

## **UPDATED INFORMATIVE DIGEST**

### **ADOPTION OF AMENDMENTS TO THE VERIFICATION PROCEDURE, WARRANTY AND IN-USE COMPLIANCE REQUIREMENTS FOR IN-USE STRATEGIES TO CONTROL EMISSIONS FROM DIESEL ENGINES**

#### **Sections Affected:**

Proposed amendments to California Code of Regulations (CCR), title 13, section(s) 2700, 2701, 2702, 2703, 2704, 2705, 2706, 2707, 2708, 2709, 2710, and 2711.

#### **Background:**

In 1998, The Air Resources Board (ARB) identified diesel particulate matter (PM) as a toxic air contaminant (title 17, CCR, section 93000). A toxic air contaminant is an air pollutant that may cause or contribute to an increase in mortality or serious illness, or which may pose a present or potential hazard to human health. Diesel PM is of particular concern because it is distributed over large regions, thus resulting in widespread public exposure.

To address this large-scale health concern, in 2000, ARB adopted the Diesel Risk Reduction Plan (Diesel RRP) with the goal of reducing PM emissions and their associated health risks by 85 percent by the year 2020. The Diesel RRP identified a number of key measures to achieve this goal: more stringent standards for all new diesel-fueled engines and vehicles, retrofitting in-use diesel engines with diesel emission control strategies (strategies or DECS), and the use of ultra low-sulfur diesel fuel.

To support the Diesel RRP, staff developed a verification procedure (Procedure) for in-use strategies that was adopted by the Board in May 2002. The Procedure is used to evaluate in-use DECS to ensure they achieve real and durable PM emissions reductions. It specifies emissions and durability test procedures, establishes warranty requirements, and in-use compliance testing requirements. Strategies that meet all of the Procedure's requirements are verified and thus become candidate compliance options to meet ARB fleet regulations that require the control of diesel emissions from in-use fleets.

In-use fleet regulations rely on having strategies available to fleet owners as a compliance option. Diesel vehicles and equipment for which regulations have already been adopted include transit buses (title 13, CCR, section 2023, et seq.), solid waste collection vehicles (title 13, CCR, section 2021, et seq.), vehicles that belong to public agencies and utilities (title 13, CCR, section 2022, et seq.), mobile cargo handling equipment at ports and intermodal rail yards (title 13, CCR, section 2479), transport refrigeration units (title 13, CCR, section 2477), off-road diesel equipment (title 13 CCR, section 2449, et seq.), and private on-road diesel vehicles (title 13, CCR, section 2025, et seq.). These regulations provide several paths to compliance, one of which is the installation of verified DECS on existing engines.

Although applying for verification is voluntary, several DECS manufacturers have experienced reduced sales of DECS due to the global recession and recent changes to ARB's fleet regulations that extended deadlines to install DECS. In response, ARB staff reviewed the Procedure and proposed amendments to reduce certain of the Procedure's laboratory emission testing requirements. Staff has found that a number of amendments to the Procedure could be made while still ensuring that it serves the needs of the in-use fleet regulations and device end-users.

**Description of Regulatory Action:**

To address concerns voiced by verification applicants regarding the testing costs associated with the Procedure's in-use compliance requirements, staff proposed amendments at the August 23, 2012 public hearing that would reduce the amount of in-use testing that the Procedure currently requires. Specifically, the amendments replace one phase of in-use emissions testing with field testing, increase the sales thresholds that determine when testing must begin, provide for functionality testing of supporting components, provide a pathway to complete the required in-use testing using only one phase of emissions tests, and streamline the in-use compliance process. These amendments would significantly reduce the cost to verification applicants while preserving the Procedure's goals and objectives.

In support of these amendments, staff has also developed amendments to add new language to section 2709 (In-Use Compliance Requirements) specifying the conditions for passing in-use compliance testing. The amendments are necessary to accommodate the introduction of field testing and the inclusion of visual and functional tests, and to ensure that the current deterioration factors are appropriate for all covered pollutants. Under these amendments, verification applicants would propose appropriate test criteria for Executive Officer approval based on the design and operational characteristics of their particular devices.

Staff's amendments add recall provisions and modify and clarify the annual warranty reporting requirements for applicants and installers. Also, the amendments provide the Executive Officer with recall authority based on criteria such as a failure to meet the requirements for passing in-use compliance testing, failure of an operational feature, warrantable failures of the same part or component in excess of four percent of the number of engines using the strategy, or for emission safety considerations. The amendments also clarifies how the existing four percent threshold for warrantable failures is determined and clarifies the existing installation warranty requirements and requires installers of verified strategies to begin submitting annual installation warranty reports similar to the product warranty reports currently submitted by applicants. These changes would benefit the end-users by better installation and maintenance practices.

The Board approved several amendments that are generally intended to provide more specificity and clarity to the existing requirements. These include conditions under which an application may be terminated; objective engine maintenance criteria that must be provided by the applicant to their authorized installers for verified device

pre-installation compatibility assessment; minimum operational data monitoring and storage requirements for backpressure monitoring systems; emission control groups and test engine selection criteria; labeling durability and replacement; alternative diesel fuels and fuel additives requirements; verified retrofit tampering prohibition; and safety evaluation requirements.

Approved changes also correct several format and numbering errors in section 2702, add several definitions to section 2701, identify the appropriate contact and mailing addresses for application submittals, clarify the durability demonstration period for locomotive verifications, add clarifying language to identify what may be considered a design modification regarding an applicant's DECS, and clarify the methodology used to determine emissions reductions. These changes would not affect the stringency of the verification process but would simply modify the existing evaluation protocol and implement the original intent of the regulation.

Lastly, at the request of the regulated entities, approved amendments extend the conditional verification timeframe for off-road strategies from one to two years. This would benefit verification applicants by allowing them additional time to complete their conditional verification requirements.

Overall, the approved amendments would provide additional flexibility and economic relief to applicants while ensuring that DECS verified by ARB continue to be durable and effective in reducing emissions from existing diesel vehicles. The proposed amendments would also strengthen and preserve critical end-user protections to ensure the safe and effective use of DECS meet ARB's fleet rules.

**Comparable Federal Regulations:**

United States Environmental Protection Agency (U.S. EPA) has published a draft document, "General Verification Protocol for Diesel Exhaust Catalysts, Particulate Filters, and Engine Modification Control Technologies for Highway and Nonroad Use Diesel Engines," but has not promulgated formal regulations for this verification protocol. That verification protocol is intended to support the voluntary retrofit programs initiated by U.S. EPA, while staff's proposal is to support ARB's Diesel RRP and all the associated in-use fleet regulations. Additionally, the U.S. EPA program affords no warranty protection.

**Changes to Underlying Laws:**

There have been no changes to the statutory authority governing adoption of this regulation.

**Changes to the Effect of this Regulation:**

Overall, the adopted regulation will result in a further clarified verification process and streamlined in-use compliance process that will reduce costs associated in-use compliance.

**Changes to the Proposed Regulation Since the Publication of the Notice:**

ARB conducted one 15 day change comment period pursuant to Government Code section 11346.8. The 15 day changes modified the regulation to include an extension of time for the submittal of a market-ready diesel emission control strategy and a warranty resolution process to assist verification applicants in investigating and resolving warranty claims that provides the ability to install a temporary replacement center body in place of the verified DECS filter module for a period not to exceed 60 calendar days for small fleets. Other changes included minor, non-substantive modifications throughout the regulation to provide additional clarity and correcting formatting and grammatical errors.