

## UPDATED INFORMATIVE DIGEST

### AMENDMENTS TO THE AIRBORNE TOXIC CONTROL MEASURE FOR STATIONARY COMPRESSION IGNITION ENGINES

**Sections Affected:** Amendments to title 17, California Code of Regulations (CCR), section 93115.

#### **Background**

On February 26, 2004, the Air Resources Board (ARB or Board) approved the Airborne Toxic Control Measure for Stationary Compression Ignition Engines (ATCM) to reduce diesel particulate matter (PM) emissions from new and in-use stationary diesel engines. Among other provisions, the ATCM (codified in title 17, California Code of Regulations, section 93115) contained a 0.15 grams per brake horsepower-hour (g/bhp-hr) PM standard for new stationary diesel agricultural and emergency standby engines. Just prior to the effective date of the standard (January 1, 2005) local air districts and agricultural engine distributors notified ARB of their concern about the availability of compliant greater than 50 to less than 175 horsepower (hp) new stationary diesel agriculture pump engines.

The ARB staff conducted an extensive investigation culminating in the Board taking emergency action at a regularly scheduled Board meeting on March 17, 2005. During the meeting, the Board heard a presentation from ARB staff and testimony from stakeholders, including agricultural industry representatives, agricultural equipment distributors and dealers, and engine manufacturers. The testimony confirmed the ARB staff's findings that only a limited number of greater than 50 to less than 175 hp new stationary diesel agricultural pump engines met the regulation's 0.15 g/bhp-hr PM standard. The Board approved a temporary emergency action (Resolution 05-29) to replace the 0.15 g/bhp-hr PM standard for these engines with the appropriate ARB and federal new off-road/nonroad engine certification standards. This action was based on the limited availability of 0.15 g/bhp-hr PM-compliant engines in the greater than 50 to less than 100 hp range and the limited number of manufacturers offering compliant engines in the 100 to less than 175 hp range. In addition, the Board directed the ARB staff to investigate the need for permanent revisions to ensure continued availability of compliant stationary diesel agricultural pump and other engines in a variety of makes, models and sizes.

On April 8, 2005, the ARB staff published a report, entitled "Staff Report: Initial Statement of Reasons for the Proposed Revisions to the Airborne Toxic Control Measure for Stationary Compression Ignition Engines" (Staff Report). Attachment A of the Staff Report proposed amendments to permanently revise title 17, California Code of Regulations, section 93115 to coincide with the

temporary emergency regulatory changes approved by the Board at the March 17, 2005 Board meeting. The proposed amendments also included several non-substantive changes to correct referencing errors or otherwise clarify the intent of the ATCM.

At a public hearing on May 26, 2005, the Board adopted Resolution 05-33, in which it approved the ARB staff's originally proposed amendments and additional suggested modifications to address stakeholder comments made during the 45-day public comment period following publication of the April 8, 2005 Staff Report. Resolution 05-33 directed ARB staff to incorporate the modifications into the proposed regulatory text, with other conforming modifications, as necessary, to address issues raised by commenters during the hearing. On June 21, 2005, the ARB staff published a "Notice of Public Availability of Modified Text and Supporting Documents and Information" for a 15-day public comment period ending on July 6, 2005. Subsequent to this notice, no further comments were received on the proposed amendments.

### **Description of the Regulatory Action**

This regulatory action amended title 17, California Code of Regulation, section 93115 as follows:

#### PM Emission Limit Revisions

The 0.15 g/bhp-hr PM emission limits for greater than 50 to less than 175 hp new stationary diesel agricultural engines (except generator sets) and direct-drive emergency standby fire pump engines have been replaced with ARB and federal new off-road/nonroad engine certification standards for engines of the same brake horsepower rating and model year. This amendment ensures the continuous availability of these engines in a variety of makes, models, and sizes.

#### Direct-drive Emergency Standby Fire Pump Engine Compliance Extension

New stationary diesel direct-drive emergency standby fire pump engine compliance with ARB and federal new off-road/nonroad engine Tier 3 and Tier 4 certification standards has been extended an additional three years beyond the effective dates of those standards. This amendment provides fire pump manufacturers with the additional time they need to design, produce, test, and certify fire pump engines to meet both Tier 3-Tier 4 and National Fire Protection Association emission and performance requirements. Also, ARB staff will work with fire pump manufacturers and the U.S. Environmental Protection Agency (U.S. EPA) to evaluate if Tier 4 engine control technology is feasible for this application.

