State of California
AIR RESOURCES BOARD

Resolution 94-67

December 8, 1994

Agenda Item No.: 94-12-2

WHEREAS, sections 39002 and 39003 of the Health and Safety Code charge the Board with the responsibility for systematically attacking the serious air pollution problem caused by motor vehicles;

WHEREAS, sections 39600 and 39601 of the Health and Safety code authorize 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 pollutants from motor vehicles is the primary cause of air pollution in many parts of the state;

WHEREAS, in section 43000.5 of the Health and Safety Code, the Legislature found and declared that, despite significant reductions in vehicle emissions in recent years, continued growth in population and vehicle miles traveled throughout California have the potential not only to prevent attainment of the state standards, but in some cases, to result in worsening of air quality;

WHEREAS, section 43004 provides that unless expressly exempted, the exhaust emissions for gasoline-powered motor vehicles shall apply to motor vehicles which have been modified or altered to use a fuel other than gasoline or diesel;

WHEREAS, section 43006 provides that the ARB may certify the fuel system of any motor vehicle powered by a fuel other than gasoline or diesel which meets the standards specified by section 43004 and adopt test procedures for such certification;

WHEREAS, section 43013 of the Health and Safety Code authorizes the Board to adopt motor vehicle emission standards and in-use performance standards which it finds to be necessary, cost-effective, and technologically feasible;

WHEREAS, section 43018 of the Health and Safety Code directs the Board to achieve the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to accomplish the attainment of state standards at the earliest possible date;

WHEREAS, sections 39515 and 39516 of the Health and Safety Code provide that the Board may delegate any duty to the Executive Officer which the Board deems appropriate and that any power, duty, purpose, function, or

jurisdiction which the Board may lawfully delegate shall be conclusively presumed to have been delegated to the Executive Officer unless the Board has expressly reserved such authority onto itself;

WHEREAS, in July 1990, the Board adopted and the Office of Administrative Law subsequently approved regulations regarding "Malfunction and Diagnostic System Requirements--1994 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines," (OBD II), which are codified at Title 13, CCR, section 1968.1, and which set forth requirements for monitoring catalyst efficiency, engine misfire, evaporative system integrity, secondary air injection, and chlorofluorocarbon (CFC) containment; for improving current monitoring of the fuel system, oxygen sensor, EGR system, and other emission-related components of the on-board diagnostic system; and for standardizing fault codes, diagnostic repair equipment, the vehicle connector used for attaching the repair equipment to the vehicle, and the protocol for downloading repair information in order to improve the effectiveness of emission control system repairs;

Whereas, the Board adopted amendments to the OBD II regulations in 1991 and 1993, and the amendments were approved by the Office of Administrative Law;

WHEREAS, the staff has now proposed adoption of additional amendments to Title 13, CCR, section 1968.1, that, among other things, would provide manufacturers with additional guidance and/or flexibility in implementing and complying with the malfunction and diagnostic requirements of the regulations, including catalyst monitoring, misfire detection, tamper resistance, and applicability of the regulations to vehicles and engines that use diesel and alternate fuels, and would require manufacturers to develop monitoring strategies capable of detecting evaporative system leaks as small as the equivalent of a 0.020 inch diameter orifice.

WHEREAS, the staff has further proposed that Title 13, CCR, section 1968.1 be amended to provide the Executive Officer with authority to certify 1996-2000 model year vehicles required to comply with the malfunction and diagnostic requirements of the section, but do not fully meet the minimum requirements in one or more areas, provided that the manufacturers of such vehicles in some cases pay a fine for such nonconformance pursuant to section 43016 of the California Health and Safety Code;

WHEREAS, the staff has further proposed amendments to Title 13, CCR, sections 2030 and 2031 and the incorporated "California Certification and Installation Procedures for Alternative Fuel Retrofit systems for Motor Vehicles Certified for 1994 and Subsequent Model Years" to allow alternative fuel retrofit system manufacturers to disable specific on-board diagnostic monitoring strategies through the 1998 model year;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project which may have significant adverse environmental impacts may be adopted as originally proposed if feasible alternatives or mitigation measures are available to reduce or eliminate such impacts;

WHEREAS, pursuant to section 43013(e) of the Health and Safety Code, the Board has considered the effects of the proposed amendments to the regulations 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:

To date, more than 35 engine families have been certified as meeting the OBD II requirements for the applicable model years;

The proposed amendments to Title 13, CCR, section 1968.1 should help manufacturers continue to be able to certify systems in future model years by clarifying requirements and by making minor adjustments to the regulation based on technical and practical experience gained to date, which should ease the burdens manufacturers face in developing OBD II systems that comply with these regulations;

Significant numbers of vehicles continue to operate with deteriorated catalytic converters and that catalyst performance is crucial to maintaining vehicle emissions in compliance with the applicable standards; accordingly, it continues to be necessary to monitor catalyst performance; however, such monitoring can be done by evaluating malfunction criteria based on tailpipe emission levels;

