

State of California
AIR RESOURCES BOARD

Final Statement of Reasons for Rulemaking,
Including Summary of Comments and Agency Response

**Public Hearing to Consider Amendments to Heavy-Duty Vehicle Regulations: 2004
Emission Standards; Averaging, Banking and Trading; Optional Reduced-Emission
Standards; Certification Test Fuel; Labeling; Maintenance Requirements and Warranties**

Public Hearing Date: April 23, 1998
Agenda Item No.: 98-4-1

I. GENERAL

The Staff Report: Initial Statement of Reasons for Rulemaking (“Staff Report”), entitled “Public Hearing to Consider Amendments to Heavy-Duty Vehicle Regulations; 2004 Emission Standards; Averaging, Banking, and Trading; Optional Reduced-Emission Standards; Certification Test Fuel; Labeling; Maintenance Requirements and Warranties,” released March 6, 1998, is incorporated by reference herein.

Following a public hearing on April 23, 1998, the Air Resources Board (ARB or Board) by Resolution 98-17 approved amendments to the existing regulations for the use and sale of heavy-duty diesel engines (HDDEs) and vehicles in the state of California. The amended regulations are contained in Title 13, California Code of Regulations (CCR), Section 1956.8, “California Exhaust Emission Standards and Test Procedures for 1985 and Subsequent Model Heavy-Duty Engines and Vehicles”; Title 13, CCR, Section 1965, “California Motor Vehicle Emission Control Label Specifications”; Title 13, CCR, Section 2112, “Useful Life Definition for Heavy-Duty Engines and Vehicles for the Procedures for In-Use Vehicle Voluntary and Influenced Recalls”; and Title 13, CCR Section 2036, “Defects Warranty Requirements for 1979 Through 1989 Model Passenger Cars, Light-duty Trucks, and Medium-Duty Vehicles; 1979 and Subsequent Model Motorcycles and Heavy-duty Vehicles; and Motor Vehicle Engines Used in Such Vehicles.”

II. BACKGROUND

In 1994, the Board approved a State Implementation Plan (SIP) for ozone. The SIP contains measures M5 and M6, which call for new state and national emission standards for heavy-duty diesel engines (HDDEs) beginning in 2004. In June 1995, ARB, the United States Environmental Protection Agency (U.S. EPA), and the manufacturers of heavy-duty vehicle engines signed a statement of principles (SOP) calling for harmonization of ARB and U.S. EPA heavy-duty vehicle regulations. In October 1997, U.S. EPA adopted new emission standards,

along with changes to the existing federal averaging, banking, and trading (ABT) program, and changes to useful life and maintenance requirements for HDDEs.

Accordingly, staff proposed amendments to California's HDDE regulations that incorporated new oxides of nitrogen plus non-methane hydrocarbons (NO_x plus NMHC) mandatory and optional reduced-emission standards for 2004 and subsequent model year HDDEs. Staff's proposal also included provisions that would allow manufacturers of HDDEs used in vehicles with a gross vehicle weight rating (GVWR) over 8,500 pounds to participate in the federal ABT program. Finally, staff's proposal included provisions modifying the warranty, maintenance, useful life, and rebuild requirements for both diesel-cycle and Otto-cycle engines. The amendments were designed to align California and federal HDDE programs as closely as possible, while maintaining the emission reduction benefits of the current California program.

III. MODIFICATIONS TO THE REGULATIONS

The original staff proposal was modified to include three changes, noticed for 15-day availability from November 6 to November 23, 1998. The modifications to staff's original proposal were designed to allow medium-duty diesel engine (MDDE) manufacturers additional flexibility in producing a 50-state product line, while ensuring the air quality benefits of California's medium-duty program. In addition, other minor modifications were proposed to improve the clarity of the regulations and correct minor typographical errors.

The first modification allows manufacturers of medium-duty diesel engines (diesel engines used in vehicles over 8,500 pounds and through 14,000 pounds GVWR) to generate California-only ABT credits for NO_x plus NMHC and particulate matter (PM) beginning in 1998 for use in 2004 and later. The second modification to the original proposal allows manufacturers of MDDEs to certify on California fuel through 2005. Finally, the third modification combines medium-duty vehicles and light heavy-duty vehicles into one averaging set.

A. MANUFACTURERS OF MDDES WOULD PARTICIPATE IN ABT BEGINNING IN 1998.

The original staff proposal would have allowed manufacturers of MDDEs used in medium-duty vehicles (over 8,500 pounds and through 14,000 pounds GVWR) to participate in the federal ABT program beginning in 2004 and later model years. However, manufacturers of MDDEs believe that participation in ABT before 2004 is critical to their plans. Manufacturers want to produce a nationwide product line, rather than one engine for California and a separate engine for the other 49 states. Manufacturers also believe that the original proposal for California's participation in ABT, as presented in the initial statement of reasons/staff report, was counter to the harmonization intended under the 1995 SOP.

