State of California
AIR RESOURCES BOARD

Resolution 02-17

April 25, 2002

Agenda Item No.: 02-3-2

WHEREAS, sections 39002 and 39003 of the Health and Safety Code charge the Air Resources Board (ARB or 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, 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 sections 43000 and 43000.5 of the Health and Safety Code, the Legislature declared that the emission of air pollutants from motor vehicles is the primary cause of air pollution in many parts of the state and 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 emission standards for gasoline powered motor vehicles shall apply to motor vehicles that 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 that meets the standards specified by section 43004 and adopt test procedures for such certification;

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

WHEREAS, section 43018(a) 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 practicable date;

WHEREAS, section 43018(c) of the Health and Safety Code further directs the Board that in carrying out the directives of section 43018(a), 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, including but not limited to, reductions in exhaust and evaporative emissions and reductions in in-use emissions through improvements in motor vehicle emission system durability and performance;

WHEREAS, section 43101 of the Health and Safety Code directs the Board to adopt and implement emission standards for new motor vehicles for the control of emissions therefrom that are necessary and technologically feasible;

WHEREAS, section 43102 of the Health and Safety Code provides that the Board shall not certify a new motor vehicle or motor vehicle engine unless the vehicle or engine meets the emission standards adopted by the ARB pursuant to Part 5 of the Health and Safety Code under test procedures adopted pursuant to section 43104;

WHEREAS, section 43104 of the Health and Safety Code provides that the Board shall adopt test procedures and any other procedures necessary to certify that new motor vehicles and engines are in compliance with the emissions standards established under Part 5 of the Health and Safety Code;

WHEREAS, section 43105 of the Health and Safety Code provides that no new motor vehicle or engine required under Part 5 of the Health and Safety Code to meet emission standards shall be sold to the ultimate purchaser, ordered or delivered for sale to the ultimate purchaser, or registered in this state if the manufacturer has violated emission standards or test procedures and has failed to take corrective action, which may include recall of vehicles or engines, specified by the Board in accordance with its regulations;

WHEREAS, sections 43105.5 and 44036.2 of the Health and Safety Code directs the Board to require motor vehicle manufacturers to provide service information necessary to properly inspect, test and repair motor vehicles;

WHEREAS, sections 43016, 43154, 43211, and 43212 of the Health and Safety Code provide that penalties may be assessed against motor vehicle manufacturers for noncompliance with ARB emission standards, other certification requirements, or other rules and regulations of the Board;

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, California Code of Regulations ("CCR"), section 1968.1, and which set forth requirements for (1) monitoring catalyst efficiency, engine misfire, evaporative system integrity, secondary air injection, and chlorofluorocarbon (CFC) containment;
(2) improving current monitoring of the fuel system, oxygen sensor, EGR system, and other emission-related components of the on-board diagnostic system; and (3) 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 title 13, CCR, section 1968.1 in 1991, 1993, 1994, and 1996, which were respectively approved by the Office of Administrative Law;

WHEREAS, the U.S. Environmental Protection Agency on October 11, 1996, approved California's request for a waiver of preemption under section 209(b) of the Federal Clean Air Act for the OBD II regulations (61 Fed.Reg. 53371);

WHEREAS, in 1998 the Board adopted stringent new tailpipe and evaporative emission standards for low emission vehicles ("LEV II");

WHEREAS, the California Environmental Quality Act (CEQA), section 21080.5 of the Public Resources Code and Board regulations at title 17, CCR, section 60006 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 43101 of the Health and Safety Code and section 11346.3 of the Government Code, the Board has considered and assessed the effects of the proposed regulations on the economy of the state;

WHEREAS, the staff has now proposed adoption of title 13, CCR, section 1968.2 that would establish OBD II requirements for 2004 and subsequent model year passenger cars, light-duty trucks, and medium-duty vehicles and engines;

WHEREAS, proposed section 1968.2 would carryover most of the requirements of section 1968.1, it proposes to revise several existing requirements, including among other things, the requirements for catalyst monitoring, misfire monitoring, evaporative system monitoring, oxygen sensor monitoring, and engine system cooling monitoring;

