

APPENDIX XV

Resolution 11-41

California's Small Off-Road Engine and Tier 4 Off-Road Compression-Ignition Engine Regulations and Test Procedures and Amendments to the Exhaust Emission Certification Test Fuel for Off-Road Spark-Ignition Engines, Equipment, and Vehicles

State of California
AIR RESOURCES BOARD

California's Small Off-Road Engine and Tier 4 Off-Road Compression-Ignition Engine Regulations and Test Procedures and Amendments to the Exhaust Emission Certification Test Fuel for Off-Road Spark-Ignition Engines, Equipment, and Vehicles

Resolution 11-41

December 16, 2011

Agenda Item No.: 11-10-4

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 43013(c) of the Health and Safety Code requires the Board, prior to adopting standards and regulations for farm equipment, to find and determine that the standards and regulations are necessary, cost-effective, and technologically feasible;

WHEREAS, section 43013(c) of the Health and Safety Code requires the Board to also consider the technological effects of emission control standards on the cost, fuel consumption, and performance characteristics of mobile farm equipment;

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, Health and Safety Code sections 43013 and 43018 direct the ARB to set emission control requirements for off-road mobile source categories including marine vessels, locomotives, utility engines, off-road motorcycles, and off-highway vehicles;

WHEREAS, in 2004, the United States Environmental Protection Agency (U.S. EPA) promulgated Tier 4 emission standards for nonroad compression-ignition (diesel) engines, along with changes to the existing test procedures, certification requirements, and compliance options including the renewal of the federal averaging, banking, and trading program, and the equipment manufacturer flexibility program;

WHEREAS, in 2004, the Board approved the incorporation of harmonized portions of the federal Tier 4 nonroad requirements into ARB's off-road diesel regulations to further control exhaust emissions from new off-road diesel engines in California;

WHEREAS, since 2005, U.S. EPA has revised the federal Tier 4 nonroad diesel requirements several times since ARB first incorporated portions of those requirements into the California off-road diesel regulation;

WHEREAS, on November 8, 2010, U.S. EPA revised federal nonroad diesel requirements to include an alternate emissions standard for combined oxides of nitrogen and hydrocarbons (ALT NO_x+HC) during the Tier 4 interim implementation period;

WHEREAS, the federal ALT NO_x+HC standard would allow manufacturers to continue certifying engines outside of California during the Tier 4 interim period without the addition of advanced exhaust after-treatment technologies;

WHEREAS, the absence of the ALT NO_x+HC standard in California would require manufacturers to certify engines during the Tier 4 interim period with after-treatment technologies at significant extra cost compared to federal requirements;

WHEREAS, it had always been U.S. EPA and ARB's intention, as stated in the federal preamble and ARB's staff report to these respective rulemakings, to temporarily allow the continued certification of engines derived from optimized Tier 3 technologies without exhaust after-treatment technologies to improve regulatory cost-effectiveness;

WHEREAS, the ALT NO_x+HC standard is numerically more stringent than the sum of the individual ALT NO_x and HC emission standard components;

WHEREAS, the adoption of the ALT NO_x+HC standard would not have a negative effect on the projected emission benefits of the original California regulation;

WHEREAS, off-road diesel equipment end-users are responsible for registration under California's in-use off-road diesel control programs;

WHEREAS, off-road diesel equipment end-users require ready and accurate access to their engines' emissions performance-related information, such as engine power, model year, and emission levels, when registering under California's in-use off-road diesel control programs, to ensure that appropriate fleet averages are determined and that emission reduction goals are achieved;

WHEREAS, current emission control labels for new off-road diesel replacement engines are required to display only a statement of compliance, and this does not provide specific information regarding the engines' emissions performance and is insufficient for the effective implementation and enforcement of California's in-use off-road diesel control programs;

WHEREAS, U.S. EPA does not have mandatory equivalents to California's in-use off-road diesel control programs;

WHEREAS, the current emission control labels have sufficient space on which to display the necessary additional emissions performance-related information;

WHEREAS, the regulated industry does not anticipate an increase in costs associated with the additional labeling requirements;

WHEREAS, the stockpiling of engines in years prior to a change in emission standards can adversely affect the effectiveness of the regulation and its calculated benefits;

WHEREAS, in 2008, U.S. EPA appended 40 Code of Federal Regulations (CFR) §1068.103 and revised 40 CFR §1068.105 to clarify that stockpiling is a violation of the federal regulations, and subject to civil penalty, and to define stockpiling as a specified deviation from normal production and inventory practices;

