

Attachment 1
State of California
AIR RESOURCES BOARD

Resolution 03-30

February 26, 2004

Agenda Item No: 03-9-2

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, under section 39650 of the Health and Safety Code, the Legislature finds and declares that it is the public policy of the state that emissions of toxic air contaminants should be controlled to levels which prevent harm to the public health;

WHEREAS, on August 27, 1998, the Board identified diesel exhaust particulate matter as a toxic air contaminant pursuant to article 3 (commencing with section 39660), chapter 3.5, part 2, division 26 of the Health and Safety Code;

WHEREAS, in identifying diesel exhaust particulate matter as a toxic air contaminant, the Board determined that there is not sufficient scientific evidence to support identification of a threshold level for diesel exhaust particulate matter below which no significant adverse health effects are anticipated (as codified in title 17, California Code of Regulations, section 93000);

WHEREAS, pursuant to section 39669.5(a) of the Health and Safety Code, the Office of Environmental Health Hazard Assessment listed diesel exhaust particulate matter and other compounds associated with diesel exhaust as possibly causing infants and children to be especially susceptible to illness;

WHEREAS, section 39665 of the Health and Safety Code directs ARB staff, with participation of the districts, and consultation with affected sources and the interested public, to prepare a report on the need and appropriate degree of regulation for each substance which the Board has determined to be a toxic air contaminant;

WHEREAS, section 41511 provides that, for the purpose of carrying out its duties, the Air Resources Board may adopt rules and regulations to require the owner or operator of any pollution emission source to take such action as the Air Resources Board may determine to be reasonable for the determination of the amount of emissions from such source;

WHEREAS, Board Resolution 98-35 directed ARB staff to begin the risk management process and focus on control measures that may be needed as a consequence of listing

diesel particulate matter emissions from diesel-fueled engines as a toxic air contaminant, and that also may be needed to reduce other potentially harmful pollutants from diesel-fueled engines;

WHEREAS, pursuant to section 39665 of the Health and Safety Code, the ARB staff prepared a comprehensive risk reduction plan to significantly reduce diesel exhaust particulate matter emissions from diesel-fueled engines and vehicles, which the Board approved on September 28, 2000;

WHEREAS, sections 39658, 39665, and 39666 of the Health and Safety Code authorize the Board to establish airborne toxic control measures (ATCMs) for substances identified as toxic air contaminants in accordance with specified criteria;

WHEREAS, for toxic air contaminants for which the Board has not specified a threshold exposure level, section 39666 of the Health and Safety Code requires ATCMs to be designed to reduce emissions to the lowest level achievable through the application of best available control technology (BACT) or a more effective control method, considering factors specified in section 39665, unless the Board determines, based on an assessment of risk, that an alternative level of emissions reduction is adequate or necessary to prevent an endangerment of public health;

WHEREAS, section 42301.6 of the Health & Safety Code provides that public notices of possible sources of hazardous air emissions from sources located within 1,000 feet from the outer boundaries of school sites are to be prepared and distributed to the parents or guardians of school children before air districts approve permits to construct or modify the sources;

WHEREAS, section 43013(b) of the Health and Safety Code requires the Board, consistent with section 43013(a), to adopt standards and regulations for controlling air pollution from nonvehicle engine categories;

WHEREAS, section 43013(c) of the Health and Safety Code requires the Board, prior to adopting standards and regulations for farm equipment, to hold a public hearing and find and determine that the standards and regulations are necessary, cost-effective, and technologically feasible;

WHEREAS, the ARB staff has worked closely with the air pollution control districts and air quality management districts (districts), the affected industry, and the public, as required by Health and Safety Code section 39665, to prepare a report on the need for, and appropriate degree of, control of toxic air contaminants;

WHEREAS, the Staff Report: Initial Statement of Reasons for Proposed Rulemaking – Airborne Toxic Control Measure for Stationary Compression-Ignition Engines, released on September 26, 2003 (staff report), along with the report Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles, adopted by the Board on September 28, 2000, constitute the reports required under Health and Safety Code section 39665;

