

## UPDATED INFORMATIVE DIGEST

### REGULATION FOR MOBILE CARGO HANDLING EQUIPMENT AT PORTS AND INTERMODAL RAIL YARDS

**Sections Affected:** Amendments to title 13, California Code of Regulations (CCR), section 2479. The following documents are incorporated by reference: (1) ASTM D975-81, "Standard Specification for Diesel Fuel Oils," as modified in May 1982; (2) "Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines (Verification Procedure)" means the Air Resources Board (ARB) regulatory procedure codified in title 13, CCR, sections 2700-2710; (3) Society of Automotive Engineers "Surface Vehicle Recommended Practice, Snap Acceleration Smoke Test Procedure for Heavy-Duty Powered Vehicles" (SAE J1667). (February 1996); (4) International Organization for Standardization (ISO) 8178 Test procedures: ISO 8178-1: 1996(E) ("ISO 8178 Part 1"); ISO 8178-2: 1996(E) ("ISO 8178 Part 2"); and ISO 8178-4: 1996(E) ("ISO 8178 Part 4"); (5) Title 13, CCR, section 2423, "Exhaust Emission Standards and Test Procedures – Off-Road Compression Ignition Engines;" and (6) applicable methods and procedures specified in 40 CFR Part 94 (as amended in 2007), or 40 CFR Part 89, 40 CFR Part 1039, or 40 CFR Part 1065 for nonroad (off-road) engines (as they existed on September 22, 2011.)

#### Background

Over 90 percent of Californians breathe unhealthful air at times. To improve air quality and protect human health, the Air Resources Board (ARB or Board) establishes requirements to reduce emissions from new and in-use on-road and off-road vehicles, engines, and other sources. The Regulation for Mobile Cargo Handling Equipment at Ports and Intermodal Rail Yards (CHE Regulation) (title 13, CCR, section 2479) is part of ARB's ongoing effort to reduce diesel particulate matter (PM) and oxides of nitrogen (NO<sub>x</sub>) emissions from diesel-fueled engines and vehicles and improve air quality associated with goods movement.

Health and Safety Code (H&SC) sections 43013(b) and 43018 direct ARB to adopt standards and regulations that the Board has found to be necessary, cost-effective, and technologically feasible for all mobile source categories including off-road diesel engines and equipment such as cargo handling equipment (CHE), through the setting of emission control requirements. H&SC 43013 directs ARB to adopt such standards and regulations on equipment such as CHE to the extent permitted by federal law.

The California Toxic Air Contaminant Identification and Control Program, established under California law by Assembly Bill 1807 (Stats. 1983, Ch. 1047) and set forth in H&SC sections 39650-39675, requires ARB to identify and control toxic air contaminants (TACs) in California. In 1998, the Board identified diesel PM as a TAC with no Board-specified threshold exposure level.

Following the identification of a substance as a TAC, H&SC section 39665 requires ARB, with participation of the air pollution control and air quality management districts (districts) and in consultation with affected sources and interested parties, to prepare a report on the need and appropriate degree of regulation for that substance. H&SC section 39665(b) requires that this “needs assessment” address, among other things, the technological feasibility of airborne toxic control measures (ATCMs) and the availability, suitability, and relative efficacy of substitute products or processes of a less hazardous nature.

In 2000, the ARB released the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (Diesel RRP). The Diesel RRP presented information that identified the available options for reducing diesel PM and recommended control measures to achieve further reductions. The scope of the Diesel RRP was broad, addressing all categories of diesel engines, both mobile and stationary.

Once ARB has evaluated the need and appropriate degree of regulation for a TAC, H&SC section 39666(c) requires ARB to adopt regulations to reduce emissions of the TAC to the lowest level achievable through the application of best available control technology (BACT) or a more effective control method, in consideration of cost, risk, environmental impacts, and other specified factors.

The purpose of the CHE regulation is to reduce emissions of diesel PM and NO<sub>x</sub> from in-use engines on CHE operating at California’s ports and intermodal rail yards. Diesel PM emission reductions from CHE are needed to reduce cancer risk, premature mortality, and other adverse health impacts from exposure to people who live in the vicinity of California’s ports and intermodal rail yards. The amendments help to achieve the 2020 goals set forth in the 2000 Diesel Risk Reduction Plan and the 2006 Emission Reduction Plan for Ports and Goods Movement of reducing diesel PM emissions and health risks by 85 percent. Reductions in diesel PM and NO<sub>x</sub> (which forms “secondary” nitrate PM in the atmosphere as well as contributes to the formation of ozone) will also assist California in its goal of achieving and maintaining State and federal air quality standards.

The purpose of this regulatory action is to provide additional flexibility to cargo handling equipment owners/operators in an effort to reduce compliance costs while continuing to reduce emissions of diesel PM and NO<sub>x</sub>. The proposed amendments address several areas, including retrofit requirements, operational requirements, emission standards, compliance requirements, definitions, and other clarifying language.