WHEREAS, California's current off-road diesel regulations do not comprehensively address stockpiling practices or penalties for the commission thereof;

WHEREAS, anti-stockpiling provisions are necessary to protect the stringency of the emission standards;

WHEREAS, anti-stockpiling provisions do not incur additional costs to the State, other than would be necessary to prosecute violators of the provisions;

WHEREAS, emissions measurement instrumentation and methodologies have progressed significantly since the Board adopted Tier 4 off-road diesel requirements in California;

WHEREAS, U.S. EPA has revised portions of the incorporated federal test procedures to improve the accuracy and precision of measuring and reporting emissions data;

WHEREAS, sections of the California Tier 4 off-road diesel test procedures differ significantly from the revised federal procedures;

WHEREAS, the differences between California Tier 4 off-road diesel and federal nonroad diesel test procedures could result in increased costs without a benefit to the environment due to the potential of redundant testing being necessary to satisfy both California and federal requirements;

WHEREAS, in conjunction with a public hearing notice released October 26, 2011, the staff has proposed that the Board adopt amendments to the California Emissions Regulation for Compression-Ignition Engines and Equipment, and the related compliance and test procedure 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 diesel 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 Tier 4 off-road diesel national program in order to attain the air quality goals of each agency;

WHEREAS, the proposed amendments to existing California Tier 4 off-road diesel 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 California program;

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

WHEREAS, U.S. EPA is retiring Part 90 and implementing Parts 1054 and 1065 for small nonroad spark-ignited engines, which alters the exhaust emission test procedures;

WHEREAS, small off-road engine and equipment manufacturers have requested that ARB harmonize with the federal exhaust emission test procedures to reduce their burden of complying with two different test procedures;

WHEREAS, the existing small off-road engine program includes regulations and procedures for emission control labels, warranties, enforcement procedures, and compliance testing necessary to adequately enforce the exhaust emission standards and test procedures;

WHEREAS, the existing small off-road engine test procedures include not only testing requirements, but also the certification procedures;

WHEREAS, the allowance to use supplemental engine cooling during small off-road engine emission tests is necessary in order to allow for real-world conditions during emission tests;

WHEREAS, California has an existing small off-road engine Particulate Matter (PM) emission standard for two-stroke engines;

WHEREAS, in conjunction with a public hearing notice released October 26, 2011, the staff has proposed that the Board adopt amendments to the California Emissions Regulation for Small Off-Road Engines, and the related compliance and test procedure sections of title 13, California Code of Regulations;

WHEREAS, the proposed amendments to existing California small off-road engine regulations 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 California program;

WHEREAS, section 43018(c) of the Health and Safety Code provides that in carrying out section 43018, the Board shall adopt standards and regulations which 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 specification of vehicular fuel composition;

WHEREAS, Health and Safety Code section 43013 authorizes the Board to adopt and implement motor vehicle fuel specifications for the control of air contaminants and sources of air pollution which the Board has found necessary, cost-effective, and technologically feasible to carry out the purposes of Division 26 of the Health and Safety Code;

WHEREAS, in 1991, the Board adopted the California Phase 2 Reformulated Gasoline standards (CaRFG2), which imposed minimum and maximum oxygen content requirements for California reformulated gasoline in California;

WHEREAS, many gasoline producers used methyl tertiary-butyl ether (MTBE) to satisfy the oxygen content requirements for CaRFG2;

WHEREAS, a federal gasoline test fuel, specified in title 40 CFR Part 86, subpart B, section 86.113-94(a)(1), is known as "Indolene";

WHEREAS, another federal gasoline test fuel, specified in title 40 CFR Part 86, subpart B, section 86.113-04(a)(1), is known as “Tier II gasoline”;

WHEREAS, the specifications for federal Indolene and federal Tier II gasolines do not include an oxygenate;

WHEREAS, the gasoline test fuel requirements contained in the on-road motor vehicle test procedures currently specify federal Indolene and Tier II gasoline test fuels for emission testing purposes, with the option of using CaRFG2;

WHEREAS, the current regulations for new small off-road engines, both new and in-use retrofitted large spark-ignition engines, and new recreational marine engines, specify, by reference and incorporation, the test fuel requirements contained in the on-road motor vehicle test procedures as their exhaust emission test fuel requirements;

WHEREAS, the current regulations for new off-highway recreational vehicles specify, by reference and incorporation, federal Indolene gasoline and federal Tier II gasoline for their exhaust emission test fuel requirements;

WHEREAS, in December 1999, the Board adopted the California Phase 3 Reformulated Gasoline (CaRFG3) specifications as California’s commercial gasoline;