To address manufacturers' concerns, staff developed a modified proposal that would not compromise California's SIP benefits. The modified proposal allows manufacturers of MDDEs,

produced for sale in California, to generate California-only ABT credits for those engines that certify to a family emission limit (FEL) below the California medium-duty standards for NOx plus NMHC or PM. The modified proposal provides MDDE manufacturers with several options for generating medium-duty ABT credits. For example, MDDE manufacturers could generate medium-duty ABT credits for: 1) certifying MDDEs to a FEL below the California medium-duty standards; or 2) certifying MDDEs to the California medium-duty standards on federal fuel. However, in order to qualify for medium-duty ABT credit, MDDE manufacturers would develop a plan for generating credits and submit it to the Executive Officer for approval. Medium-duty ABT credits would be generated beginning in 1998 with credit use beginning in 2004. However, pre-2004 credits used in California must be generated in California. At the April 23, 1998, Board hearing, the Board approved this modification.

B. MANUFACTURERS PRODUCING MDDEs FOR SALE IN CALIFORNIA ARE ALLOWED TO CERTIFY ON CALIFORNIA FUEL THROUGH 2005

Reduced NOx plus NMHC emissions standards for MDDEs were adopted by the Board in 1995 for 1998 and later model year medium-duty vehicles. The Board's 1998 emission standards are more stringent than federal standards for this weight class, but give manufacturers flexibility in meeting the standards by allowing them to certify MDDEs on California fuel indefinitely. The staff's original proposal would have required manufacturers of diesel engines used in vehicles over 8,500 pounds GVWR to certify their engines on federal fuel beginning in 2004. MDDE manufacturers believe that this would reduce the flexibility provided in the existing program and would create an additional restriction when introducing reduced-emission MDDEs nationwide.

The modified proposal allows MDDE manufacturers to certify engines that are produced for sale in California on California fuel through 2005. This provision is stricter than the current medium-duty engine requirements since manufacturers could no longer certify on California fuel indefinitely. The modified provision provides manufacturers with additional flexibility when introducing MDDEs nationwide, while not creating a negative impact on anticipated SIP benefits from the medium-duty program. Anticipated SIP reductions from the California medium-duty program were based on certifying the medium-duty engines to medium-duty emission standards on California fuel beyond 2005.

C. THE AVERAGING SET FOR THE WEIGHT CLASS OVER 8,500 THROUGH 14,000 POUNDS GVWR HAS BEEN COMBINED WITH THE WEIGHT CLASS OVER 8,500 THROUGH 19,500 POUNDS GVWR.

The original proposal allowed engine manufacturers to average, bank, or trade ABT credits within a defined averaging set. Each averaging set was defined based on California's definition for each vehicle weight category. The original proposal defined four distinct averaging sets: medium-duty vehicles (over 8,500 through 14,000 pounds GVWR), light heavy-duty vehicles (over 14,000 through 19,500 pounds GVWR), medium heavy-duty vehicles (over 19,500 through 33,000 pounds GVWR), and heavy heavy-duty vehicles (over 33,000 pounds GVWR).

Staff's proposed light heavy-duty averaging set did not conform with U.S. EPA's defined averaging set for light heavy-duty vehicles (over 8,500 through 19,500 pounds GVWR). In order to conform with U.S. EPA's averaging sets, staff modified the original proposal by combining the medium-duty vehicles and light heavy-duty vehicles into one averaging set. This modification provides manufacturers with the same flexibility nationwide when averaging, banking, or trading ABT credits.

The Board has determined that this regulatory action will not create costs or savings, as defined in Government Code section 1346.5 (a) (6), to any state agency or in federal funding to the state, or result in a mandate to any local agency or school district, the costs of which are reimbursable by the state pursuant to Part 7 (commencing with section 17500), Division 4, Title 2 of the Government Code, or other nondiscretionary savings to local agencies.

The Board's Executive Officer has also determined, pursuant to Government Code section 11346.9 (a)(5), that the regulation will not affect small business. The only businesses directly affected are engine manufacturers, which are not defined as small businesses under Government Code section 11342 (h). Therefore, no alternatives which would lessen the adverse economic impact on small businesses were considered.

In accordance with Government Code section 11346.3, the Board has also determined that the proposed regulatory action will not affect the creation or elimination of jobs within the State of California, the creation of new business or elimination of existing businesses within California, or the expansion of businesses currently doing business within California. An assessment of the economic impacts of this regulatory action can be found in the Staff Report.

The Board has further determined that there will be no, or an insignificant, potential cost impact, as defined in Government Code section 11346.5 (a) (9), on private persons or businesses directly affected by this regulatory action.

Finally, the Board has determined that no alternative considered by the agency would be more effective in carrying out the purpose for which the regulatory action was proposed or would be as effective and less burdensome to affected private persons than the action taken by the board.

