INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

for commercial vehicles, CARB tested two 2007 model year vehicles that demonstrated launch times and distances similar to those modeled by AVL. CARB provides its launch test data for a Caliber and Caravan (Enclosures 117 and 118) and observes that despite the manufacturers' opinion on this issue, one manufacturer is currently producing vehicles with the same allegedly inadequate launch time performance. CARB also notes that it had provided (at the May 30 hearing) several simple technology approaches that could improve launch time performance and maintain GHG emission performance.

Letters:
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 18.
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-0422-7) p. 84.

(2) Regarding manufacturers' complaints that gradeability and 50-70 passing times were not maintained in the vehicle modeling, AVL modeling data clearly demonstrate that if the modeled vehicles were allowed to downshift, typical in normal vehicle operation, both gradeability and 50-70 passing times were equivalent to and in some cases exceeded that of the baseline vehicles. CARB cites the FSOR Comment & Response 158.

Letters:
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 18.
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-0422-7) p. 85.

(2) Manufacturers' claims that premium grade gasoline is required to maintain the vehicle performance modeled by AVL for those technology combinations that incorporated direct injection and turbocharging are without merit. AVL has considerable experience in the modeling and development of direct injection, turbocharged applications and responded that vehicle performance of the modeled vehicles would be undiminished when using regular grade gasoline. CARB provides a copy of an email from AVL to CARB in support of their position on this issue.

Letters:
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 18.
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-0422-7) p. 86.

(E) The AVL/CRUISE model is superior to the VEHSIM model that is relied upon by manufacturers.

(1) The manufacturers' modeling arguments appear to focus heavily on (and distort the importance of) certain inputs to AVL's modeling. However, the AVL/CRUISE

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

model is clearly superior to the manufacturer consultant's VEHSIM model. In support of this conclusion, CARB cites ISOR FSOR Comment & Response 254 and the Declaration of Steve Albu (Document ID 0010.123), and lists several specific reasons why the AVL/CRUISE model is superior, including: 1) CRUISE is used for industry-wide applications, while VEHSIM is for small-scale applications; 2) CRUISE is used by manufacturers, while VEHSIM is used by no one other than the opponent's consultants; 3) CRUISE uses actual engine maps, whereas VEHSIM uses approximations of such maps with multiple embedded assumptions; and 4) CRUISE avoids the double-counting that was a concern of the 2002 NAS study, whereas it is unclear how VEHSIM does this. CARB notes that there are additional problems with the VEHSIM model, which are discussed in the Supplemental Expert report of Mr. K.G. Duleep on pp. 3-5 (and provided as attachments 106-08 to its letter), and concludes that NESCCAF and CARB had good reason to rely on AVL and its CRUISE model, despite manufacturers' contrary analysis using VEHSIM.

Letters:
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 19.

2.3.1.1 Lead Time for Control Technology Development

(A) The lead time allowed under California's GHG regulations is sufficient.

(1) Manufacturers have had ample notice of the requirements since they were adopted in August of 2005, six years before full implementation of near-term requirements and ten years before full implementation of the mid-term requirements. All of the technologies identified for the near-term are "off-the-shelf" technologies that could be readily incorporated into manufacturers' vehicles by 2012. Only three emerging technologies were projected as additional technologies needed for the mid-term: camless valve actuation, HCCI, and Integrated starter/generator (ISG). ISG has already been developed to commercial status, and HCCI and camless valve actuation are projected to be commercially viable within the 2013-2016 timeframe. CARB notes that GM and DaimlerChrysler conceded in their Vermont federal court trial that there is no compliance issue through at least MY 2010 for GM and through at least MY 2011 for DaimlerChrysler, and provide trial excerpts as supporting documentation. CARB provides additional discussion and testimony regarding the technologies available and modeled by AVL and concludes that it has clearly met both NRDC and International Harvester lead time tests as EPA has applied them in the waiver setting.

Letters:

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 20.
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-0422-7) p. 77-81.
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-0421-5) p. 38.
National Association of Clean Air Agencies (EPA-HQ-OAR-2006-0173-1604) p. 8.

(2) California has made a compelling demonstration that its standards can be met within the lead-time allowed and has shown that the emission levels required by the standards can be met with almost no changes to vehicles in the early years. CARB staff thoroughly evaluated available technologies over a long period of time with the support of independent consultants and discussions with manufacturers of those technologies and of motor vehicles. The GHG regulations rely less on "technology-forcing" than on repackaging a combination of "off-the-shelf" technologies to meet the adopted standards. CARB has amassed significant documentation that supports the conclusion that the standards are technically feasible and cost effective. There is currently no basis to deny the waiver under Section 209(b)(1)(C) as inconsistent with Section 202(a).