WHEREAS, the CaRFG3 specifications designated an oxygen content requirement, but prohibited producers from using MTBE to satisfy this requirement;

WHEREAS, the adoption of CaRFG3 specifications for the commercial gasoline upset the consistency of the fuel specifications that had existed in California between commercial gasoline and the CaRFG2 test fuel used for exhaust emission testing for most off-road, spark-ignition categories;

WHEREAS, in June 2007, the Board adopted amendments to the CaRFG3 regulations that updated the Predictive Model requirements, which initiated corresponding increases in the ethanol content in California’s commercial gasoline to a ten-percent level (E10) by December 31, 2009;

WHEREAS, published test data for off-road, spark-ignition engines that was available during the 2007 CaRFG3 rulemaking indicated that Hydrocarbon (HC) and Carbon Monoxide (CO) emissions decreased when switching to an E10 gasoline, while Oxides of Nitrogen (NOx) emissions tended to increase proportionally with increasing amounts of ethanol;

WHEREAS, since December 31, 2009, manufacturers of small off-road engines, large spark-ignition engines, recreational marine engines, and off-highway recreational vehicles have been required to design and configure their respective engines’ fuel-metering systems to certify with either CaRFG2 or a non-oxygenated federal test fuel, as applicable, yet to operate in-use with CaRFG3;

WHEREAS, in November 2008, the Board adopted an allowance for manufacturers of small off-road engines, and by reference for manufacturers of large spark-ignition engines with displacements less than and equal to one liter as well, to optionally certify their engines using E10, provided that the engines had been certified federally using the same test fuel;

WHEREAS, in January 2012, the Board is scheduled to consider, under the third rulemaking phase of California's Low-Emission Vehicle standards, adoption of an E10 gasoline test fuel requirement as a replacement for the current on-road motor vehicle test fuel requirements;

WHEREAS, adoption of a new E10 on-road motor vehicle test fuel would upset the existing consistency of exhaust emission test fuel requirements between on-road motor vehicles and off-road, spark-ignition engines;

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 amendments to regulations for the new small off-road engine, new tier 4 off-road diesel engine, new and in-use retrofitted large spark-ignition engine, new recreational marine engine, and new off-highway recreational vehicle categories 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 problem in the United States;

Adoption of Tier 4 off-road diesel emission standards and requirements in alignment with U.S. EPA emission standards and requirements will simplify the processes of certification and production-line testing for industry;

Adoption of the Tier 4 off-road diesel interim ALT NO_x+HC standards is necessary to prevent manufacturers from having to certify separate engine families in California at extra cost and without a corresponding increase in emission benefits;

Adoption of enhanced labeling requirements for new off-road diesel replacement engines is necessary for the effective implementation and enforcement of California's in-use off-road diesel control programs;

Adoption of a comprehensive stockpiling prohibition is necessary to protect the stringency of the off-road diesel emission standards and prevent circumvention of the regulations by manufacturers choosing to overproduce engines in the years before a change in the emission standards;

Amendments to the off-road diesel procedures for testing and measuring emissions are necessary to improve accuracy and precision, and to restore harmonization to prevent duplicative federal and state testing that would increase the cost of compliance without a corresponding benefit to the environment;

The economic and cost impacts of the proposed off-road diesel 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 proposed off-road diesel regulatory amendments – 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

Pursuant to section 43013(c) of the Health and Safety Code, the proposed off-road diesel regulatory amendments are necessary, cost-effective, and technologically feasible for farm equipment, and the Board considered the technological effects of emission control standards on the cost, fuel consumption, and performance characteristics of mobile farm equipment.

WHEREAS, the Board further finds that:

The U.S. EPA's action of retiring Part 90 will cause analyzer companies to eventually cease support of existing Part 90-related emission analyzing test equipment used for emission testing of small off-road engines;

Retaining the existing Part 90-based small off-road engine test procedures would require the usage of increasingly antiquated analyzer equipment;

Continuing with the current small off-road engine test procedures would cause a financial burden to engine and equipment manufacturers without any air quality benefit in California;

Adoption of the proposed amendments for aligning California's test procedures with U.S. EPA's 40 CFR parts 1054 and 1065, with modifications, is necessary to reduce unnecessary administrative burdens on small off-road engine and equipment manufacturers;

Retaining California's certification emission credit program rather than adopting the federal credit program for small off-road engines and equipment is necessary to maintain the stringency of the applicable emission standards in California;

Retaining California's small off-road engine production-line testing regulations is necessary to maintain the stringency of the applicable emission standards in California;

Retaining the allowance to use supplemental engine cooling during small off-road engine emission tests is necessary in order to allow for real-world conditions during emission tests;

Retaining PM emission measurements for two-stroke engines is necessary to ensure that PM emissions from small off-road engines remain controlled;

Retiring the current small off-road engine test procedures is necessary to fully adopt the new test procedures;

The economic and cost impacts of the proposed small off-road engine 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; and

The proposed small off-road engine regulatory amendments are necessary, appropriate, and technologically feasible to carry out the purposes of the state and federal clean air laws.

