

State of California
AIR RESOURCES BOARD

**PROPOSED REVISIONS TO ON-BOARD DIAGNOSTIC SYSTEM REQUIREMENTS,
INCLUDING THE INTRODUCTION OF REAL EMISSIONS ASSESSMENT LOGGING
(REAL), FOR HEAVY-DUTY ENGINES, PASSENGER CARS, LIGHT-DUTY TRUCKS,
AND MEDIUM-DUTY VEHICLES AND ENGINES**

Resolution 18-53

November 15, 2018

Agenda Item No.: 18-9-4

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the California Air Resources Board (CARB or 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 39002 and 39003 of the Health and Safety Code charge CARB with the responsibility for systematically attacking the serious air pollution problem caused by motor vehicles;

WHEREAS, in sections 43000 and 43000.5(a) 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 43000.5(c) of the Health and Safety Code provides that the burden for achieving needed reductions in vehicle emissions should be distributed equitably among various classes of vehicles, including heavy-duty vehicles to accomplish improvements in both the emissions level and in-use performance and durability of all new motor vehicles;

WHEREAS, section 43004 of the Health and Safety Code 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 of the Health and Safety Code provides that CARB 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, section 43806 of the Health and Safety Code directs the Board to adopt emission standards and procedures applicable to new engines used in publicly owned and privately owned public transit buses;

WHEREAS, sections 43013(a) and (b) of the Health and Safety Code authorizes the Board to adopt emission standards and in-use performance standards and other regulations for light-duty, medium-duty, and heavy-duty engines and vehicles that it finds to be necessary, cost-effective, and technologically feasible;

WHEREAS, section 43013(h) of the Health and Safety Code states that it is the intent of the Legislature that the Board act as expeditiously as feasible to reduce oxides of nitrogen (NOx) emissions from diesel vehicles and other categories of vehicular sources which significantly contribute to air pollution problems;

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, sections 39010 and 39601 of the Health and Safety Code provide that a definition set forth in chapter 2 of division 26 of the Health and Safety Code shall govern the construction of the division unless and until rules and regulations are adopted by the Board that revise such definition, that the Board may revise such definition in order to conform to definitions to federal laws and rules and regulations, and that the Board is authorized to adopt rules and regulations that are necessary for the proper execution of the powers and duties granted to, and imposed upon the Board by division 26 of the Health and Safety Code and by any other provision of law;

WHEREAS, section 39602.5(a) of the Health and Safety Code directs the Board to adopt rules and regulations pursuant to section 43013 that, in conjunction with other measures adopted by the Board, air pollution control districts, and the United States Environmental Protection Agency (U.S. EPA), will achieve ambient air quality standards required by the federal Clean Air Act (CAA) (42 U.S.C. section 7401 et seq.) in all areas of the state by the applicable attainment date, and to maintain such standards thereafter, and further provides that the Board shall adopt such measures if they are necessary, technologically feasible, and cost effective, consistent with section 43013. Section 39602.5(b) provides that if necessary to carry its duties under this section, the Board shall adopt and enforce rules and regulations that anticipate the development of new technologies and such rules and regulations shall require standards that the Board finds and determines can likely be achieved by the compliance date set forth in the rule;

WHEREAS, the Legislature adopted and the Governor signed Senate Bill 1028 in October 2007, codified in part at Health and Safety Code section 39602.5, which

identified that a number of areas within California have not attained national ambient air quality standards (NAAQS) for ozone and particulate matter of 2.5 microns or less (PM_{2.5}), and which directed the Board to adopt every feasible rule and regulation that are sufficient, in conjunction with other applicable measures, to achieve and maintain the NAAQS by the applicable deadlines;

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 that 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 CARB 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 determine whether 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; and provides that the Board shall establish procedures for determining, and the facts constituting, compliance or failure of compliance pursuant to section 43105;