Letters:
National Association of Clean Air Agencies (EPA-HQ-OAR-2006-0173-1604) p. 9.
Natural Resources Defense Council (NRDC) (EPA-HQ-OAR-2006-0173-1672) p. 3-5.
Manufacturers of Emission Controls Association (EPA-HQ-OAR-2006-0173-1294) p.2.

(3) There is no dispute about the automotive industry's ability to comply with California's standards in the near term and no question about the availability of the necessary technology through 2011. As described in the May 22 public hearings, multiple technologies developed to meet the California rule are already in production and are being deployed in street vehicles in advance of California's expectations. The only disputed issue regards the automotive industry's ability to comply beyond 2011, however, California has made a compelling and comprehensive demonstration that its 2012-2016 standards can be achieved, given the available lead time. CLF and NRDC urge EPA to consider the following three points for purposes of its lead time determination. First, EPA must recognize that the lead time clock for implementing measures to comply with the 2012-2016 standards does not start now, but rather began in 2005 or earlier since AB 1493 was enacted in 2002 and adopted in 2005. The automotive industry has at least seven to ten years to meet the 2012-2016 standards. CLF adds that the industry scenarios are not credible and that certain manufacturers have based their compliance analyses on a series of worst-case economic and technical assumptions, which are not realistic. Given those lead time ranges, the case law is clear that California, like EPA, is to be afforded significant deference regarding its determination of technological feasibility under § 202(a). Second, the lead time consideration for purposes of the Clean Air Act's consistency

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

criterion, 42 U.S.C. § 7543(b)(1)(C), is analogous to that applied by the National Highway Traffic Safety Administration ("NHTSA") in its implementation of corporate average fuel economy ("CAFE") standards, which also have a similar technology-forcing criterion. Third, the lead time consideration includes an economic component. EPA must consider the costs to consumers, not just the costs to automotive manufacturers and must also analyze market conditions and competition as well as the cost to consumers to own and operate a compliant vehicle. EPA must take into account rising costs of fuel, as well as the strong trends in consumer preference for cleaner, more efficient vehicles.

Letters:
Conservation Law Foundation (EPA-HQ-OAR-2006-0173-1502) p. 3.
Conservation Law Foundation (EPA-HQ-OAR-2006-0173-0422-24) p. 228-233.

(4) Commenters generally note that the California GHG emission standards and enforcement procedures are consistent with Section 202(a) of the CAA since the requisite technology either presently exists or could be developed by the standard's compliance deadlines. Environmental Entrepreneurs testified that the technologies that were considered in developing the GHG regulations were limited to those that could be demonstrated or were already in production in the 2002-2004 time frame in order to create a compliance scenario with which the auto manufacturers could easily comply in the proposed timeframe.

Letters:
Center for Biological Diversity (EPA-HQ-OAR-2006-0173-1485) p. 8-9.
Environmental Entrepreneurs (EPA-HQ-OAR-2006-0173-1421-15) p. 87-89.
Jackson, Mike; TIAX Corporation (EPA-HQ-OAR-2006-0173-0421-44) p. 217-218.

There are a number of technologies that could be used in the near term, either individually or in combination, to meet California's GHG performance standards in the proposed time frame.

(1) Variable valve control is becoming increasingly prevalent in the vehicle fleet. Variable valve timing alone has penetrated 54.5% of the light duty fleet. CARB notes that variable valve lift use is expanding (attachments 84-86) and provides as an attachment 117 and 118 to its letter lists of 2007 and 2008 MY vehicles with GHG technologies.

Letters:
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 13-14.

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

(2) There are three manufacturers that are currently marketing cylinder de-activation on both OHV and OHC engines across a wide variety of applications in the U.S.

Letters:
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 14.

(3) There are already numerous examples of light-duty, stoichiometric gasoline engine-equipped vehicles using advanced three-way catalyst systems and advanced engine controls that meet California's LEV II program emission requirements. GM currently markets two vehicle models with direct injection and projects that by the end of 2010, one in every six GM vehicles will be equipped with a direct injection engine. CARB adds that other manufacturers are increasingly incorporating direct injection technology into their vehicles (e.g., Ford, Mazda, Mitsubishi, BMW, VW, and Audi) and provides relevant articles (e.g., Enclosure 91) to document the growth in the use of this technology. MECA adds that emission control technologies exist today to ensure that diesel and lean gasoline vehicles can meet the same emission standards as today's stoichiometric gasoline vehicles, and enable these advanced powertrains to be viable options for reducing GHG emissions from light-duty vehicles.

Letters:
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 14.
Manufacturers of Emission Controls Association (EPA-HQ-OAR-2006-0173-1294) p.2.
Manufacturers of Emission Controls Association (EPA-HQ-OAR-2006-0173-0422-9) p.104-112.

(4) Turbocharging is widely employed on manufacturers' European vehicles and is currently available on several models in the U.S. Historically, turbocharging has been used to improve vehicle performance. More recently, however, engine charging is considered a key enabling technology for GHG reduction. CARB provides the article "Boosting the Future" as supporting documentation and notes that Saab continues to successfully apply turbochargers without requiring more expensive premium fuel that opponents may claim is necessary.