WHEREAS, the Board further finds that:

Adoption of the proposed amendments for aligning the gasoline test fuel requirements for performing exhaust emission testing of new small off-road engines, new and in-use retrofitted large spark-ignition engines, new recreational marine engines, and new off-highway recreational vehicles with the E10 gasoline test fuel requirements, which the Board is scheduled to consider for adoption in January 2012 as a replacement for the current on-road motor vehicle test fuels, is necessary for maintaining the test fuel consistency between these off-road categories and on-road motor vehicles;

Adoption of the proposed amendments for aligning the gasoline test fuel requirements for performing exhaust emission testing of new small off-road engines, new and in-use retrofitted large spark-ignition engines, new recreational marine engines, and new off-highway recreational vehicles with the E10 gasoline test fuel requirements, which the Board is scheduled to consider for adoption in January 2012 as a replacement for the current on-road motor vehicle test fuels, is necessary for establishing a complete consistency between these off-road categories' specifications for test fuel and commercially available fuel;

Adoption of the proposed amendment to allow use of the E10 test fuel as an option for the 2013 through 2019 model years is necessary in order to provide lead time for adjusting to the new E10 test fuel requirement; and

Adoption of the proposed amendment to require mandatory use of new the E10 test fuel beginning with the 2020 model year is necessary in order to establish consistency with the mandatory E10 gasoline test fuel requirement implementation schedule that will be proposed and considered for adoption by the Board in January 2012 for on-road motor vehicles.

WHEREAS, the Board further finds that:

The proposed amendments to the off-road compression-ignition engine regulations and procedures will adequately enforce the emissions standards and test procedures of these regulations;

The proposed amendments to the small off-road engine regulations and procedures will adequately enforce the emissions standards and test procedures of these regulations;

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

The proposed amendments to the small off-road engine regulations establish uniform, consistent, and reasonable emission standards for these engines and equipment;

The amended regulations will have no adverse impact on the environment;

The 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;

The regulatory action will have no noticeable impact on California businesses, including small business, because the costs of complying with the federal nonroad regulation already take into account the costs to comply in California; 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.

WHEREAS, in consideration of public comment, the Board further finds that:

The amendments as proposed limit certification test fuels to E10, and this limitation could in the future inadvertently prohibit marine and other engine certification using a different California-certified blend fuel; and

It is necessary and appropriate to modify the proposed amendments to permit marine and other off-road engine certification using California-certified blend fuels other than E10.

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 and subsections of 2403 and 2407; and, "California Exhaust Emission Standards and Test Procedures for 2005-2012 Small Off-Road Engines," incorporated by reference in sections 2403(b)(2)(B), 2403(d) and 2407(a)(7); and, adopts "California Exhaust Emission Standards and Test Procedures for New 2013 and Later Small Off-Road Engines, Engine-Testing Procedures (Part 1054);" and, "California Exhaust Emission Standards and Test Procedures for New 2013 and Later Small Off-Road Engines, Engine-Testing Procedures (Part 1065)," to be incorporated by reference in sections 2403(b)(2)(B), 2403(d) and 2407(a)(7), all as set forth in Attachment A hereto.

BE IT FURTHER RESOLVED that the Board hereby adopts amendments to sections of title 13, California Code of Regulations, and the documents incorporated by reference therein: sections and subsections of, 2421, 2423, 2424, 2425, 2425.1, 2426, and 2427; and, "California Exhaust Emission Standards and Test Procedures for New 2008-2010 Tier 4 Off-Road Compression-Ignition Engines, Part I-C," incorporated by reference in section 2421(a)(4)(A), and adopts "California Exhaust Emission Standards and Test Procedures for New 2011 and Later Tier 4 Off-Road Compression Ignition Engines, Parts I-D, I-E, and I-F," to be incorporated by reference in section 2421(a)(4)(B), all as set forth in Attachment B hereto.

