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Air Resources Board

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Arnold Schwarzenegger
Governor

January 29, 2007

Honorable Stephen L. Johnson, Administrator
U.S. EPA Headquarters
Ariel Rios Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 1101A
Washington, DC 20460

Re: Adoption of Regulation for Mobile Cargo Handling Equipment at Ports and Intermodal Rail Yards; Request for Confirmation that Certain Requirements Be Treated as if They Fall Within the Scope of Previously Granted Waivers and Authorizations under Clean Air Act Sections 209(b) and 209(e)(2), and Request for New Authorization for Other Requirements Applicable to Nonroad Engines

Dear Administrator Johnson:

At a public hearing on December 8, 2005, the California Air Resources Board (ARB) by Resolution 05-62 (appended to the enclosed Waiver and Authorization Request Support Document), approved the adoption of a regulation establishing fleet requirements for mobile cargo handling equipment at ports and intermodal rail yards. I am writing to request that the Administrator of the U.S. Environmental Protection Agency (U.S. EPA) confirm that certain requirements be treated as if they fall within the scope of previously granted waivers and authorizations under Clean Air Act (CAA) section 209(b) and 209(e)(2), and grant a new authorization pursuant to CAA section 209(e)(2) to adopt and enforce other requirements of the regulation applicable to nonroad engines.

A Waiver and Authorization Request Support Document setting forth California's basis for requesting the waiver and authorization actions is attached for your review. It sets forth a summary of the regulation, a review of the criteria governing U.S. EPA's evaluation of California waiver and authorization requests, and an explanation why the CAA requires the Administrator to grant California's requests. I also enclose a CD-ROM that contains copies of this letter, the Waiver and Authorization Request Support Document, and the rulemaking documents listed at the end of that document.

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

Honorable Stephen L. Johnson, Administrator

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Your expeditious processing of this request will be appreciated. If you need additional information on this item, please call me at (916) 445-4383. If you have technical questions, please have your staff contact Dan Donohoue, Chief, Emissions Assessment Branch, at (916) 322-6023. Legal questions may be directed to Michael L. Terris, ARB's Office of Legal Affairs, at (916) 445-9815.

Sincerely,


Catherine Witherspoon
Executive Officer

Enclosure
Attachments

cc: Mr. David J. Dickinson, Attorney/Advisor (w/encl., w/attchs.)
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Mr. Michael L. Terris, (w/encl., w/attchs.)
Office of Legal Affairs

**WAIVER AND AUTHORIZATION REQUEST
SUPPORT DOCUMENT**

**CALIFORNIA'S REGULATION FOR MOBILE CARGO HANDLING
EQUIPMENT AT PORTS AND INTERMODAL RAIL YARDS
(CHE REGULATION)**

**Submitted by the California Air Resources Board Pursuant to
Clean Air Act Section 209(b) and 209(e)(2)**

January 29, 2007

I. INTRODUCTION AND BACKGROUND

The California Air Resources Board (ARB or Board) requests that the Administrator of the U.S. Environmental Protection Agency (U.S. EPA) confirm that certain requirements of California's *Regulation for Mobile Cargo Handling Equipment at Ports and Intermodal Rail Yards (CHE Regulation)* be treated as if they fall within the scope of previously granted waivers and authorizations under Clean Air Act (CAA) section 209(b) and 209(e)(2),¹ and grant a new authorization pursuant to CAA section 209(e)(2) to adopt and enforce some of the elements of the regulation as they apply to nonroad² engines. Section II of this document describes the regulation in detail, and Section III describes the specifics and rationale for California's request as it applies to the various elements of the regulation.

The Board approved the *CHE Regulation* at a public hearing on December 8, 2005, by Resolution 05-62 (enclosed herewith). At the direction of the Board, after making modifications to the regulation available on June 2, 2006 for supplemental public comment, ARB's Executive Officer formally adopted the *CHE Regulation* by issuing Executive Order R-06-007 on October 17, 2006. (Both the modifications to the regulation and the Executive Order are enclosed herewith.) The requirements are codified at title 13, California Code of Regulations (CCR) section 2479.³ The California Office of Administrative Law approved the regulation on December 6, 2006, and it became operative on December 31, 2006.

The regulation was adopted under California's Air Toxics Program, set forth in Health and Safety Code (HSC) sections 39650 through 39675, and ARB's general authority to adopt and implement regulations for on- and off-road motor vehicles. The Air Toxics Program mandates the identification and control of toxic air contaminants (TACs) 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, to evaluate the health impacts of, and exposure to, substances and to identify those substances that pose the greatest health threat as TACs. The 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 toxic air contaminant 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

¹ In particular, the waiver for 2007 and subsequent model year heavy-duty diesel engine standards, *California State Motor Vehicle Pollution Control Standards; Waiver of Federal Preemption; Notice of Decision*, 70 Fed Reg. 50322 (August 26, 2005).

² In this request, the federal term "nonroad" and the California term "off-road" are used interchangeably.

³ Unless otherwise noted, all section references are to title 13, CCR.

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 to regulate a TAC, HSC section 39667 requires that ARB adopt regulations to reduce emissions of the TAC from vehicular sources, such as mobile cargo handling equipment, to the lowest level achievable through the application of best available control technology (BACT) or a more effective control method, after consideration of cost, risk, environmental impacts, and other specified factors. In adopting the *CHE Regulation*, the Board considered all of the above.

The *CHE Regulation* will reduce emissions of diesel PM and oxides of nitrogen (NOx). The regulation will also result in future reductions of reactive organic gases because of requirements that accelerate turnover of the equipment. Diesel PM emission reductions are needed to reduce the potential cancer risk and other adverse impacts to the people who live in the vicinity of California's major ports and intermodal rail yards. The *CHE Regulation* will provide 865 tons of diesel PM emission reductions and 18,633 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 non-attainment for the State and federal ambient air quality standards for PM₁₀, PM_{2.5} and ozone.

II. SUMMARY OF THE MOBILE CARGO HANDLING REGULATION⁴

A. Emission Standards

The *CHE Regulation* 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 engine-propelled vehicle used to handle cargo at ports and intermodal rail facilities and vehicles used to perform routine and predictable maintenance and repair activities and includes, but is not limited to, yard trucks, top handlers, side handlers, rubber-tired gantry (RTG) cranes, forklifts, dozers, and loaders.⁵ In addition to required performance standards, the regulation includes record keeping and reporting requirements that will provide up-to-date information on cargo handling equipment and activities and aid in enforcement of the regulation.

⁴ A detailed discussion of the adopted Mobile Cargo Handling regulation is set forth in the Staff Report: Initial Statement of Reasons, a copy of which is enclosed herewith.

⁵ The term "motor vehicle" used herein is more expansive than the comparable federal term defined at 40 Code of Federal Regulations (CFR) Part 85 § 85.1703. Under California Vehicle Code §§ 415 and 670, which are referenced in HSC §§ 39039 and 39059, define a motor vehicle as any vehicle capable of being propelled down a highway. In California, both on-road and off-road vehicles may be classified as a motor vehicle.

1. Newly Purchased, Leased, or Rented Equipment and Vehicles

The requirements for newly purchased, leased, or rented equipment, as well as in-use equipment, affect owners and operators of mobile cargo handling equipment, as well as persons who sell, offer for sale, purchase, lease, or rent such equipment for use at ports or intermodal rail yards in California.

The *CHE Regulation* requires, beginning January 1, 2007, that engines equipped in newly purchased, leased, or rented (jointly referred to as newly acquired⁶) mobile cargo handling equipment/vehicles meet specific performance standards. These standards vary depending on the classification of the newly acquired equipment and vehicles (i.e., whether the engine is used in off-road equipment and vehicles or registered as on-road motor vehicles), and the availability of certified on-road engines for use in off-road equipment and vehicle applications. The regulation specifically addresses yard trucks that are mobile utility vehicles, generally used off-road at ports and intermodal rail yard facilities. They are used to carry cargo containers with or without chassis and are commonly referred to as utility tractor rigs, yard tractors, yard goats, yard hostlers, yard hustlers, or prime movers. They are very similar to heavy-duty on-road truck tractors, except that the majority are equipped with off-road engines.

Some yard trucks are registered to operate on California highways. For these vehicles, the regulation requires that if they are newly acquired after January 1, 2007, they must be equipped with engines that are certified to the on-road engine emission standards for the model year in which they are newly acquired.⁷

For yard trucks that are not registered for on-road operation, the regulation requires that they have engines that are either certified to the on-road emission standards for the model year in which a yard truck is newly acquired⁸ or to the final Tier 4 off-road emission standards for the engine's rated horsepower.⁹

For mobile cargo handling equipment other than yard trucks (non-yard trucks), the regulation provides that these vehicles be treated similarly to yard trucks if they are registered for on-road use. That is, if a non-yard truck is newly acquired after January 1, 2007, and if it is registered for on-road operation, it must be equipped with an engine that has been certified to meet the on-road emission standards for the model year in which the non-yard truck mobile cargo handling equipment was newly acquired.¹⁰

If the non-yard truck is not registered for on-road use, its engine must – if technically feasible and available in the market for sale, lease, or rental – meet one of the following

⁶ Acquired means the date that a purchase order, lease, or rental agreement is signed, not the date that it arrives to be placed into service.

⁷ Section 2479(e)(1)(A)1.a., referencing title 13, CCR, § 1956.8. On-road registered yard trucks acquired in 2007 would be required to have an engine that meets the on-road emission certification standards for 2007 model year engines.

⁸ *Id.*

⁹ Section 2479(e)(1)(A)1.b., referencing the state and federal final Tier 4 off-road certification standards set forth respectively at title 13, CCR, § 2423 and 40 CFR Part 89; see also 69 F.R. 38958, 39072-3 (June 29, 2004).

¹⁰ Section 2479(e)(1)(B)1.a.

two certification standards for the model year in which the equipment was newly acquired: the on-road engine certification standards or, alternatively, the off-road Tier 4 certification standards for the model year and rated horsepower of the engine.¹¹ If neither of the first two options is feasible or available, the regulation requires the newly acquired non-yard truck be equipped with an engine that meets the most stringent certified off-road engine for the type of vehicle and application for the model year in which the vehicle is newly acquired.¹² Additionally, within one year of acquiring the new vehicle, the owner or operator must install the highest level verified diesel emission control strategy (VDECS)¹³ available on the market. If no VDECS becomes available by the end of the one-year period, the owner or operator must install the highest level VDECS within six months after one becomes available.¹⁴

2. In-Use Mobile Cargo Handling Equipment

a. Yard Trucks

The *CHE Regulation* requires in-use yard trucks, whether registered or not, to meet performance standards based on BACT by choosing one of three options: (1) meet the 2007 or later model year certified on-road engine standards; (2) meet the certified Tier 4 off-road standards; or (3) apply VDECS that reduce emissions to levels that are at least as stringent as diesel PM and NOx emissions of a certified final Tier 4 off-road diesel engine for the same horsepower rating.¹⁵ Additionally, owners and operators are required to follow different compliance schedules for meeting the in-use performance requirements depending upon the number of non-newly acquired yard trucks in their fleets, the model year of the trucks, whether the trucks are equipped with on-road or off-road engines, and whether the engines were equipped with VDECS by December 31, 2006.¹⁶ Owners and operators of fleets having three or fewer vehicles must meet the following schedule:

¹¹ Section 2479(e)(1)(B)1.b.