#### Emergency Standby Engine Operation During Missile Launching

The definition of "Emergency Use" has been modified to allow U.S. Department of Defense emergency standby engines to operate in parallel with electric grid power during missile launch tracking. This amendment protects people and

property by ensuring that power is immediately available to destroy a missile if it deviates from an expected path.

#### Emergency Standby Engine Maintenance and Testing at Healthcare Facilities

The local air districts are allowed to approve up to 40 total hours per year of stationary diesel emergency standby engine maintenance and testing operation at hospitals and other healthcare facilities. This amendment will enable healthcare facilities to comply with new Joint Commission on Accreditation Manual for Healthcare Organizations requirements for more frequent and extensive testing of emergency standby engines.

#### Emergency Standby Engine Maintenance and Testing at Schools

Schools where students live on-site, e.g., boarding schools, have been exempted from the provisions prohibiting stationary diesel emergency standby engine maintenance and testing at or near schools in the presence of students. This amendment will allow a limited number of hours per year of emergency standby engine maintenance and testing at or near the exempt schools and will ensure that these engines will work during power failures and other emergencies.

#### New Stationary Diesel Engines Acquired or Submitted for Approval, But Not Installed, Prior to the January 1, 2005 Effective Date for New Emission Limits

Districts are allowed to determine the time at which emission limit compliance requirements are triggered based on the date of new stationary diesel engine acquisition or the date an application was submitted for a district permit or registration program for stationary sources. This amendment addresses, at least partially, the potential disruption and severe economic hardships in consequence of new emission limits becoming effective during the long lead time from new engine purchase commitment to installation.

The concerns and issues associated with the date of new stationary diesel engine acquisition or approval and the phase in of more stringent emission limits are complex and require information gathering and extensive discussions with the districts and engine manufacturers, distributors, dealers, and end-users. It is not possible to conduct extensive discussions within the timeframe for finalizing the original proposed amendments by August 2, 2005, before the associated emergency regulation (Resolution 05-29) expires. Therefore, ARB staff plans to return to the Board with proposed amendments to address these timing and compliance requirement issues in the late 2005 to early 2006 timeframe, if appropriate.

In addition, the regulatory action amended title 17, California Code of Regulations, section 93115 to correct referencing errors or otherwise clarify the original intent of the ATCM. These should be considered non-substantive changes.

## **Comparable Federal Regulations**

As of this writing, there is a single federal regulation that requires stationary diesel engines to meet emission standards. The National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE) only affects stationary diesel engines greater than 500 hp, installed or reconstructed on or after December 19, 2002, and located at a major source of hazardous air pollutants. A relatively small number of engines in California are subject to the NESHAP for Stationary RICE requirements for carbon dioxide or formaldehyde emissions. In contrast, many California off-road engines are subject to federal emission certification standards for new nonroad mobile engines set forth in title 40, U.S. Code of Federal Regulations, Chapter 1, Part 89, Subpart B and Part 1039 Subpart B. The ARB has adopted identical new off-road mobile engine certification standards in title 13, California Code of Regulations, Division 3, Chapter 9, Article 4.

The U.S. EPA has proposed New Source Performance Standards (NSPS) for Stationary Internal Combustion Engines which require new stationary diesel engines to be subject to the federal new nonroad engine standards, at minimum. This makes sense because the same engine models are typically used for both nonroad and stationary applications and new nonroad engine standards can be reasonably applied to new stationary diesel engines. The amendments to title 17, California Code of Regulations, section 93115 have aligned the PM and other emission limits for greater than 50 to less than 175 hp new stationary diesel agricultural engines (except generators) and direct-drive emergency standby fire pump engines with federal new nonroad engine certification standards. A plentiful supply and wide variety of certified engines are currently available nationally and in California.

With the exception of the aforementioned direct-drive emergency standby fire pump engines, the ARB staff determined that small to medium new stationary diesel emergency standby engines should remain subject to title 17, California Code of Regulations, section 93115 0.15 g/bhp-hr PM emission limits. Most of these engines are associated with generator sets located in densely-populated urban areas. Several considerations make it unwise and unnecessary to change the current PM emission limits, including: concerns regarding diesel PM exposure and health risk, an adequate number and variety engines available, and the apparent absence of any significant engine replacement issues. However, the ARB staff is committed to work closely with engine manufacturers, distributors, dealers, and end-users to monitor the future ability of emergency standby engines to comply with the 0.15 g/bhp-hr PM and subsequent emission standards.