BE IT FURTHER RESOLVED that the Board hereby adopts amendments to sections of title 13, California Code of Regulations, and the documents incorporated by reference therein: section and subsections of 2433; and, "California Exhaust and Evaporative Emission Standards and Test Procedures For New 2010 and Later Off-Road Large Spark-Ignition Engines (2010 and Later Test Procedure 1048);" and, "California Exhaust and Evaporative Emission Standards and Test Procedures For New 2007 and Later Off-Road Large Spark-Ignition Engines (Test Procedures 1065 and 1068)," incorporated by reference in section 2433(c); and, "California Exhaust Emission Standards and Test Procedures for 2005-2012 Small Off-Road Engines," incorporated by reference in sections 2433(d)(1); and, adopts "California Exhaust Emission Standards and Test Procedures for New 2013 and Later Small Off-Road Engines, Engine-Testing Procedures (Part 1054);" and, "California Exhaust Emission Standards and Test Procedures for New 2013 and Later Small Off-Road Engines, Engine-Testing Procedures (Part 1065)," to be incorporated by reference in section 2433(d)(1), all as set forth in Attachment C hereto.

BE IT FURTHER RESOLVED that the Board hereby adopts amendments to sections of title 13, California Code of Regulations, and to the document incorporated by reference therein: sections and subsections 2783 and 2784; and, "California Exhaust Emission Standards and Test Procedures for 2015 and Subsequent Model Passenger Cars, Light

Duty Trucks, and Medium Duty Vehicles,” to be incorporated by reference in sections 2783(d)(3) and 2784(c)(3), all as set forth in Attachment D hereto.

BE IT FURTHER RESOLVED that the Board hereby adopts amendments to section of title 13, California Code of Regulations, section and subsections 2412; and, to the following document incorporated by reference therein: “California Exhaust Emission Standards and Test Procedures for 1997 and Later Off-Highway Recreational Vehicles and Engines,” incorporated by reference in section 2412(c)(1) and 2412(d)(1), all as set forth in Attachment E hereto.

BE IT FURTHER RESOLVED that the Board hereby adopts amendments to sections of title 13, California Code of Regulations, sections and subsections of 2447; and to the following document incorporated by reference therein: “California Exhaust Emission Standards and Test Procedures for 2001 Model Year and Later Spark-Ignition Marine Engines,” incorporated by reference in section 2447, all as set forth in Attachment F 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, B, C, D, E, and F, with the modifications set forth in Attachment G and such other conforming modifications as may be appropriate, after making the modified regulatory language and any 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 the Executive officer determines that this is warranted.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to determine if additional conforming modifications to the tier 4 off-road compression-ignition engine regulations are appropriate. If no additional modifications are appropriate, the Executive Officer shall take final action to adopt the regulations, as set forth in Attachment B hereto. If the Executive Officer determines that additional conforming modifications are appropriate, the Executive Officer shall adopt the modified regulation after making the modified regulatory language and any 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 as may be submitted during this period, shall make such further modifications as may be appropriate in light of the comments received, and shall present the regulations to the Board for further consideration if the Executive Officer determines that this is warranted.

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 11-41, as adopted by the Air Resources Board.

Mary Alice Morency, Clerk of the Board

Resolution 11-41

December 16, 2011

Identification of Attachments to the Resolution

- Attachment A:** Proposed amendments to the Small Off-Road Engine Regulations, as set for the in Appendices A, G, H, I, and S to the Initial Statement of Reasons, released October 26, 2011.
- Attachment B:** Proposed amendments to the California Off-Road Emissions Regulation for Compression-Ignition Engines and Equipment, as set forth in Appendices B, J, K, L, M, and T to the Initial Statement of Reasons, released October 26, 2011.
- Attachment C:** Proposed amendments to the Large Spark-Ignition Engine Regulations, as set for the in Appendices C, N, O, and U to the Initial Statement of Reasons, released October 26, 2011.
- Attachment D:** Proposed amendments to the in-use, retrofit Large Spark-Ignition Engine Regulations, as set for the in Appendices D and U to the Initial Statement of Reasons, released October 26, 2011.
- Attachment E:** Proposed amendments to the On-Highway Recreational Vehicle Regulations, as set for the in Appendices E, P, and V to the Initial Statement of Reasons, released October 26, 2011.
- Attachment F:** Proposed amendments to the Recreational Marine Spark-Ignition Engine Regulations, as set for the in Appendices F, Q, and W to the Initial Statement of Reasons, released October 26, 2011.
- Attachment G:** Staff Suggested Modifications to the Original Proposal (Distributed at the December 16, 2011 Board Hearing).