certification standards. Manufacturers

[54] Letter from Terry F. Yosie, Vice President, American Petroleum Institute, to Richard D. Wilson, Director of Office of Mobile Sources, dated March 26, 1992, Docket entry IV-G-10, at 1-2 of attached comments.

can use either the gasoline (called "Indolene Clear") used by EPA in Federal certification testing, or Indolene Clear with a lower Reid Vapor Pressure (RVP). This lower RVP certification fuel is to correspond to the specifications for commercial gasoline required for sale in California since January 1, 1992 as a result of CARB's "Phase 1 reformulated gasoline" rulemaking.[55]

CARB also anticipates that, in future years, alternative fuels will be used in California vehicles. As noted in its Staff Report:

> [A]lthough the proposal does not favor the use of any particular fuel, it does recognize that the use of alternate [clean] fuels may reduce ozone compared to conventional fuels. Clean-fueled and gasoline-fueled vehicles may emit similar amounts of hydrocarbons, but the capability of those hydrocarbons to form ozone in the atmosphere can vary greatly. To evaluate the air quality impacts of vehicles powered by different fuels, it is appropriate to compare the ozone impact rather than just the mass of the hydrocarbon emissions.....[56]

CARB recognized that although emissions from alternate fuel vehicles may have lower ozone-forming potential (or reactivity) than emissions from gasoline-fueled vehicles, the alternate fuel vehicle may

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[55] CARB Final Statement of Reasons, Docket entry II-A-7, at 7 and 75.

[56] CARB Staff Report, Docket entry II-A-3, at 5.

emit a higher mass of hydrocarbons. For this reason, CARB decided to establish Reactivity Adjustments Factors (RAFs) as a means of comparing the reactivity of emissions from alternative fuels with the reactivity of conventional fuel. By multiplying the measured mass of NMOG emissions produced by an alternative fuel by the appropriate RAF, the ozone-forming potential of the alternative fuel can be compared easily to conventional gasoline. With this approach, CARB seeks to establish a "level playing field" in terms of the ozone-forming potential for all fuels.

As the petroleum (and automobile) industry commenters have pointed out, the CARB regulations do not contain the RAFs for all types of alternative fuels; in fact, there is only a single RAF (for methanol-fueled TLEVs) established to date.[57] CARB has indicated that because it believes the reactivity of the emissions from a vehicle operating on clean fuels will differ depending on the control technology on the vehicle, it was unable to set RAFs across the board but rather decided to wait for additional data.[58]

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[57] CARB Staff Presentation Before the Air Resources Board - LEV/CF Status Update, June 11, 1992, Docket entry IV-G-31, at 2. The RAF established by CARB for methanol is .41. See CARB Notice of Public Hearing for November 12, 1992, section 13 (a), Docket entry IV-G-105.

[58] Hearing Transcript, Docket entry IV-F-01, at 37. Additionally CARB is expected to approve additional RAFs at its January 1993 meeting, and CARB is continuing to develop additional RAFs for other alternative fuels.

The CARB regulations do include, however, the procedures and protocols a manufacturer can follow to formulate a RAF for any alternative fuel which has not yet been assigned a RAF by CARB. [59] Thus, a manufacturer desiring to gain the advantage of using a "cleaner" alternative fuel for certification has the opportunity to do so by developing the RAF for the particular fuel using the CARB procedures and submitting it to the CARB Executive Director for approval.

The petroleum industry is not convinced that CARB chose the correct RAF procedures in its attempt to provide a level playing field. There was extensive criticism of the CARB regulations pertaining to reactivity, both at the hearing and in written comments, alleging that technical flaws in the reactivity adjustment factor mechanism may result in ozone increases, contrary to the goal and expectation of CARB. [60] In its most recent comments, the industry urged that, if EPA approves this waiver request, it should be approved on a mass emissions basis only and

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[59] Hearing Transcript, Docket entry IV-F-01, at 20 and 59; CARB March 1992 Comment, Docket entry IV-G-09, at 10.

[60] CARB asserts that the petroleum industry critique of the reactivity adjustment approach CARB selected is not pertinent to the waiver issues before EPA, but nevertheless responded to the points raised by the industry in detail. CARB March 1992 Comment, Docket entry IV-G-09, Attachment A.

reactivity adjustment factors should not be included.[61]

EPA has considered carefully the petroleum industry comments relating to the RAFs and the RAF procedures in the CARB regulations as well as CARB's responses to the specific concerns raised at the hearing and in the subsequent written comments. On the basis described below, the Agency has determined that the CARB protectiveness determination is not rendered arbitrary and capricious by the CARB regulations relating to RAFs for the following reasons. (While EPA has determined that CARB's protectiveness determination is not affected adversely by CARB's regulations relating to RAFs, EPA has found only that the method CARB used in determining the methanol RAFs is reasonable but neither agrees nor disagrees with any specific RAFs CARB is using.)

