

State of California
AIR RESOURCES BOARD

Resolution 06-27

September 28, 2006

Agenda Item No.: 06-08-05

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (ARB or the Board) to adopt standards, rules and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, in section 43000 of the Health and Safety Code, the Legislature has found and declared that the emission of air pollutants from motor vehicles is the primary cause of air pollution in many parts of the state, and in sections 39002 and 39003 of the Health and Safety Code, has charged the Board with the responsibility of systematically addressing the serious air pollution problem caused by motor vehicles;

WHEREAS, sections 43013, 43101, and 43104 of the Health and Safety Code authorize the Board to adopt and implement motor vehicle emission standards, in-use performance standards, and test procedures, which it finds to be necessary, cost-effective, and technologically feasible;

WHEREAS, section 43018(a) of the Health and Safety Code directs the Board to endeavor to achieve the maximum degree of emission reduction possible from vehicular and other mobile sources in order to accomplish the attainment of state ambient air quality standards at the earliest practicable date;

WHEREAS, section 43018(c) of the Health and Safety Code provides that in carrying out section 43018, the Board shall adopt standards and regulations that will result in the most cost-effective combination of control measures on all classes of motor vehicles and motor vehicle fuel, including but not limited to reductions in motor vehicle exhaust and evaporative emissions, and reductions in in-use vehicular emissions through durability and performance improvements;

WHEREAS, heavy-duty diesel vehicles play an important role in both California's and the national economy;

WHEREAS, heavy-duty diesel vehicles are projected to account for as much as 30 percent of the statewide mobile source oxides of nitrogen (NOx), and 20 percent of all diesel exhaust particulate matter (PM) inventory in 2010;

WHEREAS, California currently regulates heavy-duty diesel engine (HDDE) and medium-duty diesel engine (MDDE) exhaust emissions under a waiver of federal preemption granted by the United States Environmental Protection Agency (U.S. EPA);

WHEREAS, section 39667 of the Health and Safety Code authorizes the Board to adopt vehicular emission standards to reduce identified toxic air contaminants;

WHEREAS, California identified diesel PM as a toxic air contaminant in August 1998;

WHEREAS, the Diesel Risk Reduction Plan identified diesel-fueled heavy-duty motor vehicles as a source of diesel exhaust particulate matter;

WHEREAS, modeling analyses show that potential cancer risk increases as the number of diesel-fueled, heavy-duty vehicles continue to operate on-road;

WHEREAS, to reduce emissions, exposure, and associated potential cancer risk, one of the strategy the Diesel Risk Reduction Plan is to ensure in-use performance of heavy-duty diesel vehicles to certified standards;

WHEREAS, all heavy-duty diesel-fueled vehicles have significant emissions of NOx and diesel exhaust particulate matter or other toxic air contaminants;

WHEREAS, on October 25, 2001, the Board adopted more stringent emission standards for 2007 and subsequent model HDDEs and vehicles;

WHEREAS, pursuant to section 39602 of the Health and Safety Code, on October 23, 2003, the Board approved the 2003 State and Federal Strategy for the California State Implementation Plan (2003 SIP);

WHEREAS the 2003 SIP established a new roadmap for attaining the federal ambient air quality standards for ozone in all areas of the state by 2010, as required by federal law;

WHEREAS, the 2003 SIP included a measure "ON-ROAD HEAVY-DUTY-3" which defines strategies to reduce emissions from existing and new heavy-duty diesel vehicles;

WHEREAS, measure ON-ROAD HEAVY-DUTY-3 includes the emission control strategy "Manufacturer's In-Use Compliance" requiring manufacturers of HDDEs to test a specific number of engines per engine family by procuring and testing in-use vehicles at various mileage intervals;

WHEREAS, section 43104 of the Health and Safety Code directs ARB to adopt test procedures to ensure compliance with emission standards for new heavy-duty motor vehicles;

WHEREAS, the Board administers test procedures for determining in-use compliance of motor vehicles and engines with emission standards in title 13, CCR, sections 2111-2140;

WHEREAS, in order to conduct in-use compliance testing of HDDEs under applicable procedures, a minimum of ten engines must be emission-tested on a stationary engine dynamometer, which is both time-consuming and expensive because it requires that engines be removed from the vehicles to be tested and then reinstalled once testing has been completed; as a result, ARB has not utilized these test procedures to conduct compliance testing for HDDEs;