WHEREAS, sections 43105.5 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 CARB emission standards, other certification requirements, or other rules and regulations of the Board;

WHEREAS, the California Global Warming Solutions Act of 2006 (Assembly Bill 32 (AB 32); Stats 2006, ch. 488, Health and Safety Code section 38500 et seq.) declares that global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California;

WHEREAS, AB 32 added section 38501 to the Health and Safety Code, which expresses the Legislature's intent that the Board coordinate with State agencies and consult with the environmental justice community, industry sectors, business groups, academic institutions, environmental organizations, and other stakeholders in implementing AB 32; and design emissions reduction measures to meet the statewide emissions limits for greenhouse gases (GHG) in a manner that minimizes costs and maximizes benefits for California's economy, and maximizes additional environmental and economic co-benefits for California, and complements the State's efforts to improve air quality;

WHEREAS, section 38505 of the Health and Safety Code defines GHGs as including carbon dioxide (CO₂), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride;

WHEREAS, section 38510 of the Health and Safety Code designates CARB as the State agency charged with monitoring and regulating sources of GHG emissions in order to reduce these emissions;

WHEREAS, in July 1990, the Board adopted and the Office of Administrative Law (OAL) 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 California Code of Regulations, title 13, section 1968.1 (section 1968.1), and which set forth requirements for: (1) monitoring catalyst efficiency, engine misfire, evaporative system integrity, secondary air injection, and chlorofluorocarbon containment; (2) improving current monitoring of the fuel system, oxygen sensor, exhaust gas recirculation system, and other emission-related components of the OBD II 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 section 1968.1 in 1991, 1993, 1994, and 1996, which were respectively approved by OAL;

WHEREAS, in April 2002, the Board adopted and OAL approved regulations regarding

"Malfunction and Diagnostic System Requirements for 2004 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines," codified at California Code of Regulations, title 13, section 1968.2 (section 1968.2), and which (1) carried over most of the requirements of section 1968.1; (2) revised several monitoring requirements including, among other things, the requirements for catalyst monitoring, misfire monitoring, and oxygen sensor monitoring; and (3) established several new requirements including requirements for cold start emission reduction strategy monitoring, direct ozone reduction monitoring, production vehicle evaluation and verification testing, and standardized measurement of real world monitoring performance;

WHEREAS, in April 2002, the Board also adopted and OAL approved an enforcement regulation regarding OBD II compliance, "Enforcement of Malfunction and Diagnostic System Requirements for 2004 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines," (OBD II enforcement regulation), which is codified at California Code of Regulations, title 13, section 1968.5 and which sets specific protocols for enforcement and remedying OBD II noncompliance;

WHEREAS, in May 2004, the Board adopted and the OAL subsequently approved regulations regarding "Engine Manufacturer Diagnostic System Requirements--2007 and Subsequent Model-Year Heavy-Duty Engines," (EMD), codified at California Code of Regulations, title 13, section 1971, which set forth requirements for (1) monitoring the fuel system, exhaust gas recirculation system, particulate matter (PM) trap, and emission-related electronic components; and (2) alerting the vehicle operator to the problem by illuminating a warning light and outputting diagnostic information for use by repair technicians;

WHEREAS, in July 2005, the Board adopted and OAL subsequently approved regulations regarding "On-Board Diagnostic System Requirements for 2010 and Subsequent Model-Year Heavy-Duty Vehicles and Engines," (HD OBD), codified at California Code of Regulations, title 13, section 1971.1, which include more comprehensive diagnostic system requirements than the EMD regulation by establishing, among other things, monitoring requirements for virtually every emission-related component or system, standardized requirements defining the content and format of specific diagnostic information required to be output for use by repair technicians, testing requirements to ensure the OBD systems comply with the proposed regulation, and requirements for standardized measurement of real world monitoring performance;