First, regarding alternative fuels other than methanol (the only alternative fuel for which CARB has established a RAF), CARB has, in effect, established a mechanism for regulating vehicles powered by alternative fuels for which no corresponding Federal regulations exist. CARB has established the RAF process to apply to fuels other than conventional gasoline. By virtue of its RAF process, CARB can effectively set standards for alternative-fueled vehicles in California which are not currently regulated under the Federal program because no Federal standards apply (e.g., vehicles powered by Compressed-Natural Gas or

[61] Letter from Charles J. DiBona, President, American Petroleum Institute, to Administrator Reilly, dated December 2, 1992, Docket entry IV-G-79.

"CNG"). CARB states correctly that "obviously the California TLEV, LEV and ULEV standards with reactivity adjustments are more protective than having no standards."[62] Because these standards with reactivity adjustments serve to regulate vehicles not currently regulated by EPA, California's conclusion that its standards are at least as protective as the Federal standards is not arbitrary and capricious.[63]

Second, I have compared the only alternative fuel standards which "overlap" between the Federal and the CARB programs (M100 and M85 [64]) and I find that the CARB standards are more protective than the Federal standards. As CARB has stated:

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[62] CARB March 1992 Comment, Docket entry IV-G-09, at 13.

[63] This finding is based on the absence of corresponding Federal standards for these fuels. This situation will likely change; e.g., CNG standards have been proposed by EPA. Accordingly, it may be necessary in the future for EPA to reexamine this protectiveness determination as it pertains to alternative fuels. I note, however, because the CARB standards for NMOG for the new low-emission vehicles begin at .125 gpm NMOG and become more stringent, even if the mass emissions of hydrocarbons from an alternative-fueled vehicle are greater than the CARB NMOG standards, it is not likely that these emissions would exceed a Federal hydrocarbon standard for the alternative fuel that corresponds to the Federal Tier I gasoline standard of .25 NMHC because of the significant "cushion" between the CARB standards and the Federal hydrocarbon standard. In general, EPA establishes alternative fuel standards that are equivalent to conventional fuel standards (see, e.g., the Federal methanol-fueled vehicle standards, 54 Fed. Reg. 14426, (April 11, 1989)). In any event, I note that CARB will be required to seek from EPA a determination that any future RAFs are within the scope of this waiver.

[64] See 40 C.F.R §§ 86.090-8, 86.090-9, 86.094-8 and 86.094-9.

> The federal hydrocarbon exhaust emission standards for M100 and M85 are based on Organic Material Hydrocarbon Equivalent (OMHCE"). OMHCE measurements factor out roughly 50% of the reactivity effect of the exhaust. Since the California low-emission vehicle standards are all at least twice as stringent numerically than the federal 0.41g/mi. and 0.25 g/mi. OMHCE methanol standards, and the California regulations include a mass standard for formaldehyde, the California standards for methanol vehicles will always be more stringent than the federal standards.[65]

Because of the numerical relationship between the CARB and federal standards and because the RAF established by CARB for methanol is 0.41, the HC emissions from a methanol TLEV could not possibly exceed those from a methanol-fueled vehicle certified to the current federal methanol standards.

Third, I find that CARB's decisions regarding the RAF procedures were not arbitrary and capricious. CARB took a reasoned and reasonable approach to this aspect of its program. CARB, after extensive study, adopted the "maximum incremental reactivity" (MIR) scale for calculation of RAFs, one of several options it evaluated. The principle advantage of the MIR scale, according to CARB, is that it defines reactivity in areas where hydrocarbon control has its greatest benefits, the upwind areas

[65] CARB March 1992 Comment, Docket IV-G-09, at 13.

where the highest emission densities are found. Additionally, the MIR scale allows for "ease of RAF calculations, a single scale for use in the statewide regulations, and a framework that can easily incorporate chemical mechanism updates."[66]

The reasonableness of CARB's reactivity-based approach to NMOG emissions is also indicated by the fact that Congress directed EPA to adopt CARB's reactivity-based approach to NMOG emissions in the provisions of Part C of Title II of the Clean Air Act concerning the clean fuel vehicles program. In section 241(3), Congress provided that "[i]n the case of vehicles using fuels other than base gasoline, the level of NMOG emissions shall be adjusted based on the reactivity of the emissions relative to vehicles using base gasoline [which is defined in section 241(4)]." Congress also provided that to demonstrate compliance with an NMOG standard NMOG emissions are to be measured in accordance with CARB's NMOG test procedures and in section 241(4) directed EPA to "modify the definitions of NMOG, base gasoline, and the methods for making reactivity adjustments, to conform to the definitions and method used [by CARB in its LEV regulations] so long as the California definitions are, in the aggregate, at least as protective of public health and welfare as the definitions in this section." (Emphasis added) As CARB's definition

[66] Id. at Attachment A.

of NMOG[67] is identical to that in section 241(3) and CARB has proposed a definition of base gasoline substantially identical to that in section 241(4) of the Act, it appears likely that the CARB definitions will satisfy the "at least as protective" test of section 241(4). Consequently, it appears likely that section 241(4) will require EPA to follow CARB's methods of making reactivity adjustments in EPA's clean-fuel vehicle program.[68]

Fourth, as CARB has noted, it is expected that the "substantial majority" of the vehicles introduced pursuant to the LEV program will be gasoline-fueled vehicles.[69] Consequently, it is extremely likely that any increases in mass emissions of hydrocarbons that might result from the use of RAFs in connection with alternative fuels would have only a minimal impact in the context of the overall program.

