State of California
AIR RESOURCES BOARD

Resolution 00-3

January 27, 2000

Agenda Item No.: 00-1-4

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (the Board or ARB) 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, sections 43013, 43101, and 43104 of the Health and Safety Code authorize the Board to adopt emission standards and test procedures to control air pollution caused by motor vehicles;

WHEREAS, section 43013(a) of the Health and Safety Code authorizes the Board to adopt and implement motor vehicle emission standards and in-use performance standards for the control of air contaminants and sources of air pollution which the Board has found to be necessary, cost-effective and technologically feasible, unless preempted by federal law;

WHEREAS, section 43013(b) of the Health and Safety Code requires the Board, consistent with section 43013(a), to adopt standards and regulations for off-road or nonvehicle engine categories;

WHEREAS, section 43018 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 the state ambient air quality standards at the earliest practicable date;

WHEREAS, in 1992, the Board approved regulations to control exhaust emissions from heavy-duty compression-ignition (diesel) engines 175 horsepower (130 kilowatts) and above;

WHEREAS, the State Implementation Plan (SIP) for ozone adopted by the Board in 1994 and approved by the United States Environmental Protection Agency (U.S. EPA) in 1995, establishes the state strategy for attaining the ambient air quality standards for ozone in all areas of the state by 2010 as required by federal law;

WHEREAS, the SIP includes mobile source control measure M9 which directs staff to develop more stringent emission control regulations specifically for off-road compression-ignition (diesel) engines;

WHEREAS, the SIP also includes mobile source control measure M10 which specifies that because over one-half of the emissions of engines in the off-road compression-ignition engine category cannot be regulated by California because of federal preemption, it is necessary that the U.S. EPA also adopt and implement more stringent emission control regulations on a nationwide basis in order to achieve the emission reductions upon which the SIP is predicated;

WHEREAS, it became evident during the SIP's development that further reducing emissions of Oxides of Nitrogen (NOx) and Reactive Organic Compounds (ROG) from off-road engines and equipment operating within the state is imperative;

WHEREAS, in 1996, the ARB, the U.S. EPA, and the manufacturers of off-road compression-ignition engines signed a statement of principles (SOP) calling for harmonization of ARB and U.S. EPA off-road compression-ignition engine regulations;

WHEREAS, the SOP is a cooperative agreement between ARB, U.S. EPA, and the engine manufacturers that recognizes the technological feasibility of significant emission reductions from those engines, and that these emission reductions will result in benefits roughly equal to that of the SIP;

WHEREAS, in 1998, the U.S. EPA promulgated new emission standards for nonroad compression-ignition engines, along with changes to the existing federal averaging, banking, and trading program, and changes to useful life and maintenance requirements meeting the objectives of the SOP;

WHEREAS, in conjunction with a public hearing notice dated November 30, 1999, the staff has proposed that the Board adopt amendments to the Heavy-Duty Off-Road Diesel Cycle Engines section, Small Off-Road Engines section, and related compliance and test procedures sections of title 13, California Code of Regulations;

WHEREAS, section 209(e)(1) of the federal Clean Air Act preempts the State of California and the local air districts from adopting or enforcing emission standards and other requirements relating to the control of emissions (other than in-use operational controls) from new nonroad engines smaller than 175 horsepower primarily used in farm or construction equipment or vehicles;

WHEREAS, section 209(e)(2) of the federal Clean Air Act requires that California seek authorization from the U.S. EPA prior to enforcing emission standards or other requirements relating to the control of emission (other than in-use operational controls)

from nonroad engines (of which off-road compression-ignition engines are a subpart) not otherwise preempted by section 209(e)(1);

WHEREAS, ARB staff and the U.S. EPA have worked together to develop a harmonized national program in order to attain the goals of the SIP;

WHEREAS, the proposed amendments to existing California emission standards, compliance requirements, and test procedures are designed to harmonize as closely as possible with the federal program to minimize administrative burden, complexity, and expenses that could result from different state and federal requirements, while still maintaining the emission reduction benefits of the current California program;

WHEREAS, the coordinated efforts of ARB, U.S. EPA, and the engine manufacturers to introduce lower-emitting off-road compression-ignition engines nationwide will result in substantial air quality benefits in California and the rest of the country;

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

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 Board finds that:

> Despite advances in reducing emissions from motor vehicles, California still has the most severe air pollution problems in the United States;
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> To meet Federal and California Clean Air Act emissions reduction requirements, ARB must continue to seek proportional and incremental reductions from all sources under its authority, including off-road compression-ignition engines;
>
> Adoption of emission standards and requirements for durability, maintenance intervals, recordkeeping, warranties, test procedures, certification test fuel, and engine useful life in alignment with U.S. EPA emission standards and requirements will simplify the processes of certification and production line testing for industry;

Allowing engine manufacturers to participate in the federal Averaging, Banking, and Trading (ABT) program will provide industry with greater flexibility in complying with the emission standards while achieving the overall emission reduction goals of the proposed amended regulations;

Adoption of implementation flexibilities, similar to the federal program, will provide engine and equipment manufacturers and post-manufacture marinizers additional flexibility in the transition to more stringent emission standards and newer technology;

Allowing industry to voluntarily certify engines through 2004 to optional emissions standards ("Blue Sky Series") that are more stringent than required and to promote that more stringent certification levels for equipment can aid consumers seeking lower emitting engines and can aid in reducing emissions;

While the combination of current technology and the lead time built into the proposed regulations make the emission standards technologically feasible, ARB plans on conducting a Technology Review in 2001 to assess industry's progress in meeting the standards and the degree to which ARB and U.S. EPA have been able to achieve the goal of harmonization;

With the recent identification of diesel PM as a TAC, the importance of further reducing the public's exposure to PM emissions has become more paramount. It is expected that future review of the standards will likely result in a proposal for the adoption of appropriate Tier 3 standards for PM, Tier 4 standards for NOx and PM, and possibly standards for existing engines already in-use.

