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

Adopt new section 2479, title 13, California Code of Regulations, to read as follows:
(Note: The entire text of section 2479 set forth below is new language proposed to be added to the California Code of Regulations.)

Section 2479. Regulation for Mobile Cargo Handling Equipment at Ports and Intermodal Rail Yards.

(a) Purpose

The purpose of this regulation is to reduce diesel particulate matter (PM) and criteria pollutant emissions from compression ignition (CI) mobile cargo handling equipment that operate at ports and intermodal rail yards in the state of California.

(b) Applicability

Except as provided in subsection (c), the regulation would apply to any person who sells, offers for sale, leases, purchases, owns or operates any CI mobile cargo handling equipment that operates at ports or intermodal rail yards.

(c) Exemptions

- (1) The requirements of this section do not apply to mobile cargo handling equipment that do not operate at a port or intermodal rail yard; and
- (2) The requirements of this section do not apply to portable CI engines; and
- (3) The requirements of subsections (e), (f), (g), and (h) do not apply to mobile cargo handling equipment that are not used to handle cargo at any time but are used for other functions, such as transporting personnel or performing maintenance. Examples include, but are not limited to, fuel delivery trucks operating solely on the terminal to deliver fuel to terminal equipment, vans and buses used to transport personnel, and man-lifts used solely for maintenance purposes.

(d) Definitions

For purposes of this section, the definitions of Health and Safety Code section 39010 through 39060 shall apply except to extent that such definitions may be modified by the following definitions that apply specifically to this regulation:

- (1) "Alternative Diesel Fuel" means any fuel used in a CI engine that is not commonly or commercially known, sold, or represented by the supplier as diesel fuel No. 1-D or No. 2-D, pursuant to the specifications in ASTM D975-81, "Standard Specification for Diesel Fuel Oils," as modified in May 1982, which is

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incorporated herein by reference, or an alternative fuel, and does not require engine or fuel system modifications for the engine to operate, although minor modifications (e.g., recalibration of the engine fuel control) may enhance performance. Examples of alternative diesel fuels include but are not limited to biodiesel; Fischer-Tropsch fuels; emulsions of water in diesel fuel; and fuels with a fuel additive, unless:

- (A) the additive is supplied to the engine fuel by an on-board dosing mechanism, or
 - (B) the additive is directly mixed into the base fuel inside the fuel tank of the engine, or
 - (C) the additive and base fuel are not mixed until engine fueling commences, and no more additive plus base fuel combination is mixed than required for a single fueling of a single engine.
- (2) "Alternative Fuel" means natural gas, propane, ethanol, methanol, gasoline (when used in hybrid electric mobile cargo handling equipment only), hydrogen, electricity, fuel cells, or advanced technologies that do not rely on diesel fuel. "Alternative fuel" also means any of these fuels used in combination with each other or in combination with other non-diesel fuel.
- (3) "Basic Container Handling Equipment" means mobile cargo handling equipment, other than yard trucks, bulk cargo handling equipment, and RTG cranes, used to handle cargo containers. Basic Container Handling Equipment includes but is not limited to top handlers, side handlers, reach stackers, straddle carriers, and forklifts.
- (4) "Bulk Cargo Handling Equipment" means mobile cargo handling equipment, other than yard trucks, basic container handling equipment, and RTG cranes, generally used to move non-containerized cargo, including but not limited to dozers, excavators, loaders, tractors, mobile cranes (excluding rubber-tired gantry cranes), and sweepers.
- (5) "Carbon Monoxide (CO)" is a colorless, odorless gas resulting from the incomplete combustion of hydrocarbon fuels.
- (6) "Cargo Handling Equipment" means any off-road self-propelled vehicle or equipment used at a port or intermodal rail yard to lift or move container, bulk, or liquid cargo carried by ship, train, or another vehicle, or used to perform other non-cargo handling operations. Equipment includes but is not limited to mobile cranes, rubber-tired gantry cranes, yard trucks, top handlers, side handlers, reach stackers, forklifts, loaders, sweepers, excavators, and dozers.
- (7) "Certified Off-road Diesel Engine" means an engine certified to California off-road engine emission standards under title 13 CCR, section 2423.