WHEREAS, in 2001, ARB staff started working collaboratively with U.S. EPA and engine manufacturers to develop an in-use testing and compliance program for HDDEs based on performing the Not-To-Exceed (NTE) test procedure which allows testing with on-board portable emission measurement systems (PEMS) during on-road operation;

WHEREAS, in May 2003, the general structure of the in-use compliance testing program was agreed-upon by all parties; based upon this collaborative work, in June 2005, U.S. EPA adopted its "Final Rule on In-Use Testing Program for Heavy-Duty Diesel Engines and Vehicles," establishing a manufacturer-run in-use testing program with which all manufacturers of HDDEs sold elsewhere in the United States must comply;

WHEREAS, in order to establish a manufacturer-run in-use compliance program for heavy-duty diesel engines in California based on the regulations adopted by U.S. EPA, the staff has proposed amendments to title 13, CCR, sections 1956.1 and 1956.8, as set forth in Attachment A hereto, and, for the test procedure documents incorporated by reference therein, amendments to the "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles" as set forth in Attachment B hereto and amendments to the "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Otto-Cycle Engines," as set forth in Attachment C hereto;

WHEREAS, the amendments proposed by staff also align the 2007 and subsequent model HDDEs and vehicles emission standards and test procedures with federal requirements by including the option of certifying MDDEs under 14,000 pounds gross vehicle weight rating to count towards the phase-in calculation provision;

WHEREAS, the Board has considered the effects of the proposed requirements on the economy of the State;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project that may have significant adverse environmental impacts be adopted as originally proposed if feasible alternatives or mitigation measures are available to reduce or eliminate such impacts;

WHEREAS, the Board finds that:

1. Despite advances in reducing emissions from mobile sources, stationary sources, and area sources, California still has the most severe air pollution problems in the United States;
2. To meet federal and California Clean Air Act emission reduction requirements, ARB must continue to seek reductions from all sources under its authority, including new and in-use diesel powered trucks;
3. The proposed amendments will help ensure that emissions generated from the new diesel vehicles comply with the certification standards throughout the useful life of the vehicle;
4. The proposed amendments include requirements that 2007 and subsequent model year truck engines comply with the NO_x, particulate matter, non-methane hydrocarbon, and carbon monoxide certification standards;
5. Particulate filters are expected to be widely incorporated into diesel-fueled HDDEs on or after the 2007 model year because new, more stringent emission standards will then be in effect for new, California certified HDDEs;
6. The economic and fiscal impacts of the heavy-duty in-use compliance requirements proposed herein have been analyzed as required by California law, and the conclusions and supporting documentation for this analysis are set forth in the Initial Statement of Reasons;
7. The environmental impacts of the heavy-duty in-use compliance requirements proposed herein have been analyzed as required by California law, and the conclusions and supporting documentation for this analysis are set forth in the Initial Statement of Reasons;
8. The proposed amendments would result in a cost savings to the engine manufacturers by aligning California and federal compliance programs, resulting in testing fewer HDDEs than they would otherwise be required to do if two separate compliance programs were in place;
9. The proposed testing program would generate a vast amount of HDDE in-use test data that can be used effectively by both the manufacturers and ARB;
10. The manufacturers would be able to evaluate the performance of the HDDEs and emission control systems under real world operating conditions and use, resulting in the design of cleaner and more durable engines;

WHEREAS, the Board further finds that:

1. The proposed amendments will have indirect emission benefits as it will help the new diesel trucks comply with the certification emission standards through their useful life;
2. The proposed amendments will not have a significant adverse environmental impact and that the regulations are projected to positively impact air quality;
3. The proposed amendments will not affect the creation or elimination of jobs within the State of California, the creation of new businesses or the elimination of existing businesses within California, the expansion of businesses currently doing businesses within California, or the ability of California businesses to compete with businesses in other states;
4. No alternative considered by the Board would be more effective in carrying out the purpose for which the regulations are proposed or would be as effective and less burdensome to affected private persons.