Acknowledging manufacturers' concerns regarding separate federal and California in-use compliance programs, ARB expressly intends to achieve, and to work with EPA to ensure minimal overlap, if any, regarding the in-use test program;

The economic and cost impacts of the amendments 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;

The cost of control under the proposed regulations would be at worst case $0.32 per pound of ozone precursors reduced and $1.16 per pound of PM reduced;

The cost-effectiveness values above are similar to the values associated with other control measures adopted in furtherance of Health & Safety Code sections 43013 and 43018 and SIP measures; and

The proposed 2000 and later off-road compression-ignition engine regulations – emission standards, compliance requirements, and test procedures – are necessary, appropriate, and technologically feasible to carry out the purposes of the state and federal clean air laws; and

WHEREAS, the Board further finds that:

The proposed amendments to the regulations and procedures will adequately enforce the emissions standards and test procedures of the off-road compression-ignition engine regulations, and will independently help to reduce emissions from such engines;

The proposed amendments to the regulations establish uniform, consistent, and reasonable emission standards for off-road compression-ignition engines and associated equipment;

Adoption of the proposed standards and test procedures, along with nonroad engine regulations promulgated by the U.S. EPA, will result in a reduction of approximately 91.4 tons per day of NOx, 19.2 tons per day of non-methane hydrocarbons, and 8.5 tons per day of PM emissions statewide in 2010;

The proposed amended regulations will not have any significant adverse impact on the environment;

The proposed amended regulations will provide more ROG reductions than contemplated by SIP measures M9 and M10, while falling short of the NOx reductions anticipated in the SIP. However, taken as a whole, the combined ROG and NOx reductions from the proposal are essentially equal to the combined ROG and NOx reductions called for in the SIP;

The proposed amended regulations 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

No alternative considered would be more effective in carrying out the purpose for which the regulation is proposed or would be as effective or less burdensome to affected private persons;

NOW, THEREFORE, BE IT RESOLVED that the Board hereby adopts amendments to sections of title 13, California Code of Regulations, and the documents incorporated by reference therein: sections 2111, 2112, and Appendix A to Article 2.1; sections 2137, 2139, 2140, 2141, 2400, 2401, 2403, 2420, 2421, 2423, 2424, 2425, 2426, and 2427;

and "California Exhaust Emission Standards and Test Procedures for New 1996 and Later Heavy-Duty Off-Road Diesel Cycle Engines," and "California Smoke Test Procedures for New 1996 and Later Heavy-Duty Off-Road Diesel Cycle Engines," which are incorporated by reference in section 2423, and the document "California Exhaust Emission Standards and Test Procedures for 1995 and Later Small Off-Road Engines," which is incorporated by reference in section 2403, and adopts "California Exhaust Emission Standards and Test Procedures for New 2000 and Later Off-Road Compression-Ignition Engines, Part I-B," to be incorporated by reference in section 2421, all as set forth in Attachment A hereto.

BE IT FURTHER RESOLVED that the Board hereby determines that the regulations adopted herein will not cause the California 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 California emission standards and test procedures as adopted herein will not cause the California requirements to be inconsistent with the Federal Clean Air Act section 209(e)(1) and raise no new issues affecting previous authorizations of the Administrator of the U.S. EPA issued pursuant to Federal Clean Air Act section 209(e)(2).

BE IT FURTHER RESOLVED that the Executive Officer shall, upon adoption, forward the regulations to the U.S. EPA with a request for authorization or confirmation that the regulations are within the scope of an existing authorization pursuant to Federal Clean Air Act section 209(e)(2), as appropriate.

I hereby certify that the above is a true and correct copy of Resolution 00-3, as adopted by the Air Resources Board

RECEIVED BY
Office of the Secretary
NOV 13 2000
RESOURCES AGENCY OF CALIFORNIA

Pat Hutchens

Pat Hutchens, Clerk of the Board

Resolution 00-3

January 27, 2000

Identification of Attachments to the Resolution

Attachment A:

A-1: California Regulations for New 1996 and Later Off-Road Compression-Ignition Engines

A-2: Amendments to Title 13, California Code of Regulations, Chapter 2, Articles 2.1, 2.3, and 2.4; Procedures for In-Use Vehicle voluntary and Influenced Recalls; In-Use Vehicle Enforcement Test Procedures; and Procedures for Reporting Failures of Emission-Related Components

A-3: California Exhaust Emission Standards and Test Procedures for New 1996-1999 Heavy-Duty Off-Road Compression-Ignition Engines, Part I-A

A-4: California Exhaust Emission Standards and Test Procedures for New 2000 and Later Off-Road Compression Ignition Engines, Part I-B

A-5: California Exhaust Emission Standards and Test Procedures for New 1996 and Later Off-Road Compression-Ignition Engines, Part II

A-6: California Smoke Test Procedures for New 1996-1999 Off-Road Compression-Ignition Engines, Part III

A-7: Amendments to Title 13, California Code of Regulations, Chapter 9, Division 3, Article 1: Small Off-Road Engines

A-8: Amendments to California Exhaust Emission Standards and Test Procedures for 1995 and Later Small Off-Road Engines