Letters:
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 14.

(5) Six-speed automatic transmissions are currently used by almost all manufacturers marketing vehicles in the U.S. Automated manual transmissions can be found in BMW and VW vehicles today and Ford is planning to use these transmissions in the European vehicles. Several manufacturers, most notably Nissan, Toyota, Ford and

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

Chrysler, are currently offering passenger cars and SUVs using continuously variable transmissions.

Letters:
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 14.

(6) Most manufacturers are applying electrohydraulic and electric power steering to their mild or strong hybrid vehicles, including GM's line of full size hybrid trucks. Honda, Toyota, and Mazda have several non-hybrid vehicles using these technologies.

Letters:
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 14.

(7) The development of more efficient, low-leak mobile air conditioning systems and the use of a low global warming potential refrigerant have already been mandated by the European Union under Directive 2006/40/EC. (CARB provides a copy of this as attachment 92 to its letter.) This essentially mirrors the technology and phase-in requirements of CARB's motor vehicle regulations. Therefore, transfer of improved air conditioning technology developed for European applications to manufacturers' U.S. vehicles should not provide a significant challenge to the manufacturers. Manufacturers will incur the associated costs even absent California GHG regulations, and any additional cost to incorporate the technology on vehicles marketed in the U.S. should be minimal.

Letters:
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 15.

(8) Improved aerodynamics are easily incorporated into vehicle design either during model updates or initial vehicle design. According to the manufacturers, aerodynamic improvements are relatively easy to accomplish and according to at least one major manufacturer, relatively cost-free. CARB provides an article from Edmunds.com (attachment 93) as supporting documentation.

Letters:
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 15.

(9) Valeo, a major component supplier, anticipates commercialization of camless valve actuation technology by 2010 and is working with several manufacturers to bring it to market. CARB provides an Automotive News article (87) as supporting documentation.

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

Letters:
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 15.

(10) All major manufacturers are pursuing homogeneous charge compression ignition due to its potential to significantly reduce both criteria and GHG emissions at a relatively lower cost, and its application across a wide variety of fuels. GM is expected to demonstrate this technology in a vehicle in 2007 and Ford has announced that it could be in production within four years. Regarding manufacturers' concerns that HCCI operation over an engine's full speed and load range has not yet been demonstrated, the system modeled by AVL reflected limited HCCI operation, consistent with the current state of HCCI development. CARB provides an Autoweek article (89) and the NESCCAF September 2004 report as supporting documentation.

Letters:
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 15.

(11) Alternatively fueled vehicles (e.g., E85) are the current mantra of domestic manufacturers and efforts to mandate the use of alternative fuels by state and federal governments are ongoing. To the extent that manufacturers deliver on their promises to build millions of these vehicles and to cooperate on supporting fueling infrastructure, this will provide an additional significant compliance mechanism. CARB provides additional discussion on this issue citing to statements by major manufacturers and noting that three CEOs of domestic manufacturer have committed to make up to half of their 2012 and later model year production capable of running on alternative fuels. CARB provides a copy of the President's Twenty in Ten plan (94); the Low Carbon Fuel Standard Executive Order (115); Statements by Ford, DaimlerChrysler, GM, and the Alliance (95-100); Expert Report of Mike Jackson exhibits used with Mr. Jackson in the Vermont trial (101-02) to support its position that alternative fuel use can and will help achieve GHG emission reductions.

Letters:
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 15-16.

(12) Vehicles using integrated starter generator technology are generally considered to be mild hybrids. A current example of this is the Saturn Vue Green Line, which uses a relatively low cost, belt driven starter/generator system that shuts off the engine at idle and assists during acceleration. CARB provides an article and brochure (103-04) as supporting documentation.

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

Letters:
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 16.

(13) Improved alternator technology reduces greenhouse gases by improving the charging efficiency of the alternator. BMW and Mercedes Benz currently use the technology on some models. CARB provides an Autonews article as supporting documentation.

Letters:
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 16.

(14) To meet both the near and mid-term fleet average standards, manufacturers will be combining several technologies in many cases. CARB provides additional discussion on existing examples of combined technology (e.g., VW and Audi combining direct injection, turbocharging, engine downsizing, and continuously variable transmissions in several models) and also provides articles to document this approach and support its assertion that a combination of technologies can be used to meet the California GHG standards. CARB also notes that manufacturers are aggressively introducing new hybrid vehicles well ahead of these standards (for which CARB projected no significant additional penetration needed) despite the manufacturers' own analyses showing high hybrid costs.

Letters:
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 16-17.