¹² Section 2479(e)(1)(B)1.c.

¹³ *Id.* In 2003, ARB adopted *Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines (Verification Procedure)*, title 13, CCR, §§ 2700-2710.

¹⁴ Section 2479(e)(1)(B)1.c.

¹⁵ Section 2479(e)(2)(A).

¹⁶ Section 2479(e)(2)(B), Table 1, Compliance Schedule for In-Use Yard Truck Fleets of Three or Less..

Off-road without VDECS Installed by December 31, 2006

Model Year	Compliance Deadline
Pre-2003	Dec. 31, 2007
2003	Dec. 31, 2010
2004	Dec. 31, 2011
2005	Dec. 31, 2012
2006	Dec. 31, 2013

Off-road with VDECS Installed by December 31, 2006

Model Year	Compliance Deadline
Pre-2003	Dec. 31, 2008
2003	Dec. 31, 2011
2004	Dec. 31, 2012
2005	Dec. 31, 2013
2006	Dec. 31, 2014

On-road without VDECS Installed by December 31, 2006

Model Year	Compliance Deadline
Pre-2000	Dec. 31, 2007
2000	Dec. 31, 2008
2001	Dec. 31, 2009
2002	Dec. 31, 2010
2003	Dec. 31, 2011
2004	Dec. 31, 2012
2005	Dec. 31, 2013
2006	Dec. 31, 2014

On-road with VDECS Installed by December 31, 2006

Model Year	Compliance Deadline
Pre-2000	Dec. 31, 2008
2000	Dec. 31, 2009
2001	Dec. 31, 2010
2002	Dec. 31, 2011
2003	Dec. 31, 2012
2004	Dec. 31, 2013
2005	Dec. 31, 2014
2006	Dec. 31, 2015

The regulation provides owners or operators that have installed VDECS prior to December 31, 2006 to delay compliance one year. For example, an owner or operator with a fleet of three or fewer in-use yard trucks with pre-2003 model-year certified or non-certified off-road engines, without VDECS, must comply with the in-use performance standards by December 31, 2007. By comparison, the owner or operator of three or fewer pre-2003 in-use vehicles with off-road engines that had VDECS installed before December 31, 2006 has until December 31, 2008 to comply.

The regulation provides owners or operators of larger fleets with additional time by allowing them to phase-in compliance over several years.¹⁷ The compliance schedule is set forth below. As with smaller fleets of three or less, the compliance dates for fleets of four or more depend upon several factors: the model year of the vehicles within the fleet, whether the vehicles are equipped with on-road or off-road engines, and whether the engines have had VDECS installed on or before December 31, 2006. Similar to smaller fleets, owners and operators of fleets of four or more are provided with an additional year before compliance if their fleets have been retrofitted with VDECS. In the first year that a fleet is required to comply, the owner or operator must bring at least three of its vehicles from the entire fleet into compliance or a specified percentage of the group category (i.e., model-year off-road with or without VDECS, model-year on-road with or without VDECS), whichever is greater. In subsequent years, the owner or operator must meet the compliance date and percentage for the specific category group of vehicles as set forth in the following table.

¹⁷ Section 2479(e)(2)(B) Table 2, Compliance Schedule for In-Use Yard Truck Fleets of Four or More.

**Off-road without VDECS Installed by
December 31, 2006**

Model Year	% of Model Year	Compliance Deadline
Pre-2003	Greater of 3 or 50%	Dec. 31, 2007
	100%	Dec. 31, 2008
2003	Greater of 3 or 25%	Dec. 31, 2010
	50%	Dec. 31, 2011
	100%	Dec. 31, 2012
2004	Greater of 3 or 25%	Dec. 31, 2011
	50%	Dec. 31, 2012
	100%	Dec. 31, 2013
2005	Greater of 3 or 25%	Dec. 31, 2012
	50%	Dec. 31, 2013
	100%	Dec. 31, 2014
2006	Greater of 3 or 25%	Dec. 31, 2013
	50%	Dec. 31, 2014
	100%	Dec. 31, 2015

**Off-road with VDECS Installed by
December 31, 2006**

Model Year	% of Model Year	Compliance Deadline
Pre-2003	Greater of 3 or 50%	Dec. 31, 2008
	100%	Dec. 31, 2009
2003	Greater of 3 or 25%	Dec. 31, 2011
	50%	Dec. 31, 2012
	100%	Dec. 31, 2013
2004	Greater of 3 or 25%	Dec. 31, 2012
	50%	Dec. 31, 2013
	100%	Dec. 31, 2014
2005	Greater of 3 or 25%	Dec. 31, 2013
	50%	Dec. 31, 2014
	100%	Dec. 31, 2015
2006	Greater of 3 or 25%	Dec. 31, 2014
	50%	Dec. 31, 2015
	100%	Dec. 31, 2016

**On-road without VDECS Installed by
December 31, 2006**

Model Year	% of Model Year	Compliance Deadline
Pre-2000	Greater of 3 or 25%	Dec. 31, 2007
	50%	Dec. 31, 2008
	100%	Dec. 31, 2009
2000	Greater of 3 or 25%	Dec. 31, 2008
	50%	Dec. 31, 2009
	100%	Dec. 31, 2010
2001	Greater of 3 or 25%	Dec. 31, 2009
	50%	Dec. 31, 2010
	100%	Dec. 31, 2011
2002	Greater of 3 or 25%	Dec. 31, 2010
	50%	Dec. 31, 2011
	100%	Dec. 31, 2012
2003	Greater of 3 or 25%	Dec. 31, 2011
	50%	Dec. 31, 2012
	100%	Dec. 31, 2013
2004	Greater of 3 or 25%	Dec. 31, 2012
	50%	Dec. 31, 2013
	100%	Dec. 31, 2014
2005	Greater of 3 or 25%	Dec. 31, 2013
	50%	Dec. 31, 2014
	100%	Dec. 31, 2015
2006	Greater of 3 or 25%	Dec. 31, 2014
	50%	Dec. 31, 2015
	100%	Dec. 31, 2016

**On-road with VDECS Installed by
December 31, 2006**

Model Year	% of Model Year	Compliance Deadline
Pre-2000	Greater of 3 or 25%	Dec. 31, 2008
	50%	Dec. 31, 2009
	100%	Dec. 31, 2010
2000	Greater of 3 or 25%	Dec. 31, 2009
	50%	Dec. 31, 2010
	100%	Dec. 31, 2011
2001	Greater of 3 or 25%	Dec. 31, 2010
	50%	Dec. 31, 2011
	100%	Dec. 31, 2012
2002	Greater of 3 or 25%	Dec. 31, 2011
	50%	Dec. 31, 2012
	100%	Dec. 31, 2013
2003	Greater of 3 or 25%	Dec. 31, 2012
	50%	Dec. 31, 2013
	100%	Dec. 31, 2014
2004	Greater of 3 or 25%	Dec. 31, 2013
	50%	Dec. 31, 2014
	100%	Dec. 31, 2015
2005	Greater of 3 or 25%	Dec. 31, 2014
	50%	Dec. 31, 2015
	100%	Dec. 31, 2016
2006	Greater of 3 or 25%	Dec. 31, 2015
	50%	Dec. 31, 2016
	100%	Dec. 31, 2017

Several examples follow:

Example 1: An owner or operator has an in-use fleet of four vehicles with pre-2003 model-year certified off-road engines that have not been equipped with VDECS prior to December 31, 2006. The owner or operator would be required to bring three of its vehicles into compliance by December 31, 2007 and the fourth vehicle by December 31, 2008.

Example 2: An owner or operator has an in-use fleet of four vehicles. Two of the vehicles are equipped with pre-2003 model-year certified off-road engines and were not equipped VDECS prior to December 31, 2006. The other two vehicles have pre-2000 model year certified on-road engines without VDECS. Again, the owner would be required to bring at least three vehicles into compliance by December 31, 2007. In selecting the three vehicles to convert in 2007, the owner or operator would be required to convert the two pre-2003 model-year off-road engines because the regulation requires that 50 percent of these vehicles come into compliance by the end of 2007. The owner or operator would then have until December 31, 2009 to bring the last pre-2000 model-year on-road vehicle into compliance.

Example 3: An owner or operator has an in-use fleet of eight vehicles. Two of the vehicles have pre-2003 model-year certified off-road engines that have not had VDECS installed prior to December 31, 2006. Two others are 2001 model-year on-road engines that also did not have VDECS installed prior to December 31, 2006. The other four engines have had VDECS installed prior to December 31, 2006. Of these four, two are 2004 model-year off-road engines and two are 2005 on-road engines. The regulation requires the owner or operator to bring the two pre-2003 off-road engines into compliance by December 31, 2007. It would also need to bring one additional vehicle from the other classifications into compliance on that date, because the regulation requires at least three vehicles from the entire fleet be converted in the first year that an owner or operator commences compliance. If the owner or operator chose to convert one of the two 2001 on-road vehicles into compliance in 2007, it would not need to bring the second into compliance until December 31, 2011, when 100 percent of that category must comply. It would then need to have one of the two 2004 vehicles with off-road engines equipped with VDECS converted by December 31, 2013 and the other by December 31, 2014. By December 31, 2015, one of the 2005 model year on-road engines would need to be in compliance, with the other brought into compliance by December 31, 2016.

b. Non-Yard Trucks

The *CHE Regulation* also requires in-use (non-newly acquired) non-yard trucks to use BACT to meet specified performance standards based on the vehicle's application. The regulation identifies three categories of non-yard trucks: basic container handling

equipment,¹⁸ bulk cargo handling equipment, and RTG cranes. As with yard trucks, the regulation sets forth a time table for compliance depending upon the size and model-year composition of the in-use fleet.¹⁹

Engine Model Years	Compliance Date ²⁰				
	Non-Yard Truck Fleets of 3 or Fewer	Non-Yard Truck Fleets of 4 or More			
		First 3 or 25% (whichever is greater)	50%	75%	100%
pre-1988	2007	2007	2008	2009	2010
1988-1995	2008	2008	2009	2010	2011
1996-2002	2009	2009	2010	2011	2012
2003-2006	2010	2010	2011	2012	2013

Fleets of three or fewer vehicles must be in full compliance by December 31 of the year designated for compliance for the model year of the vehicles' engines. For example, an owner or operator has a fleet of three non-yard truck vehicles – one with a pre-1988 model-year engine, one with a 1990 model-year engine, and one with a 2002 model year engine. The owner or operator must have the pre-1988 engine in compliance by December 31, 2007, the 1990 engine by the end of 2008, and the 2002 engine by December 31, 2009.

