Final Statement of Reasons for Rulemaking

Including Summary of Comments and Agency Responses

**PUBLIC HEARING TO CONSIDER
THE ADOPTION OF THE PROPOSED AIRBORNE TOXIC CONTROL MEASURE FOR DIESEL PARTICULATE MATTER FROM PORTABLE ENGINES GREATER OR EQUAL THAN 50 HORSEPOWER**

Public Hearing Date: February 26, 2004
Agenda Item Number: 04-2-2

State of California
AIR RESOURCES BOARD

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I. GENERAL

A. Description of Board Item

On February 26, 2004, the Air Resources Board (ARB or Board) conducted a public hearing to consider adopting an airborne toxic control measure (ATCM) to reduce public exposure to diesel particulate matter (PM) emitted from portable diesel-fueled engines (proposed ATCM). The proposed ATCM was developed to fulfill the requirements in the Diesel Risk Reduction Program to reduce diesel PM emissions and associated risk from the use of diesel-fueled portable engines in California. The proposed ATCM will add sections 93116-93116.5 to Title 17, California Code of Regulations (CCR).

At the February 26, 2004, hearing, the Board approved the proposed regulation with modifications. The modifications were made available for a public comment period from May 13, 2004, to June 1, 2004. This Final Statement of Reasons for Rulemaking (FSOR) updates the staff report by identifying and explaining the modifications that were made to the original proposal. The FSOR also summarizes the written and oral comments received during the 45-day comment period preceding the February 26, 2004, public hearing, the hearing itself, and the 15-day comment period for the proposed modifications, and contains the ARB staff's responses to those comments.

B. Modifications to the Original Proposal

Various modifications to the original proposal were made to address comments received during the 45-day public comment period, and to clarify the regulatory language. A "Notice of Public Availability of Modified Text," together with a copy

of the modified proposed language were sent on May 13, 2004, to each of the individuals described in subsections (a)(1) through (a)(4) of section 44, Title 1, CCR. Additionally, this notice and the modified proposed language were made available on ARB's website and potentially affected industry were notified, via an email list server, of the website posting.

By these actions, the modified portable diesel-fueled engine ATCM was made available to the public for a 15-day minimum comment period from May 13, 2004 to June 1, 2004, pursuant to Government Code section 11346.8. Responses to comments made during the public comment period for these modifications are presented in Section II of this FSOR. After the close of the public comment period, the Board's Executive Officer determined that, with the exception of the changes described below, no additional modifications should be made to the portable diesel-fueled engine ATCM. The Executive Officer subsequently issued Executive Order G-04-080, which adopted the portable diesel-fueled engine ATCM.

The modifications to the originally proposed regulation are described below:

1. Clarified that the ATCM applies to portable diesel-fueled engines that are 50 horsepower and larger to be consistent with other regulations affecting portable engines;

2. Revised the "alternative fuel" definition to include liquid petroleum gas (LPG) and hydrogen;

3. Revised the definitions for "alternative diesel fuel" and "CARB diesel fuel," and added a definition for "diesel fuel" to clarify the differences between these fuels;

4. Added definitions for "engines exclusively used in emergency applications" and "emergency event" to be consistent with other regulations that affect stationary and portable engines;

5. Revised the definition of "emergency" to be consistent with other regulations that affect stationary and portable engines and to include the breakdown of electric-powered pumping equipment and the pumping of water to maintain water pressure;

6. Revised the definitions for "fuel additive," "selective catalytic reduction system," and "verified emission control strategy" to be consistent with other regulations that affect stationary and portable engines;

7. Deleted the definition for "school" because the word is not used in the regulation;

8. Clarified that engines manufactured and sold under the flexibility provisions contained in federal and State regulations are considered certified engines and would satisfy the “most stringent” requirement;

9. Added provisions to allow the Executive Officer or Air Pollution Control Officer to exempt portable diesel-fueled engines used in lattice boom cranes from the 2010 requirement, but require these engines to be replaced with a Tier 4 engine or achieve equivalent diesel PM reductions by 2020.

10. Revised the incentive for alternative-fueled engines to provide additional credit toward satisfying the fleet standards if the alternative-fueled engines are added to the fleet and operated prior to January 1, 2009, and the engines are certified to a nonroad engine standard;

11. Added clarification language to test-method requirements;

12. Revised recordkeeping and reporting requirements to include specific requirements for alternative-fueled engines added to the fleet prior to January 1, 2009; and

13. Revised the sections’ numbering sequence to conform to regulation order format and add minor clarification language to other sections of the regulation.

In addition to the modifications described above, the following non-substantial or solely grammatical modifications and typographical errors were corrected after the close of the 15-day comment period. The changes do not materially alter any requirement, right responsibility, condition, prescription or other regulatory element of any CCR provisions.

1. Corrected typographical error in Section 93116.1 (a). Section 93116.1 (a) used “maximum rated capacity,” which is not defined in ATCM. “Maximum rated capacity” was changed to “maximum rated horsepower,” which is defined in the ATCM.

2. Corrected typographical error in Section 93316.2(n). The definition name was revised from “Engines Exclusively Used in Emergency Applications” to “Engines Used Exclusively in Emergency Applications.” The definition for the term “Engines Used Exclusively in Emergency Applications” was not changed.

3. Typographical error corrected in Section 93116.4(e)(1)(F). To conform to the outline organization used in the ATCM, reference to section 93116.3(d)(2)(B)(2) was corrected to section 93116.3(d)(2)(B)2.

4. Clarified reporting requirements in Sections 93116.4(c)(3)(B), 93116.4(e)(1)(B), 93116.4(e)(1)(C), 93116.4(e)(1)(D), 93116.4(e)(1)(E), 93116.4(e)(1)(F), 93116.4(e)(3), 93116.4(e)(4), and 93116.4(f) by revising the term "district permit or State registration number" to "district permit or State/district registration number."

5. In the Initial Statement of Reasons (ISOR), there were two references that contained incorrect dates. The first was reference #4: "CARB, 2001. *California Air Resources Board. Policies and Actions for Environmental Justice*. Sacramento, California. April 2001." The correct date is December 2001. The second incorrect date is in reference #6: "CARB 2002b. California Air Resources Board. *Public Hearing to Consider Amendments to the Ambient Air Quality Standards for Particulate Matter and Sulfates*. May 2002." The date of the report was in May 2002, but the Board hearing was in June 2002.

C. Incorporated by Reference in Regulation

The ATCM includes the following references to other regulations in order to avoid an unnecessarily lengthy and repetitious regulatory text:

- ASTM Standard Specification for Diesel Fuel Oils D975-81.
- Air Resources Board and district air emission test methods

D. Fiscal Impacts for School Districts and Local Agencies

The Board has determined that this regulatory action will result in a mandate to school districts and other local agencies that own or operate portable diesel-fueled engines. However, the Board found that any costs associated with such mandates are not reimbursable pursuant to Part 7 (commencing with section 17500), division 4, title 2 of the Government Code because most, if not all, of these agencies are authorized to collect fees to recoup their costs under this section of the Government Code. In addition, the regulation applies to all entities that own or operate portable diesel-fueled engines and, therefore does not impose unique requirements on local government agencies.