WHEREAS, proposed section 1968.2 would also establish several new requirements, including among other things, requirements for cold start emission reduction strategy monitoring, air conditioning system component monitoring, direct ozone reduction monitoring, production vehicle evaluation and verification testing, and requirements for standardized measurement of real world monitoring performance;

WHEREAS, the staff has now further proposed adoption of title 13, CCR, section 1968.5 that would establish enforcement procedures for compliance with the proposed OBD II requirements for 2004 and subsequent model year passenger cars, light-duty trucks, and medium-duty vehicles and engines, and that such procedures would set forth a specific protocol for in-use testing of OBD II-equipped motor vehicles and engines and remedying noncompliance with the OBD II requirements;

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 to consider adoption of proposed sections 1968.2 and 1968.5, title 13, CCR;

WHEREAS, the Board finds regarding the adoption of proposed section 1968.2 of title 13, CCR, that:

With the introduction of 1996 model year motor vehicles and engines, manufacturers have incorporated OBD II systems into nearly all of their vehicle models and engines pursuant to the standards and other requirements of title 13, CCR, section 1968.1;

Since the introduction of 1996 model year vehicles, it has become apparent that additional monitoring requirements as well as revisions to existing requirements to the OBD II regulations are necessary to improve emission-control system monitoring and compliance in light of increasingly stringent tailpipe and evaporative emission standards and the need to better serve automotive repair technicians and to incorporate the use of OBD II systems into the State inspection and maintenance ("I&M") program;

Because of the number of changes being proposed as well as a determination that because of the number of amendments to title 13, CCR, section 1968.1 that have been adopted over the past 10 years, the requirements of section 1968.1 should be redrafted to provide better organization and clarity and set forth in a new section, title 13, CCR, section 1968.2, which would apply to 2004 and subsequent model year passenger cars, light-duty truck, and medium-duty vehicles and engines;

Proposed section 1968.2 of title 13, CCR would carry over many of the existing

requirements of title 13, CCR, section 1968.1 without substantive change and such requirements continue to be necessary, cost-effective, and technologically feasible;

The new requirements and substantive revisions to title 13, CCR, section 1968.1 that are set forth in proposed section 1968.2 of title 13, CCR would help to ensure that all OBD II systems meet their stated purpose of notifying vehicle operators of malfunctions to a motor vehicle's emission control system and assisting the service and repair industry in repair of such malfunctions and that such systems function properly in-use;

The new requirements and substantive revisions to title 13, CCR, section 1968.1 that are set forth in proposed section 1968.2 of title 13, CCR would further help to ensure that a motor vehicle certified to the LEV II emission standards will continue to operate in-use at or near those levels throughout the motor vehicle's life;

Catalyst monitoring requirements must be broadened to include the monitoring for oxides of nitrogen (NOx) conversion efficiency for vehicles certified to the LEV II NOx standard so that emission benefits of the LEV II program are achieved;

The requirements for the aging of catalysts need to be revised to assure that deterioration of the catalysts more closely represent real world deterioration so that the malfunction indicator light ("MIL") will illuminate at the appropriate emission level during real world operation;

Given the advances made in the monitoring for misfire and to assure the effectiveness of the misfire requirements as they apply to all manufacturers, the misfire monitoring requirements should be revised to limit the number of disablements that a manufacturer may request and that, in general, only disablements specifically identified in the regulations will be approved by the Executive Officer;

Evaporative system monitoring would be improved by requiring standardized orifice measurements and by providing manufacturers with greater flexibility in monitoring strategies for larger sized leaks and in illuminating the MIL for 0.020 inch leaks;

Because of the difficulty of projecting durability of secondary air systems and the need to increase the robustness of such systems to insure the emission reduction benefits of the LEV II program, the secondary air system monitoring requirements need to be revised from a functional system check to an emission-related malfunction threshold standard;

Because oxygen sensors are critical to the proper performance of a motor vehicle's fuel and emission control systems the OBD II system should continuously monitor

the primary oxygen sensor for circuit continuity and out-of-range values and the secondary oxygen sensor for out-of-range values;

