

## **TITLE 13. CALIFORNIA AIR RESOURCES BOARD**

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

The Air Resources Board (the Board or ARB) will conduct a public hearing at the time and place noted below to consider adoption of amendments to California's heavy-duty diesel engine (HDDE) regulations and test procedures. The proposed amendments would create an in-use compliance program for HDDEs conducted by the engine manufacturers. The proposed program is essentially identical to that of the United States Environmental Protection Agency (U.S. EPA).

DATE: September 28, 2006

TIME: 9:00 a.m.

PLACE: California Environmental Protection Agency  
Air Resources Board  
Byron Sher Auditorium  
1001 I Street  
Sacramento, CA 95814

This item will be considered at a two-day meeting of the Board, which will commence at 9:00 a.m., September 28, 2006, and may continue at 8:30 a.m., September 29, 2006. This item may not be considered until September 29, 2006. Please consult the agenda for the meeting, which will be available at least 10 days before September 28, 2006, to determine the day on which this item will be considered.

For individuals with sensory disabilities, this document is available in Braille, large print, audiocassette or computer disk. Please contact ARB's Disability Coordinator at 916-323-4916 by voice or through the California Relay Services at 711, to place your request for disability services. If you are a person with limited English and would like to request interpreter services, please contact ARB's Bilingual Manager at 916-323-7053.

### **INFORMATIVE DIGEST OF PROPOSED ACTION AND POLICY STATEMENT OVERVIEW**

**Sections Affected:** Proposed amendments to title 13, California Code of Regulations (CCR), sections 1956.1 and 1956.8, and the following documents incorporated by reference therein: "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles," as last amended July 24, 2003, and "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Otto-Cycle Engines and Vehicles," as last amended December 12, 2002.

**Background:** Health and Safety Code section 43104 directs ARB to adopt test procedures to ensure compliance with emission standards for new heavy-duty motor vehicles. Test procedures for in-use compliance of emission standards are contained in title 13, California Code of Regulations, sections 2111-2140. According to these procedures, for HDDEs, a minimum of ten engines must be emission-tested on a stationary engine dynamometer, and the emission results are then compared to the applicable emission standards to determine compliance. Conducting in-use testing with a stationary engine dynamometer 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. The proposed amendments would streamline in-use compliance testing of HDDEs in California by making California's testing requirements consistent with more flexible federal requirements.

In the 1990s, seven of the largest engine manufacturers were alleged to have violated state and federal emissions laws by disabling emission control devices on HDDEs during in-use, on-highway driving. These cases were resolved through enforcement actions which were concluded when settlement agreements were reached with the manufacturers in question. To ensure that exhaust emissions were controlled under virtually all driving conditions, most of the settling manufacturers were required to produce engines that comply with supplemental certification test procedures known as the Not-To-Exceed (NTE) test and the EURO III European Stationary Cycle (ESC) test. However, these supplemental test procedure requirements imposed by the settlement agreements expired on January 1, 2005. To ensure that HDDEs continued to be certified to the supplemental procedures, in December 2000, ARB adopted the NTE and ESC tests as part of the HDDE regulations, applicable to all 2005 and subsequent model year engines.

The NTE test procedure allows testing on an engine dynamometer, a chassis dynamometer in laboratory conditions, or with on-board portable emission measurement systems (PEMS) during on-road operation. This means that engines certified to the NTE requirements can be tested in-use and in the vehicle using PEMS, avoiding the high costs associated with engine removal and dynamometer testing.

Beginning in 2001, ARB staff started working collaboratively with U.S.EPA and engine manufacturers to develop an in-use testing and compliance program based on performing the NTE test with PEMS. In May 2003, the general structure of such a program was developed and agreed-upon by all parties. Based upon this collaborative work, in June 2005, the U.S. EPA adopted a manufacturer-run in-use testing program, which all manufacturers of HDDEs sold elsewhere in the United States must comply with. The proposed amendments would make California requirements consistent with the federal requirements in this area.

**Proposed Action:** The proposed amendments would implement a manufacturer-run in-use compliance program for HDDEs. In this proposed program, PEMS would be utilized to conduct on-road, in-use emission testing of heavy-duty diesel vehicles. Emission results from PEMS would be used to determine compliance with the NTE

emission limits within the engines' useful lives. The proposed program would start in 2007 for gaseous emissions and in 2008 for particulate matter emissions. In order to be familiarized with in-use testing of HDDEs with PEMS and NTE data collection, engine manufacturers initiated a pilot HDDE testing program which began in 2005 and will continue until the start of the enforceable compliance program, if it is adopted by the Board.

Under the proposed amendments, each year, ARB and U.S. EPA would jointly designate up to 25 percent of a manufacturer's total number of HDDE families for testing. The engine families selected for testing could include any 2007 and later model year medium-duty diesel engine and HDDE used in vehicles with gross vehicle weight ratings above 8,500 pounds. Manufacturers would screen, procure and test vehicles that use the designated engines. The vehicles would be tested under real-world driving conditions, within the engines' useful lives. ARB personnel would have the right to be present during PEMS installation and on-road testing. Pollutants that would be measured to determine compliance are: oxides of nitrogen, particulate matter, non-methane hydrocarbon, and carbon monoxide.

The proposed test program would have two phases. The first phase of testing, Phase 1, is intended to screen a designated engine family for conformity with the applicable NTE emission limits. Under Phase 1, the manufacturer would test a minimum of 5 and a maximum of 10 vehicles per engine family during normal over-the-road vehicle operation. If the engine family does not pass the Phase I requirements, then Phase 2 testing may be required. In Phase 2, ten additional vehicles are tested under more narrowly-defined test conditions to specifically target non-complying operating conditions. Failure of the Phase 1 or Phase 2 requirements may result in ARB requiring some form of remedial action. In determining whether to pursue remedial action following Phase 1 or Phase 2 testing, ARB would consider other test data obtained separately by staff or submitted by the manufacturer.

Since the proposed NTE testing would be conducted on-road instead of in an environmentally-controlled laboratory as manufacturers must do to obtain certification of new motor vehicle engine families to ARB's emission standards, an "accuracy margin" is proposed to be incorporated in the NTE testing to account for potential differences in emission measurements between the laboratory equipment and PEMS. In 2005, a Memorandum of Agreement was signed between ARB, U.S. EPA, and the engine manufacturers to establish a test program for determining measurement accuracy margins to be used in the proposed amendments. The test program is currently on-going. In the meantime, the proposed amendments contain interim accuracy margins that have been agreed upon by the same parties. Once the final accuracy margins are determined, they will be presented to the Board for adoption in a subsequent rulemaking.

### **COMPARABLE FEDERAL REGULATIONS**

On June 14, 2005, U.S. EPA adopted a manufacturer-run in-use testing and compliance program. The details of the federal program were based on the collaborative efforts

between ARB, U.S. EPA, and the engine manufacturers. The proposed amendments are essentially identical to the U.S. EPA's program.

### **AVAILABILITY OF DOCUMENTS AND AGENCY CONTACT PERSONS**

The Board staff has prepared a Staff Report: Initial Statement of Reasons (ISOR) for the proposed regulatory action, which includes a summary of the environmental and economic impacts of the proposal. The report is entitled: "Staff Report: Initial Statement of Reasons for the Proposed Rulemaking – Public Hearing to Adopt California's Heavy-Duty Diesel In-Use Compliance Regulation."

Copies of the ISOR and the full text of the proposed regulatory language, in underline and strikethrough format to allow for comparison with the existing regulations, may be accessed on the ARB's web site listed below, or may be obtained from the Public Information Office, Air Resources Board, 1001 I Street, Visitors and Environmental Services Center, 1<sup>st</sup> Floor, Sacramento, CA 95814, (916) 322-2990 at least 45 days prior to the scheduled hearing on September 28, 2006.

Upon its completion, the Final Statement of Reasons (FSOR) will be available and copies may be requested from the agency contact persons in this notice, or may be accessed on the ARB's web site listed below.

Inquiries concerning the substance of the proposed regulation may be directed to the designated agency contact persons: Mr. Stephan Lemieux, Manager, On-Road Heavy Duty Diesel Section, at (626) 450-6162 or [slemieux@arb.ca.gov](mailto:slemieux@arb.ca.gov), or Mr. Dipak Bishnu, Air Resources Engineer, On-Road Heavy Duty Diesel Section, at (626) 575-6696 or [dbishnu@arb.ca.gov](mailto:dbishnu@arb.ca.gov).

Further, the agency representative and designated back-up contact persons to whom non-substantive inquiries concerning the proposed administrative action may be directed are Artavia Edwards, Manager, Board Administration & Regulatory Coordination Unit, (916) 322-6070, or Alexa Malik, Regulations Coordinator, (916) 322-4011. The Board has compiled a record for this rulemaking action, which includes all the information upon which the proposal is based. This material is available for inspection upon request to the contact persons.

This notice, the ISOR and all subsequent regulatory documents, including the FSOR, when completed, are available on the ARB Internet site for this rulemaking at [www.arb.ca.gov/regact/inuse06/inuse06.htm](http://www.arb.ca.gov/regact/inuse06/inuse06.htm)

## **COSTS TO PUBLIC AGENCIES AND TO BUSINESSES AND PERSONS AFFECTED**

The determinations of the Board's Executive Officer concerning the costs or savings necessarily incurred by public agencies, private persons and businesses in reasonable compliance with the proposed regulations are presented below.