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- (8) "Certified On-road Diesel Engine" means an engine certified to California on-road diesel engine emission standards under title 13 CCR, section 1956.8.
- (9) "Compression Ignition (CI) Engine" means an internal combustion engine with operating characteristics significantly similar to the theoretical diesel combustion cycle. The regulation of power by controlling fuel supply in lieu of a throttle is indicative of a compression ignition engine.
- (10) "Diesel Fuel" means any fuel that is commonly or commercially known, sold, or represented by the supplier as diesel fuel, including any mixture of primarily liquid hydrocarbons (HC) - organic compounds consisting exclusively of the elements carbon and hydrogen - that is sold or represented by the supplier as suitable for use in an internal combustion, compression-ignition engine.
- (11) "Diesel-Fueled" means a CI engine fueled by diesel fuel, CARB diesel fuel, or jet fuel, in whole or part.
- (12) "Diesel Oxidation Catalyst (DOC)" means a catalyst promoting oxidation processes in diesel exhaust, and usually designed to reduce emissions of the organic fraction of diesel particulates, gas-phase HC, and (CO).
- (13) "Diesel Particulate Filter (DPF)" means an emission control technology that reduces PM emissions by trapping the particles in a flow filter substrate and periodically removes the collected particles by either physical action or by oxidizing (burning off) the particles in a process called regeneration.
- (14) "Diesel Particulate Matter (PM)" means the particles found in the exhaust of diesel-fueled CI engines. Diesel PM may agglomerate and adsorb other species to form structures of complex physical and chemical properties.
- (15) "Dozer" means an off-road tractor, either tracked or wheeled, equipped with a blade.
- (16) "Emission Control Strategy" means any device, system, or strategy employed with a diesel-fueled CI engine that is intended to reduce emissions including, but not limited to, particulate filters, diesel oxidation catalysts, selective catalytic reduction systems, fuel additives used in combination with particulate filters, alternative diesel fuels, and any combination of the above.
- (17) "Excavator" means an off-road vehicle consisting of a backhoe and cab mounted on a pivot atop an undercarriage with tracks or wheels.
- (18) "Executive Officer" means the Executive Officer of the California Air Resources Board or his/her designee.
- (19) "Fleet" means the total number of mobile cargo handling equipment vehicles owned, rented or leased by an owner or operator at one terminal or intermodal yard location.

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- (20) "Forklift" means an off-road industrial truck used to hoist and transport materials by means of steel fork(s) under the load.
- (21) "Fuel Additive" means any substance designed to be added to fuel or fuel systems or other engine-related engine systems such that it is present in-cylinder during combustion and has any of the following effects: decreased emissions, improved fuel economy, increased performance of the engine; or assists diesel emission control strategies in decreasing emissions, or improving fuel economy or increasing performance of the engine.
- (22) "Heavy-duty Pilot Ignition Engine" means an engine designed to operate using an alternative fuel, except that diesel fuel is used for pilot ignition at an average ratio of no more than one part diesel fuel to ten parts total fuel on any energy equivalent basis. An engine that can operate or idle solely on diesel fuel at any time does not meet this definition.
- (23) "Hydrocarbon (HC)" means the sum of all hydrocarbon air pollutants.
- (24) "In-Use" means a CI engine that is not a "new" CI engine.
- (25) "Intermodal Rail Yard" means any rail facility where cargo is transferred to or from a train and any other form of conveyance, such as train to ship, ship to train, train to truck, or truck to train.
- (26) "Level" means one of three categories of Air Resources Board-verified diesel emission control strategies as set forth in title 13, CCR, section 2701 et seq: Level 1 means the strategy reduces engine diesel particulate matter emissions by between 25 and 49 percent, Level 2 means the strategy reduces engine diesel particulate matter emissions by between 50 and 84 percent, and Level 3 means the strategy reduces engine diesel particulate matter emissions by 85 percent or greater, or reduces engine emissions to less than or equal to 0.01 grams diesel particulate matter per brake horsepower-hour.
- (27) "Loader" means any type of off-road tractor with either tracks or rubber tires that uses a bucket on the end of movable arms to lift and move material; can be also referred to as a front-end loader, front loader, skid steer loader, backhoe, rubber-tired loader, or wheeled loader.
- (28) "Minimum Use Requirement" means an agreement, as part of state or local incentive funding programs or written agreement between mobile cargo handling equipment owners or operators and the Ports of Long Beach, Los Angeles, or Oakland, to use an emission control device on mobile cargo handling equipment for a specified minimum number of years and/or hours.
- (29) "Mobile Crane" means the propulsion engine of a crane other than a rubber-tired gantry crane.