In a comment submitted December 8, 1992,[70] GM requested that EPA

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[67] Docket entry II-A-8, Attachment C, "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles," at 4.

[68] See also Clean Air Act section 244 (in general requiring EPA to administer and enforce clean-fuel vehicle standards in the same manner as CARB when the federal standards are numerically identical to CARB's).

[69] CARB March Comment, Docket entry IV-G-09,at 13, n. 8.

[70] Letter from Alan R. Weverstad, GM, to Charles N. Freed, Director, Manufacturers Operations Division, Docket entry IV-G-81.

reopen the docket in this proceeding in order to accept additional information regarding a legal challenge to CARB's "Reactivity Regulations" brought by the Western States Petroleum Association. According to GM, this legal challenge creates uncertainties because California may have to change its test procedures as a result of the litigation. GM also requested that, if EPA grants any portion of the waiver request in the docket, EPA "require expedited action (both by CARB and by EPA) that will allow full and timely review of any revisions to the current LEV/CF rules. If the problem cannot be addressed satisfactorily in that way, a modification of CARB LEV/CF implementation will, at a minimum, be required." In a response to this letter, dated December 11, 1992,[71] CARB noted that the WSPA challenge to the reactivity regulations concerned regulations adopted by CARB on November 9, 1992, not any of the regulations currently before EPA in this waiver proceeding. CARB also noted that the lawsuit has no legal effect on the LEV regulations at this time and that CARB has provided no indication that it intends to revise its regulations as a result of WSPA's claims.

EPA rejects GM's request to reopen the docket to address the WSPA lawsuit against CARB. As CARB notes, WSPA's challenge does not concern

[71] Letter from Tom Cackette, CARB, to Charles N. Freed, Director, Manufacturers Operations Division, Docket entry IV-G-83.

regulations subject to this waiver proceeding. Regardless of whether a lawsuit concerns regulations at issue in a waiver proceeding, the pendency of a lawsuit does not affect the legal status of the regulations. Should WSPA prevail in its challenge and CARB be required to modify its regulations, such modifications will be the subject of future waiver proceedings. The uncertainty created by the possibility of revisions to CARB's regulations is always present, however, as CARB could revise its regulations on its own, without being prompted by a court decision.

EPA also rejects GM's request that EPA at this time require expedited action by CARB and EPA on future revisions to California's LEV regulations. EPA will act as expeditiously as possible on waiver requests concerning revisions to the LEV program in the future, and such requests will be subject to the requirement of section 209 concerning consistency with section 202 of the Clean Air Act, which will ensure that revisions to California's program provide the manufacturers with adequate leadtime. Any impact that such future revisions should have on the LEV program's implementation schedule may be raised in the California regulatory proceedings leading to the adoption of the revisions and in the waiver proceedings concerning those revisions.

For the same reasons, I also reject the new request presented by API

in its December 2, 1992 comments - that EPA grant the waiver only to the extent NMOG emissions are measured on a mass basis. EPA also received comments relating to the CARB's protectiveness determination after the August 20, 1992 closing date of the additional period for public comment. In these comments, General Motors Corporation asserted that new developments regarding Federal inspection & maintenance ("I/M") regulations would impact California's protectiveness determination. Specifically, GM noted that the new EPA I/M regulations are designed to insure better in-use vehicle emission performance. GM contended that because California's current I/M program is inferior to the new Federal program, and because there is no assurance that California will adopt the I/M program required by the Federal regulations, the LEV standards combined with an inferior I/M program in the state will be less protective of the public health and welfare than the corresponding federal program mandated by the Clean Air Act.[72]

In response to the GM comments, CARB pointed out that, under the

[72] These additional comments are: Motion To Reopen the Record to Receive Additional Evidence on the Request for a Waiver of Federal Preemption for the California Low-Emission Vehicle Standards (Motion to Reopen), dated November 7, 1992, Docket entry IV-G-65, and Supplementary Submission in Support of Motion to Reopen the Record on the Request for a Waiver of Federal Preemption on the California Low-Emission Vehicle Standards (Supplementary Submission), dated November 18, 1992, Docket entry IV-G- 69.

requirements of the Act, all states with "Serious" nonattainment areas (which include California) must submit to EPA a State Implementation Plan revision providing for an enhanced I/M program.[73] In order to comply with section 182(c)(3)(A) of the Act, CARB has submitted a letter to EPA committing to comply with the Act's requirements and EPA's regulations in this area.[74]

In its comments, CARB also contends that the existence and effectiveness of I/M programs in California and other states is irrelevant to the analysis of protectiveness under section 209(b) because the state standards at issue in a waiver proceeding are those that are otherwise preempted by section 209(a). As I/M requirements are not subject to preemption under section 209(a), they are irrelevant to the comparison of Federal and California standards.

