

State of California  
AIR RESOURCES BOARD

Resolution 98-63

December 10, 1998

Agenda Item No.: 98-14-02

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (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, section 43013 of the Health and Safety Code authorizes the Board to adopt standards and regulations to control emissions from off-road or non-vehicle engine categories;

WHEREAS, section 43018 of the Health and Safety Code directs the Board to endeavor to achieve the maximum degree of emissions reduction possible from vehicular and other mobile sources to accomplish the attainment of state ambient air quality standards by the earliest practicable date;

WHEREAS, the regulations proposed by staff set forth the engines to which the regulations would apply; standards and test procedures; labeling requirements; useful life definition; and warranty requirements;

WHEREAS, the staff proposes that the Board adopt title 13, California Code of Regulations, Chapter 9, Article 4.7, "Spark-Ignition Marine Engines," containing section 2440, "Applicability," section 2441, "Definitions," section 2442, "Emissions Standards," section 2443, "Emission Control Labels-Model Year 2001 and Later Spark-Ignition Marine Engines," section 2444, "In-Use Compliance Testing and Recall Regulations-Model Year 2001 and Later Spark-Ignition Marine Engines," section 2445, "Defects Warranty Requirements for Model 2001 and Later Spark-Ignition Marine Engines," section 2446, "2001 and Subsequent Model Year Cumulative Sum Production Line Test Procedures and Selective Enforcement Auditing Regulations for Spark-Ignition Marine Engines", section 2447, "California Exhaust Emission Standards and Test Procedures for 2001 Model Year and Later Spark-Ignition Marine Engines," and section 2448, "Sunset Review."

WHEREAS, the proposed adoption of new regulations in the California Code of Regulation, title 13, sections 2440 through 2448, are like previously adopted on-road and off-road regulations and have been proven effective in controlling exhaust emission from similar engine technologies;

WHEREAS, the proposed California Code of Regulations, title 13, sections 2440 and 2441, define the applicability of these regulations spark-ignition marine engines as defined;

WHEREAS, the proposed California Code of Regulations, title 13, sections 2442 and 2447

specify the emission standards and test procedures for spark-ignition marine engines;

WHEREAS, the proposed California Code of Regulations, title 13, sections 2445.1 and 2445.2 specify an engine manufacturer's warranty responsibilities, proposed sections 2444 and 2446 specify an engine manufacturer's requirements for emission compliance after certification, and proposed section 2443.1 specifies emission control parts labeling requirements, and these sections all being of the type of enforcement and ancillary provisions proven effective in similar on-road and off-road compliance programs;

WHEREAS, national and California consumer or "green" labeling programs have become an accepted and increasingly common method of promoting sales of energy-, fuel-, and resource-efficient products or services, and a consumer label would provide ARB enforcement personnel with a supplemental means, in addition to the engine certification level, of enforcing the proposed emission standards;

WHEREAS, in carrying out the above green labeling program, it is in both the manufacturers' and consumers' interest to streamline procedures to label engines currently meeting the proposed 2001 and later model year emissions standards;

WHEREAS, manufacturers that are currently labeling engines to indicate compliance with U.S. EPA's 2006 standards have invested time and money in specific labeling schemes;

WHEREAS, the staff proposal provides few means to show evidence of engine hour accumulation for warranty purposes;

WHEREAS, section 209(e)(2) requires that California seek authorization from the United States Environmental Protection Agency (U.S. EPA) prior to enforcing emission standards or other requirements (other than in-use operational controls) relating to the control of emissions from nonroad engines not otherwise preempted by section 209(e)(1);

WHEREAS, alignment with the U.S. EPA's program for spark-ignition marine engines would reduce the compliance burden placed on the spark-ignition marine engine industry;

WHEREAS, staff has attempted to harmonize its proposal with the federal rule adopted by the U.S. EPA to minimize administrative burden, complexity, and expenses that could result from different state and federal requirements for these engines;

WHEREAS, in response to manufacturers' concerns, expressed through numerous meetings, with the technological and commercial feasibility of the draft regulations introduced at the public workshop, staff has altered the draft regulations as reflected in the proposed regulations;

WHEREAS, the proposed regulations provide manufacturers with flexibility to implement the

proposed emissions standards by allowing emissions averaging between engine families, by not including an emissions cap for the Tier 1 (2001) emissions standard, providing a variety of options as alternatives to comprehensive in-use recalls, and phasing in emissions reductions through three tiers;

WHEREAS, almost all manufacturers of outboard marine engines have developed technology that can currently meet the proposed Tier 1 (2001) emission standards;