E. Consideration of Alternatives

Alternatives to this regulatory action were considered in the Staff Report: Initial Statement of Reasons For Proposed Rulemaking—Airborne Toxic Control Measure For Diesel-Fueled Portable Engines, in accordance with Government Code section 11346.2. After responding to the comments received, Staff concludes that no reasonable alternative considered by the agency, or that has otherwise been identified and brought to the attention of the agency would be more effective in carrying out the purpose for which the regulatory action was proposed or would be as effective and less burdensome to affected private persons than the action taken by the Board.

II. SUMMARY OF COMMENTS AND AGENCY RESPONSES

The Board received written and oral comments in connection with the 45-day comment period, the February 26, 2004, hearing, and the 15-day public comment period for the modified regulatory language. A list of commenters is set forth below, identifying the date and form of all comments that were timely submitted. Following the list is a summary of each objection or recommendation made regarding the proposed action, together with an explanation of how the proposed action has been changed to accommodate the objection or recommendation or the reasons for making no change.

A. Responses to Comments Received During the 45-day Public Comment Period and Board Hearing

Abbreviation	Commenter
ALA	Bonnie Holmes-Gen American Lung Association Written Testimony: February 20, 2004 Oral Testimony: February 26, 2004
ATA	Betty L. Hawkins Air Transport Association of America, Inc. Written Testimony: February 25, 2004
BJS	Doug Van Allen BJ Services Company USA Written Testimony: February 18, 2004 Oral Testimony: February 26, 2004

BP	Dave Smith BP Written Testimony: February 18, 2004
CAPCOA	Larry Green California Air Pollution Control Officers Association Written Testimony: February 24, 2004 Barbara Lee California Air Pollution Control Officers Association Oral Testimony: February 26, 2004
CCEEB	Victor Weisser California Council for Environmental and Economic Balance Written Testimony: February 13, 2004 Cindy Tuck California Council for Environmental and Economic Balance Oral Testimony: February 26, 2004
CEE	Kathryn Phillips Center for Energy Efficiency and Renewable Technologies Written Testimony: February 20, 2004
CERA	Joseph K. Lyou, Ph.D. California Environmental Rights Alliance Written Testimony: February 20, 2004
CIAQC	Mike Buckantz Construction Industry Air Quality Coalition Oral Testimony: February 26, 2004
CSDLA	Frank Caponi County Sanitation Districts of Los Angeles County Oral Testimony: February 26, 2004
ED	Kate Larsen Environmental Defense Written Testimony: February 20, 2004

EMA	Timothy A. French Engine Manufacturers Association Written Testimony: February 23, 2004 Oral Testimony: February 26, 2004
EMWD	Daniel McGivney Eastern Municipal Water District Oral Testimony: February 26, 2004
EXXONMOBIL	Stan Holm ExxonMobil Written Testimony: February 17, 2004
EYC	Angelo Logan East Yard Communities for Environmental Justice Written Testimony: February 20, 2004
KJC	David M. Rib KJC Operating Company Written Testimony: February 18, 2004
LADWP	Mark J. Sedlacek Los Angeles Department of Water and Power Written Testimony: February 25, 2004
LCAQMD	Robert L. Reynolds Lake County Air Quality Management District Written Testimony: February 23, 2004
MECA	Dale McKinnon Manufacturers of Emission Controls Association Written Testimony: February 25, 2004 Bruce Bertelsen Manufacturers of Emission Controls Association Oral Testimony: February 26, 2004
MPAA	Melissa Patack Motion Picture Association of America (California Group) Written Testimony: February 18, 2004

MYA	Sharon Fuller Ma'at Youth Academy Written Testimony: February 20, 2004
NRDC	Janet Hathaway Natural Resource Defense Council Written Testimony: February 20, 2004 Oral Testimony: February 26, 2004
NSM	Larie K. Richardson North Star Minerals, Inc. Written Testimony: January 13, 2004
RAM	Anne Kelsey Lamb, MPH Regional Asthma Management and Prevention Initiative Written Testimony: February 20, 2004
PCL	Tim McRae Planning and Conservation League Written Testimony: February 20, 2004
PISD	Meena Palaniappan Pacific Institute for Studies in Development, Environment and Security Written Testimony: February 20, 2004
PGE	Sven Thesen Pacific Gas and Electric Written Testimony: February 18, 2004 Oral Testimony: February 26, 2004
PWS	James Thomas Pool Well Services Company Written Testimony: February 4, 2004 Oral Testimony: February 26, 2004
SCC	V. John White Sierra Club California Written Testimony: February 20, 2004
UCS	Don Anair Union of Concerned Scientists Written Testimony: February 20, 2004

USNAVY

A.J. Gonzales
U.S. Navy, representing Regional Environmental Coordinator in California for the Department of Defense
Written Testimony: February 24, 2004

Comments and Responses

1. General

1.1 Comment: The definitions of facility, location, portable, and stationary source, as defined in the portable and stationary ATCMs, are contradictory and are inconsistent between the two ATCMs. These definitions should be clarified between the two ATCMs such that it is clear whether equipment is classified as portable or stationary. (KJC)

Agency Response: ARB staff believes these definitions are clear and not contradictory. The definition for "portable" contained in the Portable Engine ATCM and the definition for "stationary CI engine" contained in the Stationary Engine ATCM are intended to compliment each other. Generally, an engine that is placed at a location for less than 12 consecutive months is considered portable—see Section 93116.2 (bb) in the Portable Engine ATCM and Section 93115(b)(50) in the Stationary Engine ATCM. Conversely, an engine that is placed at a location for more than 12 consecutive months is considered stationary—see Section 93115(b)(63) in the Stationary Engine ATCM. Location refers to any single site at a building, structure, facility, or installation.

1.2 Comment: The regulation is duplicative because federal regulations already apply to portable engines. (NSM)

Agency Response: ARB staff disagrees. The only federal regulations that apply to portable engines are contained in 40 CFR Part 89 and apply to newly manufactured off-road engines. The new engines built by the manufacturers must satisfy the applicable emission standards contained in 40 CFR Part 89. The federal regulations do not affect in-use portable engines.

2. Applicability and Authority

2.1 Comment: The ATCM applies to all types of portable engines, including diesel-fueled turbines. The ATCM should be clarified such that the ATCM applies to piston-type internal combustion engines only. (LADWP)

Agency Response: ARB staff believes the applicability of the ATCM is clear. Section 93116.1(a) under "Applicability" indicates that all portable engines having a maximum rated horsepower of 50 brake horsepower (bhp) and greater and fueled with diesel are subject to this regulation. Section 93116.2(m) defines an "engine" as any piston-driven internal combustion engine.

2.2 Comment: The Federal Aviation Act and the Airline Deregulation Act preempts the applicability of the ATCM to airport ground support equipment. (ATA)

Agency Response: The Commenter relies on broad, conditional language in its assertion that the ATCM is preempted by the Federal Aviation Act and the Airline Deregulation Act. Commenter has cited no specific authority expressly preempting air pollution control by either law. ARB agrees that no such express preemption exists.