(15) Manufacturers could build affordable vehicles with existing technology that would meet or exceed the California GHG standards. Engineers at UCS have created a minivan design, the UCS Vanguard, that shows how automakers could meet the standards using a combination of vehicle technology and low-carbon fuels. This minivan features off-the-shelf engine, transmission, and fueling systems technology, runs on E85, and would save consumers money, maintain vehicle safety and performance, and cut global warming pollution by more than 40 percent. Automakers have yet to combine these technologies, which are all in-use today, into one single package. UCS provides additional discussion on this vehicle noting that it would lead to both GHG emission reductions and operational savings for the consumer.

Letters:
Union of Concerned Scientists (EPA-HQ-OAR-2006-0173-0422-25) p. 234-238.
Union of Concerned Scientists (EPA-HQ-OAR-2006-0173-0421-34) p. 171-175.

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

(D) The manufacturers have made no showing with concrete evidence, that the California GHG emission standards are not technologically feasible in the proposed time frame.

(1) The opponents' omission of any substantive discussion of the limited technological feasibility and lead time issues EPA can consider in its consistency review is glaring - as is the failure of any individual manufacturer to step forward with such evidence - and precludes EPA from finding inconsistency. CARB cites the letters dated June 15, 2007 submitted by the Alliance (p. 35-36; procedural discussion only), AIAM (p. 9-13; only minimal technical discussion), and GM (no technical discussion). In fact, not a single manufacturer from either the Alliance or AIAM has independently presented any substantive comment concerning the principal and proper focus of this proceeding - the technological feasibility and lead time for those manufacturers to comply with the subject greenhouse gas emissions standards. CARB provides significant additional discussion with references to case law and previous testimony and documents CARB has already submitted to the Docket in support of their position on this issue. CARB notes that the Alliance only provides a list of minor technical issues on which it claims it lacks information, but that these issues have been exhaustively addressed in materials previously submitted to the Docket (CARB provides a listing of relevant documents and testimony). CARB refutes AIAM's statements regarding lead time by providing specific references to testimony and other documentation. CARB also notes that AIAM's comments on p. 9-13 of their letter appears to reflect a misunderstanding of the regulatory process - i.e., that California must first finalize its regulations before EPA can review a waiver request - and provides documentation in support (Enclosure 163). Along with many other documents, CARB cites specifically to Enclosure 125 in their June 14 comment letter in support of their position that individual manufacturers can meet most, and in some cases, all of California's standards in the early years of implementation, and in many cases without doing anything beyond following their current business plans. CARB concludes that the opponents' fundamental failure to meaningfully address the technical feasibility and lead time issues in this proceeding is fatal to more than their consistency argument. It also dooms opponents' protectiveness argument, which appears to depend heavily on manufacturers' claimed inability to reduce their greenhouse gas emissions sufficiently without resorting to technologies costing several thousand dollars per vehicle.

Letters:
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-3601) p.1-2, 26-28.

(2) The opponents' modeling suffers from numerous conservative assumptions compounded by methodological errors and inherent weaknesses. Opponents'

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

modeling is speculative because it locks in individual manufacturers' fleets. Opponents' modeling analysis also relies on numerous correction and adjustment factors, fails to model low-cost technologies available in the near- to mid-term technologies, and fails to model some higher cost technologies that while not obviously cost-effective for the mid-term, are being implemented by manufacturers for market and other reasons even now despite higher costs (e.g., higher announced diesel penetration, downsize turbocharged engines with direct gasoline injection, mild hybrids, continuously variable transmissions, electric power steering, packaging improvements, low rolling resistance tires, aerodynamic drag reduction, camless valve actuation, and HCCI). The obvious feasibility of these omitted technologies for compliance with the later years of the near-term and for the mid-term standards is abundantly clear from all of CARB's prior and more recent submissions. CARB provides significant additional discussion in support of their position, citing to a number of documents that are provided as enclosures with their comment letter.

Letters:
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-3601) p. 28-31.

2.3.1.2 Compliance Costs

(A) CARB's cost estimates are reasonable.

(1) While component costs supplied by Martec for the NESCCAF study used by CARB are generally not disputed by the manufacturers, they maintain that the retail price equivalent factor of 1.4 used by CARB is too low. As noted at the May 30 waiver hearing, the 1.4 factor is fully consistent with factors used by other agencies such as the U.S. EPA, Argonne National Laboratories, NAS, and the European Union for CO_2 abatement technologies. For example, EPA's Interim Powertrain Report 1.4.2 cites 1.26 as the retail price equivalent EPA typically uses in regulatory analyses.

Letters:
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 19.
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-0422-7) p. 81-87.

(2) Manufacturers claim that the 30 percent reduction in component costs that CARB assigned to some emerging technologies was inappropriate. This ignores the fact that the history of technology development is rife with examples of innovative designs that reduce both complexity and cost. Several such recent examples were cited at the May 30 hearing (Nissan's continuously variable valve timing and lift system, Honda's

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

variable flow turbocharger, and the 6-speed automatic transmission costed in the NESCCAF study incorporating the LePeletier design). CARB provides articles on these technologies as supporting documentation.