To insure proper fuel and spark timing control, the engine coolant temperature sensor requirements should be modified to reflect the lower enable conditions required for closed-loop operation on current vehicles and to clarify that rationality monitoring of engine coolant temperature sensors should identify when such sensors have inappropriately low or high temperature readings;

The thermostat monitoring requirements should be modified to provide motor vehicle manufacturers with additional flexibility in monitoring high capacity passenger vehicles to avoid improper illumination of the MIL;

Monitoring of cold-start emission reduction strategies while the strategies are active is needed to insure that emission reductions during the brief period following a cold start are achieved during in-use driving;

Given the adoption of specific emission standards for vehicles during operation of the air conditioning system, malfunctions of some air conditioning system components is necessary because such components can significantly affect tailpipe emissions;

Monitoring of variable valve timing and/or control systems is necessary to assure that motor vehicles that have been certified to LEV II emission levels perform at or near such levels in-use;

Monitoring of direct ozone reduction systems is needed to ensure that manufacturers who elect to incorporate such technologies in new motor vehicles and receive emission credits for doing so have systems that properly function in-use;

Higher emission-malfunction thresholds for SULEVs are appropriate given the stringency of the SULEV emission standards under the LEV II program and the challenges associated in meeting the stringent standards and complying with the OBD II requirements;

To assure compliance with increasingly stringent NOx and particulate matter (“PM”) emission standards that are required for future diesel light-duty and medium-duty vehicles and engines, it is necessary that, in general, vehicles certified to those standards be equipped with OBD II systems that monitor both the catalyst and PM trap systems on such vehicles;

More frequent monitoring and better identification of fault codes of specific input

and output components, otherwise described in the OBD II regulations as comprehensive components, are necessary given the complexity that

technicians face in determining appropriate repairs of such components and the vital importance of such components to the monitoring strategies of other components and systems;

To assure that certified vehicles maintain low emissions levels in use, regardless of the emission control technology used, it is necessary to require new monitoring requirements for future emission control technology components that are not corrected or compensated for by the adaptive fuel control system, and for other on-vehicle devices that emit criteria pollutants such as on-board reformers or fuel-burning passenger compartment heaters**;**

The effectiveness of the OBD II regulation would be improved by clarifying and updating the standardization requirements – including the requirements for communication protocol, readiness status reporting, use and reporting of fault codes and “real-time” data parameters, and reporting of the OBD II systems Calibration Verification Number and Vehicle Identification Number -- to better assist technicians in the field and to ease implementation of OBD II into the State’s inspection and maintenance program;

By revising the OBD II demonstration test and certification requirements to assure that the ARB obtains all information necessary to evaluate and certify OBD II systems on new vehicles while providing manufacturers with greater flexibility in collecting and distributing such information, the interests of all parties is served;

It is essential to the continued success of the OBD II program and the successful implementation of OBD II testing into the State’s I&M program that motor vehicle manufacturers verify that the OBD II system on production vehicles complies

with the OBD II regulation and communicates properly with off-board test equipment;

To minimize in-use problems with the OBD II systems that may otherwise go undetected, it is necessary that motor vehicle manufacturers conduct validation testing of the different diagnostics required under the OBD II regulation on vehicles manufactured in the first several months after full-scale production for a model year commences;

The provisions of title 13, CCR, section 1968.1(m)(6) should be carried over in proposed section 1968.2(i) of title 13, CCR, so that motor vehicle manufacturers who have attempted in good faith to comply fully with the OBD II regulations have the

ability to certify new motor vehicles with one or more deficiencies and, in an effort to encourage manufacturers to verify compliance on post-certification

production vehicles, manufacturers should be allowed to request and receive deficiency allowances, under limited circumstances, during the first several months after model-year production has commenced;

To ensure that OBD II monitors run frequently in-use, it is necessary for the ARB to adopt standardized procedures for determining real world monitoring performance and that motor vehicle manufacturers track the frequency of in-use operation of specified monitors;

To provide the ARB with necessary information to determine whether or not specified OBD II monitors equipped on production vehicles are operating with sufficient frequency in use and that motor vehicle manufacturers should collect and provide the ARB with tracking data from vehicles manufactured during the first six months of a model year; and