WHEREAS, in 2009, the Board adopted and OAL approved amendments to section 1971.1 and a new enforcement regulation establishing HD OBD in-use compliance procedures, "Enforcement of Malfunction and Diagnostic System Requirements for 2010 and Subsequent Model-Year Heavy-Duty Engines," (HD OBD enforcement regulation), codified at California Code of Regulations, title 13, section 1971.5, which

sets specific protocols for enforcement and remedying HD OBD noncompliance;

WHEREAS, in *Engine Manufacturers Association v. California Air Resources Board* (2014) 231 Cal.App.4th 1022, the California Court of Appeal, Third Appellate District held that CARB's adoption of the in-use testing and recall provisions of the California heavy-duty OBD enforcement regulation was consistent with the broad scope of authority the Legislature has granted CARB to reduce air pollution caused by motor vehicle emissions;

WHEREAS, the Board adopted and OAL approved amendments to sections 1971.1 and 1971.5 in 2012 and 2015;

WHEREAS, staff has proposed amendments to sections 1968.2, 1971.1, and 1971.5, as set forth in Appendices A through C to the Initial Statement of Reasons released to the public on September 25, 2018;

WHEREAS, the proposed amendments to section 1971.1 would include, among other things, increasing the minimum required in-use monitor performance ratio (IUMPR), revising the criteria to be exempt from monitoring feedgas generation performance, requiring OBD systems to incorporate additional data stream parameters that are used to characterize engine/vehicle NO_x control performance and CO₂ emissions, and increasing the fines for deficiencies;

WHEREAS, the proposed amendments to section 1971.5 would primarily revise the manufacturer self-testing requirements and modify the nonconformance criteria for deficient emission threshold monitors and monitors certified to the newly proposed higher IUMPR;

WHEREAS, the proposed amendments to section 1968.2 would primarily update the medium-duty OBD II diesel-related requirements to be consistent with the proposed diesel-related amendments to section 1971.1;

WHEREAS, CARB's regulatory program that involves the adoption, approval, amendment, or repeal of standards, rules, regulations, or plans has been certified by the Secretary for Natural Resources under Public Resources Code section 21080.5 of the California Environmental Quality Act (CEQA; California Code of Regulations, title 14, section 15251(d)), and CARB conducts its CEQA review according to this certified program (California Code of Regulations, title 17, sections 60000-60007);

WHEREAS, staff has determined the proposed amendments are exempt from CEQA under California Code of Regulations, title 14, section 15308 ("Class 8" exemption: Actions Taken by Regulatory Agencies for Protection of the Environment) because the record evidence shows that the amendments will enhance the environment by better protecting the public from health impacts associated with exposure to hydrocarbon (HC), NO_x, carbon monoxide (CO), and PM emissions, the regulatory process involves procedures for protection of the environment, and the amendments will not result in any

significant adverse environmental impacts as described in Chapter IV of the Staff Report;

WHEREAS, written comments were received that raise significant environmental issues associated with the proposal, staff prepared written responses to those issues as set forth in Attachment E, and the Board has reviewed and considered the written responses along with the environmental analysis included in the Staff Report;

WHEREAS, a public hearing and other administrative proceedings have been held according to the provisions of Chapter 3.5 (commencing with section 11340), part 1, division 3, title 2 of the Government Code;

WHEREAS, the Board finds regarding the adoption of proposed amendments to section 1971.1 that:

Since the adoption of comprehensive amendments to section 1971.1 in 2012, it has become apparent that additional requirements and revisions to current requirements are necessary to improve emission-control system monitoring and compliance in light of increasingly stringent emission standards, the need to better serve repair technicians, and manufacturer concerns regarding compliance;

Engine and vehicle manufacturers are increasingly introducing technologies to better control GHG and NOx emissions from engines and vehicles that may ultimately not perform in the real world in the same manner as represented during certification, and consequently CARB needs to continue to assess the ability of such new technologies to control the GHG and NOx emissions from such engines/vehicles;

