State of California
AIR RESOURCES BOARD

Resolution 00-53

December 8, 2000

Agenda Item No.: 00-12-5

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (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 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 motor vehicle emission standards, in-use performance standards, and test procedures, which it finds to be necessary, cost-effective, and technologically feasible;

WHEREAS, the Board has adopted standards for exhaust emissions from heavy-duty engines and vehicles in title 13, California Code of Regulations, section 1956.8, which incorporates test procedures for determining compliance with the standards as set forth in the "California Exhaust Emission Standards and Test Procedures for 1985 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles;"

WHEREAS, seven major diesel engine manufacturers employed defeat devices that frequently turned off emission controls on over one million engines between 1988 and 1998;

WHEREAS, this resulted in excess oxides of nitrogen (NOx) emissions of 1.3 million tons nationwide, in 1998 alone;

WHEREAS, these seven engine manufacturers entered into consent decrees with the United States Department of Justice, United States Environmental Protection Agency (U.S. EPA) and into settlement agreements with the Board;

WHEREAS, in addition to monetary fines and environmental projects aimed at offsetting the excess emissions, these "consent decree" manufacturers agreed to conduct supplemental "not-to-exceed" (NTE) and European stationary cycle (ESC) tests as part of certification to ensure emissions compliance throughout the engines' operating range;

WHEREAS, the consent decrees specified that the supplemental tests would be required for a period beginning in 2002 and ending in 2004;

WHEREAS, consent decree manufacturers that are required to satisfy the supplemental tests currently account for approximately 60 percent of heavy-duty diesel engine sales in California;

WHEREAS, to ensure continued emission compliance, U.S. EPA planned to adopt the same supplemental requirements for 2004 and beyond;

WHEREAS, due to extended technical negotiations with engine manufacturers, U.S. EPA was unable to finalize the rule in time for 2004 implementation;

WHEREAS, because of federal timing constraints, the NTE and ESC test procedures will not be required until the 2007 model year for federally certified heavy-duty diesel engines;

WHEREAS, due to the competitive marketplace, consent decree manufacturers will likely recalibrate their engines to compete with the non-consent decree manufacturers, that are not subject to NTE and ESC test procedures, for 2005 and 2006;

WHEREAS, failure to implement the proposed requirements may disrupt the competitive marketplace for both engine manufacturers and trucking companies through changes in engine designs which impact performance, reliability, and fuel economy from 2002 through 2007;

WHEREAS, the 2005 and 2006 "gap" in testing for emissions controls monitored during supplemental tests will likely result in a significant increase in excess NOx emissions;

WHEREAS, the federal Clean Air Act grants the State of California the authority to adopt standards for the control of emissions from new motor vehicles and engines if the State determines that the State standards will be, in the aggregate, at least as protective of public health and welfare as the applicable Federal standards;

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

WHEREAS, the California Environmental Quality Act and Board regulations require that no project which 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, a public hearing and other administrative proceedings have been held in accordance with the provisions of chapter 3.5 (commencing with section 11340), part 1, division 3, title 2 of the Government Code;

WHEREAS, the Executive Officer has determined that the regulations approved herein will not have a significant, if any, impact on the creation or elimination of jobs within the State of California, the creation of new businesses or elimination of existing businesses within California, or the expansion of businesses currently doing business within California;

WHEREAS, the Executive Officer has determined that the regulations do not create costs or savings, as defined in government Code section 11346.5(a)(6), 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 non-discretionary saving to local agencies; and

WHEREAS, the Board finds that:

1. NOx alone can directly harm human health and growing evidence shows that ozone, created from the photochemical reaction of primarily NOx and hydrocarbons is a significant cause of harmful respiratory effects.

2. Heavy-duty diesel engines that comply with standards during the federal test procedure (FTP) alone may not comply throughout the entire range of engine operations.

3. The original emission benefits associated with the State Implementation Plan Measure M6 – national heavy-duty diesel vehicle NOx emission standard of 2.0 g/bhp-hr, are not being achieved during the majority of in-use operations.

4. The timing for the requirements in place under the consent decrees in 2002 through 2004 and in place under the U.S. EPA's Final Rule in 2007 and subsequent model years will result in a two-year period (2005 – 2006) during which engine manufacturers may recalibrate their engines to compete in the national marketplace.