Pursuant to Government Code sections 11346.5(a)(5) and 11346.5(a)(6), the Executive Officer has determined that the proposed regulatory action will not create costs or savings to any state agency or in federal funding to the state, costs or mandate to any local agency or school district whether or not reimbursable by the state pursuant to part 7 (commencing with section 17500), division 4, title 2 of the Government Code, or other nondiscretionary cost or savings to state or local agencies. The proposed amendments affect manufacturers of HDDEs, not state or local agencies.

In developing this regulatory proposal, the ARB staff evaluated the potential economic impacts on representative private persons or businesses. The ARB is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action. The proposed amendment would make California requirements for in-use testing of HDDEs consistent with federal requirements. Inasmuch as the proposed amendments could be said to have economic impacts, these impacts are expected to be slight and absorbable by the manufacturers of HDDEs. Any impacts on the manufacturers of PEMs are expected to be positive.

The Executive Officer has made an initial determination that the proposed regulatory action will not have a significant statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states, or on representative private persons. Any cost impacts are expected to be slight and absorbable by the businesses affected. The amendments would apply to all manufacturers of HDDEs and make California requirements consistent with federal law. None of the manufacturers of HDDEs is located in California. There may be a slight positive economic impact on the manufacturer of PEMS that is located in California.

In accordance with Government Code section 11346.3, the Executive Officer has determined that the proposed regulatory action will not affect the creation or elimination of jobs within the State of California, the creation of new businesses or elimination of existing businesses within the State of California, or the expansion of businesses currently doing business within the State of California. Any impact on businesses in California is expected to be slight and positive. A detailed assessment of the economic impacts of the proposed regulatory action can be found in the ISOR.

The Executive Officer has also determined, pursuant to title 1, CCR, section 4, that the proposed regulatory action will not affect small businesses. There will be no incremental costs associated with staff's proposal in addition to those already needed to comply with the federal regulation. Any impact on businesses in California is expected to be slight and positive.

In accordance with Government Code sections 11346.3(c) and 11346.5(a)(11), the Executive Officer has found that the reporting requirements of the regulation which apply to businesses are necessary for the health, safety, and welfare of the people of the State of California.

Before taking final action on the proposed regulatory action, the Board must determine that no reasonable alternative considered by the board or that has otherwise been identified and brought to the attention of the board would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the proposed action.

### **SUBMITTAL OF COMMENTS**

The public may present comments relating to this matter orally or in writing at the Hearing, and in writing or by e-mail before the hearing. To be considered by the Board, written submissions not physically submitted at the hearing must be received **no later than 12:00 noon, September 27, 2006**, and addressed to the following:

Postal mail: Clerk of the Board, Air Resources Board  
1001 I Street, Sacramento, California 95814

Electronic submittal : <http://www.arb.ca.gov/lispub/comm/bclist.php>

Facsimile submittal: (916) 322-3928

The Board requests but does not require that 30 copies of any written statement be submitted and that all written statements be filed at least 10 days prior to the hearing so that ARB staff and Board Members have time to fully consider each comment. The board encourages members of the public to bring to the attention of staff in advance of the hearing any suggestions for modification of the proposed regulatory action.

### **STATUTORY AUTHORITY AND REFERENCES**

This regulatory action is proposed under that authority granted in Health and Safety Code, sections 39600, 39601, 43013, 43018, 43100, 43101, 43104, 43105, and 43806; and Vehicle Code section 28114. This action is proposed to implement, interpret and make specific Health and Safety Code sections 39002, 39003, 39500, 43000, 43013, 43018, 43100, 43101, 43102, 43104, 43106, 43202, 43204, 43206, 43210, 43211, 43212, 43213, and 43806; and Vehicle Code section 28114.

## **HEARING PROCEDURES**

The public hearing will be conducted in accordance with the California Administrative Procedure Act, title 2, division 3, part 1, chapter 3.5 (commencing with section 11340) of the Government Code.

Following the public hearing, the Board may adopt the regulatory language as originally proposed, or with non substantial or grammatical modifications. The Board may also adopt the proposed regulatory language with other modifications if the text as modified is sufficiently related to the originally proposed text that the public was adequately placed on notice that the regulatory language as modified could result from the proposed regulatory action; in such event the full regulatory text, with the modifications clearly indicated, will be made available to the public, for written comment, at least 15 days before it is adopted.

The public may request a copy of the modified regulatory text from the ARB's Public Information Office, Air Resources Board, 1001 I Street, Visitors and Environmental Services Center, 1<sup>st</sup> Floor, Sacramento, CA 95814, (916) 322-2990.

CALIFORNIA AIR RESOURCES BOARD

Catherine Witherspoon  
Executive Officer

Date:

*The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs see our Web –site at [www.arb.ca.gov](http://www.arb.ca.gov).*