Information from data stream parameters used to characterize vehicle CO₂ and NOx emissions and fuel usage in the real world will assist CARB staff in verifying that the advanced vehicle and powertrain technologies being deployed to meet California's stringent GHG and NOx emission standards actually deliver expected benefits and consumer fuel savings in the real world, and will assist staff in considering the development of future CO₂ tailpipe standards, development of future GHG and NOx-related OBD monitoring requirements, developing future plug-in hybrid electric vehicle regulations, and improving CO₂ and NOx inventory models;

Revisions to section 1971.1 are needed to ensure that malfunctions that result in high increased emissions are detected and repaired in a timely manner to ensure that emission benefits of the heavy-duty programs are achieved;

Proposed amendments to section 1971.1 include:

Higher minimum required IUMPR and additional monitors required to track and report IUMPR data;

Revisions to the monitoring requirements for crankcase ventilation systems, NOx sensors, and hybrid systems;

Revisions to the standardization requirements to assist the service and repair industry in the repair of emission-related malfunctions and to better allow CARB staff to determine compliance;

Introduction of REAL to characterize the engine's NOx control performance and CO₂ emissions in the real world;

Additional data collection requirements as part of over-the-air reprogramming events;

Additional information that must be submitted as part of the HD OBD system certification application by the manufacturer;

Revisions to the fines applicable for deficiencies;

Revisions to the production engine/vehicle evaluation testing requirements to require permanent fault code erasure testing and to collect more data from in-use engines/vehicles; and

Additional requirements and revisions to existing provisions to ensure that heavy-duty engines will continue to operate in-use at or near certification levels throughout the engine's life;

The proposed amendments to section 1971.1 meet the statutory requirements to accomplish improvements in both the emissions levels and in-use performance and durability of all new motor vehicles, as identified in section 43000.5(c) of the Health and Safety Code;

The proposed amendments to section 1971.1 meet the statutory requirements to adopt standards and regulations, in-use performance standards and other regulations for heavy-duty engines and vehicles that are necessary, cost-effective and technologically feasible, as identified in sections 43013(a) and (b) of the Health and Safety Code;

The proposed amendments to section 1971.1 meet the statutory requirement to reduce NOx emissions from diesel vehicles and other categories of vehicular sources which significantly contribute to air pollution problems as expeditiously as feasible, as identified in section 43013(h) of the Health and Safety Code;

The proposed amendments to section 1971.1 meet the statutory requirement that the Board adopt necessary, technologically feasible, and cost effective measures pursuant to section 43013 of the Health and Safety Code that, in conjunction with other applicable measures, will achieve and maintain ambient air quality standards required by the federal Clean Air Act by applicable deadlines, as identified in section 39602.5 of the Health and Safety Code;

The proposed amendments to section 1971.1 meet the statutory requirement that the Board adopt standards and regulations that will result in the most cost-effective combination of control measures on all classes of motor vehicles, including reductions in in-use emissions through improvements in motor vehicle emission system durability and performance, and that will achieve the maximum degree of emissions reductions possible from vehicular sources to attain state standards at the earliest practicable date, as identified in section 43018 of the Health and Safety Code;

The proposed amendments to section 1971.1 meet the statutory requirement that the Board adopt test procedures and other procedures necessary to determine whether vehicles and engines are in compliance with the emissions standards established under Part 5 of the Health and Safety Code, as identified in section 43104 of the Health and Safety Code;

The proposed amendments to section 1971.1 meet the statutory requirement that the Board establish procedures for determining, and the facts constituting, compliance or failure of compliance of new motor vehicles or new motor vehicle engines with emission standards or test procedures, as identified in section 43105 of the Health and Safety Code;

The proposed amendments to section 1971.1 meet the statutory requirement that the Board require motor vehicle manufacturers provide service information necessary to properly inspect, test and repair motor vehicles, as identified in section 43105.5 of the Health and Safety Code;