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- (30) "Model Year" means the CI engine manufacturer's annual production period, which includes January 1st of a calendar year, or if the manufacturer has no annual production period, the calendar year.
- (31) "Newly Purchased, Leased, or Rented Cargo Handling Equipment" means mobile cargo handling equipment, or a diesel-fueled CI engine installed in mobile cargo handling equipment, that is newly purchased, rented, or leased on or after January 1, 2007, and is operated at a port or intermodal rail yard in the state of California after January 1, 2007.
- (32) "Nitrogen Oxides (NO_x)" means compounds of nitric oxide (NO), nitrogen dioxide (NO₂), and other oxides of nitrogen, which are typically created during combustion processes and are major contributors to smog formation and acid deposition.
- (33) "Non-Methane Hydrocarbons (NMHC)" means the sum of all HC air pollutants except methane.
- (34) "Non-Yard Truck Mobile Cargo Handling Equipment" means all other mobile cargo handling equipment, not including yard trucks.
- (35) "Off-Road Engine" means an engine used in an off-road vehicle, or piece of equipment, including a certified on-road diesel engine.
- (36) "Off-Road Vehicle or Equipment" means any non-stationary device, including registered motor vehicles, powered by an internal combustion engine or motor, used primarily off the highways to propel, move, or transport persons or property.
- (37) "Owner or Operator" means any person subject to the requirements of this section, including but not limited to:
 - (A) an individual, trust, firm, joint stock company, business concern, partnership, limited liability company, association, or corporation including but not limited to, a government corporation; and
 - (B) any city, county, district, commission, the state or any department, agency, or political subdivision thereof, any interstate body, and the federal government or any department or agency thereof to the extent permitted by law.
- (38) "Particulate Matter (PM)" means the particles found in the exhaust of CI engines, which may agglomerate and adsorb other species to form structures of complex physical and chemical properties.
- (39) "Portable CI Engine" means a compression ignition (CI) engine designed and capable of being carried or moved from one location to another. Indicators of portability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform. Portable engines are not self-propelled.

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- (40) "Port" means facilities used for water-borne commerce.
- (41) "Purchased" means the date shown on the front of the cashed check, the date of the financial transaction, or the date on the engine purchasing agreement, whichever is earliest.
- (42) "Railcar Mover" means an off-road vehicle fitted with rail couplers and capable of traveling on both roads and rail tracks.
- (43) "Reach Stacker" means an off-road truck-like cargo container handler that uses an overhead telescopic boom that can reach across two or more stacks of cargo containers and lift the containers from the top.
- (44) "Registered Motor Vehicle" means a yard truck or other cargo handling vehicle that is registered as a motor vehicle under Vehicle Code section 4000, et seq.
- (45) "Retirement" or "Retire" means an engine or vehicle will be withdrawn from an active fleet in California. The engine may be sold outside of California or scrapped.
- (46) "Rubber-tired Gantry Crane or RTG Crane" means an off-road overhead cargo container crane with the lifting mechanism mounted on a cross-beam supported on vertical legs which run on rubber tires.
- (47) "Side Handler or Side Pick" means an off-road truck-like cargo container handler that uses an overhead telescopic boom to lift empty or loaded cargo containers by grabbing either two top corners on the longest side of a container, both arms of one side of a container, or both top and bottom sides of a container; also referred to as "side pick."
- (48) "Sweeper" means an off-road vehicle with attached brushes underneath that sweep the ground and pick up dirt and debris.
- (49) "Terminal" means a facility that operates cargo handling equipment at a port or intermodal rail yard.
- (50) "Top Handler or Top Pick" means an off-road truck-like cargo container handler that uses an overhead telescopic boom to lift empty or loaded cargo containers by grabbing the top of the containers; also referred to as "top pick."
- (51) "Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines (Verification Procedure)" means the Air Resources Board (ARB) regulatory procedure codified in title 13, CCR, sections 2700-2710, which is incorporated herein by reference, that engine manufacturers, sellers, owners, or operators may use to verify the reductions of diesel PM or NOx from in-use diesel engines using a particular emission control strategy.