ARB does not agree that either law implicitly preempts the ATCM and the case authority cited by Commenter does not suggest otherwise. The City of Burbank case cited by Commenter, a 5-4 decision, really focused more on the federal Noise Control Act and the City's efforts to reduce noise from nighttime air traffic, than it did on the Federal Aviation Act. In any event, the Supreme Court made it clear that the primary focus of the Federal Aviation Act was the regulation of the navigable airspace, which was, according to the majority, the precise issue in that case. It is difficult to relate any aspect this case to the regulation at issue.

Regarding Commenter's claim that, at least in the Fifth Circuit, regulation of air pollution associated with ground support equipment is preempted, misstates the conclusions made in the City of Houston case. That case dealt with the Port Preference Clause of the U.S. Constitution and limiting nonstop flights. It does not even mention ground support equipment. Again, gleaning any relevance of that case to the instant issue is difficult.

Nor does the Airline Deregulation Act serve to preempt the ATCM. As noted by Commenter, the Airline Deregulation Act addresses the pricing, routing and service of an air carrier. Contrary to Commenter's statement, the ATCM does not restrict or limit carrier services or operations in any way.

Commenter cites to the FedEx case for support. In that case, the 9th Circuit clearly pointed out that it will not give such literal interpretation to broadly stated preemption language so as to preclude state regulation in any way, shape or form. The PUC in the FedEx case attempted to

regulate pricing. The ARB in no way attempts to regulate in this area through the adoption of the ATCM.

In sum, ARB disagrees that the regulatory action is preempted in any way.

2.3 Comment: The ATCM conflicts with Section 209(e)(1) of the Clean Air Act (CAA), which preempts states from adopting or attempting to enforce emission standards for new engines smaller than 175 horsepower and used in farm and construction equipment. An engine is considered “new” for preemption purposes until the equipment is rebuilt or after the expiration of its useful life. Consequently, ARB cannot adopt or enforce any emission control requirements for portable farm and construction equipment less than 175 horsepower until such equipment is rebuilt or after the expiration of its useful life. (EMA)

Agency Response: Commenter claims that the regulation is "inherently unlawful and invalid" because it violates §209(e)(1)(A) of the Clean Air Act. This provision preempts state regulation of new engines smaller than 175 horsepower used in farm or construction equipment or vehicles. Staff disagrees with this claim. The regulation, in §93116.1(b)(6), specifically provides that portable engines coming under 209(e)(1) are not covered.

2.4 Comment: The ATCM conflicts with Section 209(e) of the CAA, which preempts states from adopting or attempting to enforce emission standards for new and existing nonroad engines. In addition, U.S. EPA has expressly concluded that fleet standards are preempted emission standards. (ATA)

Agency Response: ARB disagrees with Commenter's analysis of section 209(e) of the Clean Air Act; both as to its scope and effect. Outside of the express limitations contained in 209(e)(1), the Clean Air Act provides California a means of receiving the authority to adopt and enforce standards and other requirements relating to the control of emissions from new nonroad engines. California has availed itself of this right many times in its ongoing efforts to attain the national ambient air quality standards and provide a healthy environment for all Californians.

With respect to Commenter's claim that 40 CFR §85.1603(c)(2) precludes ARB from adopting the ATCM, that regulation applies to locomotives, not portable equipment. Locomotives present a unique situation and have very little, if anything, in common with portable equipment.

2.5 Comment: The ATCM should be modified to exempt portable equipment covered by the South Coast Ground Service Equipment Memorandum of Understanding (MOU) for the useful life of the equipment that is subject to the MOU, or the reductions achieved from implementing the MOU should

be considered equivalent to the reductions achieved with the ATCM. (ATA)

Agency Response: ARB staff does not believe that the diesel PM emissions reductions from the MOU are de facto equivalent to those achieved by the ATCM. The ATCM allows the Executive Officer to exempt this equipment from the ATCM if the affected air carriers can demonstrate such equivalency.

2.6 Comment: The equivalency determination for the MOU should be based upon the collective fleet of the MOU participants, not upon each air carrier's individual fleet. (ATA)

Agency Response: ARB staff agrees and has incorporated ATA's recommendations into the ATCM.

2.7 Comment: The ATCM should be revised to exempt generator sets equipped with sound-proofing technology. Add-on pollution controls may not work in conjunction with sound-proofing technology. (MPAA)

Agency Response: ARB staff believes that it is premature to consider this proposed exemption. The ATCM requires all portable diesel-fueled engines of 50 brake-horsepower or greater to be certified to a U.S. EPA or ARB off-road emissions standard by 2010. Add-on controls for portable diesel-fueled engines will not be necessary until at least 2013, when the fleet-average emission standards take effect.

Currently, no technology for reducing diesel PM from portable diesel-fueled engines has completed the ARB Verification Procedure for In-Use Strategies to Control Emissions from Diesel Engines (Verification Procedure), as required by the ATCM. With this in mind, ARB staff, when developing the ATCM, included sufficient time for the development of these technologies. At the direction of the Board, staff will monitor the development and applicability of diesel PM retrofit technologies for portable applications, including those utilizing sound-proofing technology, and provide a report to the Board no later than 2008. Revisions to the ATCM will be considered at that time and based upon the findings of the technology review.

3. Alternative Fuel and Fuel Additives

3.1 Comment: Only alternative fuels meeting applicable state and federal requirements, including California Department of Measurement Standards (DMS), should be considered "alternative fuels," as defined in the ATCM. (BP)

Agency Response: ARB staff agrees and believes that the ATCM addresses this point. Section 93116.2(b) specifically lists the fuels defined as "alternative fuels." These specific fuels are subject to applicable state and federal requirements, including regulations promulgated by DMS.

3.2 Comment: The definition for "alternative diesel fuel" should be harmonized between the following regulations: Verification Procedures, Warranty and In-Use Compliance Regulation; the Stationary Diesel Engine ATCM; and the Portable Diesel Engine ATCM. Furthermore, the definition should be clarified to indicate that mixtures of alternative diesel fuel and diesel fuel are considered "alternative diesel fuels." Finally, only alternative diesel fuels satisfying standards adopted by DMS or receiving an exemption from DMS should be allowed for use in diesel-fueled engines. (BP)

Agency Response: ARB staff agrees and has revised the definition for "alternative diesel fuel" in the ATCM to be consistent with the definition for "alternative diesel fuel" in the Verification Procedures, Warranty and In-Use Compliance Regulation and the Stationary Diesel Engine ATCM. In addition, the definition was clarified to indicate that mixtures of an alternative diesel fuel with diesel fuel are considered alternative diesel fuels. Alternative diesel fuels used in portable engines will continue to be subject to applicable State and federal requirements, including those under the jurisdiction of DMS.

3.3 Comment: BP supports the requirement that diesel fuel blends must be verified through the Verification Procedure to receive emissions credit, and has provided recommendations to clarify the applicability of the requirement. (BP)

Agency Response: ARB staff incorporated BP's recommendations into the ATCM.

3.4 Comment: The regulation as written would preclude the use of fuel additives as an alternative to reduce diesel PM emissions from portable diesel-fueled engines. (BJS)

Agency Response: It is not the intent of the ARB staff to preclude the use of any technology or technique that can reduce the emissions of diesel PM, as long as the technology or technique satisfies the requirements of the Verification Procedure for In-Use Strategies to Control Emissions from Diesel Engines. The ATCM's definition for both "alternative diesel fuel" and "fuel additive" are consistent with the definitions in the Verification Procedure. For example, if a fuel additive is used in conjunction with diesel fuel, the combination may be treated as an "alternative diesel fuel."