After reviewing this exchange of comments, EPA finds that there is no reason to accept GM's contentions regarding the alleged impact of the I/M issue on the protectiveness analysis. EPA does not believe that I/M is pertinent to the protectiveness analysis because it is not subject to

[73] Letter from Tom Cackette, Chief Deputy Executive Officer, CARB, to Charles N. Freed, Director, Manufacturers Operations Division, dated November 19, 1992, Docket entry IV-G-72.

[74] See Supplemental Submission from GM, Attachment A, Docket entry IV-G-69.

preemption by section 209(a). I/M programs are not the "accompanying enforcement procedures" referred to in section 209. Unlike I/M programs, which apply to vehicle owners, those procedures are for enforcing the standards against motor vehicle manufacturers. In any event, California has submitted a commitment to adopt an enhanced I/M program in accordance with the requirements of section 182(c) the Act.[75]

In a comment dated December 8, 1992, GM raised questions about CARB's protectiveness determination on the basis of a report prepared by CARB's Technical Support Division in October of 1992.[76] According to GM, the October 1992 report indicated that decreases in NOx emissions could cause ozone increases, suggesting that the NOx decreases that would result from the LEV program would worsen California's air quality problems. GM requested that EPA reopen the docket in this proceeding to allow further evaluation of the significance of this report. CARB responded to GM's December 8, 1992 comment with a letter dated December 11, 1992.[77] In that letter, CARB pointed out that GM had failed

[75] I also am unable to find that GM's comments present any reason to reopen formally the record of this proceeding, so I therefore deny the GM request (or "motion") to reopen the proceeding and schedule an additional public hearing.

[76] Letter from Alan R. Weverstad, GM, to Charles N. Freed, Director, Manufacturers Operations Division, Docket entry IV-G-81.

[77] Letter from Tom Cackette, CARB, to Charles N. Freed, Director, Manufacturers Operations Division, Docket entry IV-G-83.

to mention other parts of the October 1992 report that indicated that reductions in emissions of VOCs which would also be brought about by the LEV program, consistently resulted in ozone decreases. CARB also pointed out that NOx emissions decreases result in decreases in levels of PM10, which is also a problem for the South Coast Air Basin. Finally, CARB stated that, as discussed in the report, the focus of the October 1992 paper was "to investigate a particular methodology used in conjunction with the Urban Airshed Model, rather than to predict the air quality impacts of an emission control strategy." The paper itself noted that the example presented in the paper was not for the purpose of evaluating "emission control strategies for the South Coast Air Basin of California. As noted in the performance section below, this application does not meet the ARB's performance goals for typical model performance."[78] The paper further noted that additional analysis of the model's performance was necessary.

In addition to the issues raised by CARB in its December 11, 1992 letter, it should be noted that GM's suggestion that the LEV program would worsen California's air quality problems is contradicted by the modeling

[78] Letter from Alan R. Weverstad, GM, to Charles N. Freed, Director, Manufacturers Operations Division, Docket entry IV-G-81, Attachment C, at 3.

results introduced into this proceeding by MVMA/AIAM. [79] Those results indicated that the LEV program would result in small decreases in ozone levels; they did not indicate that the LEV program would increase ozone levels. It also appears that questions about the impact of NOx emission reductions were raised by the motor vehicle manufacturers in the course of California's regulatory proceedings leading up to California's adoption of the LEV program and that CARB responded to those concerns at that time. [80]

For the reasons given by CARB in its response to GM's December 8, 1992 comment and for the additional reasons discussed in the preceding paragraph, GM's request to reopen the docket in order to evaluate further the significance of the October 1992 paper is rejected. CARB's response makes clear that it would be inappropriate and premature (given the status of the modeling underlying the paper) to rely on the October 1992 paper to find that CARB's protectiveness determination was arbitrary and capricious.

Therefore, based on the record before me, I cannot find that CARB's determination that its state standards are, in the aggregate, at least as

[79] MVMA March 1992 Comments, Docket entry IV-G-14, at 51-52.

[80] CARB Final Statement of Reasons, Docket entry II-A-7, at 92-93.

protective of public health and welfare as applicable Federal standards is arbitrary and capricious.

