State of California
AIR RESOURCES BOARD

Resolution 03-21

September 25, 2003

Agenda Item No: 03-7-2

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 Air Resources Board (the "Board") to adopt standards, rules and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, in section 43000 of the Health and Safety Code, the Legislature has declared that the emissions of air pollutants from motor vehicles is the primary cause of air pollution in many parts of the state and, the state has the responsibility to establish uniform procedures for compliance with standards which control or eliminate those air pollutants, vehicle emission standards apply to new and used motor vehicles equipped with motor vehicle pollution control devices;

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 further directs the Board to endeavor to achieve the maximum degree of emission reduction possible from motor vehicle sources to accomplish the attainment of state ambient air quality standards by the earliest practicable date while the Board adopts standards and regulations that will result in the most cost-effective combination of control measures on all classes of motor vehicles;

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 be necessary and technologically feasible to accomplish the attainment of state ambient air quality standards, 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 of the Health and Safety Code under test procedures adopted pursuant to section 43104;

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, section 43700 of the Health and Safety Code declares that reductions of emissions from diesel powered vehicles, to the maximum extent feasible, is in the best interest 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, Health and Safety Code section 39658 declares that the state board shall establish airborne toxic control measures for toxic air contaminants;

WHEREAS, the Board undertakes the control of diesel particulate emissions from solid waste collection vehicles as the first among a series of control measures undertaken pursuant to the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (the Plan) adopted by the Board on September 28, 2000;

WHEREAS, the Board undertakes reductions of diesel particulate from diesel engines and vehicles under the Plan as independent control measures for which the Board will separately and specifically consider appropriate technologies and approaches for control of the diesel particulate emissions that provide flexibility to reflect the nature of the fleets being regulated and any unique needs of the operator;

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 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, the California Environmental Quality Act and Board regulations require that no project which 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 impact of this 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, the ARB staff conducted public workshops on June 26 and 28, 2001; September 4 and 5, 2001; February 26 and 28, 2002; and December 9 and 10, 2002, as well as public outreach meetings, on the new regulation;

WHEREAS, the Board finds, based on the information in the public record, including the staff report and technical support document, and testimony provided at the hearing, that:

1. Excessive diesel particulate matter emissions from solid waste collection heavy-duty diesel motor 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 12,000 collection vehicles in California that will be covered by this regulation, not including collection vehicles powered by alternative fuels or gasoline;

3. The reduction in ambient PM levels resulting from this rule will prevent an estimated 80 premature deaths from 2004 through 2020, at a cost per premature death prevented of $900,000; compared to the U.S. EPA's present value of avoiding one death at $4.2 to $5.9 million, this rule is a very cost-effective mechanism of preventing premature deaths caused by diesel PM;

4. Cancer risk as a result of exposure to diesel particulate matter from solid waste collection vehicles will be reduced from a high of about 31 cancer cases per million to about four cancer cases per million in the highest exposure areas;

5. Without this regulation, the baseline for diesel particulate matter emissions from collection vehicles is expected to be 0.56 tons per day in 2010 and 0.17 tons per day

in 2020;

6. With this regulation, diesel particulate matter emissions from collection vehicles are expected to decline to between 0.18 and 0.28 tons per day in 2010 and to between 0.08 and 0.10 tons per day in 2020;

7. The adoption of this proposed measure would achieve up to 84 percent reduction in diesel PM emissions from collection vehicles in 2010, and up to 92 percent reduction in diesel PM emissions in 2020, relative to the 2000 baseline;

8. Other pollutants that will be reduced as a result of this regulation include hydrocarbon (HC), from 1.30 to 1.45 tons per day reduced, oxides of nitrogen (NOx), from 3.1 to 6.5 tons per day reduced, and carbon monoxide, from 3.33 to 4.29 tons per day, in 2010;

9. The cost-effectiveness of this rule, based on the cost of compliance divided by the pounds of pollutant reduced is $32 per pound of PM and $1.79 per pound of HC plus NOx, over a 17-year period;

10. The cost per household, assuming that the costs of compliance are passed on to solid waste collection customers, is estimated to be less than $1.00 per year; and

11. The health benefits derived from the control of diesel PM are immediate and offset any possible adverse effect of: 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; and the disposal of diesel 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 finds no feasible mitigation measures or alternatives that would further reduce any potential adverse environmental impacts exist, while at the same time ensuring that the long-term benefits of the program would be achieved;

WHEREAS, pursuant to the requirements of the California Environmental Quality Act and the Board's regulations, the Board further finds 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 proposed article 4, chapter 3, division 3, title 13, to be added to the California Code of Regulations, and sections 2020, 2021, 2021.1, and 2021.2.

BE IT FURTHER RESOLVED, that the Board directs the Executive Officer to adopt article 4, chapter 3, division 3, title 13, California Code of Regulations, and new sections 2020, 2021, 2021.1, and 2021.2, with the modifications approved by the Board as set forth in Attachment A hereto and such other conforming modifications as may be appropriate, 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 as may be submitted during this period, shall make further modifications as may be appropriate in light of the comments received or as necessary to ensure consistency with the modifications approved by the Board, and shall bring any proposed changes to the Board for consideration if she believes 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 the operative date of article 4, chapter 3, division 3, title 13, California Code of Regulations, and new sections 2020, 2021, 2021.1, and 2021.2, and to conduct outreach and education activities with municipalities and owners of solid waste collection vehicles.

BE IT FURTHER RESOLVED that the Board intends and expects municipalities and service providers to work together to amend or renegotiate contracts as needed so that service fees reflect the service providers' costs for compliance with these regulations;

BE IT FURTHER RESOLVED, that the Board directs the Executive Officer, annually in 2005, 2006, and 2007, and biennially thereafter as needed, to report to the Board on the effectiveness of the previous year's phase-in of the implementation of the control measure. The report may include all of the following, in addition to other information deemed necessary:

- Status of best available control technology utilized in the previous year(s) to meet implementation deadlines;
- An estimate of the effectiveness of the best available control technology used;
- A survey of rate-regulated owners and operators of solid waste collection vehicles and municipalities to determine the status of rate negotiations for the costs of implementing the mandated control measure.

I hereby certify that the above is a true and correct copy of Resolution 03-21, as adopted by the Air Resources Board.

Alexa Malik, Clerk of the Board

Rec'd By
Office of the Secretary
JUN - 4 2004
Resources Agency of California

Resolution 03-21

September 25, 2003

Identification of Attachment to the Resolution

Attachment A: Staff's Suggested Modifications to the Proposed Diesel Particulate Matter Control Measure for On-Road Heavy-Duty Residential and Commercial Solid Waste Collection Vehicles, as set forth in Appendix A to the Staff Report (released June 6, 2003).

State of California
Environmental Protection Agency
AIR RESOURCES BOARD

Notice of Decision and
Response to Significant Environmental Issues

Item:	Diesel Particulate Matter Control Measure for On-road Heavy-duty Diesel-fueled Residential and Commercial Solid Waste Collection Vehicles
Approved By:	Resolution 03-21
Adopted by:	Executive Order G-04-007
Agenda Item:	03-7-2
Public Hearing Date:	September 25, 2003
Issuing Authority:	Air Resources Board
Comment:	No comments were received identifying any significant environmental issues pertaining to this item. The Staff Report identified no adverse environmental effects.
Response:	N/A
Certified:	Alexa L. Malik, Regulations Coordinator Board Administration & Regulatory Coordination Unit
Date:	5/4/04

Rec'd by
Office of the Secretary

JUN - 4 2004

Resources Agency of California