As a fuel, the additive/fuel mixture must also meet CARB fuel requirements, which includes a more rigorous analysis on the impacts of the fuel mixture on the engine system.

If the fuel additive is not considered an "alternative diesel fuel" because of the manner or extent to which it is added, then the fuel requirements do not apply. What does apply to such a fuel additive, however, is the requirement in the Verification Procedure for a multimedia evaluation of the potential effects of the additive, making sure that it does not cause a significant adverse impact on the public health and the environment. Either way, the ATCM allows the use of fuel additives, as long as they are CARB-verified.

3.5 Comment: To encourage the use of clean technologies such as fuel cells, the definition for "alternative fuel" should be revised to include hydrogen. (PGE)

Agency Response: ARB staff agrees and has incorporated the comment into the ATCM.

3.6 Comment: The ATCM contains incentives for replacing portable diesel-fueled engines with portable engines utilizing alternative fuels. This incentive should be modified to encourage earlier conversion to alternative fuels by giving double credit for these engines when calculating the fleet emissions average if such conversions are completed prior to January 1, 2009. (PGE)

Agency Response: Staff agrees and has incorporated the comment into the ATCM.

4. Emergency, Emergency Event, and Low-Use Engine

4.1 Comment: The ATCM contains references to the term "engines used exclusively in emergency applications," but does not define this term. To clarify what are considered emergency applications, a definition for "emergency use engine" should be added to the ATCM as follows: a portable engine that is: (1) operated to provide electrical power or mechanical work during the failure of normal electrical power, the pumping of water or sewage to prevent or mitigate a flood or sewage overflow, or the pumping of water for fire suppression or protection; and (2) is operated under limited circumstances for maintenance and testing, emissions testing, or initial startup testing, not to exceed 26 hours per year. (USNAVY)

Agency Response: In response to the USNAVY comment, ARB staff added a definition for "engines used exclusively in emergency applications" to the ATCM. As defined in Section 93116.2(n), "engines used exclusively in emergency applications" are engines "that are used only during an emergency or emergency event*, and includes appropriate maintenance and testing*." (Emphasis added.) "Emergency" and "emergency event" are defined in Sections 93116.2(k) and 93116.2(l), respectively. The types of activities described by USNAVY for "emergency use engine" were incorporated into the term "emergency."

4.2 Comment: The definition of "emergency" in the ATCM should be consistent with the definition for "emergency" in the Portable Equipment Registration Program (PERP) regulation. (BJS, PWS)

Agency Response: ARB staff agrees that the term "emergency" should be consistent between the Portable Diesel Engine ATCM, the PERP regulation, and the Stationary Diesel Engine ATCM. Unfortunately, the term "emergency" is significantly different in the PERP regulation than in the Stationary Diesel Engine ATCM, as the term is used for completely different purposes. Consequently, ARB staff introduced the term "engines used exclusively in emergency applications" in the Portable Diesel Engine ATCM to utilize both of these two other definitions.

As defined in Section 93116.2(n), "engines used exclusively in emergency applications" are engines "that are used only during an *emergency* or *emergency event* (emphasis added), and includes appropriate maintenance and testing." "Emergency" is defined in Section 93116.2(k) and is similar to the definition for "emergency" in the Stationary Diesel Engine ATCM. "Emergency event" is defined in Section 93116.2(l) and is similar to the definition of "emergency" in the PERP regulation. In this manner, the intent of the term "emergency" in these other two regulations is maintained in the ATCM.

4.3 Comment: The ATCM defines a "low-use engine" as an engine that operates 80 hours or less annually. However, if the low-use engine is pressed into service for an "emergency event," those hours do not count toward the 80 hours. There is no such exemption if the engine is used in an "emergency."

In the ATCM, the definition of "emergency event" reflects catastrophic emergencies, such as large wildlife fires or earthquakes, while the definition of "emergency" lists specific events considered localized emergencies, such as loss of grid power. The definitions of "emergency" and "emergency event" should be combined into one definition, and the hours used in any of these emergency situations should be exempt from the 80-hour limit for "low-use engines. (EMWD)

Agency Response: ARB staff disagrees with the proposal of combining the definitions for "emergency event" and "emergency." These definitions are distinct for a reason. The definition of "emergency event"—the widespread, catastrophic occurrence—is based on the definition of "emergency" in the Portable Equipment Registration Program (PERP). PERP recognizes that during such an event, engines may be pressed into service that are neither registered with the program nor permitted by the local air districts (e.g., brought in from other states), and there is no time for the appropriate regulatory process; therefore, these engines receive a temporary exemption from registration and permitting. Similarly, the ATCM recognizes that "low-use" engines may be pressed into service during a catastrophic event, and ARB staff believes that these hours of service should not count against the 80-hour limit for low-use engines.

The definition of "emergency" in the ATCM—the more specific, local occurrence—is similar to the definition of "emergency" in the Stationary Diesel Engine ATCM. ARB staff included this definition to identify other specific emergencies without compromising the intent behind the exclusion of hours for "low-use" engines during catastrophic "emergency events."

Ultimately, the ATCM provides the same relief from some provisions of the ATCM to "low-use" engines and "engines used exclusively in emergency applications," which entails both "emergency events" and "emergencies." The intent of exempting these engines from some provisions of the ATCM is to recognize that replacing or retrofitting infrequently used engines is not particularly cost-effective. ARB staff believes that the engine owner should identify the exemption category of his engines (e.g., exclusively used for emergency applications or infrequently used), and that the engines should not switch between these categories. Otherwise, there exists a possibility that some low-use engines could be used for a significant number of hours, circumventing the intent behind the designation of "low-use" and increasing diesel PM emissions. Furthermore, recordkeeping and enforcement would be more difficult for engines switching categories.

4.4 Comment: The definition of emergency should be expanded to include the pumping of water to maintain pressure in the water distribution system in the event of a pipe break, high demand on the system due to use of fire hydrants, or breakdown of electric-powered pumping equipment. (LADWP)

Agency Response: ARB staff agrees and has incorporated the comment into the definition of "emergency" in the ATCM.

4.5 Comment: The definition of emergency should be clarified to include using portable engines in fire training exercises. (EXXONMOBIL)

Agency Response: ARB staff agrees and has incorporated the comment into the definition of "emergency" in the ATCM.

4.6 Comment: The definition of low-use engine should be expanded to include portable diesel-fueled engines with a maximum horsepower rating of less than 175 horsepower and operated less than 250 hours per calendar year. (PGE)

Agency Response: ARB staff disagrees. This proposal would result in a significant increase in both emissions and recordkeeping.

The categories of "low-use engine" and "engines used exclusively in emergency applications" were developed to recognize that subjecting these engines to the full requirements of the ATCM would not be cost-effective due to low annual usage. Consequently, these engines are not subject to the fleet-average emission standards of the ATCM in 2013 and 2017.