B. Compelling and Extraordinary Conditions

Under section 209(b)(1)(B) of the Act, I cannot grant the waiver if I find that California "does not need such State standards to meet compelling and extraordinary conditions ....". In comments relating to this criterion, MVMA/AIAM believe that I should make this finding. First, they assert that the question before EPA is whether these specific LEV program standards are needed, rather than whether California continues to need its own motor vehicle emission control program, of which these standards are a part. Second, applying this standard of review, they assert I should find that the LEV standards are not needed by California because, using calculations they endorse, the standards will provide only a very small air quality benefit to the state.[81]

EPA has considered carefully the testimony and comments of CARB and MVMA/AIAM regarding this particular prong of the waiver test. EPA agrees with California that the basic inquiry here concerns whether

[81] MVMA/AIAM March 1992 Comment, Docket entry IV-G-14, at 51-56.

"compelling and extraordinary conditions" exist that justify California's continued need for its own mobile source program. Therefore, I reject the Associations' interpretation of the test of section 209(b)(1)(B) for the following reasons.

In its review of a waiver request under the standard of section 209(b)(1)(B), EPA is guided by the principle, recognized by the MEMA I court, that Congress intended California to be "afford[ed] the broadest discretion"[82] in its choice of air pollution control strategies. This principle is particularly pertinent here, where there is vigorous disagreement between CARB and the waiver opponents over the level of the benefits. (I note here that the industry concedes that there is a benefit to be gained by the California LEV program, but they believe the benefit is insignificant.)[83]

Because it determined that California was entitled to exercise broad discretion in its choice of mobile source air pollution control methods, Congress acted to ensure that EPA's review of California's decisionmaking be narrow. From the outset, EPA has consistently complied with

[82] H.R. Rep. 95-294, at 301-302 (1977) (cited with approval in MEMA I, 627 F.2d at 1110.

[83] Letter from Thomas H. Hanna, President, MVMA and George C. Nield, President, AIAM, to William K. Reilly, Administrator, EPA, dated January 29, 1992, Docket entry II-D-01, at 7.

Congressional intent. For example, in a 1971 decision, (then) Administrator Russell Train said:

> The law makes it clear that the waiver requests cannot be denied unless the specific findings 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.[84]

Later waiver decisions amplified and clarified this position. In a 1975 case granting a waiver for California's light-duty vehicle standards for model years 1977 and beyond, the Administrator noted that:

> The structure and history of the California waiver provision clearly indicate a Congressional intent and an EPA practice of leaving the decision on ambiguous and controversial public policy to California's judgment ... Sponsors of the (waiver) language eventually adopted referred repeatedly to their intent to make sure that no 'Federal bureaucrat' would be able to tell the people of California what auto emission standards were good for them, as long as they were stricter than the Federal standards.[85]

[84] 36 Fed. Reg. 17,458 (August 31, 1971).

[85] 40 Fed. Reg. 23,101, 23,102 (May 28, 1975) (emphasis added).

In a 1976 decision granting a waiver to California's motorcycle emission standards for 1978 and beyond model years, the Administrator further elaborated on this standard of review:

> Arguments concerning ... the marginal improvements that will allegedly result (from implementations of the standards at issue in this waiver request), and the question of whether these particular standards are actually required by California ... fall within the broad area of public policy. The EPA practice of leaving the decision on such controversial matters of public policy to California's judgment is entirely consistent with the Congressional intent.[86]

Congress affirmed its intent in the 1977 amendments to section 209(b). At that time, Congress amended the section to require California to determine that its standards will be as protective as Federal standards in the aggregate. This amendment, as noted above, allowed California to choose to adopt individual standards less stringent that the corresponding Federal standards when California determined that such a strategy is appropriate for their air pollution control efforts. The House Committee noted that "[t]he Committee amendment is intended to ratify and strengthen the California waiver provision and to affirm the underlying intent of that provision, i.e., to afford the broadest discretion [to California] in selecting the best means to protect the health of its

[86] 41 Fed. Reg. 44,209, 44,210 (October 10, 1976).

citizens and the public welfare."[87]

After the 1977 amendments, EPA addressed the issue of whether California had to demonstrate a need for its own motor vehicle program or a need for the particular standard at issue in the waiver proceeding. In a 1984 decision, EPA rejected arguments raised by the auto manufacturers and agreed with California that the basic "inquiry concerns whether compelling and extraordinary conditions exist that justify California's continued need for its own mobile source emissions control program."[88] In that decision, the Administrator discussed how the legislative history of section 209 showed that Congress' concern for industry was largely focused on problems the industry might face from the administration of two programs. The Administrator proceeded to conclude: "Therefore, as CARB points out "[t]he "need" issue thus went to the question of standards in general, not the particular standards for which California sought [a] waiver in a given instance.'" [89] The Administrator determined that he could not deny the waiver on the basis of a lack of need because "the manufacturers have not demonstrated that California no longer has a

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[87] H.R. Rep. 95-294, 301-302 (1977), (cited with approval in MEMA I, 627 F.2d at 1110.

[88] 49 Fed. Reg. 18,887, 18,890 (May 3, 1984).