Owners and operators of fleets of four or more vehicles are allowed to phase-in the conversion of their fleets, providing them with more time in which to comply. In the first year in which compliance is required, the owner or operator must at least bring three vehicles or 25 percent of its fleet, whichever is greater, into compliance. Increasing percentages of the fleet would have to be in compliance over the next several years. Examples follow:

Example 1: The in-use non-yard fleet is comprised of 100 vehicles, all of which are equipped with pre-1988 model-year engines. The owner or operator of the fleet must bring 25 engines into compliance by December 31, 2007, 25 more engines by December 31, 2008, 25 more engines by December 31, 2009, and the final 25 engines by December 31, 2010.

Example 2: The in-use non-yard fleet is comprised of 100 vehicles, 50 of which have pre-1988 model-year engines and 50 of which have 1988-1995 model-year engines. The owner or operator would have to bring 13 pre-1988 engines into compliance by December 31, 2007; 12 more pre-1988 engines and 13 1988-1995 engines by

¹⁸ 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.

¹⁹ Section 2479(e)(3), Table 3: Compliance Option Compliance Schedule for Non-Yard Truck In-Use Mobile Cargo Handling Equipment.

²⁰ Compliance date refers to December 31st of the year indicated.

December 31, 2008; 13 pre-1988 and 12 1988-1995 engines by December 31, 2009; the final 12 pre-1988 and 13 1988-1995 engines by December 31, 2010; and the final 12 1988-1995 engines by December 31, 2011.

Example 3: The in-use non-yard fleet is comprised of 100 vehicles, 25 of which have pre-1988 model-year engines, 25 of which have 1988-1995 model-year engines, and 50 of which have 1996-2002 model year engines. The owner or operator would have to bring six pre-1988 engines into compliance by December 31, 2007; seven more pre-1983 engines and six 1988-1995 engines by December 31, 2008; six pre-1988, seven 1988-1995 engines, and 13 1996-2002 engines by December 31, 2009; the final 6 pre-1988, six 1988-1995 engines, and 12 1996-2002 engines by December 31, 2010; and the final six 1988-1995 engines and 13 1996-2002 engines by December 31, 2011; and 12 1996-2002 engines by December 31, 2012.

Owners and operators of each category have three BACT-based compliance options for meeting the in-use performance requirements for non-yard trucks. While some of the BACT options are the same for the different vehicle categories, others differ because of the types of vehicles in each category, which reflect differences in design, engines used, operational variance, VDECS availability, ability to repower the equipment, average useful life of the vehicles and engines, the level of diesel PM emission health risk posed, capital costs, and cost-effectiveness.

i. Basic Container Handling Equipment

Basic container handling equipment consist of top handlers, side handlers, reach stackers, forklifts, straddle carriers, and any other equipment type (except RTG cranes) that handles cargo containers. The first compliance option allows an owner or operator to use an engine or power system – including diesel, alternative fueled, or heavy-duty pilot ignition engine – certified to the 2007 or later model year on-road or the Tier 4 off-road engine standards for the rated horsepower and model year of the engine.²¹ The second option allows an owner or operator to bring basic container handling equipment into compliance by using a pre-2007 model year certified on-road engine or a certified Tier 2 or Tier 3 off-road engine and applying the highest level VDECS available for the type of engine is used. But if no VDECS or a Level 1 VDECS is the highest level available, the owner or operator must also upgrade the vehicle's engine to either a certified Tier 4 off-road engine or install a Level 3 VDECS by December 31, 2015.²² The third option allows the owner or operator to use a pre-Tier 1 or Tier 1 off-road engine equipped with the highest level VDECS available. But, as with the second option, if no VDECS or if a Level 1 or 2 VDECS is the highest level available, the owner or operator must upgrade the equipment's engine to either a certified Tier 4 off-road engine or a Level 3 VDECS by December 31, 2015.²³

²¹ Section 2479(e)(3)(B)1.a.

²² Section 2479(e)(3)(B)1.b.

²³ Section 2479(e)(3)(B)1.c.

ii. Bulk Cargo Handling Equipment

Bulk cargo handling equipment consist of dozers, loaders, excavators, mobile cranes, sweepers, railcar movers, aerial lifts, and any other equipment type (except forklifts) that handles non-containerized or bulk cargo. As with basic container handling equipment, the *CHE Regulation* requires the owner or operator to select one of three BACT compliance options.

The first option is identical to that required for basic containerized equipment: use of engines certified to the 2007 or later model year on-road engine standards or the Tier 4 off-road engine standards for the engine's rated horsepower and model year.²⁴ While the 2007 model year certified on-road engine is not available in the higher horsepower ranges, it may be available for some of the equipment in this category in the lower horsepower ranges. The second option is also the same as that for container handling equipment: the owner or operator may use a pre-2007 model year certified on-road engine or a certified Tier 2 or 3 off-road engine for the rated horsepower and model year of the engine, and the engine must be equipped with the highest level of VDECS available. Again, if no VDECS is available or if the highest level VDECS available is only Level 1, then by December 31, 2015, the owner operator must either replace the engine with a Tier 4 certified off-road engine or have a Level 3 VDECS installed.²⁵ The third option allows the owner or operator use a pre-Tier 1 or certified Tier 1 off-road engine with the highest level VDECS available, but if no VDECS is available or if the highest available VDECS is only Level 1, the owner or operator must either replace the engine with a Tier 4 certified off-road engine or install a Level 3 VDECS by December 31, 2015.²⁶

iii. RTG Cranes

RTG cranes are in a category of their own because of their unique operation, size, costs, effective life, and retrofit options. While there is a limited selection of VDECS currently available for this category of equipment, ARB is coordinating a study to identify and demonstrate high efficiency retrofit emission control systems for RTG cranes (as well as for top handlers and side handlers) that should soon lead to verification of several models.²⁷

As with the other two categories of non-yard truck equipment, the *CHE Regulation* requires the owner or operator to select one of three BACT compliance options. Like the previous two categories, the first option allows the owner or operator to use an engine or power system certified to the 2007 or later model year on-road or Tier 4 off-road engine standards for the rated horsepower and model year of the engine.²⁸ While

²⁴ Section 2479(e)(3)(B)2.a.

²⁵ Section 2479(e)(3)(B)2.b.

²⁶ Section 2479(e)(3)(B)2.c.

²⁷ Additional information on this project is available in Appendix H of the Staff Report.

²⁸ Section 2479(e)(3)(B)3.a.

2007 model-year certified on-road engines will not immediately be available for most RTG cranes because of their high horsepower ratings, they may be available for some of the smaller horsepower RTG cranes. The second option allows the owner or operator to use either a pre-2007 model year certified on-road or certified Tier 2 or 3 off-road engine equipped with the highest level VDECS available.²⁹ The third option allows the owner or operator to use a pre-Tier 1 off-road engine or a certified Tier 1 off-road engine equipped with the highest level VDECS available. If no VDECS is available or if the highest level VDECS available is a Level 1 or 2, then the owner or operator must also have the engine either replaced with a Tier 4 certified off-road engine or have a Level 3 VDECS installed by either December 31, 2015 or the model year of the initially compliant engine plus 12 years, whichever is later.³⁰

B. Compliance Flexibility

In addition to the flexibility provided to owners and operators to achieve compliance with the emission standards through the various BACT options, the *CHE Regulation* expressly provides other means to assist them in complying with the regulation.

1. Extensions

Owners and operators may be eligible to receive additional time beyond the specified compliance dates set forth in the regulation. There are five different types of compliance extensions available; they, however, may not be combined or used consecutively, unless expressly permitted. Owners and operators may apply for the following types of extensions: (1) a one year extension if an engine is within one year of retirement;³¹ (2) an annual extension for up to two years for non-yard truck mobile cargo handling equipment if no VDECS is available for the specific equipment;³² (3) an annual extension, through December 31, 2005, for use of experimental diesel particulate matter emission control strategies if no VDECS is available for a non-yard truck mobile cargo handling equipment engine or if the available VDECS is not feasible for a specific vehicle application;³³ (4) an extension excusing an owner or operator from compliance until receipt or installation of ordered complying product (i.e., new equipment, engine, VDECS) if the owner or operator had entered into a contractual order with an equipment, engine or VDECS manufacturer at least six months prior to the compliance date of the regulation but has not received the complying product by the compliance date because of manufacturer delays;³⁴ and (5) an extension for up to three years for yard trucks that have been retrofitted with VDECS prior to December 31, 2005 by using incentive funding from public agencies (i.e., NOx and PM Bank or Carl Moyer Program)

²⁹ Section 2479(e)(3)(B)3.b..

³⁰ Section 2479(e)(3)(B)3.c..

³¹ Section 2479(f)(1).

³² Section 2479(f)(2).

³³ Section 2479(f)(3).

³⁴ Section 2479(f)(4).

if the funding program stipulated minimum use requirements that would expire after the required compliance date.³⁵

2. Alternative Compliance Plan for Non-Yard Truck Cargo Handling Equipment

The regulation includes an alternative compliance plan (ACP) option for owners and operators of non-yard truck cargo handling equipment that would allow them to demonstrate that equivalent emission reductions can be achieved through the use of alternative strategies.³⁶ Alternative strategies can include equipment engine modifications, exhaust treatment control, engine re-powering, equipment replacement, the use of alternative fuels or fuel additives, and operational controls. Applications for the ACP must be approved by the Executive Officer, and until such approval is granted, the owner or operator would be required to meet the performance requirements in subsection (e)(3).

C. Other Requirements

1. In-Use Fuel Requirements

The *CHE Regulation* requires owners and operators to use one of several specified fuels, including CARB diesel fuel, alternative fuels, Executive Officer-approved alternative diesel fuel that has been approved under the Verification Procedure, CARB diesel fuel used in conjunction with fuel additives that have been approved under the Verification Procedure, or any combination of the above.

2. Record-Keeping and Reporting Requirements

For enforcement purposes, the *CHE Regulation* contains record-keeping and reporting requirements. Owners and operators are required for all mobile cargo handling equipment in their fleet to maintain records; affix a label (or an alternative method approved by the Executive Officer) to each vehicle with information regarding, among other things, the compliance strategy used or, alternatively, planned compliance date; submit a compliance plan and annual statement of compliance; and perform annual reporting by submitting to the ARB contact information, location of their equipment, and equipment populations by model year group and type. These requirements will enable staff to monitor the implementation of the regulation and provide more accurate estimates of pollutant reductions.

³⁵ Section 2479(f)(5).

³⁶ Section 2479(h).