Letters:
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 19.

(3) Since CARB's cost estimates are generally fairly accurate and conservative, manufacturers have understandably tried to focus on CARB's original underestimate in one discrete area: zero-emission vehicles. But the proper analysis - if EPA should even do one, given the expansive deference to California's cost estimates that the Alliance itself argues applies here (see June 5 Alliance letter Section I.A) -- is to LEV, not ZEV. ZEV required a single breakthrough technology (batteries) far in the future; LEV and these GHG regulations assume a phase-in of multiple technologies. In ZEV, the principal (battery) technology was unavailable at adoption; for LEV and these GHG standards most technologies are available before and in the first model year. In ZEV, manufacturers at adoption had not announced plans for production; in LEV and here multiple manufacturers have announced plans for applying all near- and mid-term technologies. NRDC adds that ZEV assumed the development and implementation of advanced vehicle technologies, which is not the case with California's GHG emission standards. Also, in evaluating the manufacturers' comments on compliance costs, EPA should take into account the fact that industry has historically overestimated compliance costs by a significant amount.

Letters:
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 19-20.
Natural Resources Defense Council (NRDC) (EPA-HQ-OAR-2006-0173-0421-37) p. 182-189.
Sierra Club (EPA-HQ-OAR-2006-0173-0421-46) p. 228-232.

(B) The California GHG emission standards will result in overall savings and the potential payback period for nearly all projected technologies would be only a few years.

(1) EPA's Interim Powertrain Report (attachment 116) found that even the highest-cost diesel hybrid option for reducing greenhouse gasses was cost-effective based on a consumer payback period that assumed gasoline and diesel fuel prices of $2.25 per gallon. Payback for the gasoline technologies was two to four years.

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

Letters:
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 17.

(2) When analyzing potential payback periods for projected technologies, CARB found that nearly all would payback within a few years assuming a gasoline price of $1.74 per gallon. CARB notes that as with other assumptions in its analysis, this price assumption is very conservative. CLF adds that at this price, the payback period is 4.3 years, but when a more realistic assumption of $2.80 per gallon is used the payback period is about 2.5 years. CLF asserts that EPA's review must balance this against the industry's criticism of the analysis.

Letters:
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 17.
Conservation Law Foundation (EPA-HQ-OAR-2006-0173-0422-24) p. 231-232.

(3) Not only will California's standards allow many states to better protect the welfare of their citizens, but they will likely create jobs, enhance America's energy security, and reduce dependence on foreign oil, and save money for the consumer.

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

(4) California's economic analysis shows that owners of vehicles that meet these standards will save money due to reduced fuel and maintenance costs. The savings are large enough so that the net costs of owning and operating compliant vehicles - initial vehicle costs reflected in lease payments plus life-time fuel savings - will actually go down. This analysis was conducted when gasoline cost $1.74/gallon, but there is still a net benefit even when it is assumed that gasoline exceeds $3.00/gallon, as it does today. Therefore, there is no basis to deny the waiver under Section 209(b)(1)(C) as inconsistent with Section 202(a).

Letters:
Environmental Entrepreneurs (EPA-HQ-OAR-2006-0173-1421-15) p. 88.
Natural Resources Defense Council (NRDC) (EPA-HQ-OAR-2006-0173-1672) p. 4.

(C) California's standards will ultimately provide an economic benefit to manufacturers in that it will force production of technologies that may become widely available at a later time and will allow for gradual implementation.

(1) As demonstrated in the recent heavy-duty diesel emissions rulemaking, it is in the interest of manufacturers to minimize risk by implementing changes in stages, rather

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

than having to meet such requirements across the entire country at once. California serves as a testing site for technologies.

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

(D) Granting the California waiver would result in a significant distortion to new car commerce with no corresponding environmental benefit.

(1) CARB's GHG standards likely will result in undue constraints on motor vehicle product availability and in significant price increases that could lead to reduced sales, reduced dealership profits, reduced workforces, and/or the retention of older vehicles with lower fuel efficiencies. Predictably, manufacturers may be forced to compromise vehicle performance attributes in order to meet CARB's GHG fleet average mandate or to reduce the delivery of certain models within California initially or sometime during any given model year. CARB's GHG mandate is effectively unenforceable since consumers looking for certain models unavailable in California because they are effectively "capped out" will turn to out-of-state dealers. For example, if a manufacturer is forced by CARB's fleet average mandate to curtail the shipment of a certain pick-up truck model to California dealers, consumers interested in purchasing the truck and registering it in California will simply obtain a California-certified version of it elsewhere. This would be the inevitable result of an overly-ambitious single state standard, a result that would only be exacerbated by the patch-work adoption of CARB's standards by other states pursuant to Section 177 of the Act. If the CARB standards are implemented, California dealers would be harmed as a result of lost sales and the goals of CARB's GHG emissions program, however suspect, would be undermined. Commenter provides additional discussion in support of their position on this issue. *[See related discussion under Issue 4.2].*

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

2.3.1.3 Safety

(A) The California GHG standards will not lead to reduced safety resulting from reductions to the weight of the vehicle fleet.