[89] Id.

compelling and extraordinary need for its own program." [90] This determination was not challenged at the time of the 1984 waiver decision and, in fact, has remained unchallenged until the instant waiver proceeding.

This approach to the "need" criterion is also consistent with the fact that because California standards must be as protective as Federal standards in the aggregate, it is permissible for a particular California standard (or standards) to be less protective that the corresponding Federal standard. [91] For example, for many years, California chose to allow a carbon monoxide standard for passenger cars that was less

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[90] Id. at 18,890.

[91] The Administrator noted that:

> Indeed, to find that the 'compelling and extraordinary conditions' test should apply to each pollutant would conflict with the amendment to section 209 in 1977 allowing California to select standards 'in the aggregate' at least as protective as federal standards.' In enacting that change, Congress explicitly recognized that California's mix of standards could 'include some less stringent than the corresponding federal standards.' See H.R. Rep. No. 294, 95th Cong., 1st Sess. 302 (1977). Congress could not have given this flexibility to California and simultaneously assigned to the state the seemingly impossible task of establishing that 'extraordinary and compelling conditions' exist for each standard.

stringent than the corresponding Federal standard as a "trade-off' for California's stringent nitrogen oxide standard.[92] Under a standard of review like that proposed by MVMA/AIAM, EPA could not approve a waiver request for only a less stringent California standard because such a standard, in isolation, necessarily could be found to be contributing to, rather than helping, California's air pollution problems.

Based upon EPA's review of the comments pertaining to the "compelling and extraordinary conditions" test of Section 209(b)(1)(B), I have determined that my inquiry in this area continues to be limited to whether California needs its own motor vehicle control program to meet compelling and extraordinary conditions and not whether any given standards are necessary to meet such conditions.

I turn now to the industry's second contention under this test, namely, that because the LEV standards will provide such a small air quality benefit to California, they are not needed by the state. The industry argues that the LEV standards will offer only *de minimis* air quality benefits to California. In support, MVMA/AIAM note that "the record does not indicate that CARB has provided EPA with any data or analysis to quantify or estimate the reductions in ozone levels in any part

[92] See 43 Fed. Reg. 25,729, 25,731 (June 14, 1978).

of the State that it could attribute to the CF/LEV program."[93] The associations based this opinion on a comparison of CARB's projections of the emission reductions expected from the LEV program to the results of air-quality modeling performed by the joint Auto/Oil Air Quality Improvement Research Program.[94]

CARB, on the other hand, has commented that the LEV program will provide significant benefit to the state's air quality. For example, CARB staff, using emission factors for the various vehicle categories in CARB's emission model, has projected emission reductions of 29 tons per day in emissions of NMOG and 36 tons per day for NOx in the year 2000. These numbers represent four percent and three percent decreases, respectively, in the statewide on-road emissions that would occur without the LEV program regulations.[95] Further projections by the CARB staff for the year

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[93] Letter from Thomas H. Hanna, President, MVMA and George C. Nield, President, AIAM to William K. Reilly, Administrator, EPA, dated January 29, 1992, Docket entry II-D-01, at 6.

[94] Id., see also Hearing Transcript, Docket entry IV-F-01, Testimony of Reg Modlin, Chrysler Corporation at 86-95.

[95] CARB Technical Support Document, Docket entry II-A-4, at IX-1 to IX-4. Other discussion of air quality benefits appears in: CARB Waiver Request Letter, Docket entry II-A-1, at 10-11; CARB Staff Report, Docket entry II-A-3, at 12-13 and 59-62; Hearing Transcript, Docket entry IV-F-01, at 9 and 21-22; CARB March 1992 Comments, Docket entry IV-G-09, at 14-16 and Attachment B; CARB August 1992 Comments, Docket entry IV-G-49, at 72-75.

2010 show even greater reductions in NMOG, CO and NOx.[96] EPA has also received compelling comments on the need for the LEV program from the South Coast Air Quality Management District.[97]

As discussed above in connection with the analysis of the nature of the "compelling and extraordinary conditions" test, EPA is guided by the principle that Congress intended California to be afforded broad discretion in its choice of air pollution control strategy. Thus, as Administrator Train concluded in a 1971 waiver decision: "The issue of whether a proposed California requirement is likely to result in only marginal improvement in air quality not commensurate with its cost ... is not legally pertinent to my decision under section 209."[98]

Consequently, as California has noted correctly, "[T]he extent to which a given set of California standards will reduce air pollution in California is not pertinent to the need question. As long as compelling and extraordinary air pollution problems continue to exist in California -- as

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[96] CARB March 1992 Comments, Attachment B, Docket entry IV-G-09.

[97] Letter from James M. Lents, Ph.d, Executive Officer South Coast Air Quality Management District, to Charles Freed, Director, Manufacturers Operations Division, dated August 19, 1992, enclosing their "Response to Supplemental Comments Filed By The Motor Vehicle Manufacturers Association (SCAQMD Comment), Docket entry IV-G-50.