III. WAIVER/AUTHORIZATION ANALYSIS

A. Introduction

1. Waivers

Section 209(b) of the CAA sets forth the protocol for granting California waivers to the general preemption of section 209(a), which prohibits states and their local subdivisions from adopting and enforcing standards and other requirements relating to the control of emissions from new motor vehicles and new motor vehicle engines. Under section 209(b), the Administrator must grant a waiver to California if the state has determined that its standards will be, in the aggregate, at least as protective of public health and welfare as applicable federal standards, unless the Administrator finds that (1) the state's protectiveness determination is arbitrary and capricious, (2) California does not need separate state standards to meet compelling and extraordinary conditions, or (3) the state's standards and accompanying enforcement procedures are not consistent with section 202(a) of the CAA.

In considering whether to grant waivers for accompanying enforcement procedures tied to standards for which a waiver has already been granted, the Administrator has long held that he will only address questions as to (1) whether the enforcement procedures are so lax that they threaten the validity of California's determination that its standards are as protective of public health and welfare as applicable federal standards and, (2) whether the enforcement procedures are consistent with section 202(a).³⁷

The Administrator has applied a similar analysis in finding that amendments to a standard or regulation are within the scope of a previously granted waiver.

If California acts to amend a previously waived standard or accompanying enforcement procedure, the change may be included within the scope of the previous waiver if it does not undermine California's determination that its standards, in the aggregate, are as protective of public health and welfare as comparable Federal standards, does not affect the consistency of California's requirements with section 202(a) of the [CAA], and raises no new issues affecting the Administrator's previous waiver determination.³⁸

³⁷ *Motor and Equipment Manufacturers Association v. EPA (MEMA)* (D.C. Cir. 1979) 627 F.2. 1095, 1111, 1113.

³⁸ Decision Document accompanying scope of waiver determination in 51 Fed.Reg. 12391 (April 10, 1986), at p. 2 (footnotes omitted); see also 46 Fed.Reg. 36742 (July 15, 1981).

2. Authorizations

Section 209(e)(2) of the CAA sets forth the protocol for the Administrator granting California authorization to adopt and enforce standards and other requirements relating to controlling emissions from new and in-use nonroad engines that are not otherwise specifically preempted from under section 209(e)(1) – new engines less than 175 hp used in farm and construction equipment and vehicles and new engines used in new locomotives and locomotive engines. Closely tracking the new motor vehicle waiver process, section 209(e)(2) directs the Administrator to grant the authorization to California for all other nonroad engines if California determines that the state's standards will be, in the aggregate, at least as protective of public health and welfare as applicable federal standards, unless he finds that: (1) the protectiveness finding of the state is arbitrary and capricious; (2) California does not need separate state standards to meet compelling and extraordinary conditions; or (3) the state standards and accompanying enforcement procedures are not consistent with CAA section 209.

Section 209(e)(2) of the CAA, like section 209(b), requires California to obtain the Administrator's approval (i.e., waiver or authorization). In reviewing a California request for authorization under section 209(e)(2), the Administrator must consider nearly identical criteria as under section 209(b). In light of these almost identical protocols, U.S. EPA has confirmed that it would similarly interpret sections 209(b) and (e) where the language is similar.³⁹

One deviation in language is that CAA section 209(e)(2) requires that the Administrator must consider not only consistency with CAA section 202(a) – as required under section 209(b)(1)(C) – but also other subsections of section 209. In its *209(e) Final Rule*, U.S. EPA interpreted this provision to require that California's standards and accompanying enforcement provisions must also be consistent with sections 209(a) and 209(e)(1).⁴⁰ As the Administrator stated in a recent authorization:

In [o]rder to be consistent with section 209(a), California's [nonroad] standards and enforcement procedures must not apply to new motor vehicles or new motor vehicle engines. Secondly, California's nonroad standards and enforcement procedures must be consistent with section 209(e)(1), which identifies the categories permanently preempted from state regulation. California's nonroad standards and enforcement procedures would be considered inconsistent with section 209 if they applied to the categories of engines or vehicles identified and preempted from State regulation in section 209(e)(1). Finally, and most importantly in terms of application to nonroad [authorization requests], California's nonroad standards and enforcement procedures must be consistent with

³⁹ *Air Pollution Control; Preemption of State Regulation for Nonroad Engine and Vehicle Standards (Final 209(e) Rule)*, 59 Fed. Reg. 36969, 36981 (July 20, 1994); see also *Utility Authorization*, Decision Document, at p. 11; see also 65 Fed.Reg. 69763, 69763-69764 (November 20, 2000).

⁴⁰ 59 Fed.Reg. 36969, 36983 (July 20, 1994).

section 209(b)(1)(C). EPA will review nonroad authorization requests under the same “consistency” criteria that are applied to motor vehicle waiver requests. Under section 209(b)(1)(C), the Administrator shall not grant California’s motor vehicle waiver if she finds that California standards and accompanying enforcement procedures are not consistent with section 202(a)” of the [CAA].⁴¹

As indicated in the above quotation, the Administrator has applied a similar analysis in finding that amendments to a standard or regulation are within the scope of a previously granted authorization.⁴²

B. Principles Followed in Granting CAA Section 209(b) Waivers and 209(e) Authorizations

1. The Burden Is on Those Who Challenge the Request

In considering a waiver, authorization, or a within the scope request, California’s regulation and protectiveness determination are presumed to satisfy the criteria for granting a waiver or authorization, and the burden to show otherwise is on those persons challenging the waiver request.⁴³ As held by the court in *MEMA* and long followed by U.S. EPA:

The language of the statute and its legislative history indicate that California’s regulations and California’s determination that they comply with the statute, when presented to the Administrator are presumed to satisfy the waiver requirements and that the burden of proving otherwise is on whoever attacks them. [It is they who] bear the burden of persuading the Administrator that the waiver request should be denied.⁴⁴

2. The Scope of the Waiver/Authorization Hearing Should Be Limited

As indicated above, the scope of the Administrator’s inquiry in determining whether to deny a waiver or authorization request is limited by the express terms of CAA sections 209(b)(1) and (e)(1). Once California determines that its standards are, in the aggregate, at least as protective of public health and welfare as applicable federal standards, the Administrator must grant the waiver or authorization unless one of the three specified findings can be made.

This reading of the statute is consistent with the decision in *MEMA* and prior U.S. EPA waiver decisions interpreting CAA section 209(b), which hold that the review of

⁴¹ 65 Fed.Reg. 69763, 69764 (November 20, 2000).

⁴² *Id.*, 69763-69764.

⁴³ *Motor Equipment Manufacturers Association v. EPA (MEMA)* (D.C. Cir. 1979) 627 F.2d 1095, 1121.

⁴⁴ *Id.*; See also Decision Document accompanying OBD II Waiver Determination, at p. 15-16.

California's decision to adopt separate standards is a narrow one.⁴⁵ In granting the waiver for the OBD II regulation in 1996, Administrator Carol Browner concluded that she must grant a waiver if she could not find sufficient evidence in the record to support any of the above listed criteria that would dictate not granting the waiver.⁴⁶ Much earlier Administrator William D. Ruckelshaus stated:

The law makes it clear that the waiver request cannot be denied unless the specific findings designated in the statute can properly be made. The issue of whether a proposed California requirement is likely to result in only marginal improvement in air quality not commensurate with its cost or is otherwise an arguably unwise exercise of regulatory power is not legally pertinent to my decision under section 209⁴⁷

3. Deference Must Be Given to California's Policy Judgments

As indicated in the waiver decisions cited above, in granting waivers to California's motor vehicle program, U.S. EPA has routinely deferred to the policy judgments of California's decision-makers. U.S. EPA has recognized that the intent of Congress in creating a limited review of California's determinations regarding its need for separate standards was to ensure that the federal government did not second-guess the wisdom of state policy.⁴⁸ Administrators have recognized that the deference is wide-ranging:

The structure and history of the California waiver provision clearly indicate both a Congressional intent and an U.S. EPA practice of leaving the decision on ambiguous and controversial matters of public policy to California's judgment.

* * * * *

It is worth noting . . . I would feel constrained to approve a California approach to the problem which I might also feel unable to adopt at the federal level in my own capacity as a regulator. The whole approach of the Clean Air Act is to force the development of new types of emission control technology where that is needed by compelling the industry to "catch up" to some degree with newly promulgated standards. Such an approach . . . may be attended with costs, in the shape of a reduced product offering, or price or fuel economy penalties, and by risks that a wider number of vehicle classes may not be able to complete their development work in time. Since a balancing of these risks and costs

⁴⁵ See 40 Fed.Reg. 23102, 23103 (May 28, 1975).

⁴⁶ 61 Fed.Reg. 53371 (October 11, 1996).

⁴⁷ 36 Fed.Reg. 17158 (August 31, 1971). See also 40 Fed.Reg. 23102, 23104; 58 Fed.Reg. 4166 (January 7, 1993), Decision Document, at p. 20.

⁴⁸ 40 Fed.Reg. 23102, 23103.

against the potential benefits from reduced emissions is a central policy decision for any regulatory agency under the statutory scheme outlined above, I believe I am required to give very substantial deference to California's judgments on this score.⁴⁹

C. The Requirements for Newly Acquired Yard Trucks Registered for On-Road Operation Are Covered by the Previously Granted Waiver for 2007 Heavy-Duty Diesel Vehicles

To the extent the requirements for newly acquired yard trucks registered for on-highway operation requires the purchase, lease, or rental of new on-road motor vehicle engines and vehicles, the requirements are covered by the waiver granted by U.S. EPA for California's regulations establishing emission standards for 2007 and subsequent model year on-road heavy-duty diesel engines.⁵⁰ The *CHE Regulation* requires that on or after January 1, 2007, newly acquired yard trucks registered for highway operation must be equipped with new 2007 or subsequent model year on-road heavy-duty engines. To meet the requirements in the first year, most owners and operators will likely have to acquire new motor vehicles and engines, and such requirements arguably fall under the preemption of CAA section 209(a), for which California must obtain a waiver.⁵¹ If a waiver is required, the Administrator should confirm that it falls within the scope of the previously granted waiver.

1. Protectiveness

In adopting Resolution 05-62, the Board expressly found that the requirements for newly acquired registered yard trucks fall within the scope of the 2007 heavy-duty diesel engine waivers in that the requirements applicable to such vehicles do not undermine the Board's previous determination that its emission standards, in the aggregate, are as protective of public health and welfare as comparable federal standards; do not affect the consistency of California's requirements with section 202(a) of the CAA; and raise no new issues affecting the Administrator's previous waiver determination.

⁴⁹ 40 Fed.Reg. 23102, 23104 (emphasis added). See also 58 Fed.Reg. 4166, Decision Document, at p. 64.

⁵⁰ *California State Motor Vehicle Pollution Control Standards; Waiver of Federal Preemption; Notice of Decision*, 70 Fed Reg. 50322 (August 26, 2005).