ARB staff estimates that there are currently about 3,300 engines that could be considered low-use engines or engines used exclusively in emergency applications. These 3,300 engines represent 10 percent of the total engines and emit 3 percent of the total diesel PM emissions from portable diesel-fueled engines. Expanding this group of portable engines to include engines with a maximum horsepower rating of less than 175 horsepower and operated less than 250 hours per calendar year would allow an additional 5,000 or more engines to be exempt from the fleet standards. This would increase the percentage of engines exempt from the fleet standards to 25 percent of the total engines, and would more than triple the emissions from these exempt categories from 3 percent of the total diesel PM emissions from portable diesel-fueled engines to 10 percent. These emissions increases are unwarranted.

In addition, adding these engines into these fleet-average-exempt categories would subject these portable engine owners to increased recordkeeping and reporting requirements, subsequently increasing the enforcement load on local air districts and ARB staff.

5. Emission Standards and Technology Review

5.1 Comment: MECA supports the proposed air toxic control measure strategies for reducing diesel PM emissions from in-use diesel-fueled portable engines. MECA specifically commented that verified Level-3

products, while not available today, are expected be available in the 2013 to 2017 timeframe when the fleet PM requirements begin to tighten. In addition, MECA supports the staff proposal to provide operators with an early compliance incentive for Tier 4 engines. (MECA)

Agency Response: ARB staff developed the ATCM with the expectation that Level-3 products will be commercially available when the fleet PM requirements take effect in 2013.

5.2 Comment: The Stationary and Portable ATCMs have different emission standards and the timeline for complying with these emission standards are also different. The requirements of these ATCMs should be harmonized as expeditiously as possible, such that any engine, regardless of the engine being used in a stationary or portable application, operating more than 200 hours, would be subject to the same emissions standards and time frames of implementation. CAPCOA requests that ARB work with control product manufacturers and district staff to promote the expeditious development of diesel PM control devices for portable equipment. (LCAQMD, CAPCOA)

Agency Response: ARB staff disagrees that the ATCMs can be harmonized due to the significant operating differences between the two applications of diesel-fueled engines.

The emissions of diesel PM from stationary diesel-fueled engines are more amenable to the technologies available to reduce these emissions. Stationary diesel-fueled engines used in prime applications typically operate at high loads. The high exhaust temperature from these engines is sufficient for the proper operation of a passive diesel particulate filter (DPF). In addition, one technology has been verified to achieve 85% reduction in diesel PM emissions from stationary engines used in emergency standby applications.

In contrast, portable engines are used in a wider variety of applications and with a wider range of engine loads. Some of the businesses and public agencies that use portable engines in their activities include motion picture studios, agriculture, air transportation, public and investor-owned utilities (providing electricity, water, and waste treatment/disposal), construction services, marine construction and dredging services, oil and gas well service companies, and rental services. Engine size can vary from 50 to 3,000 brake-horsepower. This diversity in uses of portable engines makes it a challenge to develop an effective control technology.

To better understand the exhaust-temperature issue for portable diesel-fueled engines, ARB staff and UC Riverside measured the exhaust temperatures on over 100 different engines representing the range of

different portable applications. This information indicated that in many cases the exhaust gas from portable engines did not attain the necessary temperature for the proper operation of a passive DPF. Therefore, the passive DPF is not a good candidate for many portable engine applications.

Currently, no technology has completed the ARB Verification Process, which is required by the portable diesel-fueled ATCM. The only available options in the short term to reduce diesel PM from portable engines is either to require the replacement of older engines with newer, cleaner engines or provide incentives to switch to alternative fuels. The ATCM was crafted to allow sufficient time to develop technologies to reduce diesel PM emissions from portable diesel-fueled engines. ARB staff will monitor the development, effectiveness, and availability of retrofit technologies for portable engines and will report to the Board no later than 2008. Based on the results of this technology review, ARB staff may recommend revisions to the ATCM.

5.3 Comment: In lieu of purchasing an engine that is certified to an off-road engine standard by 2010, owners of portable diesel-fueled engines used exclusively in emergency applications or that qualify as low-use engines may commit to replacing these engines with Tier 4 engines. The replacement, for the applicable class and category, must be made within two years of the first engine being offered for sale. The two-year period should begin when a Tier 4 engine for that specific application is available for sale. (BJS)

Agency Response: ARB staff understands that some portable diesel engine applications make repowering more of a challenge due to technical and design reasons. However, neither the local air districts nor ARB could reasonably determine when a specific engine becomes available for a specific application. The proposed revision would be difficult to enforce and could significantly delay the replacement of older engines with Tier 4 engines. ARB staff believes that customers can work with the engine manufacturers to address this issue.

5.4 Comment: The Construction Industry Air Quality Coalition supports inclusion of a provision that allows either the Executive Officer or the Air Pollution Control Officer to determine, on a case-by-case basis, that portable diesel-fueled engines in lattice boom cranes can be exempted from the 2010 requirement. (CIAQC)

Agency Response: ARB staff worked with the crane industry and CIAQC on this issue and included the lattice boom exemption in the ATCM.

5.5 Comment: The ATCM should be revised to be aligned with the federal regulatory flexibility provisions for nonroad equipment and vehicle manufacturers. These provisions were added to the federal regulation as part of the Tier 2/Tier 3 Nonroad Emission Regulations to avoid unnecessary hardships for nonroad equipment manufacturers. The flexibility provisions consists of four elements: 1) a percent-of-production allowance, 2) small-volume allowance, 3) hardship relief, and 4) continuance of the allowance to use up existing inventories of engines. (EMA)

Agency Response: Staff has revised the ATCM to accommodate the flexibility provisions for nonroad equipment and vehicle manufacturers that are contained in both the federal and State programs for newly-manufactured nonroad engines. Engines that are certified to Tier 1, 2 or 3 nonroad engine standards and considered compliant with the applicable nonroad engine standards pursuant to the flexibility provisions for nonroad equipment and vehicle manufacturers are considered compliant with sections 9116.3(b)(1)(A) and 9116.3(b)(2)(A) of the ATCM. Consistent with the effort to replace all portable diesel-fueled engines with engines that are certified to Tier 1,2, or 3 nonroad engine standards, equipment that uses noncertified engines pursuant to the flexibility provisions for nonroad equipment would not comply with sections 9116.3(b)(1)(A) and 9116.3(b)(2)(A) of the ATCM.

5.6 Comment: The initial requirement for the ATCM does not become effective until 2010. Six years is too long to wait for reductions in diesel PM from such a large source of diesel exhaust. Consequently, the ARB should consider moving up the initial implementation date. Fleets with 15 or more portable engines should be required to replace one third of their uncertified portable engines with certified Tier 3 engines each year in the 2008 to 2010 timeframe. (ALA, CEE, CERA, ED, EYC, MYA, NRDC, PCL, PISD, RAM, SCC, UCS)

Agency Response: ARB staff did not include this proposed revision in the ATCM because it would disrupt an existing regulatory schedule for portable diesel-fueled engine replacement and would not result in significant emissions reductions. ARB staff chose 2010 as the date to replace noncertified engines because an existing ARB program affecting portable engines, the Portable Equipment Registration Program (PERP), already has a similar requirement that takes effect in 2010. The PERP, adopted by the Board in 1997, is a voluntary program in which operators of portable equipment can register portable equipment with the State in lieu of obtaining permits from local air districts. By January 1, 2010, all engines registered under PERP must be certified to a U.S. EPA/ARB off-road engine standard. Currently, about 1,400 businesses owning 16,000 engines—nearly half of the total diesel-fueled portable engines in

California—are registered with PERP. Most companies registered with the PERP have factored into their business plans how the fleets will need to be modified to satisfy the 2010 requirement. ARB staff chose to harmonize with this existing engine-replacement schedule.