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(52) "Verified Diesel Emission Control Strategy (VDECS)" means an emission control strategy, designed primarily for the reduction of diesel PM emissions, which has been verified pursuant to the "Verification Procedure for In-Use Strategies to Control Emissions from Diesel Engines" in title 13, California Code of Regulations, commencing with section 2700.

(53) "Yard truck" means an off-road mobile utility vehicle used to carry cargo containers with or without chassis; also known as utility tractor rig (UTR), yard tractor, yard goat, yard hostler, yard hustler, or prime mover.

(e) Requirements

(1) Newly Purchased, Leased, or Rented Equipment Performance Standards:

(A) As of January 1, 2007, except as provided for in subsection (c), no owner or operator shall operate any newly purchased, leased, or rented vehicles or equipment unless they meet the following:

1. Mobile cargo handling equipment that is registered as a motor vehicle shall be equipped with an engine that meets the on-road emission standards as specified in title 13, California Code of Regulations, section 1956.8, for the model year in which the engine is purchased.
2. Mobile cargo handling equipment that are *not* registered motor vehicles:
 - a. shall be equipped with engines that have been certified to meet the 2007 or current model year for the year purchased on-road emission standards as specified in title 13, California Code of Regulations, section 1956.8; or engines that have been certified to meet the Tier 4 off-road diesel engine requirements as specified in title 13, California Code of Regulations, section 2423 for the model year of the year purchased and the rated horsepower; or
 - b. if (a) above is not available for the specific application and equipment type, the cargo handling equipment shall 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, California Code of Regulations, section 2423 for the model year of the year purchased and rated horsepower, provided the owner or operator installs the highest level VDECS available within one year after purchase, lease, rent, or placing into service, or within 6 months of when VDECS become available, if after one year.

(2) In-Use Performance Standards for Yard Trucks

(A) In accordance with the schedule set forth below in paragraph (e)(2)(B), no owner or operator shall operate an in-use off-road yard truck at a port or intermodal rail yard unless it meets the performance standards set forth below:

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1. engine certified to 2007 or later on-road emission standards for the model year of the year purchased as specified in title 13, California Code of Regulations, section 1956.8; or
2. engine certified to Tier 4 off-road standards for the model year of the year purchased as specified in title 13, California Code of Regulations, section 2423, when effective; or
3. engine with installed VDECS that results in the engine meeting or exceeding the diesel PM and NOx emission standards of a certified Tier 4 off-road diesel engine of the same horsepower rating as specified in title 13, California Code of Regulations, section 2423.

(B) Compliance Schedules for In-Use Yard Trucks

1. All owners or operators of three or fewer yard trucks shall comply with subsection (e)(2) according to the schedule in Table 1:

Table 1: Compliance Schedule for In-Use Yard Truck Fleets of Three or Less

Off-road without VDECS

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

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

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

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

2. All owners or operators of four or more yard trucks shall comply with subsection (e)(2) according to the schedule in Table 2:

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Table 2: Compliance Schedule for In-Use Yard Truck Fleets of Four or More

Off-road without VDECS

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

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

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

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

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- a. for each compliance deadline, the percentage of yard trucks (25 percent, 50 percent, or 100 percent) that must meet the requirements of subsection (e)(2) is determined based on the total population of yard trucks for a specific model year or model year group (i.e., pre-2003) that exist in the owner's yard truck fleet at the time of the first compliance deadline for that model year or model year group; and
- b. if the number of yard trucks is not a whole number, conventional rounding practices apply (i.e., if less 0.5, round down; if 0.5 or greater, round up).