⁵¹ See *EMA v. South Coast Air Quality Management District* (2004) 541 U.S. 246, holding that requirements regarding the acquisition of vehicles by a vehicle fleet operator do not escape CAA section 209(a) preemption just because they address the purchase of vehicles rather than their manufacture or sale. In later years, the need to purchase new engines and vehicles under the *CHE Regulation* becomes increasingly less necessary as an owner or operator should be able to purchase non-new model year engines and vehicles so long as they meet the 2007 model year emission standards. To the extent the in-use performance standards apply to non-new yards trucks registered for on-road operation, a waiver is not required. CAA section 209(a) only preempts states from adopting or attempting to enforce standards relating to the control of emissions from new motor vehicles or new motor vehicle engines. If the requirements do not apply to new engines and vehicles, they do not require a waiver under CAA section 209(b).

In reviewing California's protectiveness finding, the Administrator may not deny a waiver on protectiveness grounds unless he or she finds that those challenging the waiver have presented clear and convincing evidence that the Board's protectiveness finding is arbitrary and capricious.⁵² This standard is in accord with "the congressional intent to provide California with the broadest possible discretion in setting regulations it finds protective of the public health and welfare."⁵³ There is no question that the Board's finding is justified and correct in that ARB adopted heavy-duty engine standards that parallel the federal 2007 heavy-duty emission standards,⁵⁴ and the mobile cargo handling requirements for newly acquired registered yard trucks do not modify those requirements. Accordingly, California was neither arbitrary nor capricious in finding that the adopted requirements for registered yard trucks are, in the aggregate, at least as stringent as comparable federal regulations.

2. Consistency with CAA Section 202(a)

The requirement that registered yard trucks use 2007 and subsequent model-year on-road engines is consistent with section 202(a) of the CAA. U.S. EPA has historically interpreted consistency with section 202(a) under a two-prong test: (1) that there is sufficient lead time to permit the development of technology necessary to meet the standards and other requirements, giving appropriate consideration to the cost of compliance in the time frame provided, and (2) that the California and federal test procedures are sufficiently compatible to permit manufacturers to meet both the state and federal test requirements with one test vehicle or engine.⁵⁵

Yard trucks registered for on-road operation are rightfully already subject to ARB's on-road heavy-duty exhaust emission standards codified at title 13, CCR, section 1856.8, and all trucks registered for on-road operation are required to be equipped with certified engines. The *CHE Regulation* is intended to ensure that any yard truck – regardless of model year – newly acquired, on or after January 1, 2007, be equipped with a 2007 or subsequent certified model year on-road engine. The technological feasibility for applying these engines to yard trucks is not at issue. There is no dispute that certified on-road engines have been used in yard truck applications for years. No stakeholder, including engine or vehicle manufacturers or end users of the vehicles, have disputed this or have raised any concerns regarding the feasibility of using certified engines in yard truck applications.

The *CHE Regulation* does not modify the test procedures for certification of the California 2007 and subsequent model-year heavy-duty engines. Accordingly, the

⁵² See *MEMA*, 627 F.2d at 1120-1122.

⁵³ *Id.*, at 1122.

⁵⁴ 40 CFR Part 86, § 86.007 et seq.

⁵⁵ See 61 Fed.Reg. 53371, 53372 (October 11, 1996); Decision Document at p.2 (*OBD II Waiver Decision*).

Administrator's determination in granting the waiver of California's 2007 heavy-duty emission standards is not affected.

For the foregoing reasons, the Administrator should confirm that the *CHE Regulation* requirements for newly acquired yard trucks falls within the scope of the previously granted 2007 and subsequent model-year heavy-duty engine emission standards waiver.

D. The Requirements for Newly Acquired Non-Yard Trucks Registered for Operation on Public Roadways Are Similarly Covered by the Previously Granted Waiver for 2007 Heavy-Duty Diesel Vehicles

As with newly acquired yard trucks, the *CHE Regulation* requires that, on or after January 1, 2007, newly acquired non-yard trucks that are registered for on-highway operation must be equipped with an on-road engine meeting the 2007 and subsequent model year on-road emission standards.⁵⁶ Being registered for on-road operation, these vehicles should already be subject to the 2007 on-road heavy-duty regulation, but to the extent that they have been mistakenly registered with certified off-road engines, this regulation will clear up any confusion. As with on-road yard trucks, the requirements effectively mandate in the first year of the regulation that newly purchased, leased, and rented vehicles be equipped with new 2007 model-year engines. Such requirements arguably fall within the scope of the CAA section 209(a) preemption and would require ARB to obtain a waiver under CAA section 209(b). To the extent that this is the case, the requirements reasonably fall within the scope of the 2007 on-road heavy-duty diesel waiver.⁵⁷

E. The Requirements for Newly Acquired Off-Road Yard Trucks Should Be Analyzed Similarly to a Within-the-Scope Authorization Request

The *CHE Regulation* requires that on or after January 1, 2007, newly acquired off-road yard trucks must be equipped with a 2007 or subsequent model year on-road heavy-duty engine or an off-road engine certified to meet the final Tier 4 off-road emission standards for the rated horsepower.⁵⁸ ARB respectfully requests that the Administrator analyze these options in a manner similar to a "within the scope" of a preexisting CAA section 209 determination. The special circumstances, which are explained below, surrounding the adopted emission standard options for newly acquired off-road yard trucks suggest that such an analysis be applied here.

⁵⁶ Section 2479(e)(1)(B)1.a.

⁵⁷ See discussion above in section III.C. regarding registered on-road yard trucks.

⁵⁸ Section 2479(e)(1)(B), referencing the on-road emission standards at title 13, CCR, section 1956.8 and the off-road emission standards at title 13, CCR, section 2423.

1. The Administrator Should Confirm that Option 1, Use of a Certified On-Road Engine, Falls within the Scope of a Preexisting Waiver

As stated above, ARB and U.S. EPA adopted parallel emission standards for 2007 and subsequent model-year on-road heavy-duty diesel engines. And, the *CHE Regulation* requires that all yard trucks registered for on-road operation that are newly acquired after January 1, 2007 be equipped with 2007 and subsequent model year certified on-road engines.

Like on-road yard trucks, off-road yard trucks can be readily equipped with on-road heavy-duty engines. Indeed, since at least the 2000 model year, yard truck manufacturers have provided buyers with the option of equipping their off-road vehicles with on-road engines.⁵⁹ The primary difference between on-road and off-road yard trucks is that off-road vehicles are typically equipped with governors to regulate their speed and do not have all the requisite safety devices to allow them to operate on public highways. Except to the extent that yard trucks registered for on-road operation do operate to some extent on public roadways, the typical operational environment for both on- and off-road yard trucks is on paved surfaces at port and intermodal rail yard facilities.

A literal reading of CAA section 209(e) would require that California obtain a new authorization for option 1, even though EPA has already issued a waiver for 2007 and subsequent model year heavy-duty engines. ARB believes that such a literal reading is unduly rigid and restrictive and would serve no beneficial purpose while unjustifiably delaying ARB enforcement of this regulatory option. As recognized by U.S. EPA, a subsequently adopted California regulation or amendments to an existing regulation may fall within the scope of a previously granted waiver if the regulation/amendments do not undermine California's initial protectiveness determination, are consistent with the technical feasibility requirements of CAA section 202(a),⁶⁰ and raise no new issues not previously considered.

Here, although Option 1 technically falls under the authority of CAA section 209(e), all of the criteria for a within the scope finding are met. First, and foremost, U.S. EPA has granted a waiver under section 209(b) for the emission standards and other requirements for 2007 and subsequent model-year on-road heavy-duty diesel engines. Option 1 allows owners and operators of off-road yard trucks to meet the requirements of section 2479(e)(1)(B)1.b. by purchasing vehicles equipped with certified on-road engines that are covered by the 2007 heavy-duty waiver issued by U.S. EPA.

⁵⁹ Staff Report at p. V-3.

⁶⁰ To the extent that the Administrator believes that since the option applies to nonroad vehicles, he must also consider whether the requirement is fully consistent with CAA section 209, no inconsistencies exist. Option 1, on its face, does not apply to motor vehicles as defined in 40 CFR §85.1703 or CAA section 209(e)(1) preempted new nonroad engines under 175 horsepower used in farm or construction vehicles or equipment or new locomotives and locomotive engines.

a. Protectiveness

In Resolution 05-62, the Board found that to the extent the *CHE Regulation* affects nonroad vehicles or nonroad engines as defined in CAA section 216(10) and (11), the emission standards and other requirements related to the control of emissions in the regulation approved herein are, in the aggregate, at least as protective of public health and welfare as applicable federal standards. The requirements do not undermine previous protectiveness findings made by ARB in adopting its Tier 4 off-road CI emission standards in 2005, or the 2007 model-year heavy-duty on-road diesel emission standards adopted in 2003. By requiring newly acquired off-road vehicles to be equipped with 2007 and later on-road heavy-duty diesel engines -- with emission standards significantly more stringent than presently required for new off-road engines -- Option 1 does not undermine ARB's previous protectiveness determinations.

b. Consistency

The requirements of section 2479(e)(1)(A)1.b. are not inconsistent with CAA section 209. By their terms the requirements apply to neither motor vehicles preempted under CAA section 209(a) nor nonroad engines preempted under CAA section 209(e)(1).⁶¹ Further, the requirements are consistent with CAA section 202(a) as required by 209(b)(1)(C). As stated, manufacturers of off-road yard trucks have been offering the option of installing on-road engines in off-road yard trucks since at least 2000. Neither vehicle nor engine manufacturers have raised any concerns that 2007 on-road engines cannot be used in 2007 off-road yard trucks or that 2007 on-road engines will not be available for such applications on or before January 1, 2007. Being that the 2007 on-road engines must be certified as on-road engines, ARB and U.S. EPA will be certifying the engines using the same test procedures that are used for all other on-road engines. Thus, no issue regarding inconsistent test procedures exists. Finally, since the on-road engines required for off-road yard trucks are identical to all other certified on-road engines, no new issues exist that were not considered in granting the 2007 and subsequent model year waiver. The fact that the *CHE Regulation* applies to purchasers of newly acquired off-road yard trucks and not to manufacturers should not affect the above analysis. The crux of the analysis is whether sufficient lead time exists for development and availability of the new engines, giving appropriate consideration to costs. A key element in considering costs to the manufacturer is the increased cost to the manufacturer that will be passed onto the consumer. Accordingly, having found that the emission standards for new on-road engines are technologically feasible for the manufacturer, a similar finding should be made here as it applies to the purchaser.

For the foregoing reasons and for purposes of administrative efficiency, the Administrator should find that Option 1 falls within the scope of the previously granted waiver for 2007 and subsequent model-year heavy-duty diesel engines.

⁶¹ See section 2479(e)(1)(B), which makes it clear that these engines are not used in motor vehicles as defined by U.S. EPA in 40 CFR §85.1703) or engines under 175 hp used in farm and construction equipment and vehicles or engines used in locomotives.

c. No New Issues

For the reasons discussed above, the inclusion of Option 1 under the existing 2007 heavy-duty diesel waiver would raise no issues that were not previously considered in granting the waiver. As stated, engine manufacturers have readily made available on-road engines for off-road yard truck applications. And stakeholders have raised no objection to the inclusion of Option 1 in this regulation, even though Option 1 may be the only feasible option in the early years of implementation.