WHEREAS, staff has proposed an ATCM for stationary compression-ignition engines, set forth in Attachment A, which was developed through the sharing of information and discussions of concepts and draft versions that were made available to the public for review and comment at public meetings on February 14, 2001; January 16, 2002; April 4, 2002; September 4, 2002; November 19, 2002; March 6, 2002; June 5, 2003; and August 26, 2003;

WHEREAS, in accordance with Health and Safety Code section 39665(c), the staff report and relevant comments received during public consultation with the districts, affected sources, and the public were made available for public review and comment 45 days prior to the public hearing to consider the proposed ATCM;

WHEREAS, the staff report and supporting references discuss, to the extent data could reasonably be made available, the factors specified in Health and Safety Code section 39665(b), namely the rate and extent of present and anticipated future emissions, estimated levels of human exposure, and risks associated with those levels; the stability, persistence, transformation products, dispersion potential, and other physical and chemical characteristics of the toxic air contaminants when present in the ambient air; the categories, numbers, and relative contribution of present or anticipated sources of the toxic air contaminants; the availability and technological feasibility of measures to reduce or eliminate emissions, the anticipated effect of measures on levels of exposure, and the degree to which the proposed ATCM is compatible with, or applicable to, recent technological improvements or other actions; the approximate cost of each measure, the magnitude of risks as reflected by the amount of emissions, and the reduction in risk which can be attributed to each measure; the availability, suitability, and relative efficacy of substitute compounds of a less hazardous nature; and the potential adverse health, safety, or environmental impacts that may occur as a result of implementation of the measures;

WHEREAS, staff has performed risk evaluations of diesel exhaust particulate emissions from stationary compression-ignition engines using U.S. Environmental Protection Agency (U.S. EPA)-approved and ARB-recommended air dispersion models, and these evaluations indicate potential cancer risks for off-site receptor locations near facilities operating such engines up to levels exceeding 100 chances in a million for emergency stationary diesel-fueled engines and up to levels exceeding 1,000 chances in a million for prime stationary diesel-fueled engines;

WHEREAS, the ATCM as modified in Attachment B would reduce emissions of diesel exhaust particulate matter and its associated risks by prohibiting persons from owning or operating engines for use in California that violate specified fuel-use requirements or exceed applicable emission standards and operational requirements after the specified compliance deadlines;

WHEREAS, the Board undertakes reductions of diesel particulate through ATCMs as independent control measures for which the Board will separately and specifically consider appropriate technologies and approaches for the control of the diesel particulate emissions, and the Board intends for school-related provisions to be considered separately and independently in other measures that come before the Board for consideration;

WHEREAS, the Board has considered the impact of the proposed ATCM on the economy of the State and the potential for adverse economic impacts on California business enterprises and individuals;

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, 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, pursuant to the requirements of the California Environmental Quality Act and the Board's regulations, the Board finds that:

1. Adverse health and environmental impacts result from the emissions of diesel exhaust particulate matter from stationary compression-ignition engines, and mitigation measures are necessary to reduce emissions of these toxic air contaminants;
2. Excessive diesel exhaust particulate matter emissions from stationary compression-ignition engines, most of which are diesel-fueled, are a significant source of toxic air contaminants, comprising approximately four percent of the total diesel particulate matter emissions in California, which contribute significantly to serious air pollution in communities and across the State;
3. The ATCM would minimize emissions of diesel exhaust particulate matter from stationary compression-ignition engines by establishing requirements that are based on the application of the BACT and operational practices for diesel PM;
4. The ATCM would prohibit the non-emergency operation of a stationary diesel-fueled engine located on or within 500 feet of school grounds during specified hours when school is in session, which would further reduce children's exposure to diesel exhaust particulate matter;
5. The ATCM would be consistent with ARB's environmental justice policy by reducing health risks from diesel exhaust in all communities with or near stationary diesel-

fueled engines, including those with low-income and minority populations regardless of location;