(1) Regarding the downweighting theory, which holds that manufacturers will reduce the size and weight of the vehicle to comply with the regulations resulting in vehicles

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

that are less crashworthy, CARB notes that the AB 1493 legislation precludes a downweighting requirement, and downweighting is unlikely as a compliance method. No evidence to the contrary was presented at the Vermont trial. CARB notes that although downsizing would not be required to comply with the GHG standards, doing so would not necessarily compromise safety. CARB cites (and provides as attachments 135-39 to its letter) an expert report by Dr. David L. Greene demonstrating that any weight reduction that may be made to comply with these standards need not adversely affect safety, and CARB encloses the ICCT and DRI reports as additional support.

Letters:
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 20.
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-0422-7) p. 88.

(2) Reductions to the size and weight of the vehicle would not necessarily lead to a reduced level of safety. The 1998 NHTSA study has shown that a more important indicator is the weight disparity between vehicles on the road. Other research has shown that vehicle size and design are better predictors of safety than weight. The rebound effect resulting from the California GHG standards will be minimal and would be offset by recent improvements in highway safety.

Letters:
Shull, Robert (EPA-HQ-OAR-2006-0173-0422-28) p. 249-253.

(B) California's GHG regulations will not lead to increased VMT and associated increased deaths and injuries due to accidents.

(1) The manufacturers' rebound/fleet turnover safety theory predicts that increased deaths and injuries will occur on California roads since the GHG standards will lead to measurably more VMT than would occur absent the standards. CARB reiterates that the manufacturers have not met their burden on this issue (see related discussion under Issue 2.1.2) and asserts that CARB's understanding of this issue is the result of its expertise, study, and the public process used to develop the regulations (attachment 134).

Letters:
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-1686) p. 20.
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-0422-7) p. 88.

(C) California's GHG regulations are likely to have an adverse effect on safety through the rebound effect, which would increase VMT, and the fleet turnover effect, which

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

would result in vehicle downsizing and the use of older vehicles with less safety features.

(1) In addition to the impact on emissions, California's GHG regulations would have negative impacts on public health and welfare through decreased traffic safety. Traffic safety would be harmed through several mechanisms. The increased driving and congestion caused by the rebound effect would cause additional traffic fatalities and serious injuries. Increased retention of older vehicles would also deteriorate highway safety since these vehicles do not have the same advances in vehicle safety technology as newer vehicles. In addition, the shift to smaller and lighter vehicles driven by this regulation would contribute to increased traffic fatalities and serious injuries. Commenter provides additional discussion on this issue, citing to specific statistics regarding how downsizing has led (and will lead) to increased fatalities and injuries. Commenter also cites the federal truck CAFE program, which was recently reformed by NHTSA into a size-based standard. The California regulation fails to include size-based reforms and contains features that would exacerbate safety problems by placing greater regulatory pressure on downsizing cars than trucks (thus increasing the disparity between the two).

Letters:
General Motors Corporation (EPA-HQ-OAR-2006-0173-1595) p. 5-6.

(D) Waiver opponents have not met their burden of showing any safety impact that would serve as a basis for EPA to deny the wavier.

(1) CARB has considered and rejected all of the opponents' safety arguments as part of its administrative process. CARB cites several records including the response to comment document in this regard, in which the following points are made: the legislation prohibits requiring weight reduction, manufacturers can comply without reducing weight, and the opponents' own (Sierra 2004) analysis shows that weight reduction is far from cost-effective and therefore an unlikely compliance option. CARB also notes that they have submitted to EPA expert reports that disprove any safety impacts from the regulations, including David Greene's expert testimony and reports (with co-authors) demonstrating that there is no connection between increased fuel economy and highway safety and that weight reduction can both improve safety and reduce greenhouse emissions simultaneously. At least one manufacturer concurs that it is inaccurate to say that smaller or lighter cars are less safe than other vehicles (see Stuart Johnson (VW) testimony). In addition to the above points, CARB notes that the opponents' VMT safety theory is entirely based on their flawed rebound and fleet turnover arguments and is therefore equally lacking in merit.

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

Letters:
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-3601) p. 30.

Lead time clock

The California GHG regulations do not provide adequate lead time to permit compliance.

(1) The fatal problem with the lead time provided by the regulations is that CARB expected manufacturers to begin taking steps to comply as soon as the regulations were adopted on September 23, 2004, despite the fact that CARB did not submit this waiver application until December 21, 2005 and the fact that no waiver has yet been granted. Requiring manufacturers to begin complying with a state regulation that has not received a Section 209(b) waiver, and therefore is technically preempted under Section 209(a) - violates both the plain language of the Act as well as basic notions of fundamental fairness. Even though California has enacted regulations in the past that have gone into effect before the granting of a waiver, those past waivers applied to California regulations that fell squarely within the State's authority to regulate under Section 209(b) and where the granting of the waiver was largely a foregone conclusion. In this case, CARB has enacted a regulation that is beyond the State's authority to regulate.