The proposed amendments to section 1971.1 meet the statutory requirements that the Board monitor sources of GHG emissions, including CO₂, and consult with industry sectors, business groups and other stakeholders in implementing Division 25.5 of the Health and Safety Code (California Global Warming Solutions Act of 2006) as identified in sections 38501, 38505, and 38510 of the Health and Safety Code; and

The proposed amendments are exempt from CEQA under California Code of Regulations, title 14, section 15308 ("Class 8" exemption: Actions Taken by Regulatory Agencies for Protection of the Environment) because the record evidence shows that the amendments will enhance the environment by better protecting the public from health impacts associated with exposure to hydrocarbon (HC), NO_x, carbon monoxide (CO), and PM emissions, the

regulatory process involves procedures for protection of the environment, and the amendments will not result in any significant adverse environmental impacts;

WHEREAS, the Board finds regarding the adoption of proposed amendments to section 1971.5 that:

Changes are needed to section 1971.5 to align with the proposed amendments to section 1971.1;

More appropriate in-use criteria and thresholds (i.e., criteria and thresholds at which a vehicle would be found to have a nonconforming OBD system and would be subject to possible enforcement action) are needed to reflect emission threshold monitors that were granted deficiencies during OBD certification and monitors certified to the proposed revised IUMPR;

Revisions to the manufacturer self-testing requirements are needed to address manufacturers' engine procurement and testing workload issues;

Proposed amendments to section 1971.5 include:

More appropriate criteria to determine if an OBD system is considered nonconforming for deficient emission threshold monitors;

More appropriate criteria to determine if an OBD system is considered nonconforming to account for the revised IUMPR requirements;

More appropriate criteria to determine if an OBD system is considered nonconforming and if mandatory recall is applicable during the first few model years of HD OBD system implementation for alternate-fueled engines; and

Revisions to the engine procurement criteria and testing requirements for manufacturer self-testing;

The proposed amendments to section 1971.5 meet the statutory requirements to properly execute the powers and duties granted to, and imposed upon the Board by Division 26 of the Health and Safety Code and by any other provision of law as identified in section 39601 of the Health and Safety Code;

The proposed amendments to section 1971.5 meet the statutory requirements that the Board adopt necessary, technologically feasible, and cost effective measures pursuant to section 43013 of the Health and Safety Code that, in conjunction with other applicable measures, will achieve and maintain ambient air quality standards required by the federal Clean Air Act by applicable deadlines, as identified in section 39602.5 of the Health and Safety Code;

The proposed amendments to section 1971.5 meet the statutory requirements to accomplish improvements in both the emissions levels and in-use performance and durability of all new motor vehicles, as identified in section 43000.5(c) of the Health and Safety Code;

The proposed amendments to section 1971.5 meet the statutory requirements to adopt standards and regulations, in-use performance standards and other regulations for heavy-duty vehicles that are necessary, cost-effective and technologically feasible, as identified in sections 43013(a) and (b) of the Health and Safety Code;

The proposed amendments to section 1971.5 meet the statutory requirement to reduce NOx emissions from diesel vehicles and other categories of vehicular sources which significantly contribute to air pollution problems as expeditiously as feasible, as identified in section 43013(h) of the Health and Safety Code;

The proposed amendments to section 1971.5 meet the statutory requirement that the Board adopt standards and regulations that will result in the most cost-effective combination of control measures on all classes of motor vehicles, including reductions in in-use emissions through improvements in motor vehicle emission system durability and performance, and that will achieve the maximum degree of emissions reductions possible from vehicular sources to attain state standards at the earliest practicable date, as identified in section 43018 of the Health and Safety Code;

The proposed amendments to section 1971.5 meet the statutory requirement that the Board adopt test procedures and other procedures necessary to determine whether vehicles and engines are in compliance with the emissions standards established under Part 5 of the Health and Safety Code, as identified in section 43104 of the Health and Safety Code;