WHEREAS, some manufacturers of personal watercraft marine engines have developed technology that under currently planned production and release schedules, will meet the proposed Tier 1 (2001) emission standards;

WHEREAS, almost all manufacturers of outboard marine engines have developed technology that can currently meet the proposed Tier 2 (2004) emission standards;

WHEREAS, some manufacturers of personal watercraft marine engines have developed technology likely to meet the proposed Tier 2 (2004) emissions standards, and most manufacturers of both outboard and personal watercraft marine engines have supported the proposed Tier 2 (2004) emissions standards;

WHEREAS, several manufacturers of outboard marine engines have developed technology that can currently meet the proposed Tier 3 (2008) emission standards, and the 2008 implementation date should provide sufficient time for many of the remaining outboard marine engine manufacturers to meet the proposed Tier 3 (2008) emissions standards;

WHEREAS, a few manufacturers of personal watercraft marine engines have developed technology that nearly meets the proposed Tier 3 (2008) emission standards, and the 2008 implementation date should provide sufficient time for these manufacturers and at least some of the remaining personal watercraft marine engine manufacturers to meet the proposed Tier 3 (2008) emissions standards;

WHEREAS, the Board-approved emissions inventory upon which the proposed regulations are based will be reviewed as information becomes available and will be made available to the public as it is updated;

WHEREAS, the California Environmental Quality Act (CEQA) 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 has considered the impact 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; and

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;

To meet Federal and California Clean Air Act emissions reductions requirements, ARB must continue to seek proportional and incremental reductions from all sources under its authority, including spark-ignition marine engines.

It is necessary and appropriate that the proposed regulations require engine manufacturers to certify spark-ignition marine engines sold in California to the proposed mandatory hydrocarbon plus oxides of nitrogen emission standards, beginning with model year 2001, to provide for reductions of hydrocarbons plus oxides of nitrogen;

It is necessary and appropriate that the proposed regulations require emission control labels to properly identify emissions-critical or emission-related parts to ensure that these parts are properly identified and maintained and that they meet the applicable emission standards and provide a unique identification number for enforcement purposes, including in-use testing;

It is necessary and appropriate that the proposed regulations require three tiers of environmental labeling to ensure that potential engine owners, engine owners, and enforcement personnel have information on the relative cleanliness of the engine under the ARB standards, which in turn should promote the early introduction to and purchase of cleaner engines in California, thereby potentially resulting in reduced emissions independently of the emissions standards;

It is necessary and appropriate to allow data other than EPA certification to show which pre-2001 model year engines are eligible for manufacturer to arrange interim clean label;

It is necessary and appropriate to allow green or consumer labeling for application to engines manufactured before the 2001 model year to be designed in a way that allows manufacturers to take advantage of aesthetics inherent in their existing clean labels;

It is necessary and appropriate to consider alternative evidence of hour accumulation for warranty purposes, possibly including electronic recording or anecdotal evidence of commercial or other regular usage;

It is necessary and appropriate that the proposed regulations require an in-use testing program to ensure that certified engines meet the standards throughout their useful lives;

It is necessary and appropriate that the proposed regulations require defects warranty and notification provisions to ensure that the engines have emission-related components that are reliable, durable and capable of complying with the applicable emission standards, and a warranty requirement longer than U.S. EPA's will promote greater reliability and durability;

It is necessary and appropriate that the proposed regulations require a production line testing program that incorporates a modified U.S. EPA Cumulative Sum procedure to ensure engines meet the standard throughout the year;

It is necessary and appropriate that the proposed regulations require a Selective Enforcement Auditing program, which fully aligns with U.S. EPA's program, to discourage inappropriate production line testing and/or reporting of data;

It is necessary and appropriate that the proposed regulations require production-line testing to ensure that manufacturers are building their engines as designed and certified;

It is necessary and appropriate that the proposed regulations provide a corporate averaging program for spark-ignition marine engines, allowing manufacturers to comply with the emission standards on a corporate average basis;

It is necessary and appropriate that the proposed regulations incorporate emission test procedures to implement the regulations;

It is necessary and appropriate that the proposed regulations differ from the federal requirements for emission standards, certification labeling, warranty, in-use testing, and production-line testing, and consumer/environmental labeling because the differences are both authorized by law and the cost of the differing state regulations is justified by the benefit to human health, public safety, public welfare, or the environment;

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, as supplemented by Staff's presentation at the hearing on this item;

The cost of controlling outboard marine engines under Tier 1 of the proposed regulation would be approximately \$0.93- \$0.97 per pound of HC+NOx reduced;

The cost of controlling personal watercraft marine engines under Tier 1 of the proposed regulation would be approximately \$0.38-\$0.74 per pound of HC+NOx reduced;