In-use surveillance programs indicate that evaporative system leaks as small as 0.020 inches in diameter occur on a significant number of in-use vehicles causing excess evaporative emissions, and, therefore, evaporative monitoring systems that can detect leaks of this size, as well as other malfunctions, should significantly reduce in-use evaporative emissions from vehicles;

The monitoring of misfire over the full engine operating range is necessary because misfire contributes substantially to excess emissions and can cause catalyst overheating and failure;

On diesel fueled vehicles, the loss of compression or other malfunctions that prevent combustion in one or more cylinders and fuel system malfunctions cause excess emissions; monitoring systems that detect such malfunctions should significantly reduce such emissions from diesel fueled vehicles;

Manufacturers of alternative fuel vehicles and alternative fuel retrofit systems require additional leadtime to investigate the effects of alternate fuels on component performance and durability before full implementation of reliable OBD II systems on these vehicles can take place;

The proposed amendments should maximize the long-term effectiveness of the OBD II regulations by restructuring and enhancing current monitoring requirements based on the latest improvements in monitoring technologies;

The proposed amendments would enable manufacturers that have been unable to develop a fully complying OBD II system, despite good faith efforts, to certify such systems conditionally, through the 2000 model year, upon payment of a penalty in some cases;

The proposed amendments to Title 13, CCR, section 1968.1 are necessary, cost-effective, and technologically feasible to carry out the purposes of the California Clean Air Act; and

The proposed amendments to Title 13, CCR, section 1968.1, do not affect the Board's earlier findings that the full implementation of the regulation will result in emission reductions that will help attain and maintain national and air quality standards for ozone, carbon monoxide and nitrogen dioxide;

WHEREAS, the Board has determined, in accordance with the California Environmental Quality Act and Board regulations, that the proposed amendments to Title 13, CCR, section 1968.1, that provide that manufacturers may elect to phase-in the monitoring of misfire detection over the full range of operating conditions over a four year period and that manufacturers may be permitted to certify non-fully compliant OBD II systems, may have some short-term adverse environmental impacts in relation to the regulations presently in effect; however, overriding considerations exist for adoption of the proposed amendments:

Title 13, CCR, section 1968.1(b)(3.3) presently provides that for 1997 and later model year vehicles, misfire shall be monitored continuously and under all positive torque engine speeds and conditions; however, staff has determined, and the Board finds, that some engine and driveline characteristics, especially as they apply to engines with 10 or 12 cylinders, still preclude reliable misfire monitoring over the full range of operating conditions;

No equally effective alternative methods for misfire monitoring have been identified that would be cost-effective and technologically feasible for implementation by the 1997 model year.

Strict enforcement of the existing regulations could result in several engines not being able to be certified and available for sale in California; accordingly, amendments have been proposed to permit manufacturers to

phase-in the full-range misfire requirement over four years, beginning with the 1997 model year;

The proposed amendments to Title 13, CCR, section 1968.1(m) would enable manufacturers that have been unable to develop fully complying OBD II systems, despite good faith efforts, to certify such systems conditionally, through the 2000 model year;

Theoretically, allowing vehicles to be certified during the phase-in period even though they cannot be monitored over the full range of operating conditions could prevent the proper and immediate repair of emission control systems of such vehicles and could result in a possible increase in emissions;

However, such vehicles, even with the potential monitoring system deficiencies that have been identified, will be significantly more effective in reducing in-use vehicle emissions than malfunction and diagnostic systems that comply with pre-OBD II system requirements;

The certification of such vehicles would minimize economic hardship for vehicle manufacturers, distributors of such vehicles within California, and would minimize any resulting impact on vehicle availability and costs for consumers;

WHEREAS, the Board has determined, in accordance with the California Environmental Quality Act and Board regulations, that the proposed amendments to Title 13, CCR, sections 2230-2231 will not have significant adverse environmental impacts;

NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves for adoption, with modification, the amendments to sections 1968.1 and 2230-2231, Title 13, California Code of Regulations and the documents incorporated therein, which were made available for public comment in Mail-Out 94-38 and are set forth in Attachment A. The modifications to the language of Attachment A are set forth in Attachment B.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to adopt Section 1968.1, Title 13, California Code of Regulations, 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 pursuant to section 209(b) of the Clean Air Act 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, and will not cause the California requirements to be inconsistent with section 202(a) of the Clean Air Act;

BE IT FURTHER RESOLVED that the Executive Officer shall, upon adoption, forward the amended subsections to Title 13, CCR, section 1968.1, to the Administrator of the Environmental Protection Agency with a request for a waiver of federal preemption pursuant to section 209(b) of the Clean Air Act;

BE IT FURTHER RESOLVED that the Board directs the staff to continue to closely monitor vehicle manufacturers in complying with the requirements of section 1968.1, Title 13, CCR, and to report to the Board in 1996 if further amendments to the regulations are necessary for future model year vehicles.

I hereby certify that the above is a true and correct copy of Resolution 94-67 as adopted by the Air Resources Board.

Pat Hutchens

Pat Hutchens, Board Secretary