(3) In-Use Performance Standards for Non-Yard Truck Mobile Cargo Handling Equipment

- (A) In accordance with the schedule set forth in subsection (e)(3)(C), no owner or operator shall operate non-yard truck mobile cargo handling equipment unless they meet all of the following:
 1. Use of a Compliance Option for each vehicle or equipment in the active fleet as specified in paragraph (e)(3)(B) per the compliance schedule listed in Table 3; and
 2. Adherence to any special circumstances that may apply when a diesel emission control strategy is used as a Compliance Option as specified in subsection (g); and
 3. Maintenance of all records as specified in subsection (h); and
 4. Continuous Compliance. An owner or operator is required to keep all mobile cargo handling equipment in compliance with this regulation at all times, so long as the owner or operator is operating the vehicle in California.
- (B) Compliance Option. Each owner or operator shall use one of the following Compliance Options on each engine or vehicle in his fleet as required by the implementation schedule in subsection (e)(3)(C):
 1. Basic Container Handling Equipment:
 - a. An engine or power system, including a diesel, alternative fuel, or heavy-duty pilot ignition engine, certified to either the 2007 or later model year on-road emission standards for the year purchased as specified in title 13, CCR, section 1956.8, or the Tier 4 off-road diesel engine requirements for the year purchased as specified in title 13, CCR, section 2423 (when effective) for the model year and rated horsepower; or

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- b. An engine or power system certified to the on-road emission standards for the year purchased as specified in title 13, CCR, section 1956.8, or certified to the Tier 2 or Tier 3 off-road diesel engine standard for the year purchased, as specified in title 13, CCR, section 2423, and used in conjunction with the highest level diesel emission control strategy per title 13, CCR, section 2700 et seq., that is verified for a specific engine to reduce diesel particulate matter and which the diesel emission control strategy manufacturer or authorized dealer agrees can be used on a specific engine without jeopardizing the original engine warranty in effect at the time of application. If the highest level diesel emission control strategy used is Level 1, the engine or power system must be certified to the Tier 4 off-road diesel engine standards, as specified in title 13, CCR, section 2423, or apply a Level 3 VDECS by December 31, 2015; or
 - c. An engine or power system with model year prior to Tier 1 or certified to the Tier 1 off-road diesel engine standard, as specified in title 13, CCR, section 2423, and used in conjunction with the highest level diesel emission control strategy per title 13, CCR, section 2700 et seq., that is verified for a specific engine to reduce diesel particulate matter and which the diesel emission control strategy manufacturer or authorized dealer agrees can be used on a specific engine without jeopardizing the original engine warranty in effect at the time of application. If the highest level diesel emission control strategy used is Level 1 or Level 2, the engine or power system must be certified to the Tier 4 off-road diesel engine standards, as specified in title 13, CCR, section 2423 or apply a Level 3 VDECS by December 31, 2015.
2. Bulk Cargo Handling Equipment:
- a. An engine or power system, including a diesel, alternative fuel, or heavy-duty pilot ignition engine, certified to either the 2007 or later model year on-road emission standards for the year purchased as specified in title 13, CCR, section 1956.8, or the Tier 4 off-road diesel engine requirements for the year purchased as specified in title 13, CCR, section 2423 (when effective) for the model year and rated horsepower; or
 - b. An engine or power system certified to the on-road emission standards for the year purchased as specified in title 13, CCR, section 1956.8, or certified to the Tier 2 or Tier 3 off-road diesel engine standard for the year purchased, as specified in title 13, CCR, section 2423, and used in conjunction with the highest level diesel emission control strategy per title 13, CCR, section 2700 et seq., that is verified for a specific engine to reduce diesel particulate matter and which the diesel emission control strategy manufacturer or authorized dealer agrees can be used on a specific engine without jeopardizing

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the original engine warranty in effect at the time of application. If the highest level diesel emission control strategy used is Level 1, the engine or power system must be certified to the Tier 4 off-road diesel engine standards, as specified in title 13, CCR, section 2423 or apply a Level 3 VDECS by December 31, 2015; or

- c. An engine or power system with model year prior to Tier 1 or certified to the Tier 1 off-road diesel engine standard, as specified in title 13, CCR, section 2423, and used in conjunction with the highest level diesel emission control strategy per title 13, CCR, section 2700 et seq., that is verified for a specific engine to reduce diesel particulate matter and which the diesel emission control strategy manufacturer or authorized dealer agrees can be used on a specific engine without jeopardizing the original engine warranty in effect at the time of application. If the highest level diesel emission control strategy used is Level 1, the engine or power system must be certified to the Tier 4 off-road diesel engine standards, as specified in title 13, CCR, section 2423 or apply a Level 3 VDECS by December 31, 2015.