[98] 36 Fed. Reg. 17,458 (August 31, 1971).

they surely do -- there will continue to be a need for the standards."[99]

For the reasons stated above in connection with the analysis of the "compelling and extraordinary conditions" test, I believe that California's assessment of the need question is correct, and that the extent of the benefits that will be produced by the California LEV program is not pertinent to my decision.

Finally, I turn to a consideration of whether the compelling and extraordinary conditions that justify California's motor vehicle emission control program still exist. I believe that CARB has demonstrated in its waiver request the continuing and pervasive existence of the compelling and extraordinary conditions justifying California's need for its own motor vehicle pollution control program. In its letter of request for this waiver, CARB discussed how air pollution continues to affect the area:

> The South Coast Air Basin is the only area in the country designated as having an 'extreme' air pollution problem in the 1990 amendments to the Clean Air Act. The unique geographical and climatic conditions and the tremendous growth in vehicle population and use which moved Congress to authorize California to establish separate vehicle standards in 1967 are still in existence today. Indeed, these conditions were precisely the reason the Board has adopted the low-emission vehicle

[99] CARB March 1992 Comment, Docket IV-G-09, at 14.

regulations. [100]

The South Coast Air Quality Air Management District also provided a current assessment of the air quality situation in that part of California:

> The Basin has the most serious air quality problem in the nation. Ozone and carbon dioxide reach maximum levels nearly three times the national standard set to protect public health. Fine particulate matter reaches levels of nearly twice the national health-based standards. The Basin is the only area in the nation exceeding the nitrogen dioxide health standards. As a result of non-compliance with the federal standards for ozone and fine particulate matter, Basin residents incur billions of dollars in damage to health, materials, agriculture and visibility each year.
>
> A combination of poor atmospheric ventilation, frequent sunshine and neighboring mountain barriers makes the Basin an area of high air pollution potential. As a result, the Basin cannot absorb large amounts of pollutant emissions without exceeding health-based air quality standards. [101]

No commentor disputed California's determination of the existence of a continuing problem; indeed, the industry itself commented that "[T]here is no question that California continues to face severe ozone air-

[100] CARB Waiver Request Letter, Docket entry II-A-1, at 11.

[101] SCAQMD Comment, Docket entry IV-G-50, at 4.

quality problems."[102]

Based on previous showings by California in this regard, the submissions to the record by CARB and other parties in support of CARB's position and CARB's response to the the MVMA comments, EPA agrees that California continues to face the requisite compelling and extraordinary conditions. Thus, I cannot deny the waiver request on the basis of a lack of compelling and extraordinary conditions.

C. Consistency with Section 202(a)

1) The Standard of Review for Consistency

Under section 209(b)(1)(C), I cannot grant California its waiver request if I find that California standards and accompanying enforcement procedures are not consistent with section 202(a) of the Act. California's standards are not consistent with section 202(a) if there is inadequate leadtime to permit the development of technology necessary to meet those requirements, giving appropriate consideration to the cost of compliance

[102] Letter from Thomas H. Hanna, President, MVMA and George C. Nield, President, AIAM to William K. Reilly, Administrator, EPA, dated January 29, 1992, Docket entry II-D-01, at 6.

within that time frame. California's accompanying enforcement procedures would also be inconsistent with section 202(a) if the Federal and California test procedures were inconsistent.[103] CARB has determined that these amendments to its standards, certification procedures, and enforcement procedures do not cause the California requirements to be inconsistent with section 202(a).[104]

The scope of EPA's review of whether California's action is consistent with section 202(a) is narrow; it is limited to determining 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 procedures.[105]

As discussed earlier in Section III (Standard and Burden of Proof), the burden of proof in waiver proceedings lies squarely with the parties who oppose the waiver. In the instant proceeding, automobile industry opponents of the waiver request have presented evidence for EPA's

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[103] See Section I above ("INTRODUCTION") for discussion of Section 202(a).

[104] CARB Resolution 90-58, dated September 28, 1990, Docket entry II-A-5, and Executive Order G-673, dated October 2, 1991, Docket entry II-A-9.

[105] See MEMA I, 627 F.2d at 1126.

consideration which they believe should lead EPA to make the finding of inconsistency with section 202, and therefore cause EPA to deny this waiver request.

