

UPDATED INFORMATIVE DIGEST

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

Sections Affected: Adoption of Section 2479, title 13, California Code of Regulations (CCR).

Background

Health and Safety Code (HSC) sections 43013(b) and 43018 provide broad authority for the Air Resources Board (ARB or the Board) to adopt emission standards and other regulations to reduce emissions, including those from toxic air contaminants (TACs), and other air pollutant emissions from vehicular and other mobile sources.

With respect to TACs, California's Air Toxics Program, established under California law by AB 1807 (Stats. 1983, Ch. 1047) and set forth in HSC sections 39650 through 39675, mandates the identification and control of air toxics in California. The identification phase of the Air Toxics Program requires ARB, with participation of other state agencies, such as the Office of Environmental Health Hazard Assessment (OEHHA), to evaluate the health impacts of, and exposure to, substances and to identify those substances that pose the greatest health threat as TACs. ARB's evaluation is made available to the public and is formally reviewed by the Scientific Review Panel (SRP) established under HSC section 39670. Following ARB's evaluation and the SRP's review, the Board may formally identify a TAC at a public hearing. Following the identification of a substance as a TAC, Health and Safety Code sections 39658, 39665, 39666, and 39667 require ARB, with the 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.

In 1998, the Board identified diesel particulate matter (diesel PM) as a TAC with no Board-specified threshold exposure level. A needs assessment for diesel PM was conducted between 1998 and 2000, which resulted in ARB developing a 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 regulations to achieve further reductions. The scope of the Diesel RRP was broad, addressing all categories of engines, both mobile and stationary.

Once ARB has evaluated the need and appropriate degree to regulate a TAC, HSC sections 39666 and 39667 respectively require ARB to adopt regulations to reduce emissions of the TAC from nonvehicular and vehicular sources 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. In developing the proposed regulation, State law also requires an assessment of the appropriateness of substitute products or processes. The mobile cargo handling equipment subject to this regulation are vehicular sources. As such, the proposed regulation will be adopted under the authority provided in HSC section 39667.

Presently, no federal law has been promulgated addressing emission reductions from in-use cargo handling equipment engines. Unless specifically preempted under Section 209(e)(1)¹, 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 States Environmental Protection Agency (U.S. EPA) before ARB may enforce its regulations.

The regulation will reduce emissions of diesel PM and oxides of nitrogen (NOx). The regulation will also result in future reductions of reactive organic gases (ROG) due to accelerated turnover of the equipment. Diesel PM emission reductions are needed to reduce the potential cancer risk and other adverse impacts from exposure to this TAC for the people who live in the vicinity of California’s major ports and intermodal rail yards. The regulation will also reduce diesel PM and NOx emissions that contribute to regional PM and will assist California in its goal of achieving state and federal air quality standards. Reductions in NOx and ROG, precursors in the formation of ozone pollution, will help reduce regional ozone levels.

The regulation will provide 865 tons of diesel PM emission reductions and 18,600 tons of NOx emission reductions throughout California between the years of 2007 and 2020. These emission reductions will occur in areas near ports and intermodal rail yards, many of which are in designated State and federal non-attainment areas for PM₁₀, PM_{2.5}, and ozone.

Description of the Regulatory Action

The regulation for Mobile Cargo Handling Equipment at Ports and Intermodal Rail Yards is designed to use BACT to reduce the general public’s exposure to diesel PM and NOx emissions from mobile cargo handling equipment at ports and intermodal rail yards. Mobile cargo handling equipment is any motorized vehicle used to handle cargo and includes, but is not limited to, yard trucks, top handlers, side handlers, rubber-tired gantry (RTG) cranes, forklifts, dozers, and loaders. In addition to required performance standards, the regulation includes recordkeeping and reporting requirements to provide

¹ 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.

staff up-to-date information on cargo handling equipment and activities and to aid in enforcement of the regulation.

The requirements for newly purchased, leased, or rented equipment, as well as in-use equipment, affect owners and operators of mobile cargo handling equipment that operate at ports and intermodal rail yards in California. The requirements also affect any person, including terminals, who sells, offers for sale, purchases, leases, or rents mobile cargo handling equipment for use at a port or intermodal rail yard in California. Mobile cargo handling equipment that does not operate at a port or intermodal rail yard and portable compression-ignition engines are not subject to this regulation.

The regulation requires, beginning January 1, 2007, newly purchased, leased, or rented (new) cargo handling equipment to meet performance standards, which vary depending on the classification of the new equipment and the availability of certified on-road engines for the equipment type and application. For registered on-road vehicles, the new equipment is required to meet the certified on-road engine standards for the model year in which the engine is purchased. For new off-road equipment where a certified on-road engine is available, the equipment must meet either the on-road engine certification standards or the off-road Tier 4 final certification standards for the model year of the year purchased and the rated horsepower of the engine.

