

State of California
AIR RESOURCES BOARD

Resolution 94-53

September 22, 1994

Agenda Item No.: 94-9-1

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, in section 43000 of the Health and Safety Code the Legislature has declared that the emission of air contaminants from motor vehicles is the primary cause of air pollution in many parts of the state, and that the control and elimination of those air contaminants is of prime importance for the protection and preservation of the public health and well-being, and for the prevention of irritation to the senses, interference with visibility, and damage to vegetation and property;

WHEREAS, section 43018(a) of the Health and Safety Code, enacted by the California Clean Air Act of 1988, 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, section 43018(b) of the Health and Safety Code directs the Board no later than January 1, 1992 to take whatever actions are necessary, cost-effective, and technologically feasible in order to achieve, by December 31, 2000, a reduction in motor vehicle emissions of reactive organic gases (ROG) of at least 55 percent and a reduction of motor vehicle emissions of oxides of nitrogen (NOx), and the maximum feasible reductions in particulates (PM), carbon monoxide (CO), and toxic air contaminants from vehicular sources;

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 reductions in motor vehicle exhaust and evaporative emissions, reductions in in-use vehicular emissions through durability and performance improvements, requiring the purchase of low-emission vehicles by state fleet operators, and specification of vehicular fuel composition;

WHEREAS, section 43104 of the Health and Safety Code directs the Board to adopt test procedures for determining whether new motor vehicles are in compliance with the emission standards established by the Board;

WHEREAS, the Board's test procedures for certifying 1985 and subsequent model heavy-duty diesel engines and vehicles are contained in the California Exhaust Emission Standards and Test Procedures for 1985 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles (the Heavy-Duty Diesel Test Procedures), which is incorporated by reference in Title 13, California Code of Regulations, section 1956.8(b);

WHEREAS, the Board's test procedures for certifying 1987 and subsequent model heavy-duty Otto-cycle engines and vehicles are contained in the California Exhaust Emission Standards and Test Procedures for 1987 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles (the Heavy-Duty Otto-Cycle Test Procedures), which is incorporated by reference in Title 13, California Code of Regulations, section 1956.8(d);

WHEREAS, the Board's test procedures for certifying 1988 and subsequent model light- and medium-duty vehicles are contained in the California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles (the Light- and Medium-Duty Vehicle Test Procedures), which is incorporated by reference in Title 13, California Code of Regulations, section 1960.1(k);

WHEREAS, Title 13, California Code of Regulations, section 2282(g)(3) identifies the specifications of the 10 percent aromatic hydrocarbon content "reference fuel" to be used in engine testing to determine whether an alternative diesel fuel formulation results in emissions equivalent to the emissions associated with diesel fuel meeting the 10 percent aromatic hydrocarbon content standard applicable to diesel fuel sold commercially for use in motor vehicles in California;

WHEREAS, the Heavy-Duty Diesel Test Procedures and the Light- and Medium-Duty Vehicle Test Procedures provide that certification testing of (a) 1995 and subsequent model-year passenger cars, light-duty trucks and medium-duty diesel-fueled vehicles, (b) 1995 and subsequent model-year medium-duty engines, and (c) 1996 and 1997 model-year urban bus diesel engines, may as an option be conducted using diesel fuel meeting the 10 percent aromatic hydrocarbon content "reference fuel" specifications set forth in section 2282(g)(3);

WHEREAS, The California Exhaust Emission Standards and Test Procedures for 1995 and Later Utility and Lawn and Garden Equipment Engines, incorporated by reference in Title 13, California Code of Regulations, section 2403, provides that the certification test fuel used for emission testing of 1995 and later utility and lawn and garden equipment engines shall be consistent with the fuel specifications as outlined in the latest amended text of the Light- and Medium-Duty Vehicle Test Procedures;

WHEREAS, the Heavy-Duty Diesel Test Procedures, the Heavy-Duty Otto-Cycle Test Procedures, and the Light- and Medium-Duty Vehicle Test Procedures provide that the specifications for natural gas certification fuel for 1994

and subsequent model vehicles and engines include an oxygen content requirement of 0.5 +/- 0.1 mole percent;

WHEREAS, Title 13, California Code of Regulations, section 2292.6 provides that liquefied petroleum gas (LPG) intended for use in motor vehicles in California must have a propylene (propene) content not exceeding 10 volume percent for LPG sold or supplied between January 1, 1992 and December 31, 1994, and not exceeding 5 volume percent for LPG sold or supplied on or after January 1, 1995;