The diesel PM reductions achieved through the proposed revision would be minimal. Currently, Tier 2 engines are available for most classes and categories of nonroad engines. Tier 3 engines, which emit less oxides of nitrogen (NOx), will be commercially available in the 2007-2010 timeframe. Diesel PM emissions reductions achieved by expediting engine replacement would be temporary—disappearing by 2013, when the fleet average emissions standards take effect. The minimal impact on emissions is insufficient to disrupt the existing PERP engine replacement schedule.

5.7 Comment: The proposed fleet standards are too aggressive in that they will require the replacement of newly purchased Tier I engines with Tier 4 engines well before the end of the engines' useful life. This will be especially costly, as the company has recently purchased 18 engines rated at 750 horsepower and more. The fleet standards should be modified as follows:

	2013	**2017**	**2020**
<175 hp	0.5	0.2	0.04
≥175 hp	0.4	0.16	0.02

(BJS)

Agency Response: ARB staff did not make this revision. The fleet averages in the ATCM provide a reasonable rate of progress between 2010, when portable engines must be certified to an off-road standard, and 2020, when the ATCM is fully implemented, resulting in diesel PM emissions reductions of 95 percent.

With the exception of the emission standards that apply to engines rated at 750 horsepower and larger, the 2013 fleet-average standards will essentially remove most Tier 1 portable diesel-fueled engines from California, just as the 2010 requirements removed noncertified engines. The 2017 fleet-average standards represent fleets that are about half Tier 2/3 engines and half either Tier 4 engines or engines retrofitted with control technology that achieves 85 percent reduction in diesel PM emissions. There are other methods and techniques to achieve these fleet-average standards—alternative fuels, fuel additives, electrification credit, early Tier 4 engine purchase credit, etc.—but in general the fleet-average standards represent reasonable progress toward the 2020 goal.

Nevertheless, because of the uncertainty associated with the development of retrofit technology and of the rollout schedule for Tier 4 engines, especially for the larger classes and categories of engines, ARB staff will complete, by no later than 2008, a technology review to determine the feasibility of satisfying the ATCM's interim fleet standards. ARB staff believes it is premature to revise the fleet-average standards in the ATCM at this time.

5.8 Comment: Engines typically operate with varying power settings or load; some applications may require an engine to be operated near maximum capacity for the majority of the time, while other applications may result in the engine idling for a significant portion of its operating time. Since the load affects the amount of diesel PM that may be emitted, the fleet average calculation should consider the different loads an engine would operate at under different applications. (BJS)

Agency Response: ARB staff believes the fleet-average calculation accounts for the effect of engine load on emissions. The fleet-average calculation considers the horsepower and the emission factor for each portable diesel-fueled engine in the fleet. The emission factors for the engines are determined through testing by the engine manufacturers for the purpose of demonstrating compliance with applicable off-road engine emissions standards. The testing protocol requires emissions testing at variable loads; therefore, the variable-load effect is taken into account through the emission factors used in the fleet-average calculation.

5.9 Comment: CSDLA and CCEEB support the commitment for a technology review before 2008. As part of this technology review, the Board and staff should consider additional options that provide flexibility, such as in cases where hardship can be demonstrated. (CSDLA, CCEEB)

Agency Response: ARB staff included flexibility provisions in the ATCM through incentives, credits, exemptions, and deferrals. As mentioned earlier, no technologies have presently been verified to reduce diesel PM from off-road applications of portable diesel-fueled engines. The ATCM allows the necessary time for the development of such technologies. The 2008 technology review will be an essential step in determining if additional flexibility needs to be considered. Additional flexibility provisions in the ATCM will largely depend upon the availability and cost of installing these diesel PM emissions control technologies.

6. Recordkeeping and Reporting

6.1 Comment: The recordkeeping and reporting requirements of the ATCM are overly burdensome. In addition, the requirement of a signed

statement of compliance by a responsible official provides no real value. (NSM)

Agency Response: ARB staff disagrees. The recordkeeping and reporting requirements contained in the ATCM are necessary to ensure the enforceability of the ATCM. For the most part, recordkeeping is required if the engine owners choose to utilize the credits built into the ATCM that concern annual hours of operation (e.g., electrification credit, use of alternative fuels, the determination of low-use engines). ARB staff rejected other approaches to the ATCM, such as limiting hours of operation per project location, because they required burdensome recordkeeping.

The reporting requirements of the ATCM are necessary to determine if the engine fleets are meeting the fleet-average standards. Because fleets can be distributed throughout the State and managed by different personnel within a company, the ATCM requires a Responsible Official for a business or government entity to supply the necessary information to ARB. This minimizes reporting requirements. The statement of compliance is based on a self-monitoring, self-reporting approach that is common with many air pollution regulations, including federal Title V permits for stationary sources.

6.2 Comment: If ARB staff incorporates the proposal to provide additional credit for early conversion to alternative-fueled engines (Comment 3.6), additional reporting and recordkeeping requirements pertaining to this credit will also have to be incorporated into the ATCM. (PGE)

Agency Response: ARB staff has incorporated the comment into the ATCM.

7. Enforcement of Fleet Requirements

7.1 Comment: The ATCM allows both the ARB and districts to take enforcement action against companies that violate the fleet emission standards of the ATCM. The ATCM should be revised to restrict the enforcement of the ATCM's fleet emission standards to the ARB. (USNAVY)

Agency Response: ARB staff believes most fleets operate exclusively within a specific district's boundaries. However, because some fleets operate in multiple air districts throughout the year, it would be difficult for any specific local air district to enforce the fleet-average standards. In these cases, ARB may have to act as the primary enforcement agency.

8. Schools

8.1 Comment: The Motion Picture Association of America supports the proposal to continue to study the use of portable engines near schools. The Association requests that any restrictions for portable engines operated near schools recognize the mobile and unpredictable nature of making motion pictures. In addition, the Association requested that the definition of school be clarified to not include parking lots and to exclude employer-sponsored schools from requirements that affect the use of portable engines near schools. (MPAA)

Agency Response: As directed by the Board, ARB staff is assessing the feasibility of requiring additional diesel PM emissions reductions from portable diesel-fueled engines that operate near schools. Staff will provide a report to the Board on this issue. As part of this assessment, staff will consider the issues raised by MPAA.

8.2 Comment: It is not necessary to include additional requirements to further limit the emissions from portable diesel-fueled engines operating near schools. (CCEEB)

Agency Response: As indicated above, ARB staff is assessing the feasibility of requiring additional diesel PM emissions reductions from portable diesel-fueled engines that operate near schools. Staff will provide a report to the Board on this issue.

8.3 Comment: There should be additional requirements to further limit the emissions from portable diesel-fueled engines operating near schools. (ALA, CEE, CERA, ED, EYC, MYA, NRDC, PCL, PISD, RAM, SCC, UCS, MPAA)

Agency Response: As indicated above, ARB staff is assessing the feasibility of requiring additional diesel PM emissions reductions from portable diesel-fueled engines that operate near schools. Staff will provide a report to the Board on this issue.