In addition, modifications were made to the proposed amendments to encourage introduction and use of ultra-clean technologies such as electric and hybrid equipment; ensure fleets are brought into compliance prior to granting low-use compliance extensions; provide access to the Alternative Compliance Plan provisions for both yard truck equipment and non-yard truck equipment; allow the opacity-based monitoring

program requirements to exempt newer equipment; and require additional disclosure to sellers of equipment and engines subject to the CHE regulation.

## **Description of the Regulatory Amendments**

On September 22, 2011, the Board considered amendments to the existing CHE Regulation. After a 15-day comment period, the amendments were subsequently adopted by the Executive Officer. A summary of the amendments is presented below. A more detailed description can be found in the Initial Statement of Reasons for Rulemaking for the Regulation for Mobile Cargo Handling Equipment at Ports and Intermodal Rail Yards (CHE ISOR). The CHE ISOR can be accessed at: <http://www.arb.ca.gov/regact/2011/cargo11/cargo11.htm>

### *Retrofit Requirements*

The amendments that are retrofit-related include: adding a two year compliance extension if “No verified diesel emission control strategy (VDECS) Available” and the facility owner/operator replaces non-compliant equipment with electric or hybrid CHE, if such equipment is available and operationally feasible; requiring equipment with a “No VDECS Available” compliance extension to be brought into compliance within six months if a retrofit becomes available; allowing an owner/operator not to have to install a VDECS if it is certain that the equipment will be replaced with electric or hybrid equipment at the end of the final extension period or if the owner/operator will replace a secondary piece of equipment with electric or hybrid equipment; restricting CHE from qualifying for more than two compliance extension years if a VDECS cannot be applied solely because of high engine exhaust opacity; allowing extensions for experimental controls if needed to generate data for verification; and, allowing filing of extension applications later – up to 60 days prior to compliance deadline.

### *Operational Practices*

The amendments addressing operational practices include: adding a provision to allow alternative power systems to be used as a compliance option for newly purchased, leased, or rented yard trucks not registered as motor vehicles; initiating a CHE opacity-based monitoring program; allowing the opacity-based monitoring program to exclude equipment less than four years old; allowing a limited low-use compliance extension for equipment operating less than 200 hours annually; allowing warranty engine replacement; allowing rental of non-compliant equipment for manufacturer delivery delays; and, modifying requirements to qualify for a low-use compliance extension such that an owner/operator must bring into compliance all applicable non-yard truck equipment in the fleet for which compliance is feasible.

### *Emissions Standards*

The amendments addressing emission standards include: requiring retrofit of transitional Tier 4 engines certified to a Family Emissions Limits (FEL) Alternative PM emission standard; requiring any person selling an engine certified to the Tier 4 FEL

alternative particulate emissions limits to disclose to the buyer that the engine is subject to retrofit requirements of the CHE Regulation; and allowing demonstration of emissions equivalency for alternative technologies.

### *Compliance Requirements*

The amendments addressing compliance requirements include: exempting equipment at rural low-throughput ports (i.e., the Port of Humboldt Bay); allowing compliance schedule modification to bring older engines into compliance first; modifying the Alternative Compliance Plan (ACP) requirements to encourage the inclusion of electric and/or hybrid yard truck and non-yard truck equipment in the development of an ACP; and, requiring an owner/operator to include information in their annual report about any electric or hybrid equipment purchased in response to extension requirements.

### *Clarifying Language and Definitions*

The amendments clarifying regulatory language include: modifying existing definitions to clarify intent; adding new definitions to support other amendments; adding a definition for “hybrid” to support 15-day regulatory modifications; moving the section that allows warranty engine replacement with a like engine; clarifying data requirements for demonstrating that an engine or power system meets performance requirements and clarifying for which model year the engine or power system must meet the applicable standards; clarifying that, except when an engine is a warranty replacement, equipment that is repowered with a replacement engine is considered newly purchased, leased, or rented equipment; and adding additional clarifying language.

These amendments were made available for public comment beginning on August 4, 2011 through September 21, 2011 and the 15-day changes were made available for public comment beginning on June 15, 2012 through July 2, 2012. The Executive Officer then took action adopting the amendments in their final form.

## **Comparable Federal Regulations**

Presently, no federal law has been promulgated addressing emission reductions from in-use CHE engines. Unless specifically preempted under Section 209(e)(1)<sup>1</sup>, California is the only state allowed to adopt emission requirements for off-road engines that are different from those of the federal government. Section 209(e)(2)(A) of the federal Clean Air Act (CAA) authorizes California to adopt and enforce emission standards and other requirements for off-road engines and equipment not subject to federal preemption, so long as the California standards “will be, in the aggregate, at least as protective of public health and welfare as the applicable Federal standards.” However, California must apply for, and receive authorization from, the administrator of the United

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<sup>1</sup> CAA Section 209(e)(1) prohibits all states, including California, from adopting emission standards or other requirements related to the control of emissions from new nonroad engines less than 175 horsepower used in farm and construction equipment and vehicles and for new locomotives and engines used in locomotives.

States Environmental Protection Agency (U.S. EPA) before ARB may enforce its regulations. Authorization was granted to enforce the original CHE regulation, adopted in 2006, by the U.S. EPA on November 28, 2011.