3. Rubber-Tired Gantry Cranes:

- a. An engine or power system, including a diesel, alternative fuel, or heavy-duty pilot ignition engine, certified to either the 2007 or later model year on-road emission standards for the year purchased as specified in title 13, CCR, section 1956.8, or the Tier 4 off-road diesel engine requirements for the year purchased as specified in title 13, CCR, section 2423 (when effective) for the model year and rated horsepower; or
- b. An engine or power system certified to the on-road emission standards for the year purchased as specified in title 13, CCR, section 1956.8, or certified to the Tier 2 or Tier 3 off-road diesel engine standard for the year purchased, as specified in title 13, CCR, section 2423, and used in conjunction with the highest level diesel emission control strategy per title 13, CCR, section 2700 et seq., that is verified for a specific engine to reduce diesel particulate matter and which the diesel emission control strategy manufacturer or authorized dealer agrees can be used on a specific engine without jeopardizing the original engine warranty in effect at the time of application; or
- c. An engine or power system with model year prior to Tier 1 or certified to the Tier 1 off-road diesel engine standard, as specified in title 13, CCR, section 2423, and used in conjunction with the highest level diesel emission control strategy per title 13, CCR, section 2702(f), Table 1, that is verified for a specific engine to reduce diesel particulate matter and which the diesel emission control strategy manufacturer or authorized dealer agrees can be used on a specific engine without jeopardizing the original engine warranty in effect at

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the time of application. If the highest level diesel emission control strategy used is Level 1 or Level 2, the engine or power system must be certified to the Tier 4 off-road diesel engine standards, as specified in title 13, California Code of Regulations, section 2423 or apply a Level 3 VDECS by the later of model year plus 12 years or December 31, 2015.

(C) Compliance Schedule for Non-Yard Truck Mobile Cargo Handling Equipment

1. All owners or operators of non-yard truck mobile cargo handling equipment shall comply with subsection (e)(3) according to the schedule in Table 3:

Table 3: Compliance Option Compliance Schedule for Non-Yard Truck In-Use Mobile Cargo Handling Equipment

Engine Model Years	Compliance Date ¹				
	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

- a. for each compliance deadline, the percentage of non-yard truck equipment (25 percent, 50 percent, or 100 percent) that must meet the requirements of subsection (e)(3) is determined based on the total population of non-yard truck equipment for a specific model year group (i.e., pre-1988) that exist in the owner’s non-yard truck fleet at the time of the first compliance deadline for that model year group ; and
- b. if the number of non-yard truck equipment is not a whole number, conventional rounding practices apply (i.e., if less 0.5, round down; if 0.5 or greater, round up).

(D) Alternative Compliance Plan for Non-Yard Truck Mobile Cargo Handling Equipment

1. *ARB staff is considering a possible alternative path for non-yard truck equipment that can demonstrate equivalent reductions using alternative control strategies.*

¹ Compliance date refers to December 31st of the year indicated.

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(4) Fuel Requirements

(A) As of January 1, 2007, except as provided for in subsection (c), no owner or operator of cargo handling equipment shall fuel the equipment with any fuel unless the fuel is one of the following:

1. CARB Diesel Fuel; or
2. An alternative diesel fuel that meets the requirements of the Verification Procedure; or
3. An alternative fuel; or
4. CARB Diesel Fuel used with fuel additives that meets the requirements of the Verification Procedure; or
5. Any combination of (e)(4)(A)1. through (e)(4)(A)4. above.

(B) Owners or Operators Choosing to Use Alternative Diesel Fuels. Owners or operators choosing to use alternative diesel fuels in mobile cargo handling equipment to meet the requirements of subsections (e)(2) and (e)(3) shall:

1. Maintain records in accordance with subsection (h); and
2. Use only fuel that is a VDECS alternative diesel fuel in mobile cargo handling equipment at ports or intermodal rail yards in California; and
3. Permanently affix a label in clear view near the fill spout that identifies the proper fuel that is required to be in compliance; and
4. In the event that the owner or operator decides to revert to using conventional diesel or CARB diesel fuel, the operator shall comply with the requirements of subsections (e)(2) and (e)(3) within 10 days of discontinuation of alternative diesel fuel use. Within 10 days of discontinuation, the owner or operator shall notify the Executive Officer in writing of this change in fuel use and shall include an update to any annual report submitted to comply with subsections (e)(2), (e)(3), (h), or (i).