For new off-road equipment for which a certified on-road engine is unavailable, the owner or operator must use the highest level certified off-road engine for the model year of the year purchased and install the highest available level diesel emission control strategy verified under the *Verification Procedure for In-Use Strategies to Control Diesel Emissions* (VDECS) within one year of acquiring the new equipment. If no VDECS are available for the new cargo handling equipment during the initial year of operation, the owner or operator is required to install the highest level VDECS within six months after it becomes available.

The regulation requires in-use yard trucks to meet performance standards based on BACT by choosing one of three options. One option is to meet the 2007 or later model year certified on-road engine standards; another option is to meet the certified Tier 4 off-road standards; and the last option is to apply VDECS that will result in emissions that are less than or equal to the diesel PM and NO_x standards of a certified final Tier 4 off-road diesel engine of the same horsepower rating. Pre-2003 model year yard trucks are required to comply first, beginning December 31, 2007. Owners or operators of more than three yard trucks are given additional time to comply. The regulation allows owners or operators who have installed VDECS or a certified on-road engine prior to December 31, 2006, to delay the compliance date one year.

The regulation requires in-use non-yard truck equipment to use BACT to meet specified performance standards based on the category of equipment. Three categories exist: Basic Container Handling (including, but not limited to top handlers, side handlers, and

forklifts²), Bulk Cargo Handling (including, but not limited to dozers, loaders, excavators, and sweepers), and RTG cranes. Each category has three compliance options, based on BACT. One option is to use an engine or power system, including a diesel, alternative fuel, or heavy-duty pilot ignition engine, certified to the 2007 or later model year on-road engine standards or Tier 4 off-road engine standards. Another option is to use a pre-2007 model year certified on-road engine or a certified Tier 2 or Tier 3 off-road engine and apply the highest level VDECS available. The last option is to use a pre-Tier 1 off-road engine or a certified Tier 1 off-road engine and install the highest level VDECS available. If either of these last two options requiring VDECS is chosen, an additional compliance step may be necessary, depending on the category of equipment and the level of VDECS used. For Basic Container Handling and Bulk Cargo Handling Equipment, the additional compliance requirement is to replace the engine with a Tier 4 off-road engine or install a Level 3 VDECS by December 31, 2015. For RTG cranes, the additional compliance requirement is the same, but the compliance date is either December 31, 2015, or the model year plus 12 years, whichever is later. More detail is provided in the Staff Report: Initial Statement of Reasons (ISOR or Staff Report).

The regulation includes provisions that may allow qualified owners or operators to delay compliance with the in-use performance standards if an engine is within one year of retirement, if no VDECS are available for an engine used in a particular type of cargo handling equipment, if an experimental diesel PM emission control strategy is used, if there are equipment manufacturer delivery delays, or for yard trucks that received incentive funding from public agencies to apply VDECS by the end of 2005. The maximum delay depends on the compliance extension granted.

The regulation contains an alternative compliance plan option which may allow an owner or operator to submit for approval by the EO an alternative compliance approach as long as it would achieve emission reduction equal to or greater than what would occur under the regulation. The regulation also provides for the experimental use of emissions control technology that has not yet received approval under ARB retrofit verification process. The regulation also allows the owner or operator to demonstrate that the highest level VDECS is not feasible for their application.

Recordkeeping and reporting requirements are also defined in the regulation. Owners and operators are required to maintain records for all mobile cargo handling equipment, affix a label to each vehicle with the compliance strategy used or planned compliance date (or an alternative method approved by the Executive Officer), submit a compliance plan and annual statement of compliance for their mobile cargo handling equipment, and perform annual reporting by submitting to ARB their contact information and location of their equipment. These requirements will allow staff to monitor the implementation of the regulation and provide more accurate estimates of pollutant reductions.

² While forklifts are used to handle both containerized and bulk cargo, for the purposes of this regulation, they are considered to be part of the Basic Container Handling equipment category.

Comparable Federal Regulations

As stated above, there are no federal regulations for in-use mobile cargo handling equipment that are comparable to the regulation. However, the regulation relies heavily on the implementation of U.S. EPA's Tier 4 nonroad emission standards for new diesel engines, with which ARB has harmonized, since engine replacement is one of many compliance pathways. While under CAA Section 213, U.S. EPA may only adopt new emission standards for nonroad engines; California is the only government agency in the nation that may adopt in-use emission standards for nonroad engines.