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

WHEREAS, the Board finds regarding the adoption of proposed section 1968.5 of title 13, CCR, that:

The Legislature has entrusted the Board with express and implied authority to adopt OBD II specific enforcement procedures;

To better address the unique issues involved in compliance with the proposed OBD II regulations at title 13, CCR, section 1968.2, OBD II-specific enforcement procedures are necessary and should be used instead of the general in-use enforcement provisions (title 13, CCR sections 2111-2149) that were initially adopted and intended to apply only for the enforcement of ARB adopted tailpipe and evaporative emission standards;

The proposed enforcement procedures would clarify the rights and responsibilities of all parties in complying with the OBD II requirements and the OBD II specific in-use testing procedures and remedies should ensure greater and more effective compliance while providing motor vehicle manufacturers with fair notice and process;

WHEREAS, the Board further finds regarding the adoption of proposed sections 1968.2

and 1968.5 of title 13, CCR that:

With respect to the requirements of CEQA, proposed sections 1968.2 and 1968.5, title 13, CCR, would not adversely impact the environment but would help guarantee that motor vehicles initially certified to very low and near-zero emission standards maintain such emission levels throughout their lives; by doing so, the proposed regulations would help in the attainment and maintenance of the national ambient air quality standards for ozone, carbon monoxide and nitrogen dioxide;

Having identified that the proposed regulations should not adversely affect the environment, but rather help ensure that measurable emission benefits are achieved both statewide and in the South Coast Air Basin, proposed sections 1968.2 and 1968.5, title 13, CCR, should not adversely impact any community in the State, especially low-income or minority communities;

The economic and cost impacts of proposed title 13, CCR, sections 1968.2 and 1968.5 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 for this regulatory action;

The reporting requirements of title 13, CCR, sections 1968.2 and 1968.5 applicable to businesses are necessary for the health, safety, and welfare of the people of the State;

The requirements of proposed title 13, CCR, sections 1968.2 are similar to requirements addressed in federal regulations; however, the provisions of sections 1968.2 and 1968.5 differ from the federal regulations codified at 40 CFR Part 86, section 86.094-2 et seq. and 40 CFR Part 85, section 85.1801 et seq.; and

The different state provisions are justified in that they are authorized by state law and the cost of the different state provisions is justified by the benefit to human health, public safety, public welfare, or the environment.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves proposed sections 1968.2 and 1968.5, title 13, California Code of Regulations as set forth in Attachments A and B hereto.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to adopt proposed sections 1968.2 and 1968.5, title 13, California Code of Regulations, 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 he or she 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 sections 1968.2 and 1968.5 do not undermine California's previous determinations that the State's standards are in the aggregate, at least as protective of the public health and welfare as applicable federal standards or that requirements and procedures are inconsistent with section 202(a) of the Clean Air Act and do not raise any new issues.

BE IT FURTHER RESOLVED that the Executive Officer shall, upon adoption, forward title 13, CCR, section 1968.2 to the Administrator of the Environmental Protection Agency with a request that requirements set forth therein and the enforcement provisions of title 13, CCR, section 1968.5 be found to be within the scope of the existing waiver that has been granted under section 209(b) of the Clean Air Act for Title 13, CCR, section 1968.1.

BE IT FURTHER RESOLVED that the Board directs the staff to continue to closely monitor vehicle manufacturers in complying with the requirements of section 1968.2, title 13, CCR, and the implementation of section 1968.5, title 13, CCR, and to report back to the Board within two years from the effective date of the regulations with a status report and such amendments as deemed necessary to effectuate the purposes and policies outlined above.

I hereby certify that the above is a true and correct copy of Resolution 02-17, as adopted by the Air Resources Board.

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Stacey Dorais, Clerk of the Board

Resolution 02-17
April 25-26, 2002

Identification of Attachments to the Resolution

Attachment A: Technical Status and Proposed Revisions to Malfunctions and Diagnostic System Requirements, Section 1968.2, Title 13, California Code Regulations and Associated Enforcement Provisions for 2004 and Subsequent Model Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines, Section 1968.5, Title 13, California Code of Regulations

Attachment B: Staff's Suggested Modifications to the Proposed Regulations