State of California
AIR RESOURCES BOARD

Resolution 07-56

December 6, 2007

Agenda Item No.: 07-12-5

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 waivers 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 ARB adopted the Diesel Risk Reduction Plan in 2000 which established the goal of reducing emissions from virtually all in-use diesel engines within the State of California by 2010;

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

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 strategies of 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, 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 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 September 2006, the Board adopted "California's Heavy-Duty Diesel In-Use Compliance Regulation"; on September 11, 2007, the regulation was approved by the Office of Administrative Law and filed with the Secretary of State and the regulation became effective October 11, 2007;

WHEREAS, California's heavy-duty diesel in-use compliance regulation included interim "measurement allowances" to be used while conducting on-road testing of heavy-duty diesel vehicles with PEMS;

WHEREAS, because testing will be conducted in the field instead of an environmentally controlled laboratory, ARB, U.S. EPA, and the engine manufacturers agreed to determine a "measurement allowance" for each pollutant to account for any potential difference in measurement accuracy; a contract was entered with the Southwest Research Institute (SwRI), in San Antonio, Texas to do this work and SwRI recently completed the development of PEMS measurement allowances for gaseous emissions, under the direction of a measurement allowance steering committee (MASC) comprised of members from ARB, U.S. EPA and the engine manufacturers;

WHEREAS, SwRI has completed testing and published a MASC approved final report establishing appropriate measurement allowances for oxides of nitrogen, non-methane hydrocarbons and carbon monoxide; the measurement allowances may be used when conducting heavy duty diesel in-use compliance testing using PEMS;

WHEREAS, U.S. EPA is expected to adopt the same measurement allowances for its essentially identical heavy-duty in-use compliance testing program within the next six months;

WHEREAS, the measurement allowances for gaseous pollutants have been determined, and can be used while testing on-road heavy-duty diesel vehicles with PEMS;

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 ARB in September 2006, the staff has proposed amendments to title 13, CCR, section 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, with the modifications set forth in Attachment C hereto;

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 amendments approved herein 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 amendments approved herein include requirements that 2007 and subsequent model year truck engines comply with the NOx, PM, 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 gaseous measurement allowances approved herein for incorporation in the heavy-duty diesel in-use compliance requirements adopted earlier have been analyzed as required by California law,

and the conclusions are that either there are no impacts or the impacts will be very minimal;

7. The environmental impacts of the gaseous measurement allowances proposed herein have been analyzed as required by California law, and that adoption of these measurement allowances will help conducting in-use testing of heavy-duty diesel trucks and ensure that the tested trucks comply with the 2007 heavy-duty diesel engine standards;

WHEREAS, the Board further finds that:

1. The amendments approved herein 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 amendments approved herein will not have a significant adverse environmental impact and that the regulations are projected to positively impact air quality;

3. The amendments approved herein 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 business within California, or the ability of California businesses to compete with businesses in other states; and

4. No other alternatives to the proposed requirements were evaluated since the proposed measurement allowances are necessary in order for the heavy-duty in-use testing program to go forward.

NOW, THEREFORE, BE IT RESOLVED that, the Board hereby approves the adoption of the amendments to section 1956.8 of title 13, California Code of Regulations, set forth in Attachment A hereto, and 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, 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 and B, with the modifications set forth in Attachment C 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 approved 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 approved 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 07-56, as adopted by the Air Resources Board.

Lori Andreoni

Lori Andreoni, Clerk of the Board

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Identification of Attachments to the Resolution

Attachment A: Proposed amendments to title 13, California Code of Regulations, section 1956.8, as set forth in Appendix A to the Staff Report: Initial Statement of Reasons released October 19, 2007.

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 October 19, 2007.

Attachment C: Staff's Suggested Modifications to the Original Proposal (distributed at the Board hearing on December 6, 2007)