6. Adoption of the ATCM is not expected to result in any significant adverse environmental impact; any potential adverse environmental impacts, including possible increases in nitrogen dioxide (NO₂) in some passive catalyzed filters and zinc-containing ash collected from diesel particulate filters, are expected to be minimal; and
7. The considerations identified above override any adverse environmental impacts that may occur as a result of increased NO₂ or zinc in the ash waste, and no feasible alternatives or mitigation measures would reduce the potential adverse environmental impacts while at the same time providing the benefits described above.

WHEREAS, in consideration of the staff report and the written comments and public testimony it has received, the Board further finds that:

1. In accordance with Health and Safety Code section 39666(c), the ATCM has been designed, in consideration of the factors specified in Health and Safety Code section 39665(b), to reduce emissions to the lowest level achievable through the application of BACT;
2. The ATCM would reduce diesel exhaust particulate matter emissions from affected engines used in non-agricultural operation by up to 80 percent relative to the 2002 baseline in 2020;
3. The ATCM would also reduce other air pollutants, including approximately 1,700 tons of reactive organic gasses (ROG); 12,640 tons of oxides of nitrogen (NO_x); and 6,590 tons of carbon monoxide, from 2005 to 2020;
4. The ATCM could result in increased amounts of NO₂ emissions in some passive catalyzed filters and zinc-containing ash from diesel particulate filters, but no significant adverse environmental impacts are expected because: (a) for those engines retrofitted with verified diesel particulate filters, the NO₂ emissions are capped by the Board-approved Verification Procedure (title 13, California Code of Regulations, section 2700 et seq.); (b) the number of engines using non-verified diesel particulate traps will be limited to a small fraction of the total diesel engines installing diesel particulate traps and the hours of operation will be limited; (c) any ash cleaned from diesel particulate matter 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; (d) 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 (e) the disposal of diesel oxidation catalysts, if considered to be hazardous waste, are minimized by the usual industry practice of recycling catalysts for their precious metal content.

5. The reduction in ambient diesel particulate matter levels resulting from the ATCM will likely prevent an estimated 121 premature deaths by 2020, at a cost per premature death prevented of about \$216,000;
6. When compared to the U.S. EPA's present value of avoiding one premature death at \$6.3 million, the ATCM is a very cost-effective way of preventing premature deaths caused by diesel exhaust particulate matter;
7. The ATCM will significantly reduce the risks associated with exposures to emissions of diesel PM from stationary diesel-fueled engines;
8. The economic and cost impacts of the ATCM have been analyzed as required by California law, and the analysis of these impacts, as set forth in the staff report for the ATCM, indicates that the typical capital costs for a business with an emergency standby engine will range from \$100 to about \$7300, with annual costs of about \$100, and the typical capital costs for a business with a prime engine will range from about \$22,000 to about \$61,000, with annual costs ranging from \$0 to about \$550;
9. The staff's economic and cost impacts analysis shows that affected businesses will be able to absorb the costs of the ATCM with no significant statewide adverse impacts on their profitability, based on the projected change in return on owner's equity (ROE), which ranged from a decrease of 0.01% to a 6% decrease in ROE – a change in ROE greater than 10% would indicate a potential for significant adverse economic impacts;
10. No alternative considered or that have otherwise been identified and brought to the attention of the ARB would be more effective at carrying out the purpose for which the ATCM is proposed, or be as effective and less burdensome to the affected private persons and businesses than the ATCM;
11. There are no feasible mitigation measures or alternatives that would further reduce any potential adverse environmental impacts, while at the same time ensuring that the long-term benefits of the program would be achieved;
12. Given that emergency standby engines currently participate in demand response programs, it is necessary to limit the operation of and control the emissions from those engines to the extent feasible and to ensure that these engines are not allowed to operate for load shedding purposes during non-emergencies;
13. The standards and other requirements in the ATCM are necessary, cost-effective, and technologically feasible for stationary diesel engines used in agricultural operations (i.e., farm equipment); and
14. The reporting requirements applicable to businesses are necessary for the health, safety, and welfare of the people of the State.