The proposed amendments to section 1971.5 meet the statutory requirement that the Board establish procedures for determining, and the facts constituting, compliance or failure of compliance of new motor vehicles or new motor vehicle engines with emission standards or test procedures, as identified in section 43105 of the Health and Safety Code; and

The proposed amendments are exempt from CEQA under California Code of Regulations, title 14, section 15308 ("Class 8" exemption: Actions Taken by Regulatory Agencies for Protection of the Environment) because the record evidence shows that the amendments will enhance the environment by better protecting the public from health impacts associated with exposure to hydrocarbon (HC), NOx, carbon monoxide (CO), and PM emissions, the regulatory process involves procedures for protection of the environment, and the amendments will not result in any significant adverse environmental impacts;

WHEREAS, the Board finds regarding the adoption of proposed amendments to section 1968.2 that:

With the introduction of 1996 model year motor vehicles and engines, manufacturers have incorporated OBD II systems into nearly all of their light- and medium-duty vehicle models and engines pursuant to the standards and other requirements of sections 1968.1 and 1968.2;

Additional amendments to section 1968.2 were adopted in 2006 and 2009 requiring more comprehensive monitoring requirements for diesel vehicles to make it more consistent with the requirements adopted in 2005 for heavy-duty vehicles in section 1971.1;

Since the adoption of amendments to section 1968.2 in 2015, additional amendments to section 1968.2 are necessary to address concerns of manufacturers regarding compliance;

Proposed amendments to section 1968.2 include:

Revisions to the requirements for medium-duty diesel vehicles to make them more consistent with those currently being proposed for heavy-duty diesel engines in section 1971.1;

Revisions to the definition of "active off-cycle credit technology";

Revisions to the permanent fault code erasure provisions of the production vehicle evaluation testing requirements;

Additional data collection requirements as part of over-the-air reprogramming events;

The proposed amendments to section 1968.2 meet the statutory requirements to accomplish improvements in both the emissions levels and in-use performance and durability of all new motor vehicles, as identified in section 43000.5(c) of the Health and Safety Code;

The proposed amendments to section 1968.2 meet the statutory requirements to adopt standards and regulations, in-use performance standards and other regulations for light-duty and medium-duty vehicles that are necessary, cost-effective and technologically feasible, as identified in sections 43013(a) and (b) of the Health and Safety Code;

The proposed amendments to section 1968.2 meet the statutory requirement to reduce NOx emissions from diesel vehicles and other categories of vehicular sources which significantly contribute to air pollution problems as expeditiously as feasible, as identified in section 43013(h) of the Health and Safety Code;

The proposed amendments to section 1968.2 meet the statutory requirement that the Board adopt necessary, technologically feasible, and cost effective measures pursuant to section 43013 of the Health and Safety Code that, in conjunction with other applicable measures, will achieve and maintain ambient air quality standards required by the federal Clean Air Act by applicable deadlines, as identified in section 39602.5 of the Health and Safety Code;

The proposed amendments to section 1968.2 meet the statutory requirement that the Board adopt standards and regulations that will result in the most cost-effective combination of control measures on all classes of motor vehicles, including reductions in in-use emissions through improvements in motor vehicle emission system durability and performance, and that will achieve the maximum degree of emissions reductions possible from vehicular sources to attain state standards at the earliest practicable date, as identified in section 43018 of the Health and Safety Code;

The proposed amendments to section 1968.2 meet the statutory requirement that the Board adopt test procedures and other procedures necessary to determine whether vehicles and engines are in compliance with the emissions standards established under Part 5 of the Health and Safety Code, as identified in section 43104 of the Health and Safety Code;

The proposed amendments to section 1968.2 meet the statutory requirement that the Board establish procedures for determining, and the facts constituting, compliance or failure of compliance of new motor vehicles or new motor vehicle engines with emission standards or test procedures, as identified in section 43105 of the Health and Safety Code;

The proposed amendments to section 1968.2 meet the statutory requirement that the Board require motor vehicle manufacturers provide service information necessary to properly inspect, test and repair motor vehicles, as identified in section 43105.5 of the Health and Safety Code;

The proposed amendments to section 1968.2 meet the statutory requirements that the Board monitor sources of GHG emissions, including CO₂, and consult with industry sectors, business groups and other stakeholders in implementing Division 25.5 of the Health and Safety Code (California Global Warming Solutions Act of 2006) as identified in sections 38501, 38505, and 38510 of the Health and Safety Code; and

The proposed amendments are exempt from CEQA under California Code of Regulations, title 14, section 15308 ("Class 8" exemption: Actions Taken by Regulatory Agencies for Protection of the Environment) because the record evidence shows that the amendments will enhance the environment by better protecting the public from health impacts associated with exposure to

hydrocarbon (HC), NOx, carbon monoxide (CO), and PM emissions, the regulatory process involves procedures for protection of the environment, and the amendments will not result in any significant adverse environmental impacts;

WHEREAS, the Board further finds regarding the adoption of proposed amendments to sections 1971.1, 1971.5, and 1968.2 that:

The economic and cost impacts of proposed amendments to sections 1971.1, 1971.5, and 1968.2 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 sections 1971.1, 1971.5, and 1968.2 that are applicable to businesses are necessary for the health, safety, and welfare of the people of the State;

The requirements of sections 1971.1, 1971.5, and 1968.2 are similar but not identical to requirements addressed in federal regulations; different California regulations are authorized by the Health and Safety Code and the cost of the different state provisions is justified by the benefit to human health, public safety, public welfare, or the environment;

The proposed amendments were developed in an open public process, in consultation with affected parties, through numerous public workshops, individual meetings, and other outreach efforts, and these efforts are expected to continue;

No reasonable alternatives to the amendments considered to date, or that have otherwise been identified and brought to the attention of CARB, would be more effective at carrying out the purpose for which the regulation is proposed or would be as effective and less burdensome to affected entities than the proposed regulation;

The proposed amendments are consistent with CARB's environmental justice policies and do not disproportionately impact people of any race, culture, or income; and

The proposed amendments are exempt from CEQA under California Code of Regulations, title 14, section 15308 because substantial evidence in the record shows that it will enhance the environment by better protecting the public from health impacts associated with exposure to HC, NOx, CO, and PM emissions, the regulatory process involves procedures for protection of the environment, and the proposal will not result in any significant adverse environmental impacts.

NOW, THEREFORE, BE IT RESOLVED that the Board approves the response to environmental comments set forth in Attachment E to this resolution.

BE IT FURTHER RESOLVED that the Board hereby approves for adoption amendments to sections 1968.2, 1971.1, and 1971.5, title 13 California Code of Regulations, as set forth in Attachments A through C, as modified by Attachment D, Staff's Suggested Modifications to the Original Proposal.

BE IT FURTHER RESOLVED that if there is a possibility that any modifications to the regulation made available for one or more 15 day public comment periods may affect the conclusion of the environmental analysis, the Executive Officer shall prepare and circulate any additional environmental analysis to the extent required by CARB's regulations at California Code of Regulations, title 17, sections 60000-60007, and prepare written responses to any comments received raising significant environmental issues as necessary, to present to the Board for approval along with the final regulation.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to make the modified regulatory language in Attachment D, and any additional conforming modifications that are appropriate, available for public comment, with any additional supporting documents and information, for a period of at least 15 days. The Executive Officer shall consider written comments submitted during the public review period and make any further modifications that are appropriate available for public comment for at least 15 days. The Executive Officer may present the regulation to the Board for further consideration if warranted, and if not, the Executive Officer shall take final action to adopt the regulation after addressing all appropriate modifications.