CARB has reviewed the cases in which the D. C. Circuit Court of Appeals, (the only court to have reviewed EPA section 209 waiver decisions) has opined on the test for technological feasibility, and believes that the most relevant decision is National Resources Defense Council v. EPA (hereinafter referred to as "NRDC"), 655 F.2d 318 (D.C. Cir. 1981). In NRDC (which was a consolidated case), several automobile manufacturers and NRDC petitioned the court to review EPA's particulate standards for diesel cars and light trucks, arguing that they were too stringent (the industry argument) or not stringent enough (the NRDC argument). In upholding the Agency's actions, the court concluded:

> Given this time frame [a 1980 decision on 1985 model year standards], we feel that there is substantial room for deference to the EPA's expertise in projecting the likely course of development. The essential question in this case is the pace of that development, and absent a revolution in the study of industry, defense of such a projection can never possess the inescapable logic of a mathematical deduction. We think that the EPA will have demonstrated the reasonableness of its basis for prediction if it answers any theoretical objections to the (projected control technology), identifies the major steps necessary in refinement

> of the technology, and offers plausible reasons for believing that each of those steps can be completed in the time available.[106]

CARB points to NRDC as important for EPA's consideration of its LEV waiver request because it stands for the proposition that Congress intended regulators to project future advances in pollution control technology rather than be limited to the technology existing when the standards were set. CARB used the framework of the three-part test articulated in the NRDC case to present its evidence of technological feasibility in its submissions. Detailed discussion of CARB's information, the information from MVMA/AIAM and other parties, and EPA's evaluation of these submissions appears below at pages 67 to 141.

The industry opponents disagree with CARB's contentions regarding the applicability of NRDC. MVMA/AIAM further argue that CARB has failed to satisfy the criteria set forth in the NRDC decision. They contend that the "core principle of general importance in NRDC was that 'the presence of substantial leadtime for development before manufacturers will have to commit themselves to mass production of a chosen prototype gives the agency greater leeway to modify its standards if the actual future course

[106] NRDC, 655 F.2d at 331-32 (emphasis added).

of technology diverges from expectations.'" [107] Accordingly, MVMA/AIAM argue that NRDC requires CARB to conduct a meaningful technological feasibility/cost review at appropriate intervals before the industry must commit fully to major expenses in new pollution control technologies. MVMA/AIAM conclude that CARB has neither set adequate rules for these periodic reviews nor allowed for adequate leadtime for development of necessary technology for this program, and therefore has failed to satisfy the criteria set forth in NRDC.

Rather than relying on NRDC, the industry opponents invoke International Harvester as the controlling case. As already discussed, the industry opponents assert that International Harvester requires that the burden of proof on technological feasibility be shifted to CARB. For the reasons stated above in Section III, EPA rejected that contention.

With respect to the standard to be applied in this decision in determining whether EPA should find that California's LEV program standards are technologically feasible in the lead time provided, I note that the court in NRDC pointed out that the court in International Harvester "probed deeply into the reliability of EPA's methodology" because of the relatively short amount of lead time involved (a May 1972

[107] MVMA/AIAM March 1992 Comment, Docket entry IV-G-13, at 47, n. 93.

decision regarding model year 1975 vehicles) and because "the hardship if a suspension were mistakenly denied outweighed the risks of a suspension needlessly granted." [108] The NRDC court continued: "The present case is quite different; the 'base hour' for commencement of production is relatively distant, and until that time the probable effect of a relaxation of the standard would be to mitigate the consequences of any excessive strictness in the initial rule, not to create new hardships." [109] The NRDC court further noted that International Harvester did not involve an agency's prediction of future technological advances, but an evaluation of presently-available technology. [110]

Similarly, CARB points out that the fundamental difference in these two cases was the amount of lead time available to the industry to comply with the contested EPA rules, a shorter time in International Harvester, and a longer period in NRDC. While the shorter time period in International Harvester "necessitated the Court's searching scrutiny of EPA's methodology," [111] CARB argues that International Harvester is not an appropriate test where there is substantial lead time to develop or refine

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[108] 655 F.2d at 330.

[109] Id. The "hardships" referred to are hardships that would be created for manufacturers able to comply with the more stringent standards being relaxed late in the process.

[110] Id.

[111] Id. at 53.

technologies.[112] Because of the extent of lead time available to the industry before it must begin to comply with the more stringent elements of the California LEV program, CARB believes the rule derived from NRDC is more appropriately applied to its technological feasibility analysis than the International Harvester rule, which should apply to relatively short leadtimes.

In ensuring that EPA's review of the record in this proceeding is a reasoned one, EPA reviewed carefully the parties' discussion of the above court decisions. A review of EPA's history of waiver decisions shows that, in previous evaluations of whether a California standard must be found inconsistent with section 202(a), the Administrator has looked to court decisions applying section 202(a) to the adoption of Federal standards. While these cases are helpful to this process, I must also evaluate waiver requests in light of Congressional intent regarding the waiver program generally. An important motivation behind enactment of section 209(b) was to foster California's role as a laboratory for motor vehicle emission control, in order "to continue the national benefits that might flow from allowing California to continue to act as as a pioneer in this field."[113]

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[112] Id. at 56, quoting NRDC, 655 F.2d at 331.

[113] 40 Fed. Reg. 23,102, at 23,103 (waiver decision citing views of Congressman Moss and Senator Murphy), (May 28, 1975).