WHEREAS, the Board further finds, in accordance with Health and Safety Code section 39650(e), that while absolute and undisputed scientific evidence may not be available to determine the exact risk from diesel particulate matter from stationary diesel-fueled engines, it is necessary to take action to protect public health and that the maximum feasible emission reductions permitted by law should be obtained; and

WHEREAS, the Board further finds that, because exposure to diesel particulate matter and other emissions associated with diesel exhaust may make children especially susceptible to illness, it is necessary in accordance with Health and Safety Code section 39650(e) to take additional action against near-school diesel engines to protect children's health when they are on school grounds during a school activity, even if absolute and undisputed scientific evidence may not be available to determine the exact risk from diesel particulate matter from stationary diesel-fueled engines that are near schools.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves adoption of section 93115, title 17, California Code of Regulations, as set forth in Attachment A hereto.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to adopt section 93115, title 17, California Code of Regulations, with the modifications approved by the Board as set forth in Attachment B 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 further consideration if the Executive Officer believes 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 the operative date of section 93115, title 17, California Code of Regulations, and to institute a program of public outreach regarding the ATCM to all sectors of affected industry, end users, and the public for the purposes of informing them about the requirements and effective dates of the ATCM, and urging them to accelerate as much as possible the timeframes for implementing the ATCM requirements.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to send the adopted ATCM to local air pollution control districts for implementation and enforcement and to provide assistance to the districts in implementing and enforcing the ATCM.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to work with the agricultural community and to report on or before June 30, 2004, and periodically thereafter as needed, to the Board on the progress of ARB staff's work in identifying

how best to further reduce diesel exhaust particulate matter and NOx emissions from new and in-use stationary diesel-fueled engines in agricultural operations, including evaluations of the cost-effectiveness of replacing such engines with electric motors.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to work with the Community Care Licensing Division of the California Department of Social Services and other interested parties to determine if additional restrictions on stationary diesel-fueled engines near childcare facilities are necessary and, on or before December 30, 2004, to propose for the Board's consideration such modifications to the adopted ATCM that are necessary to protect the health of children in such childcare facilities.

BE IT FURTHER RESOLVED that the Board directs the staff to monitor the usage of emergency standby engines in demand response programs, to periodically review the emission standards and operating requirements for these engines to determine if additional restrictions are necessary, and to assess if the operation of these engines in demand response programs should be continued in consideration of California's energy needs.

BE IT FURTHER RESOLVED that the Board directs the staff to monitor the implementation of the ATCM and to propose amendments to the ATCM for the Board's consideration when warranted to resolve any implementation problems; to achieve additional feasible emission reductions; and to reflect any changes to BACT for stationary diesel-fueled engines.

BE IT FURTHER RESOLVED that the Board directs the staff to evaluate the in-use experiences with the test methods specified in the ATCM; the best approach for integrating the ATCM with the requirements of the existing "Hot Spots" Emission Inventory Criteria and Guidelines Regulation; and the updating of the emissions inventory for stationary diesel-fueled engines using information obtained from the initial reporting requirements specified in the ATCM.

I hereby certify that the above is a true and correct copy of Resolution 03-30, as adopted by the Air Resources Board.

/s/

Lori Andreoni, Clerk of the Board

Resolution 03-30

February 26, 2004

Identification of Attachments to the Resolution

Attachment A: The Proposed Airborne Toxic Control Measure for Stationary Compression Ignition Engines, as set forth in Appendix A to the Staff Report (released September 2003)

Attachment B: Staff Proposed Changes to the Proposed Airborne Toxic Measure for Stationary Compression Ignition Engines, as set forth in Appendix A to the Staff Report (released September 2003)