Letters:
Association of International Automobile Manufacturers (EPA-HQ-OAR-2006-0173-1455) p. 9-13.

(2) Compliance with the GHG Regulations requires dramatic improvements in fuel economy that are not possible within the timeframe CARB proposes. Undisputed evidence presented in the Vermont trial established that the emission limits set forth in these regulations will effectively require increasing fleet average fuel economy levels ranging from 27.6 mpg in 2009 up to 43.7 mpg in 2016 for the Passenger Car/Light Duty Truck category. AIAM provides additional discussion on this issue noting that CARB's designated representative on lead-time issues testified that it will actually take some manufacturers up to six years to comply with the 2011 standards and seven years to comply with the 2012 standards. Given that the regulations go into

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

effect in 2009 and that substantial lead time is required, it is clear that CARB expected manufacturers to immediate initiate steps towards compliance, despite the fact that the GHG regulations are preempted under EPCA and ineligible for a waiver. Nothing in Section 209(b) can be read to require manufacturers to comply with a regulation that has not received a waiver.

Letters:
Association of International Automobile Manufacturers (EPA-HQ-OAR-2006-0173-1455) p. 9-13.

Alternative Argument re Endangerment –

Even though the *Massachusetts v. EPA* decision established that GHG emissions should be considered "air pollutants" for potential regulation under Section 202(a), EPA still needs to decide whether to make an endangerment finding and then, pursuant to Section 202(a)(2), what technologies to require and when to require them. *[See related discussion under Issue 5].* The California GHG standards are not consistent with Section 202(a) because EPA has not: determined that the Agency will regulate CO_2 or other GHG emissions under Section 202, set the form of any such 202(a) regulation, or made an endangerment finding. As such, there is no way for EPA to evaluate consistency. Any attempt to evaluate consistency with Section 202(a) in advance of EPA's evaluation of endangerment, and (if a positive finding is made) in advance of EPA's settling the fact and form of GHG regulations on the federal level, would be premature. California does not address the "endangerment finding" requirement in Section 202(a)(1) in its discussion of whether its regulations are consistent with Section 202(a). Instead, California examines consistency with Section 202(a)(2) of the CAA, focusing on technological feasibility and lead time. Section 209(b)(1)(C) requires consistency with both of these Sections. It is arbitrary and capricious to attempt to make a comparison to determine consistency with a set of standards EPA has not yet issued. Commenters provide significant additional discussion, citing to case law, public hearing testimony, previous California waiver requests, and/or relevant sections of the CAA (e.g., Section 202(b)(2)) to support their opinion on this issue.

Letters:
Alliance of Automobile Manufacturers (EPA-HQ-OAR-2006-0173-1297) p. 28-34.
Alliance of Automobile Manufacturers (EPA-HQ-OAR-2006-0173-1519) p. 7-8.

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

Association of International Automobile Manufacturers (EPA-HQ-OAR-2006-0173-1455) p. 9.
National Automobile Dealers Association (EPA-HQ-OAR-2006-0173-1671) p. 3-4.
Utility Air Regulatory Group (UARG) (EPA-HQ-OAR-2006-0173-1497) p. 6-7.

(2) The fact that the current California waiver request pertains to climate change regulations, rather than to conventional pollutants, means that EPA should not give California's waiver request a presumption of consistency under Section 209(b)(1)(C). EPA should either find that the California GHG standards are inconsistent with Section 202(a), because EPA has not made a judgment at this point that GHG emissions should be regulated under Section 202(a), or hold the request in abeyance until its own work under Section 202(a) is at a point that allows for a considered judgment on the issue of consistency.

Letters:
Alliance of Automobile Manufacturers (EPA-HQ-OAR-2006-0173-1519) p. 9-10.

(3) California's waiver requests in nearly all previous cases have been to address pollutants for which an endangerment finding has already been made. Generally, when EPA grants a waiver request under Section 209(b), it is for a criteria air pollutant that EPA has listed under Section 108 of the CAA. In these cases, EPA has already made the endangerment finding required under Section 202(a)(1) because Section 108 requires the EPA Administrator, before listing a pollutant under Section 108, to make an endangerment finding parallel to that under Section 202(a)(1) (in addition to meeting other criteria not present in Section 202). The only two instances when EPA granted waivers for California under Section 209(b) where an endangerment finding had not already been made (i.e., PM in 1984 and formaldehyde in 1993), are readily distinguishable from the present matter and were based on legislative history and/or existing language in the CAA. In contrast, there is no legal basis for authorizing the regulation of GHG emissions from new motor vehicles in the absence of an endangerment finding under Section 202(a)(1).