2. The Administrator Should Confirm that Option 2, Use of Final Tier 4 Off-Road Emission Standards, Be Treated Similarly to a Within the Scope Authorization

Under Option 2, owners and operators may, alternatively, elect to equip off-road yard trucks with engines certified to the final Tier 4 off-road emission standards. For this requirement, as well as similar requirements for other off-road engines subject to the *CHE Regulation*, ARB respectfully requests that the Administrator apply the administrative construct that ARB first proposed for granting authorizations in its *Request for Authorization Determination Pursuant to Clean Air Act Section 209(e) for Amendments to California's Emission Standards and Test Procedures for New 1996 and Later Off-Road Compression-Ignition Engines*, dated July 16, 2004.

Off-road yard trucks are typically equipped with engines greater than 175 horsepower (hp) (130 kilowatts (kW) per hour). As explained in ARB's July 2004 authorization request new off-road CI engines, U.S. EPA granted initial authorization to California on September 21, 1995, to adopt and enforce emission standards and test procedures for heavy-duty CI engines equal to or greater than 175 hp.⁶² The authorized regulation established two tiers of emission standards for engines between 175 hp and 750 hp, and a single tier of standards for engines greater than 750 hp.

Subsequent to issuance of the authorization, U.S. EPA, ARB, and the Engine Manufacturers Association signed a *Statement of Principles (SOP)* in 1996 to establish national emission standards for CI engines. Pursuant to the goals set forth in the *SOP*, U.S. EPA adopted emission control regulations for new nonroad CI engines on October 23, 1998.⁶³ ARB subsequently adopted comparable emission standards for California at a public hearing on January 28, 2000. In those amendments, the Board harmonized its emission standards to the federal nonroad diesel standards establishing three tiers of emission standards. In harmonizing with the federal regulation, ARB effectively delayed implementation of the previously adopted and authorized second tier of emission standards that were to be implemented in 1999. The amendments also established, in accord with the federal nonroad regulation, a third tier of emission standards for new

⁶² 60 Fed.Reg. 48981 (September 21, 1995).

⁶³ 63 Fed.Reg. 56968 (October 23, 1998).

engines starting in 2006. In July 2004, ARB requested that the Administrator confirm that these amendments were within the scope of the 1995 heavy-duty CI authorization.

In June 2004, U.S. EPA adopted a fourth tier of emission standards for new nonroad engines.⁶⁴ ARB then adopted, in December 2004, Tier 4 emission standards for new off-road CI engines that align with the federal nonroad emission standards. ARB is presently finalizing a letter requesting that the Administrator also confirm that these amendments fall within the scope of the previously granted 1995 authorization.

As set forth in the July 2004 authorization request, ARB believes that that the 2000 amendments (as well as the 2005 amendments) fall within the scope of the previously granted waiver – even though the amended emission standards are, in part, more stringent than the presently authorized standards. Importantly, these California standards are not more stringent than the adopted federal nonroad standards to which they are aligned, and also are in accord with the 1996 *SOP*. A finding that the amendments are within-the-scope of the previously issued authorization would provide administrative efficiency and flexibility to ARB while providing fairness to regulated manufacturers. ARB would be able to enforce its regulations fully and effectively, while minimum burdens would be placed on manufacturers that must in any event meet the federal regulations. As explained in the July 2004 authorization request and will be explained in the Tier 4 authorization request, the 2000 and 2005 amendments meet the criteria for confirming that an amendment is within the scope of a previously granted authorization: the amended standards are, in the aggregate, at least as protective of public health and welfare as applicable federal regulations, the California regulations are consistent with CAA section 202(a), and no new issues are presented that were not considered in U.S. EPA's promulgation of its regulation.

For similar reasons, the Administrator should find that the *CHE Regulation's* optional requirement that owners and operators of newly acquired off-road yard trucks meet the final Tier 4 emission standards is within the scope of the previously granted 1995 authorization.

a. Protectiveness

As stated above, in Resolution 05-62 the Board found that to the extent the *CHE Regulation* affects nonroad vehicles or nonroad engines as defined in CAA section 216(10) and (11), the emission standards and other requirements related to the control of emissions in the regulation approved herein are, in the aggregate, at least as protective of public health and welfare as applicable federal standards. As with the Tier 1 through Tier 3 emission standards covered in the ARB's July 2004 request for authorization, the Board adopted Tier 4 emission standards in 2005 for off-road CI engines that align with the federal Tier 4 nonroad diesel emission standards.⁶⁵ Being

⁶⁴ *Control of Emissions of Air Pollution from Nonroad Diesel Engines and Fuel*, 69 Fed.Reg. 38957 (June 29, 2004).

⁶⁵ Section 2423, amended December 7, 2005.

that the federal and State Tier 4 emission standards are identical and that other requirements of the federal and state regulations closely parallel one another, the California standards and accompanying enforcement procedures are, in the aggregate, at least as protective as applicable federal provisions.⁶⁶ As stated above, to the extent that the *CHE Regulation* applies to purchasers of new engines, that element should not affect this analysis.

b. Consistency

As stated above, the requirements for newly acquired off-road yard trucks, on their face, make it clear that they apply to neither on-road motor vehicles preempted under CAA section 209(a) nor nonroad engines preempted under CAA section 209(e)(1). Moreover, in adopting the federal nonroad diesel Tier 4 emission standards, the Administrator has fully considered and found that the subject engines meet the CAA section 202(a) requirements for sufficient lead-time for development and application of the requisite technology, giving appropriate consideration to costs. As indicated, the analysis should be the same for purchasers of new engines as for manufacturers. The costs passed on to purchasers by manufacturers are subsumed in the initial consideration of the costs to manufacturers. Additionally, the fact that such engines are not presently available should not deter from this analysis. Owners and operators have the alternative option of purchasing new on-road engines for newly acquired off-road yard trucks; and, as stated above, those engines are presently available for purchase.

3. Alternatively, the Administrator Must Grant California a New Authorization for Options 1 and 2, If He Does Not Find a Within-the-Scope Type Construct Appropriate

In the alternative, if the Administrator were to find that he cannot apply the suggested administrative construct to Options 1 and 2, ARB requests that he grant California a new authorization for the optional requirements.

a. Protectiveness

For the reasons previously stated, it cannot be reasonably challenged that the requirements as they apply to newly acquired off-road vehicles are at least as protective as applicable federal standards or that the Board's determination was arbitrary or capricious. As stated, the requirements for newly acquired off-road yard trucks respectively parallel existing federal standards for heavy-duty on-road engines and non-road CI engines and do not undermine the Board's previous protectiveness findings.

⁶⁶ The one true difference between the federal and state regulations – ARB's in-use enforcement protocol – is at least as stringent as applicable federal procedures.

b. The Requirements Are Necessary to Meet Compelling and Extraordinary Circumstances

In Resolution 05-62, the Board reaffirmed its longstanding position that California continues to need its own nonroad engine and vehicle program to meet serious air pollution problems unique to the State. The Administrator has previously and consistently recognized California's unique needs when granting waivers for motor vehicles under CAA section 209(b) and authorization for California's nonroad regulations under section 209(e).

The relevant inquiry under CAA section 209(e)(2)(A)(ii) is whether California needs its own emission control program to meet compelling and extraordinary conditions, not whether any given standard is necessary to meet such conditions.⁶⁷ In approving waivers under section 209(b), the Administrator has determined that:

"[C]ompelling and extraordinary conditions" does not refer to levels of pollution directly, but primarily to the factors that tend to produce them: geographical and climatic conditions that, when combined with large numbers and high concentrations of automobiles, create serious air pollution problems.⁶⁸

California and the South Coast and San Joaquin Valley air basins in particular continue to experience some of the worst air quality in the nation.⁶⁹ The unique geographical and climatic conditions, and the tremendous growth in vehicle population and use that moved Congress to authorize California to establish separate vehicle standards in 1967, still exist today. It is noteworthy that U.S. EPA recently confirmed the ARB's judgment, on behalf of the State of California, on this matter.⁷⁰

In the California Clean Air Act of 1988, the California Legislature found that:

[D]espite the significant reductions in vehicle emissions which have been achieved in recent years, continued growth in population and vehicle miles traveled throughout California have the potential not only to prevent

⁶⁷ 49 Fed. Reg. 18887, 18892 (May 3, 1984.)

⁶⁸ *Id.*

⁶⁹ See e.g. *Approval and Promulgation of State Implementation Plans; California – South Coast*, 64 Fed.Reg.1770, 1771 (January 12, 1999).

⁷⁰ *California State Motor Vehicle Pollution Control Standards; Waiver of Federal Preemption – Notice of Decision*, 68 Fed.Reg.19811,19812 (April 22, 2003).

attainment of the state standards, but in some cases, to result in worsening of air quality.⁷¹

In response to the undisputed severe air quality problems in California, the California Legislature authorized ARB to consider adopting, *inter alia*, standards and regulations for nonroad engines.⁷² Given the serious air pollution problems California faces and the resultant need to achieve the maximum reductions in emissions, the California Legislature and the ARB believe it is necessary to develop emission controls for nonroad sources as well as for motor vehicles.⁷³ The ARB continues to find such previously uncontrolled nonroad engines to be significant emission sources for which controls are necessary to meet federal and state air quality standards.⁷⁴

By adding federal and state authority to regulate nonroad engines, Congress and California's Legislature, respectively, acknowledged the increasing importance of reducing emissions from all mobile sources, including nonroad engines. The Administrator has repeatedly agreed with the ARB that California's continuing extraordinary conditions justify separate California nonroad programs.⁷⁵ Nothing in these conditions has changed to warrant a change in this determination. Accordingly, for all the aforementioned reasons, there can be no doubt of the continuing existence of compelling and extraordinary conditions justifying California's need for its own nonroad vehicle and engine emissions control program.

c. Consistency

For the reasons set forth above, requirements of section 2479(e)(1)(A)b. are fully consistent with CAA section 209.

F. The Administrator Should Find that Options 1 and 2 of the New Requirements for Newly Acquired Non-Yard Trucks Not Registered for On-Road Operation Are Within the Scope of Previously Granted Waivers and Authorizations and Should Grant a New Authorization for Option 3

On or after January 1, 2007, newly acquired non-yard trucks that are used exclusively off-road must be equipped with engines meeting one of the following options:

Option 1: that have been certified to meet the on-road emission standards as specified in title 13, CCR, section 1956.8 for the model year in which the non-yard truck mobile cargo handling equipment and engines were newly purchased, leased, or rented; or

⁷¹ California Health and Safety Code section 43000.5.

⁷² California Health and Safety Code sections 43013 and 43018.

⁷³ See California Health and Safety Code sections 41750, 41754, 43000.5, 43013 and 43018.