8.4 Comment: To reduce diesel PM exposure near schools, only clean engines should be allowed to operate near schools. (ALA).

Agency Response: ARB staff considered a clean-engine requirement for portable engines operating near schools in an earlier draft of the ATCM, but ultimately did not include such a requirement. Specifically, the provision would have required engines operating near schools to be cleaner than the general population of portable engines in the State. For example, certified engines would have been required near schools several years prior to requiring all portable engines to be certified. Staff

determined that this approach might result in an economic disadvantage to small-fleet owners, as they would be compelled to replace a larger portion, if not all, of their fleet sooner than otherwise necessary if they occasionally worked near schools. Large-fleet owners would have more flexibility dispatching their fleets, although many times not without substantial coordination. Finally, field enforcement of a clean-engine provision would be difficult and resource-intensive.

ARB staff will re-evaluate this approach as well as other options as it assesses the feasibility of requiring additional diesel PM emissions reductions from portable diesel-fueled engines that operate near schools. Staff will provide a report to the Board on this issue.

9. Economic Impact

9.1 Comment: The cost analysis evaluates the economic impact of each ATCM on an individual basis only. In addition to the individual economic impact of this ATCM, the ARB should evaluate the economic impacts from all measures identified in the Diesel Risk Reduction Plan. The California Environmental Quality Act (CEQA) requires the project to be evaluated in its entirely and prevents segmenting a project to minimize the impacts. (LADWP, EMA)

Agency Response: The Diesel Risk Reduction Plan (Plan), approved by the Board in 2000, represents ARB staff's comprehensive approach to significantly reduce diesel PM emissions from a wide variety of sources, both on-road and off-road. In the Plan, ARB staff provided an estimate of the costs associated with several possible emissions control technologies, especially diesel particulate filters (DPFs). As ARB staff has developed specific regulations based on the Plan, the installation of DPFs has proved problematic for some categories of diesel engines, including portable diesel-fueled engines; therefore, some of the costs of the regulations outlined in the Plan have been different than what was originally estimated. Nevertheless, ARB staff committed in the Plan to provide detailed cost and cost-effectiveness analyses during the preparation of each control measure.

Staff believes that ARB has fully complied with the requirements of CEQA at all times.

9.2 Comment: The cost for complying with the PERP is not included as part of the cost for satisfying the requirements of the ATCM; therefore, the cost of complying with the requirements of the ATCM is underreported. (PWS)

Agency Response: ARB staff disagrees that the cost of complying with the ATCM is underreported. Staff recognizes that businesses registered with PERP will have an additional economic impact as a result of complying with the PERP requirements. However, State law requires that the focus of the economic analysis be on the regulation, in this case the ATCM.

9.3 Comment: The assumptions used in the economic impact analysis result in the underreporting of the total economic impact of the ATCM. Assumptions that should be reevaluated include the useful life of portable diesel-fueled engines, the cost for particulate filters, and the cost for replacing or repowering portable equipment. The cost analysis is based upon a diesel engine life of 25 years. An engine's typical useful life in the oil service industry is considerably longer, and therefore, a longer useful life should be used for the economic analysis. The economic analysis also underestimated the cost for diesel particulate filters (DPFs), the cost of replacing or repowering portable engines, and the maintenance cost associated with the use of DPFs. (PWS)

Agency Response: ARB staff disagrees that the cost of complying with the ATCM is underreported. The economic impact analysis reflects the average costs of the ATCM for the 33,000 portable diesel-fueled engines operating in California. Over 80 percent of the diesel-fueled engines registered with the PERP are characterized as generators, pumps, and compressors. For this type of equipment, the estimated cost for replacement and repowering is well within the range of $135 to $220 per horsepower estimated by staff. For certain types and applications of equipment, such as drill rigs used in the oil well services industry, the specific cost may be somewhat higher.

Regarding engine replacement or repower, ARB staff assumed that an existing engine would eventually be replaced at the end of its useful life and took into account the remaining value of the existing engine at the time the proposed ATCM requires the engine to be replaced with a new, cleaner engine. Furthermore, based on the age of the engines registered with PERP, staff estimated that the useful life of a portable diesel-fueled engine is typically 25 years, although many times it may be less than that. While PWS indicated the useful life of engines within its industry can be between 40 to 60 years, less than one percent of the 16,000 engines registered with PERP are more than 30 years old.

PWS also commented that the cost use for catalyzed diesel PM filters was too low. To evaluate the economic impact for the ATCM, the costs for catalyzed diesel PM filters was estimated to be $40/hp and assumed to stay at this level until the ATCM is fully implemented. We believe this is a conservative assumption given that U.S. EPA projected, in the Preamble

for the Control of Emissions of Air Pollution from Nonroad Diesel Engines and Fuel (2003), the cost of catalyzed diesel PM filters would fall to about $5-8/hp when Tier 4 engines become initially available in 2011-2012.

Finally, PWS commented that the maintenance cost for DPFs might be underestimated. The maintenance cost used in the economic impact analysis is based upon DPF manufacturers' recommendations for on-road applications. When DPFs are verified for off-road applications, ARB will review those estimated maintenance costs as part of the 2008 technology review and revise ATCM costs as necessary.

9.4 Comment: The ATCM will impact the ability of California's business to compete for jobs in California with companies that are located outside the State. (PWS)

Agency Response: ARB staff expects the ATCM to minimally impact the ability of businesses based in California to complete with businesses based outside of California. For a business based outside of California to operate its equipment within California, the company's portable diesel-fueled engines will need to satisfy the applicable requirements of the ATCM.

9.5 Comment: The economic impact for the ATCM is understated because the economic analysis does not consider that two engines may need to be purchased to satisfy the requirements of the ATCM. (EMA)

Agency Response: ARB staff disagrees that the economic impact of the ATCM is understated. The ATCM is based on a two-phase approach: replace older engines with newer, cleaner engines, then retrofit those engines with verified control equipment to reach the ultimate diesel PM emissions reductions in 2020. Some businesses, such as rental companies, turn over their fleets of portable engines more frequently and may wish to replace engines again; however, it was never the intent of the ATCM to require multiple engine replacements.

Because technologies have not been verified for reducing diesel PM emissions from off-road applications, the regulation allows for sufficient time for the development of these technologies. The first fleet-average standards do not take effect until 2013. In the meantime, because of the uncertainly of the availability of verified control technologies within the necessary timeframes, ARB staff is committed to conducting a technology review and reporting to the Board no later than 2008. If verified control technologies are not developed and made commercially available and the only option available to satisfy the standards in the timeframe provided in the ATCM is to replace engines with cleaner engines, then ARB staff would revisit the implementation schedule of the ATCM as part of the

technical review. Furthermore, ARB staff would also revisit the economic impact analysis and revise the analysis to be consistent with proposed revisions to the ATCM.

9.6 Comment: It is incorrect that the ATCM will not have a significant adverse economic impact on affected business or that affected businesses will be able to absorb the cost of the proposed regulation without significant adverse impact on profitability. (NSM, PWS)

Agency Response: ARB staff, in the Initial Statement of Reasons, estimated the economic impact on businesses of complying with the ATCM in accordance with state law. Based upon ARB staff's evaluation, ARB staff believes that most businesses will be able to absorb the costs of complying with the ATCM with no significant adverse impact on profitability.