The incremental cost of controlling outboard marine engines under Tier 2 of the proposed regulation would be approximately \$1.72-\$1.81 per pound of HC+NOx reduced;

The incremental cost of controlling personal watercraft marine engines under Tier 2 of the proposed regulation would be approximately \$0.38-\$1.08 per pound of HC+NOx reduced;

The incremental cost of controlling outboard marine engines under Tier 3 of the proposed regulation would be approximately \$1.98-\$2.08 per pound of HC+NOx reduced;  
The incremental cost of controlling personal watercraft marine engines under Tier 3 of the proposed regulation would be approximately \$1.08-\$1.21 per pound of HC+NOx 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

Based on the above, the Staff Report/Initial Statement of Reasons, and the information provided during the public hearing of this item, the proposed spark-ignition marine engines regulations are necessary, cost-effective, and technologically feasible to carry out the purposes of the state and federal clean air laws;

WHEREAS, the Board further finds that:

The proposed spark-ignition marine engines regulations and procedures for emission control labels, warranty, enforcement procedures, and compliance testing are necessary to adequately enforce the emissions standards and test procedures of the 2001 and Later Spark-Ignition Marine Engines regulation, and will independently help to reduce emissions from such engines;

The proposed consumer labeling requirements may independently help to reduce emissions by promoting the sales of cleaner engines in California;

The proposed regulation establishes uniform, consistent and reasonable emission standards for spark-ignition marine engines;

Adoption of the proposed standards and test procedures would result in a reduction of approximately 110 tons per weekend summer day of combined hydrocarbons and oxides of nitrogen emissions statewide in 2010;

That the adoption of the regulations approved herein will not have a significant adverse environmental impact and that the regulations are projected to have positive air quality and water quality impacts; and

That 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 following sections of title 13, California Code of Regulations, and the documents incorporated by reference therein: Chapter 9, Off-road Vehicles and Engines Pollution control Devices; Article 4.7, Spark-Ignition Marine Engines; sections 2440-2448, and the incorporated "California Exhaust Emission Standards and Test Procedures for 2001 Model Year and Later Spark-Ignition Marine Engines"; and the incorporated "California Exhaust Emission Standards and Test Procedures for 2001 Model Year and Later Spark-Ignition Marine Engines," all as set forth in Appendix A hereto, with the modifications described in Appendix B hereto.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to adopt the above amendments as set forth in Appendix A hereto, with the modifications set forth in Appendix B hereto and such other conforming modifications and technical amendments as may be appropriate, after making the modified regulatory language and additional supporting documents and information available for public comment for a period of 15 days, provided that the Executive Officer shall consider such written comments regarding the modification and additional supporting documents and information as may be submitted during this period, shall make modifications as may be appropriate in light of the comments received, and shall present the regulations to the Board for further consideration if he determines that this is warranted.

BE IT FURTHER RESOLVED that the Board hereby determines that the regulations adopted herein will not cause 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 finds that separate California emission standards and test procedures are necessary for spark-ignition marine engines.

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 section 202 (a) of the Clean Air Act and raise no new issues affecting previous waiver determinations of the Administrator of the U.S. EPA pursuant to section 209(b) of the Clean Air Act.

BE IT FURTHER RESOLVED that the Board directs staff, as part of the technology review in 2006, to include an assessment of the overall feasibility of the Tier 3 standards, including the stringency of the emission limits, the length of the useful life period, and the degree of harmonization with U.S. EPA, and which will provide industry with an opportunity to provide their own assessment of these issue to the Board.

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 of the Clean Air Act, as appropriate.

I hereby certify that the above is a true and correct copy of Resolution 98-63, as adopted by the Air Resources Board.

---

Pat Hutchens, Clerk of the Board

Resolution 98-63

December 10, 1998

**Identification of Appendices to the Resolution**

**Appendix A:** Proposed addition of new sections 2440-2447, as set forth in Attachment A to the Staff Report: Public Hearing to Consider Adoption of Emission Standards and Test Procedures for New 2001 and Later Model Year Spark-Ignition Marine Engines (released October 23, 1998); and the “California Exhaust Emission Standards and Test Procedures for 2001 Model Year and Later Spark-Ignition Marine Engines,” as set forth in Attachment B to the Staff Report: Public Hearing to Consider Adoption of Emission Standards and Test Procedures for New 2001 and Later Model Year Spark-Ignition Marine Engines (released October 23, 1998).

**Appendix B:** Staff’s Suggested Changes to the Original Proposal (distributed at the Board hearing on December 10, 1998).