⁷⁴ Resolution 03-37. See also Staff Report at Chapter II.

⁷⁵ *Utility Authorization*, Decision Document, at p. 33; *OHRV Authorization*, Decision Document, at pp. 27-29; and *HDOR Authorization*, Decision Document, at pp. 16-18.

Option 2: that have been certified to meet the Tier 4 off-road emission standards for the model year and rated horsepower of the newly purchased, leased, or rented non-yard truck mobile cargo handling equipment engines; or

Option 3: if Options 1 and 2 are not available for a specific application and equipment type, the newly acquired non-yard truck must be equipped with engines that have been certified to meet the highest available level off-road diesel engine emission standards as specified in title 13, CCR, section 2423 for the rated horsepower and model year in which the equipment were newly purchased, leased, or rented, provided the owner or operator must install the highest level VDECS available within one year after the purchase, lease, or rental of the equipment, or, if a VDECS is not available by that date, within six months of when a VDECS becomes available.⁷⁶

1. To the Extent that New On-Road Heavy-Duty Engines May Be Used in Non-Yard Truck Applications, Option 1 Falls Within the Scope of a Previously Granted Waiver

ARB respectfully requests that to the extent that certified on-road heavy-duty engines may be used in off-road non-yard truck applications, the Administrator should find that the Option 1 falls within the scope of the recently granted waiver for 2007 and later model-year heavy-duty engines, for the reasons discussed above in section III.E.1.⁷⁷

2. To the Extent that Option 2 Applies to New CI Engines Equal to or Greater than 175 hp, It Falls Within the Scope of a Previously Granted Authorization

Similarly, for the reasons discussed above in section III.E.2.,⁷⁸ to the extent that off-road non-yard trucks use off-road CI engines equal to or greater than 175 hp, Option 2 falls within the scope of the 1995 off-road heavy-duty authorization.

3. To the Extent that Option 2 Applies to New CI Engines Less than 175 hp, the Administrator Should Apply a New Construct Similar to a Within-the-Scope Determination

It its July 2004 authorization request, ARB respectfully requested that the Administrator develop a new administrative construct for reviewing and applying authorization requests for regulations that harmonize and align with federal requirements. As stated, such a construct would allow California to fully implement and enforce its regulations to ensure the greatest emission benefits of the regulation. An approach that allows California to fully administer its program from the beginning rather than having a bifurcated system under which federal administration of the program would be handed off to California once the authorization is granted makes for a more efficient and fair process. Allowing ARB to assume immediate responsibility for administration of its own

⁷⁶ Section 2479(e)(1)(B)1.b.

⁷⁷ *Supra.*, p. 21.

⁷⁸ *Supra.*, p. 23.

program should also prove advantageous for all stakeholders who, from a business perspective, would benefit from consistent application and approach of a state-administered program.

ARB renews that request here. Although no authorization has previously been granted to California for CI engines less than 175 hp, the criteria for granting a within-the-scope determination are fully satisfied. First, the emission standards for new CI engines less than 175 hp are, in the aggregate, at least as stringent as comparable federal regulations for such engine ratings. Consistent with the 1996 *SOP*, ARB adopted the standards to harmonize with federal emission standards. Second, for the reasons set forth by U.S. EPA in adopting the federal Tier 4 standards, the standards are technologically feasible given the lead time provided and the costs incurred to comply. Third, the *CHE Regulation* does not modify the test procedures for certification of federal and state Tier 4 engines. The procedures are effectively identical and thus are not incompatible. Finally, no new issues are presented, even though the instant regulation is addressed to purchasers of non-yard trucks with CI engines installed and not the manufacturers of such engines. As previously stated, the same issues were fully explored and discussed in U.S. EPA's consideration of technical feasibility for manufacturers in promulgating the federal standards.

4. If Options 1 And 2 Are Not Available for Non-Yard Truck Off-Road Applications, ARB Requests that the Administrator Grant a New Authorization for Option 3, and for Options 1 and 2 if He Cannot Confirm that the Latter Options Fall Within "Within-the-Scope" Type Constructs

If Options 1 and 2 are not available for certain new non-yard truck off-road applications, ARB requests that the Administrator grant a new authorization for Option 3. Although ARB requested authorization for off-road Tier 1, 2, and 3 emission standards in July 2004, it has not previously requested authorization for application of verified retrofit technologies (i.e., VDECS), nor has U.S. EPA considered VDECS in the context of non-yard truck applications. No basis exists for the Administrator to deny this request.

ARB further requests that the Administrator issue a new authorization for Options 1 and 2, if he cannot apply the within-the-scope type constructs as requested by ARB in sections III.F.1. through 3. above.

- a. Protectiveness

As stated, in adopting Resolution 05-62, the Board found that to the extent the *CHE Regulation* affects off-road vehicles or engines, the emission standards and other requirements related to the control of emissions are, in the aggregate, at least as protective of public health and welfare as applicable federal standards. Federal and California emission standards for 2007 and subsequent model-year on-road heavy-duty engines are aligned as are federal and state Tier 4 emission standards for off-road CI engines. As described above, there should be no question that Options 1 and 2 are, in

the aggregate, at least as stringent as federal emission standards for new on-road and nonroad vehicle engines. To the extent that Option 3 is the only available option for certain non-yard truck applications prior to introduction of new Tier 4 off-road engines, the requirements of Option 3 are more stringent than applicable federal regulations, which do not require VDECS for lower tier certified engines.

b. The Requirements are Necessary to Meet Compelling and Extraordinary Circumstances⁷⁹

For the reasons set forth in section III.E.3.b.,⁸⁰ the Administrator cannot find that California does not need the adopted emission requirements for newly acquired off-road non-yard truck applications to meet compelling and extraordinary conditions.

c. Consistency

The requirements of title 13, CCR, section 2479(e)(1)(B) are fully consistent with CAA section 209. First, by its terms, the requirements only apply to off-road sources, and not motor vehicles as defined by 40 CFR section 85.1703. Second, the options do not apply to new nonroad engines under 175 hp used in farm and construction vehicles or to locomotives.⁸¹ The options are also fully consistent with CAA section 202(a).

i. Option 1

Option 1 is consistent with section 202(a) in that the required technology is feasible given the lead time provided and the costs of compliance. As stated, engine manufacturers will be producing engines meeting the 2007 on-road heavy-duty emission standards starting by January 2007. Moreover, Option 1 is only one of several options that an owner or operator may elect to use to comply with the regulation; to the extent that a non-yard truck, off-road vehicle can be equipped with an on-road engine, engines will be available at a compliance cost near that which is available for on-road vehicles. If an on-road engine cannot be used in a particular non-yard truck application, the owner and operator may elect to use one of the other two options.

ii. Option 2

In promulgating its nonroad Tier 4 emission standards, U.S. EPA fully considered and found the standards were achievable through application of technology which the Administrator determined will be available for the engines and vehicles to which such standards apply, giving appropriate consideration to the cost of applying such technology within the period of time available to manufacturers for compliance.⁸² While certification of interim Tier 4 standards for new off-road engines is not required prior to

⁷⁹ see *supra*, at pp. 25-26.

⁸⁰ *Supra*, at pp. 25-26.

⁸¹ CAA § 209(e)(1).

⁸² CAA § 213(a)(3).

2008 and will be phased in for most engine categories over a four-year period, it is anticipated that some interim-certified Tier 4 engines will be available for purchase in 2007. To the extent that such engines are available in the timeframes considered by U.S. EPA, Option 2 is consistent with CAA section 202(a). Indeed, the option does not accelerate compliance in that the *CHE Regulation* allows owners and operators to comply with the requirements by electing to use Option 3 if Tier 4 engines are not available before the compliance dates under the respective federal and state Tier 4 regulations.

iii. Option 3

As stated, Option 3 provides additional compliance flexibility by allowing the owner or operator to use a lower certified tier engine if neither Options 1 nor 2 are available.⁸³ Under the regulation, in such an event, the owner or operator must install the highest available certified tier engine on newly acquired non-yard trucks. If an owner or operator so elects, he must additionally commit to install the highest level of VDECS available within one year after the vehicle is acquired or, if a VDECS is not available by that date, within six months of a VDECS becoming available.⁸⁴

As can be seen, Option 3 does not prohibit the acquisition or use of equipment for which no VDECS technology exists. Owners and operators are obligated to install such VDECS only upon the VDECS becoming available. As discussed in the Staff Report, ARB found that “[t]here are various advanced exhaust aftertreatment technologies commercially available that can provide significant reductions in diesel PM, particularly when combined with ultra low-sulfur diesel fuel.”⁸⁵ The principal technologies that have been successfully used to reduce diesel PM are diesel oxidation catalysts (DOCs), emulsified diesel fuel, and diesel particulate filters (DPFs). To date, several of these technologies have been verified as VDECS for certain non-yard truck applications and can be used to meet the performance requirements of the proposed regulation. By providing such compliance flexibility, the requirements of Option 3 meet the consistency criteria of section 202(a).

G. In-Use Performance Standards for Yard Trucks

As discussed in Part II of this document, the *CHE Regulation* requires that between December 31, 2007 and December 31, 2017, owners and operators convert their existing in-use yard truck fleet to vehicles having engines:

- certified to 2007 or later on-road emission standards for the model year of the year purchased as specified in title 13, CCR, section 1956.8; or
- certified to final Tier 4 off-road emission standards for the rated horsepower; or

⁸³ Section 2479(1)(B)1.c.

⁸⁴ *Id.*

⁸⁵ Staff Report, at V-4.

- equipped with a VDECS that results in emissions less than or equal to the diesel PM and NOx emission standards for a certified final Tier 4 off-road diesel engine of the same horsepower rating.⁸⁶

1. In-Use Yard Trucks Registered for On-Road Operation Do Not Require a Waiver

To the extent the in-use performance standards apply to non-new yard trucks registered for on-road operation, a waiver is not required. CAA section 209(a) preempts states from adopting or attempting to enforce standards relating to the control of emissions from new motor vehicles or new motor vehicle engines. By its terms, section 2459(e)(2) applies only to in-use (i.e., non-new) motor vehicles.

2. The Administrator Must Grant California's Request for Authorization for the Fleet Requirements for Non-New Off-Road Yard Trucks

- a. Protectiveness

It cannot be disputed that the adopted in-use emission requirements for the off-road yard truck fleet are at least as protective to public health and welfare as applicable federal regulations. This is because the CAA does not invest U.S. EPA with authority to adopt regulations for non-new nonroad engines.⁸⁷ Consequently, since there are no applicable federal regulations for non-new nonroad engines, California's requirements are undisputedly more stringent.

- b. Extraordinary and Compelling Circumstances

For the reasons set forth in section III.E.3.b.,⁸⁸ the Administrator cannot find that California does not need the adopted emission requirements for non-new off-road yard to meet compelling and extraordinary conditions.