Furthermore, the overall estimated cost effectiveness of the ATCM is between $16/lb and $19/lb—consistent with other diesel ATCMs adopted by the Board. The cost effectiveness of these ATCMs ranges between $10/lb to $67/lb.

10. Environmental Impacts

10.1 Comment: The staff report should identify the reduction in emissions of NOx, ROG, CO, and SOx associated with the replacement of existing diesel-fueled engines with cleaner engines certified to either the Tier 2 or Tier 3 emission standards for off-road engine. (PWS)

Agency Response: ARB staff, in the Staff Report: Initial Statement of Reasons for the Proposed Airborne Toxic Control Measure for Diesel-Fueled Portable Engines, estimated the reductions in diesel PM, NOx, and ROG resulting from the full implementation of the ATCM. As indicated in the staff report, diesel PM will be reduced by 95 percent, and both NOx and ROG emissions will be reduced by nearly 80 percent.

The staff report did not provide estimates for reductions of CO or SOx emissions resulting from the ATCM. While the replacement of older engines with newer engines would result in a significant reduction of CO, ARB staff did not quantify the expected reductions because most areas of the State are in attainment with federal and State ambient CO standards. In addition, SOx emissions from portable diesel-fueled engines are directly related to the fuel used in the engine. Consequently, any reduction in SOx emissions would be the result of regulations requiring the reduction of sulfur compounds in the fuel and not a result of replacing older engines with newer, cleaner engines.

10.2 Comment: Because of the potential that ash from PM filters may be considered a hazardous waste, the ARB should consider funding research to determine if the waste from diesel PM filters would be considered hazardous waste. In addition, the ATCM should include the cost of hazardous waste disposal, training of employees for the removal of the ash, and personal protective equipment. (PWS)

Agency Response: As discussed above, the control technologies and techniques that will be used to reduce diesel PM from off-road engine applications are still being developed. Consequently, while staff suggested in the ISOR that the ash collected from diesel PM filters may be considered hazardous waste, it is premature to determine the extent of this issue until the technologies that will be used to reduce diesel PM emissions from portable diesel-fueled engines have been commercialized. As part of the technology review, ARB staff will monitor this issue.

10.3 Comment: The health benefits resulting from implementing the ATCM are based upon unproven methods and invalid assumptions. Consequently, the whole discussion on health benefits should be deleted from the ISOR. (EMA)

Agency Response: ARB staff disagrees. As discussed in Chapter VII of the Staff Report: Initial Statement of Reasons for the Proposed Airborne Toxic Control Measure for Diesel-Fueled Portable Engines, ARB staff based its health benefits discussion on the reduction in ambient diesel PM concentrations when the ATCM is fully implemented. The reduction in diesel PM concentration would result in corresponding lower exposure to primary and secondary PM. One of the key health effects associated with ambient particulate matter, of which diesel PM is a component, is premature mortality. As discussed in the Staff Report, we based our premature mortality analysis on sound, peer-reviewed, and defensible methodological elements from Krewski et al. (Reanalysis of the Harvard Six Cities Study and American Cancer Society Study of Particulate Air Pollution and Mortality, Health Effects Institute, Cambridge, MA; 2000) Furthermore, the U.S. EPA has been using the Krewski's study for its regulatory impact analysis since 2000.

10.4 Comment: The ATCM should be modified to allow districts to suspend PERP registrations and bring the equipment under temporary local air district jurisdiction to ensure that appropriate measures are taken to avoid significant health or nuisance impacts. In addition, ARB should work with CAPCOA to develop a method to evaluate health risks from portable equipment when multi-day operations will occur near sensitive receptors. (CAPCOA)

Agency Response: The Board adopted revisions to PERP on the same day it adopted the ATCM. Section 2453(l)(5) was added that states a district permit may be required if "any engine or equipment unit…has been determined to cause a public nuisance as defined in Health and Safety Code Section 41700." In other words, a local air district can require a permit if a specific PERP-registered piece of equipment is deemed to be a public nuisance. The ATCM does not need to be modified to allow districts to suspend PERP registrations for certain types of projects.

As discussed in Staff Report: Initial Statement of Reasons for the Proposed Airborne Toxic Control Measure for Diesel-Fueled Portable Engines, portable diesel-fueled engines are used in a variety of applications. The majority of applications using portable diesel-fueled engines are completed in a short period of time. Because of the variability in the use of portable diesel-fueled equipment and the mobile nature of portable equipment, it is difficult to quantify the potential health risk resulting from the operation of a portable diesel-fueled engine on any specific receptor. The current risk assessment methodology recommended by the Office of Environmental Health Hazard Assessment (OEHHA) and used by ARB staff in evaluating potential cancer risk is based upon exposure to the emissions of a source for 70 years—by nature very unlikely with portable engines. ARB staff will continue to work with CAPCOA on this issue.

B. Responses to Comments Received During the 15-Day Public Comment Period for the Modified Regulatory Language

Abbreviation	Commenter
ATA	Betty L. Hawkins Air Transport Association of America, Inc. Written Testimony: June 1, 2004
PGE	Sven Thesen Pacific Gas and Electric Written Testimony: June 1, 2004

Comments and Responses

1. Alternative Fueled Engines

1.1 Comment: The operating requirements for alternative-fueled engines and low use engines should have the same operating limit of 80 hours per calendar year. (PGE)

Agency Response: ARB staff disagrees. The annual operating requirements in the ATCM for alternative-fueled engines and low-use engines address completely separate issues. The 100-hour *minimum* annual operating requirement for alternative-fueled engines is intended to encourage owners of alternative-fueled engines to operate these engines in lieu of diesel-fueled engines. Fleet-average credit is given when these engines are operated at least 100 hours per year. Credit should not be given for merely owning these engines.

ARB staff recognizes that portable diesel-fueled engines used infrequently (i.e., low-use engines) should be exempt from some of the provisions of the ATCM because of higher cost-effectiveness estimates. To that end, ARB staff developed an alternative compliance path in the ATCM for low-use engines based on 80 hours *maximum* annual use. The two hourly requirements for alternative-fueled engines and low-use engines are unrelated; therefore, there is no reason to make the hour target the same.

2. Applicability

2.1 Comment: The emission reductions resulting from implementing the MOU are equivalent to the reductions achieved by the ATCM, and therefore portable equipment that are regulated by the MOU are exempted from the requirements of the ATCM for the life of the engine. (ATA)

Agency Response: The ATCM allows portable equipment that is subject to the South Coast Ground Service Equipment MOU to be exempt from the requirements of the ATCM if the participating airlines demonstrate to the satisfaction of the Executive Officer that the diesel PM reductions achieved by satisfying the requirements of the MOU are equivalent to the reductions achieved by the ATCM. ARB staff will evaluate any proposal submitted by the air carriers or their representatives seeking such an equivalency determination.

2.2 Comment: ATA supports the revisions that recognize the collective fleet of all carriers subject to the MOU would be subject to the requirements of the ATCM instead of each individual air carrier's fleet being subject to the requirements of the ATCM. (ATA)

Agency Comment: The ATCM reflects this comment.