NOW, THEREFORE, BE IT RESOLVED that, the Board hereby approves the adoption of the amendments to sections 1956.1 and 1956.8 of title 13, CCR, set forth in Attachment A hereto, the amendments to the California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles set forth in Attachment B, hereto, and the amendments to the California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Otto-Cycle Engines set forth in Attachment C hereto, with the modifications set forth in Attachment D hereto.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to take final action to adopt the amendments set forth in Attachments A, B and C, with the modifications set forth in Attachment D and such other conforming modifications as may be appropriate, after making the modified regulatory language and any additional supporting documents and information available to for a supplemental public comment period of at least 15 days, provided that the Executive Officer shall consider such written comments as may be submitted during this period, shall make modifications as appropriate in light of the comments received, and shall present the regulations to the Board for further consideration if she determines that this is warranted after review of the comments.

BE IT FURTHER RESOLVED that the Board hereby determines that the amendments adopted herein will not cause California motor vehicle emission standards, in the aggregate, to be less protective of public health and welfare than applicable federal standards.

BE IT FURTHER RESOLVED that the Board hereby finds that separate California emission standards and test procedures are necessary to meet compelling and extraordinary conditions.

BE IT FURTHER RESOLVED that the Board finds that the amendments adopted herein will not cause the California emission standards and test procedures to be inconsistent with section 202(a) of the Clean Air Act and raise no new issues affecting previous waiver determinations of the U.S. EPA Administrator pursuant to section 209(b) of the federal Clean Air Act.

BE IT FURTHER RESOLVED that the Executive Officer shall, upon adoption, forward the regulations to U.S. EPA with a request for a waiver or confirmation that the regulations are within the scope of an existing waiver of federal preemption pursuant to section 209(b) of the federal Clean Air Act, as appropriate.

I hereby certify that the above is a true and correct copy of Resolution 06-27, as adopted by the Air Resources Board.

Lori Andreoni, Clerk of the Board

Resolution 06-27

September 28, 2006

Identification of Attachments to the Resolution

- Attachment A: Proposed amendments to title 13, California Code of Regulations, sections 1956.1 and 1956.8, as set forth in Appendix A to the Staff Report: Initial Statement of Reasons released August 11, 2006.
- Attachment B: Proposed amendments to the “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles” as set forth in Appendix B to the Staff Report: Initial Statement of Reasons released August 11, 2006.
- Attachment C: Amendments to the “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Otto-Cycle Engines” as set forth in Appendix C to the Staff Report: Initial Statement of Reasons released August 11, 2006.
- Attachment D: Staff’s Suggested Modifications to the Original Proposal (distributed at the Board hearing on September 28, 2006).

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Staff's Suggested Modifications To The Original Proposal

**PUBLIC HEARING TO CONSIDER ADOPTION OF CALIFORNIA'S HEAVY-DUTY
DIESEL IN-USE COMPLIANCE REGULATION**

Agenda Item No.: 06-08-05

The original proposal includes an amendment to the "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Otto-Cycle Engines." This amendment reflects technical amendments adopted by the United States Environmental Protection Agency (U.S. EPA) in December 2005 and allows alternative label content and formats for 2007 and later model-year heavy-duty otto-cycle engines with advance Executive Officer approval.

The original proposal also includes a variety of amendments to the "California Proposed Amendments to the "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles." It had been staff's intent to include with those proposed amendments labeling provisions identical to the alternative labeling provisions proposed for the Heavy-Duty Otto-Cycle Engine Test Procedures, as the U.S. EPA amendments applied to diesel as well as otto-cycle engines. However, the proposed labeling provision was inadvertently omitted from the diesel engine amendments. Staff accordingly suggests a modification that would add the alternative labeling provision to the Heavy-Duty Diesel Engine Test Procedures as follows:

**CALIFORNIA EXHAUST EMISSION STANDARDS AND TEST PROCEDURES FOR
2004 AND SUBSEQUENT MODEL HEAVY-DUTY DIESEL-ENGINES AND
VEHICLES**

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- 35. Labeling. §86.xxx-35,**
 A. Federal Provisions.
 1. **§86.001-35** April 6, 1994.

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B. California provisions.

1. For 2004 and later model year heavy-duty diesel engines certified under the requirements of title 13, CCR, §1956.8(a)(3), the statement of compliance requirements of this subsection shall be repeated for each of the two fueling modes of operation. Appended to the statement for the lower emitting fueling mode of operation shall be the following sentence:

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5. For 2007 and later model-year engines, the Executive Officer may approve, in advance, other label content and formats provided the alternative label contains information consistent with this section 35.

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