Letters:
Utility Air Regulatory Group (UARG) (EPA-HQ-OAR-2006-0173-1497) p. 7-8

The fact that EPA does not currently regulate GHG emissions is not relevant to EPA's consideration of the waiver request.

Letters:

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

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

(2) Contrary to opponents' argument (i.e., Alliance and AIAM), *Massachusetts et al. v. EPA* does not provide EPA with shelter to find inconsistency on the ground that EPA must by first make its own endangerment finding on GHG emissions before granting California's waiver request. That *Massachusetts et al. v. EPA* contemplated activity at the federal level" and that Executive Order 13432 requires coordination among federal agencies is entirely irrelevant. *[See related discussion under Issues 4 and 5].* There has been a great deal of federal activity and coordination on hydrocarbons, oxides of nitrogen, particular matter, toxics, and other motor vehicle emissions over the last three decades. Congress provided a mechanism for EPA to continually review standards for those pollutants and to set standards for others, but that remains irrelevant to the scope and pace of California's authority under Section 209(b) since Congress anticipated that California's standards would be more stringent than the national standards. CARB provides significant additional discussion on this issue citing to the IPCC Fourth Assessment release and case law in support of their position including the statements of Judge Tatel (*Massachusetts v. EPA* 415 F.3d 50, 76 (D.C. Circ 2005)) who asserted that EPA may only withhold an endangerment finding if additional information is needed to determine whether the statutory standard has been met. CARB notes that even if EPA were to err by deciding it must first make an endangerment finding before granting California's request, it can and must do so concurrently with granting the waiver.

Letters:
California Air Resources Board (CARB) (EPA-HQ-OAR-2006-0173-3601) p. 23-26.

For endangerment - 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.

c) Technological Feasibility and Cost of Compliance

Congress has stated that the consistency requirement of section 202(a) relates to

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

technological feasibility.76 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.77

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.78 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.79

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.80 This is because section 202(a) is concerned with cost of compliance during the period

---

76 H.R. Rep. No. 95-294, 95th Cong., 1st Sess. 301 (1977).
77 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).
78 See 41 Fed. Reg. 44,209 (Oct. 7, 1976).
79 Id.
80 See, e.g., 41 Fed. Reg. 42,209 (Oct. 7, 1976) and 55 Fed. Reg. 43,028 (Oct. 25, 1990).

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

"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 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.81

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).82 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.

GHG emissions from passenger cars and trucks (i.e., nitrous oxide, methane,

---

81 627 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.).
82 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).

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

certain chlorofluorocarbons (CFCs) from refrigerant leakage and CO_2) are currently regulated to the maximum extent feasible subject to statutory limitations. Nitrous oxide and methane are currently regulated by California and EPA and are already covered under an existing waiver. CFCs are subject to international restrictions under the Montreal Protocol on Substances that Deplete the Ozone Layer. CO_2 is subject to separate statutory authority and is regulated under authority granted by Congress to DOT not EPA. This same statute preempts states from infringing on this regulatory authority and is not covered by the CAA Section 209 waiver.

Letters:
Environmental Consultants of Michigan (EPA-HQ-OAR-2006-0173-0012) p. 1-3.

Cutting our consumption of Middle East oil and reducing CO_2 emissions are national imperatives, but the proposal by CARB would bankrupt the domestic auto industry, regulate light trucks and SUVs out of existence, and drive up the costs of new vehicles by $6,000. Ford, GM, and Chrysler want to be part of the solution and are investing billions of dollars to develop hybrid vehicles, plug-in hybrids, and other clean fuel technologies. The $15 billion that the domestic auto industry invests in R&D is more than any other industry in the U.S. California's waiver application contains assumptions and undocumented claims about the benefits of the mandates. It also cites false and incorrect assessments on how the auto industry can comply with the new mandates.

Letters:
Knollenberg, Joseph K.; House of Representatives, 9th District, MI (EPA-HQ-OAR-2006-0173-1292) p. 1-2. (also includes the following members of Congress as additional signatories: Timothy Walberg, Dave Camp, Fred Upton, Mike Rogers, Thaddeus McCotter, and Candice Miller)

d) Consistency of Certification Procedures

California's standards and accompanying enforcement procedures would also be

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

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.83

CARB states in its Waiver Request letter that the

Because EPA received no comments suggesting that CARB's GHG testing 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.

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. However, xxx . 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 GHG amendments, as set forth above, with respect to the 2009 and later model years.

Dated:

---

83 See, e.g., 43 Fed. Reg. 32, 182 (Jul. 25, 1978).

INTERNAL DELIBERATIVE DOCUMENT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
DISCLOSURE AUTHORIZED ONLY TO CONGRESS FOR OVERSIGHT PURPOSES IN RESPONSE TO SUBPOENA

Stephen Johnson, Administrator