WHEREAS, the staff has proposed regulatory amendments which, as initially proposed, would establish more narrowly-defined specifications, including an aromatic hydrocarbon content of 8 to 12 percent and a natural cetane number of 47 to 55, for the diesel fuel which may as an option be used in certification testing of (a) 1995 and subsequent model-year passenger cars, light-duty trucks and medium-duty diesel-fueled vehicles, (b) 1995 and subsequent model-year medium-duty engines, (c) 1996 and 1997 model-year urban bus diesel engines, and (d) 1995 and later utility and lawn and garden equipment;

WHEREAS, the proposed regulatory amendments, as initially proposed, would also revise the oxygen content specification for the natural gas certification fuel for 1994 and subsequent model vehicles and engines to specify a maximum content of 0.5 mole percent;

WHEREAS, the proposed regulatory amendments, as initially proposed, would also revise the required specifications for LPG intended for use in motor vehicles in California to extend the maximum propene limit of 10 volume percent through December 31, 1996, and to delay imposition of the maximum propene limit of 5 volume percent until January 1, 1997;

WHEREAS, the California Environmental Quality Act and Board regulations require that an action not be adopted as proposed where it will have significant adverse environmental impacts if feasible alternatives or mitigation measures are available which would substantially reduce or avoid such impacts;

WHEREAS, the Board has considered the impact of the proposed amendments 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:

The amendments adopted herein pertaining to the specifications for the diesel fuel that may as an option be used for certification testing of (a) 1995 and subsequent model-year passenger cars, light-duty trucks and medium-duty diesel-fueled vehicles, (b) 1995 and subsequent model-year medium-duty engines, (c) 1996 and 1997 model-year urban bus diesel engines, and (d) 1995 and later utility and lawn and garden equipment, are necessary and appropriate to reflect the expected parameters of commercial 10 percent aromatic hydrocarbon content motor vehicle diesel fuel in ranges sufficiently narrow to assure repeatable and reliable certification testing;

It is necessary and appropriate to revise the oxygen content specification for the natural gas certification fuel for 1994 and subsequent model vehicles and engines to specify a maximum content of 0.5 mole percent, in order to reduce the potential safety risks in producing natural gas meeting the oxygen content specification;

It is necessary and appropriate to delay, until January 1, 1997, the imposition of the maximum propene limit of 5 volume percent for LPG sold commercially for use in motor vehicles in California, in order to reduce the possibility of supply shortages and market segregation which could adversely impact the development of the market for commercial motor vehicle LPG fuel; and

The California test procedures for certification of new passenger cars, light-duty trucks, medium-duty vehicles and engines, and heavy-duty engines as amended herein differ from comparable regulations in the Code of Federal Regulations, and the differing state regulations are authorized by sections 43013, 43018, 43101 and 43104 of the Health and Safety Code;

The amendments adopted herein will not have a significant adverse emission or other environmental impact; and

The amendments adopted herein will not have an adverse impact on the economy of the state.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby adopts the amendments to sections 1956.8(b), 1956.8(d), and 1960.1(k), Title 13, California Code of Regulations, as set forth in Attachment A hereto, the amendments to the California Exhaust Emission Standards and Test Procedures for 1985 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles as set forth in Attachment B hereto, the amendments to the California Exhaust Emission

Standards and Test Procedures for 1987 and Subsequent Model Heavy-Duty Otto-cycle Engines and Vehicles as set forth in Attachment C hereto, and the amendments to the California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles as set forth in Attachment D hereto.

BE IT FURTHER RESOLVED that the Board hereby determines that the amendments adopted herein to the California motor vehicle emission standards and test procedures will not cause the 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 California motor vehicle emission standards and test procedures as amended 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 forward the amendments pertaining to the motor vehicle emission standards and test procedures to the U.S. Environmental Protection Agency with a request for a waiver or confirmation that the amendments 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 94-53 as adopted by the Air Resources Board.

Pat Hutchens

Pat Hutchens, Board Secretary

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September 22, 1994

Identification of Attachments to the Resolution

Attachment A: Proposed amendments to Title 13, California Code of Regulations, sections 1956.8(b), 1956.8(d), 1960.1(k), and 2292.6 as set forth in Appendix A to the Staff Report.

Attachment B: Amendments to the California Exhaust Emission Standards and Test Procedures for 1985 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles, as set forth in Appendix B to the Staff Report.

Attachment C: Amendments to the California Exhaust Emission Standards and Test Procedures for 1987 and Subsequent Model Heavy-duty Otto-cycle Engines and Vehicles, as set forth in Appendix C to the Staff Report.

Attachment D: Amendments to the California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles, as set forth in Appendix D to the Staff Report.