5. It is necessary to adopt supplemental test procedures for the 2005 and 2006 model years so that engine manufacturers do not recalibrate their engines, resulting in higher emissions of NOx.

6. The economic and fiscal impacts of the supplemental test procedures 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 cost of reducing the excess emissions due to the supplemental test procedures range from $0.09 to $0.63 per pound of excess NOx reduced.

8. The cost-effectiveness values above are in the same range of values associated with other control measures adopted under the authority from the Health and Safety Code.

9. The cost-effectiveness values above are based on costs for the non-consent decree manufacturers since the consent decree manufacturers will have already made design changes, as necessary, for their engines to comply with the consent decree requirements and will not have to redesign their engines to satisfy the supplemental test procedure requirements adopted herein.

10. The supplemental test procedures adopted herein will not cause California motor vehicle emission standards, in the aggregate, to be less protective of public health and welfare than the applicable federal test procedures.

11. Separate California test procedures are necessary to meet the conditions caused by a highly competitive marketplace; and

WHEREAS, the Board further finds that:

1. The supplemental test procedures will adequately enforce the existing emission standards of on-road, heavy-duty diesel engines and cover a wider range of in-use operations.

2. The supplemental test procedures help to ensure continuation of consent decree requirements from 2002 until the federal requirements begin in 2007.

3. The supplemental test procedures will not have any significant adverse impact on the environment.

4. Adoption of the supplemental test procedures will reduce excess statewide NOx emissions by 17 tons per day in 2006 and by 14 tons per day in 2010 from California registered vehicles alone.

5. Calculating the effect of adoption of the supplemental test procedures as the de facto national standard, the reductions in excess NOx emissions statewide in California will total 22 tons per day in 2006 and 18 tons per day in 2010 from California and out-of-state registered vehicles.

6. Adoption of the supplemental test procedures will reduce excess NOx emissions of 5.1 tons per heavy heavy-duty diesel engine (33,001 pounds and greater gross vehicle weight rating) and 0.6 tons per medium heavy-duty diesel engine (14,001 to 33,000 pounds gross vehicle weight rating) over the lifetime of each engine.

7. There is no alternative considered by the Board that 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 adopts article 1.5 and section 2065; amends section 1956.8, title 13, California Code of Regulations; and amends the incorporated "California Exhaust Emission Standards and Test Procedures for 1985 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles," as set forth in Attachments A and B hereto.

BE IT FURTHER RESOLVED that the Board hereby determines that the regulations 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 test procedures are necessary to meet compelling and extraordinary conditions.

BE IT FURTHER RESOLVED that the Board finds that the California test procedures as adopted herein will not cause the California requirements to be inconsistent with section 202(a) of the Clean Air Act and raise no new issues affecting previous waiver determinations of the Administrator of the Environmental Protection Agency pursuant to section 209(b) of the Clean Air Act.

BE IT FURTHER RESOLVED that the Executive Officer shall, upon adoption, forward the regulations to the Environmental Protection Agency 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 Clean Air Act, as appropriate.

I hereby certify that the above is a true and correct copy of Resolution 00-53, as adopted by the Air Resources Board.

Marie Kavan

Marie Kavan, Clerk of the Board

Rec'd By
Office of the Secretary

JUN 1 2 2001

Resources Agency of California

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Identification of Attachments to the Resolution

Attachment A:

1. Amendments to title 13, California Code of Regulations, section 1956.8; Exhaust Emission Standards and Test Procedures for 1985 and Subsequent Model Year Heavy-Duty Engines and Vehicles.

2. Adopt title 13, California Code of Regulations, division 3, chapter 2, article 1.5; Enforcement of Vehicle Emission Standards and Surveillance Testing for 2005 and Subsequent Model Year Heavy-Duty Engines and Vehicles.

3. Adopt title 13, California Code of Regulations, division 3, chapter 2, section 2065; Applicability of Chapter 2 to 2005 and Subsequent Model Year Heavy-Duty Engines and Vehicles.

Attachment B:

1. Amendments to California Exhaust Emission Standards and Test Procedures for 1985 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles.