

State of California  
AIR RESOURCES BOARD

Resolution 05-64

December 8, 2005

Agenda Item No: 05-12-6

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (ARB 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, 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 and, in sections 39002 and 39003 of the Health and Safety Code, has charged the Board with the responsibility of systematically addressing the serious air pollution problem caused by motor vehicles;

WHEREAS, sections 43013, 43101, and 43104 of the Health and Safety Code authorize the Board to adopt motor vehicle emission standards, in-use performance standards, and test procedures, which it finds to be necessary, cost-effective, and technologically feasible;

WHEREAS, section 43018 of the Health and Safety Code directs the Board to endeavor to achieve the maximum degree of emission reductions possible from motor vehicle sources to accomplish the attainment of state ambient air quality standards by the earliest practicable date;

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, which standards the Board has found to necessary and technologically feasible to carry out the purposes of this division, and which standards may be applicable to motor vehicle engines, rather than to motor vehicles;

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, division 26 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, division 26 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, section 43700 of the Health and Safety Code declares that reduction of emissions from diesel-powered vehicles, to the maximum extent feasible, is in the best interests of air quality and public health;

WHEREAS, on August 27, 1998, following extensive scientific review and public hearings, and consistent with the conclusions of the Scientific Review Panel and the Office of Environmental Health Hazard Assessment, the Board formally identified particulate matter (PM) emissions from diesel-fueled engines as a toxic air contaminant and on September 28, 2000 approved a plan to reduce risk from diesel pollution by reducing harmful PM emissions from diesel engines;

WHEREAS, section 39658 of the Health and Safety Code provides that the state board shall establish airborne toxic control measures for toxic air contaminants;

WHEREAS, section 39667 of the Health and Safety Code directs the Board to achieve the maximum possible reduction in public exposure to toxic air contaminants by establishing emission standards for vehicular sources, including new and in-use motor vehicles and fuels;

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, ARB staff has proposed adoption of a diesel particulate control measure for public and utility on-road heavy-duty diesel fuel vehicles, contained in new sections 2022 and 2022.1, title 13, California Code of Regulations (CCR), as set forth in Appendix A to the Staff Report: Initial Statement of Reasons released October 21, 2005 (Staff Report) and in Attachment A hereto;

WHEREAS, ARB staff conducted public workshops regarding a diesel particulate control measure for public and utility on-road heavy-duty diesel fuel vehicles on April 3, 2003; December 2, 2003; December 3, 2003; May 17, 2004; May 18, 2004; October 7, 2004; and October 8, 2004, and in addition has met with individual stakeholders;

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 that may have significant adverse environmental impacts be adopted as originally proposed if feasible alternatives or mitigation measures are available to reduce or eliminate such impacts;

WHEREAS, the Board has considered the environmental impacts of the potential regulatory action;

WHEREAS, the Board has considered the impact of the proposed regulatory action on the economy of the state;

WHEREAS, the Board finds that no alternative considered would be more effective, or equally effective and less costly, in achieving the regulatory objectives sought than the proposed regulations;

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, based on the information in the rulemaking record, including the Staff Report and testimony provided at the hearing, the Board finds that:

1. Excessive diesel PM emissions from heavy-duty diesel vehicles contribute significantly to serious air pollution in residential communities and the state and are a significant source of toxic air contaminants, comprising approximately 70 percent of all toxic air contaminant emissions in California;
2. There are approximately 30,000 public agency-operated and utility-operated heavy-duty diesel-fueled vehicles in California that will be covered by the proposed regulations, not including vehicles powered by alternative fuels or gasoline;
3. The reduction in ambient PM levels resulting from the proposed regulations will prevent an estimated 40 deaths from 2006 through 2022, at a cost per premature death prevented between \$3 to \$4 million;
4. Compared to the United States Environmental Protection Agency's present value of avoiding one death of \$5 to \$7 million, the proposed regulations are a cost-effective mechanism of preventing premature deaths caused by diesel PM;
5. Without the proposed regulations, the baseline diesel PM emissions from public agency-operated and utility-operated heavy-duty diesel-fueled vehicles are expected to be 0.25 tons per day in 2010 and 0.12 tons per day in 2020;
6. With the proposed regulations, diesel PM emissions from public agency-operated and utility-operated heavy-duty diesel-fueled vehicles are expected to decline by 0.15 tons per day in 2010 and 0.05 tons per day in 2020;
7. The adoption of the proposed regulations would achieve up to 60 percent reduction in diesel PM emissions from public agency-operated and utility-operated heavy-duty diesel-fueled vehicles in 2010, and up to 42 percent reduction in diesel PM emissions in 2020;

8. Other pollutants that would be reduced as a result of the proposed regulations include hydrocarbon (HC), from 0.23 to 0.08 tons per day reduced, oxides of nitrogen (NOx), from 10.1 to 9.8 tons per day reduced, and carbon monoxide, from 2.0 to 0.82 tons per day reduced, in 2010;
9. The approximate cost-effectiveness of the proposed regulations, based on the cost of compliance divided by the pounds of pollutant reduced, is \$159 per pound of PM and \$11 per pound of HC plus NOx, over a 4 year period;
10. The optional implementation schedule provided for operators of public or utility fleets in low-population counties is appropriate to mitigate the fiscal and economic impact of the regulations on these operators, because the public fleet operators in these counties may have less access to revenue sources such as vehicle license fees, road tax, property taxes, and sales taxes than those in other areas of the state, and the utilities have fewer customers; and
11. The health benefits derived from the control of diesel PM under the proposed regulation are immediate and offset any possible adverse environmental impacts from any ash cleaned from diesel PM filters, if determined to contain zinc or other elements in sufficient concentration to characterize the ash as a hazardous waste, may be disposed of as a hazardous waste pursuant to state and federal law; any increases in sulfate particulate caused by the use of diesel oxidation catalysts are minimized by the use of California low sulfur diesel fuel that will be required statewide as of September 1, 2006; and the disposal of oxidation catalysts, if considered to be hazardous waste, is minimized by the usual practice of recycling catalysts for their precious metal content;

WHEREAS, pursuant to the requirements of the California Environmental Quality Act and the Board's regulations, the Board further finds that there are no feasible mitigation measures or alternatives that would reduce the potential adverse environmental impacts, while at the same time ensuring that the long-term benefits of the program would be achieved; and

WHEREAS, pursuant to the requirements of the California Environmental Quality Act and the Board's regulations, the Board further finds that the considerations identified above override any adverse environmental impacts that may occur from adoption of the proposal and no significant non-air quality environmental impacts from the proposed regulation herein have been identified.

NOW, THEREFORE, BE IT RESOLVED, that the Board hereby approves the proposed adoption of article 4, chapter 3, division 3, title 13, California Code of Regulations (CCR) sections 2022 and 2022.1 as set forth in Attachment A hereto, with modifications set forth in Attachment B hereto.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to incorporate into the approved regulations modifications set forth in Attachment B, with such other

conforming modifications as may be appropriate, and then to adopt the amended regulations as modified, after making the modified regulatory language available for public comment for a period of 15 days, provided that the Executive Officer shall consider such written comments regarding the modifications as may be submitted during this period, shall make modifications as may be appropriate in light of the comments received, and shall present the regulations to the Board for further consideration if the Executive Officer determines that this is warranted.

BE IT FURTHER RESOLVED, that the Board directs the Executive Officer to develop user-friendly guidelines for implementation and compliance within six months of adoption of the regulations, and to conduct outreach and education activities with municipalities and owners of public agency-operated and utility-operated heavy-duty diesel-fueled vehicles.

I hereby certify that the above is a true and correct copy of Resolution 05-64, as adopted by the Air Resources Board.

---

Lori Andreoni, Clerk of the Board

Resolution 05-64

December 8, 2005

Identification of Attachments to the Board Resolution

- Attachment A:** Proposed Regulation for Diesel Particulate Matter Control Measure for On-Road Heavy-Duty Diesel-Fueled Vehicles Owned or Operated by Public Agencies and Utilities (article 4, chapter 3, division 3, title 13, California Code of Regulations (CCR) sections 2022 and 2022.1) as set forth in Appendix A to the Initial Statement of Reasons, released October 21, 2005.
- Attachment B:** Modifications to the Original Regulatory Proposal, as Approved by the Board at the December 8, 2005 Hearing (Note: This document is different from the “Stakeholder Requested Changes” document distributed by staff at the hearing.)

Attachment B  
Resolution 05-64

**Modifications to the Original Regulatory Proposal,  
as Approved by the Board at the December 8, 2005 Hearing**

1. A municipality or utility not specifically listed in Table 2 of section 2022.1(c)(2) may apply to the Executive Officer for consideration as a fleet located in designated "low population counties" provided that certain criteria are met (which can include but are not limited to the following):
  - The fleet is located in a "nonurbanized area" or a "rural and small urban area" or any area outside of an urbanized area, as designated by the U.S. Bureau of the Census. An urbanized area consists of a core area and the surrounding densely populated area with a total population of 50,000 or more, with boundaries fixed by the Bureau of the Census or extended by state and local officials.
  - The fleet is located in a county with less than 325,000 population and meets the definition of low-population when the population of one or more cities which have their own municipal vehicle fleet are subtracted from the county population as of July 1, 2005, and the fleet does not operate within those cities' boundaries.
  - The fleet revenue is not based on special district assessments or fees.
  - Other criteria as deemed appropriate by the Executive Officer
2. Modify section 2022.1(c)(1) to delay the start of Group 2 (1988-2002 MY) engines to December 31, 2007. The new schedule would be 20% by 2007, 60% by 2009, and 100% by 2011.
3. Add new section 2022.1(d)(4) to allow a Group 3 compliance extension of 20% BACT by 2009, 60% BACT by 2011 and 100% BACT by 2012 provided a fleet implements 100% BACT to Group 1 and 2 vehicles by 2008.
4. Modify section 2022.1(f)(1) to require records be provided to ARB upon request **or** where the vehicle normally resides.
5. Modify section 2022.1(c) to allow EO discretion for a longer implementation phase-in period commensurate to the emission benefits for fleets that employ significant quantities of advanced technology vehicles (for example, hybrid electric vehicles) to meet BACT, or consider the earning of credits towards BACT compliance. The advanced technology vehicles must be demonstrated to meet or exceed the MY 2007 and later engine emission standards and significantly reduce greenhouse gas emissions and petroleum use.