BE IT FURTHER RESOLVED that the Executive Officer shall submit the proposed regulatory action to the United States Environmental Protection Agency (U.S. EPA) for approval as a revision to the California State Implementation Plan (SIP) as required by the federal Clean Air Act (CAA). The adopted regulatory action would be submitted as a SIP revision because it amends regulations intending to reduce emissions of air pollutants to attain and maintain the National Ambient Air Quality Standards promulgated by U.S. EPA under the CAA.

BE IT FURTHER RESOLVED that the Board hereby determines that 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.

BE IT FURTHER RESOLVED that the Executive Officer shall 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(b) of the Clean Air Act, as appropriate.

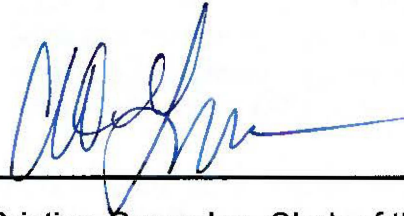
BE IT FURTHER RESOLVED that to the extent a new waiver is required, the Board hereby determines that California continues to need its own motor vehicle emission reductions program to meet compelling and extraordinary environmental conditions.

BE IT FURTHER RESOLVED that to the extent the regulations adopted herein fall within the scope of an existing waiver of federal preemption pursuant to section 209(b) of the CAA, such amendments will not cause California requirements to be inconsistent with section 202(a) of the CAA or raise new issues that affect previous waiver determinations of the Administrator of the U.S. EPA under section 209(b) of the CAA.

BE IT FURTHER RESOLVED that the Board directs the staff to continue to closely monitor vehicle and engine manufacturers in complying with the requirements of sections 1968.2, 1971.1, and 1971.5, title 13, California Code of Regulations, and to report to the Board in approximately 2 years, if amendments to the regulations are necessary.

BE IT FURTHER RESOLVED that the Board directs the staff to report to the Board in approximately 3 years with a technical review of sections 1968.2, 1971.1, and 1971.5, title 13, California Code of Regulations in light of any heavy duty on-highway regulations adopted in the interim, including an updated economic analysis of the OBD program costs and benefits consistent with the methodologies used by the agency.

I hereby certify that the above is a true and correct copy of Resolution 18-53 as adopted by the California Air Resources Board.

A handwritten signature in blue ink, appearing to read 'Cristina Granados', is written over a horizontal line.

Cristina Granados, Clerk of the Board

Resolution 18-53

November 15, 2018

Identification of Attachments to the Board Resolution

- Attachment A*:** Proposed Amendments to the Regulation for On-Board Diagnostic System Requirements--2010 and Subsequent Model-Year Heavy-Duty Engines, section 1971.1, title 13 California Code of Regulations, as set forth in Appendix A to the Initial Statement of Reasons, released September 25, 2018.
- Attachment B*:** Proposed Amendments to the Regulation for Enforcement of Malfunction and Diagnostic System Requirements for 2010 and Subsequent Model-Year Heavy-Duty Engines, section 1971.5, title 13 California Code of Regulations, as set forth in Appendix B to the Initial Statement of Reasons, released September 25, 2018.
- Attachment C*:** Proposed Amendments to the Regulation for Malfunction and Diagnostic System Requirements--2004 and Subsequent Model Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines, section 1968.2, title 13 California Code of Regulations, as set forth in Appendix C to the Initial Statement of Reasons, released September 25, 2018.
- Attachment D:** Staff's Suggested Modifications to the Original Proposal (Distributed at the November 15, 2018 CARB hearing).
- Attachment E*:** Responses to Comments on the Environmental Analysis for the Proposed Revisions to On-Board Diagnostic System Requirements, Including The Introduction Of Real Emissions Assessment Logging (REAL), For Heavy-Duty Engines, Passenger Cars, Light-Duty Trucks, And Medium-Duty Vehicles And Engines (Distributed at the November 15, 2018 CARB hearing).

*Attachment A, B, C, and E are NOT attached to the proposed resolution; they are simply described on this page.