IV. SUMMARY OF COMMENTS AND AGENCY RESPONSE

A. FORTY-FIVE DAY WRITTEN COMMENTS

Only one comment letter was received. That comment letter contained the joint comments of the Coalition for Clean Air (CCA) and the Natural Resources Defense Council (NRDC).

Comment: The SOP process used to develop this regulation is a flawed and illegal rule development process. It excluded the public, at large, and greatly restricted the ability of ARB and the U.S. EPA in achieving the necessary emission reductions from heavy-duty engines. (CCA

and NRDC)

Response: While the SOP resulted from meetings between the U.S. EPA, the ARB, and the heavy-duty engine manufacturers, the SOP did not change the ARB's normal rule development process. The ARB held a public workshop on December 12, 1998, to present concepts for a proposed regulation, including emission limits and implementation dates. In addition to the workshop, the normal public availability and public hearing notice requirements were met. A public hearing was held on April 23, 1998. The public-at-large was not excluded from the process.

Section 11346.4 (a), Chapter 3.5, Part 1 of Division 3 of Title 2 of the Government Code, provides for public notification at least 45 days before the regulatory hearing date. ARB fulfilled the 45-day legal requirement by mailing out 3,300 notices and staff reports for public review and comment on March 26, 1998. The notice was also available on the Internet and in ARB's Public Information Office for those members of the public that were not on ARB's mailing list. As advised in the notice, a public hearing was scheduled for, and held by the Board on, April 23, 1998.

Comment: The 2004 NOx plus NMHC standard was set at a level to accommodate diesel technology rather than at a level to achieve air quality goals and protect public health. ARB must do more to push the use of clean alternative fuels. (CCA and NRDC)

Response: As mandated in Health & Safety Code sections 43018(c), 43101, and 43600, ARB's basis for considering new regulations and setting new emission standards is to protect public health and achieve air quality goals, while considering technological feasibility and economic impacts. The staff conducts ongoing reviews of heavy-duty engine technology development (including alternative fuel technology) to determine the levels of emission standards that are feasible and economically reasonable.

Alternative-fueled engines for heavy-duty vehicles are available and may be used in meeting the proposed standards. In fact, some of the alternative-fueled engines are available that have certified to emission levels lower than the adopted standard. Although even stricter emission standards may push the use of alternative-fueled engines in heavy-duty applications, these standards may not be feasible because the alternative-fueled engines are not available in a full range of models. Furthermore, the infrastructure for alternative fuel in heavy-duty vehicles, available to some fleets, is not available on a statewide, much less a nationwide, scale. With a large segment of California's heavy-duty vehicle fleet engaged in interstate commerce, requiring alternative-fueled engines for these vehicles would eliminate the ability of the California trucking industry to compete in interstate commerce because of the lack of a refueling infrastructure along interstate trucking routes.

Comment: The proposed regulations will not allow California to meet its SIP commitment, creating a 5-ton-per-day shortfall in emission benefits. California is already well into the red due to other SIP measure shortfalls. ARB should set emission standards that deliver

the SIP commitments and require use of alternative fuels so public health is adequately protected. (CCA and NRDC)

Response: SIP measure M5 has two parts. Measure M5 calls for: 1) a lower NOx emission standard for new on-road heavy-duty engines sold in California beginning in 2002, or 2) a lower NOx emission standard beginning in 2004 plus the implementation of alternative measures which achieve equivalent or greater NOx reductions. Implementation of the proposed regulations will achieve 91 percent of the required NOx reductions. The remaining 9 percent (five tons per day) will be achieved through the implementation of alternative measures. These alternative measures include introduction of alternative-fueled and low-emission diesel engines through demand-side programs and incentives. As a means of achieving additional emission reductions, ARB and the local districts are developing heavy-duty incentive measures to promote the use of alternative fuels in heavy-duty applications.

B. BOARD HEARING ORAL TESTIMONY

Comment: At the public hearing, oral testimony was given by only one speaker, a representative of the Engine Manufacturers Association (EMA). The EMA expressed support for the amended California HDDE regulations which include a new California mandatory NOx plus NMHC standard of 2.4 g/bhp-hr (or 2.5 g/bhp-hr with 0.5 g/bhp-hr NMHC cap) beginning in 2004. The EMA believes that the harmonization of the standards resulting from aligning California regulations with the corresponding federal regulations benefits its members by eliminating the costs of separate California and 49-state product lines. Furthermore, the harmonization of the ABT program for the medium-duty category is very important to manufacturers because it provides them with the necessary flexibility to introduce a nationwide product line in the medium-duty category. (EMA)

Response: The ARB developed the regulations to ensure that the maximum emission reductions would be achieved while providing for harmonization with the federal emission standards to the extent feasible. While the regulations are not completely in harmony with the federal requirements, California's standards differ because of California's need to reduce emissions beyond the level that the federal regulations would achieve.

C. 15-DAY COMMENT LETTERS

No comment letters were received.