- c. Consistency with CAA Section 209

By its terms, the *CHE Regulation* applies to off-road yard trucks and thus does not apply to motor vehicles as defined in 40 CFR section 85.1703, which are preempted under CAA section 209(a), or to nonroad engines preempted under CAA section 209(e)(1) – new nonroad engines under 175 hp used in farm and construction equipment and

⁸⁶ Section 2479(e)(2).

⁸⁷ CAA § 213(a)(3) provides in pertinent part: "[T]he Administrator shall . . . promulgate (and from time to time revise) regulations containing standards applicable to emissions from those classes or categories of new nonroad engines and new nonroad vehicles. . . ." (Emphasis added.) See also *Engine Manufacturers Association v. U.S. EPA* (D.C. Cir. 1996) 88 F.3d 1075.

⁸⁸ *Supra*, at p. 25.

vehicles and new engines used in locomotives. The optional requirements are also consistent with CAA sections 209(b)(1)(C) and 202(a).

i. Option 1

In the first years of the regulation's implementation, it is expected that most, if not all owners and operators will elect the first option: replacing late model off-road yard trucks with vehicles equipped with certified 2007 and subsequent model year on-road heavy-duty engines or re-powering such older vehicles with new certified on-road engines. As explained above, no technical feasibility issue exists with regard to availability of certified 2007 and subsequent year heavy-duty on-road engines.⁸⁹ If owners and operators choose to comply by replacing or re-powering with certified on-road engines, such engines should be readily available by the regulation's initial compliance date, December 31, 2007. Turnover of most yard truck fleets is fairly high, and since ARB has estimated that owners and operators of off-road yard trucks will incur little incremental cost in purchasing on-road engines in lieu of off-road engines, the compliance costs should not be significant.

ii. Option 2

The Tier 4 off-road standards are scheduled to be phased in starting in 2011 for most heavy-duty engine horsepower ratings. In promulgating its Tier 4 nonroad diesel regulation, U.S. EPA found that compliance was feasible by 2011. Although some Tier 4 engines might be available in earlier years, it is not anticipated that most owners and operators will avail themselves of this option during the first years of implementation, when they are required to begin updating the emission standards of their in-use fleets.

iii. Option 3

As stated, 2007 and later certified on-road engines should be readily available for owners and operators to convert their fleets to lower emitting engines by December 31, 2007. If they are not, the regulation provides a third option for compliance. However, this option may also not be available during the first year of implementation. The first year of fleet conversion requires owners and operators to reduce emissions on pre-2003 off-road yard trucks by December 31, 2007. By this date, ARB does not expect any VDECS to be verified that are capable of reducing pre-2003 engines (engines that are either uncertified or certified to Tier 1 emission standards) to at least final Tier 4 standards. Nonetheless, this is not expected to be a real-world problem because most yard trucks have a high turnover rate, and on-road engines under Option 1 are readily available. Further flexibility is provided by allowing owners and operators to receive a compliance extension of up to one year for engines near retirement.

⁸⁹ See discussion *supra* at III.E.1, p. 20 and III.F.3.a., pp. 26-28.

In later years, as the compliance schedule requires converting newer model-year vehicles that have engines certified to Tier 3 emission levels, VDECS will be available that will achieve the lower emissions equal to Tier 4 engine emission levels. For example, Huss Umwelttechnik has had a DPF verified as a Level 3 VDECS that will achieve at least 85 percent emission reductions on a Tier 3 engine, resulting in emissions equal to or less than Tier 4 emission standards. ARB fully expects more DPFs will be verified that will achieve such emission reductions in the coming months and years.

H. The Administrator Must Grant California's Request for Authorization for Its Fleet Requirements for Off-Road Non-Yard Trucks

As explained above,⁹⁰ depending upon the category of non-new non-yard trucks (i.e., bulk container handling, bulk cargo handling, or rubber-tired gantry cranes), the *CHE Regulation* requires that owners and operators convert their fleet to lower emitting vehicles between December 31, 2007 and December 31, 2013. As with emission requirements for non-new yard trucks, California is not preempted by CAA section 209(a) from establishing emission standards for non-new, non-yard trucks and consequently does not have to receive a waiver from U.S. EPA. Recognizing, however, that California must obtain an authorization for non-new nonroad engines, ARB respectfully requests that the Administrator grant its request.

1. Protectiveness and Compelling and Extraordinary Need

For the reasons previously presented for granting an authorization for the off-road yard truck fleet requirements,⁹¹ the Administrator should similarly grant authorization for the non-new non-yard truck fleet requirements. The Board's determination that the adopted standards are at least as stringent as comparable federal regulations is undisputedly neither arbitrary nor capricious. U.S. EPA does not have authority to adopt emission standards for non-new, nonroad engines.⁹² Moreover, it cannot be disputed that California has an extraordinary and compelling need for its own in-use fleet emission reduction program.⁹³

2. Consistency

The requirements for off-road non-yard truck fleets are consistent with CAA section 209. By the requirements' terms, they do not apply to motor vehicles as defined by U.S. EPA and are, therefore, not preempted by CAA section 209(a). Moreover, the regulation is not intended to apply to new nonroad engines under 175 hp used in farm and construction equipment and vehicles or to those used in locomotives, which are wholly preempted under CAA section 209(e)(1). Finally, the regulations are consistent with

⁹⁰ *Supra*, pp. 8-12.

⁹¹ *Supra*, section III.F.

⁹² CAA § 213.

⁹³ see *supra*, section III.E.3.b.

CAA section 209(b)(1)(C) in that they are technologically feasible given the time for compliance after considering the cost of compliance.⁹⁴

The regulation provides owners and operators of the various types of non-yard trucks with significant flexibility in complying with the fleet conversion requirements. As stated, they may elect any of three options for phasing in compliance of their fleets. In summary, they may replace or re-power existing vehicles with 2007 and subsequent model-year certified on-road heavy-duty engines or certified Tier 4 off-road engines or retrofit earlier model-year certified on-road engines or certified Tier 1 through 3 off-road engines or non-certified off-road engines with the highest level of VDECS available on the market at the time compliance is required.⁹⁵

Depending on the non-yard truck category and the level of VDECS initially used for compliance, the owner or operator may have additional compliance requirements to further upgrade or retrofit the engines to Tier 4 emission standards or to Level 3 VDECS by December 31, 2015. In adopting these options, ARB recognized that 2007 model year on-road engines, Tier 4 off-road engines, and higher level of VDECS may not be available for all non-yard truck applications in the early years of the fleet conversion requirement. To that end, the regulation makes the options contingent upon availability, fully anticipating that some vehicle engines may not be able to achieve maximum emission reductions immediately.

However, as previously presented, in the year since the regulation's adoption, one manufacturer, Huss Umwelttechnik, has had a DPF verified as a Level 3 VDECS for use on all on-road and off-road engines through the 2006 model year.⁹⁶ If for some reason VDECS are not presently applicable, the regulation effectively provides more than 11 years, to December 31, 2015, for full compliance to the maximum emission reduction levels.

Beyond the flexibility provided directly by the options, an owner or operator, if necessary, may apply for various compliance extensions.⁹⁷ They also may request that the Executive Officer approve alternative compliance plans that will ensure comparable emission reductions but provide owners and operators with additional flexibility in how they wish to operate their fleets.⁹⁸

Finally, no issue regarding compatibility of federal and state certification procedures for on-road or off-road engines exists.

⁹⁴ CAA § 202(a).

⁹⁵ Non-certified engines are engines that were manufactured prior to the effective date requiring certification on new off-road engines under title 13 CCR, section 2423.

⁹⁶ See ARB Verification Program web page at <http://www.arb.ca.gov/diesel/verdev/level3/level3.htm>

⁹⁷ See summary, *supra*, at II.B., pp. 12-13.

⁹⁸ *Supra*, p.13.

I. In-Use Fuel Requirements

Under the CAA and U.S. EPA's regulations, California does not need to obtain a waiver or authorization from U.S. EPA for requirements pertaining to fuel specification standards. As the regulation applies to on-road motor vehicles, CAA section 211(c)(4)(B) provides that "[a]ny State for which application of section 209(a) has at any time been waived under section 209(b) may at any time prescribe and enforce, for the purpose of motor vehicle emission control, a control or prohibition respecting any fuel or fuel additive." Moreover, in the 2004 federal rule establishing Tier 4 emission standard for nonroad engines, U.S. EPA opined that the preemption prohibiting states from adopting fuel specification standards and enforcement procedures for motor vehicles does not apply to nonroad engines.⁹⁹

J. Record-Keeping Requirements

The record-keeping requirements of the *CHE Regulation* are intended to ensure compliance and effective enforcement of the incorporated emission standards. The requirements are thus accompanying enforcement provisions, which do not undermine the Board's determination that the regulation, in the aggregate, is as protective of public health and welfare as applicable federal regulations. In adopting the record-keeping provision, the Board made a further finding that the requirements were necessary to protect public health, safety and welfare of residents of the state.¹⁰⁰ No issue regarding the costs of compliance with the record-keeping requirements was raised during the rulemaking process.

To the extent the record-keeping requirements help enforce elements for which we seek confirmation that the elements are within the scope of previous waivers or authorizations, we request the confirmation decision include the record-keeping requirements. To the extent they help enforce elements for which we seek a new authorization, we similarly request that the authorization include the record-keeping requirements.

⁹⁹ *Control of Emissions of Air Pollution From Nonroad Diesel Engines and Fuel*, 69 Fed.Reg 38958 (June 29, 2004) ["today's action does not preempt state controls or prohibitions respecting characteristics or components of fuel or fuel additives used in nonroad [engines]."] See also U.S. EPA's direct final rule, *Control of Air Pollution: Emission Standards for New Nonroad Compression-Ignition Engines at or Above 37 Kilowatts; Preemption of State Regulation for Nonroad Engine and Vehicle Standards; Amendments to Rules*, 62 Fed.Reg.67733, fn 128 (December 30, 1997), amending Appendix A [section 209 does not preempt states from "regulating the use and operation of nonroad engines, such as sulfur limits on fuel."]

¹⁰⁰ Resolution 05-62.

IV. CONCLUSION

Based on the foregoing, ARB respectfully requests that the Administrator grant California's request for waiver and authorization actions pursuant to CAA section 209. To assist you in reviewing the regulation, ARB is enclosing the following documents that it is incorporating into the record of this waiver proceeding.

1. Notice of Public Hearing to Consider the Adoption of a Proposed Regulation for Mobile Cargo Handling Equipment at Ports and Intermodal Rail Yards, Issued October 11, 2005.
2. Staff Report: Initial Statement of Reasons for Proposed Rulemaking, with Appendices issued October 11, 2005,.
3. Resolution 05-62, dated December 8, 2005.
4. Notice of Availability of Modified Text, issued May 17, 2006.
6. Executive Order G-05-010, dated October 17, 2006.
7. Final Statement of Reasons for Rulemaking Including Summary of Comments and Agency Response.
8. Final Regulation Order for title 13, California Code of Regulations, section 2479.

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