(C) Owners or Operators that Retrofit Mobile Cargo Handling Equipment with a VDECS. Owners or operators that retrofit mobile cargo handling equipment with a VDECS that requires certain fuel properties to be met in order to achieve the required PM reduction or PM emissions shall only fuel the subject mobile cargo handling equipment with fuel that meets these specifications. In addition, owners or operators that choose a VDECS that requires certain fuel properties to be met in order to prevent damage to the VDECS or an increase in toxic air contaminants, other harmful compounds, or in the nature of the emitted PM, shall only fuel the subject mobile cargo handling equipment with fuel that meets these specifications.

(f) Compliance Extensions

An owner or operator may be granted an extension to a compliance deadline specified in subsection (e) for one of the following reasons. If a compliance extension is granted by the Executive Officer, the owner or operator shall be deemed to be in compliance as

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specified by the Executive Officer's authorization. Unless specifically stated, compliance extensions may not be combined or used consecutively, and only one compliance extension type may be granted per engine or vehicle.

- (1) Compliance Extension for an Engine Near Retirement. If an owner or operator has applied a Compliance Option to its fleet pursuant to the schedule set forth in Table 3 of subsection (e), and the next engine subject to the Compliance Options is scheduled to be retired from the active fleet within one year of the applicable compliance deadline, the owner or operator is exempt from applying a Compliance Option to that engine for up to one year, provided the owner or operator maintains appropriate records and documentation, as specified in subparagraph (h)(1)(F), regarding the assigned retirement date and the engine is retired on or before the assigned date. If upon inspection the ARB finds the aforementioned conditions not to have been met, the engine would be in noncompliance from the date that compliance was otherwise required under the schedule set forth in Table 3 of subsection (e).
- (2) Compliance Extension Based on No Verified Diesel Emission Control Strategy for Non-Yard Truck Mobile Cargo Handling Equipment. If the Executive Officer has not verified a diesel emission control strategy or one is not commercially available for a particular engine and equipment combination, an annual extension in compliance, up to a maximum of two years, may be granted by the Executive Officer. An extension may be granted upon the following circumstances:
 - (A) Executive Officer Compliance Extension. The Executive Officer shall grant a blanket one-year compliance extension if a diesel emission control strategy is not verified for an engine ten months prior to each compliance deadline specified in subsection (e)(3)(C).
 - (B) Owner or Operator Application Compliance Extension. An owner or operator may apply to the Executive Officer for a compliance extension for an engine six months prior to each compliance deadline specified in subsection (e)(3)(C). The Executive Officer shall grant an owner or operator a one-year extension upon determining that the owner or operator has provided sufficient documentation to meet the conditions set forth below. The owner or operator may, six-months prior to the expiration of the extension, apply for an additional one-year extension. In such a case, the owner or operator shall once again be required to show to the Executive Officer's satisfaction that the conditions set forth below have been met:
 1. The owner or operator must establish that it has applied a Compliance Option specified in subsection (e)(3) to all applicable engines in its fleet for which a Compliance Option is feasible pursuant to the schedule set forth in Table 3 of subsection (e).
 2. Identification of each engine for which an extension is requested by engine serial number; engine manufacturer, model year, family, and series; and type of mobile cargo handling equipment, for which a specific diesel emission control strategy would jeopardize the original engine warranty and a statement from the engine manufacturer or

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authorized dealer stating the original engine warranty would be jeopardized, or

3. Identification of each engine and equipment or vehicle combination for which an extension is requested by engine serial number; engine manufacturer, model year, family, and series; and type of mobile cargo handling equipment, for which no diesel emission control strategy is commercially available and a list of manufacturers that have been contacted with their responses to a request to purchase, and
4. A description of the reason(s) for the request for a compliance extension for each engine or engine and equipment or vehicle combination, and

(3) Use of Experimental Diesel Particulate Matter Emission Control Strategies. An annual compliance extension may be granted by the Executive Officer for the use of an experimental, or non-verified, diesel particulate matter emission control strategy if a VDECS is not available or if the owner or operator can demonstrate that the existing VDECS is not feasible for their equipment or application. The owner or operator shall keep documentation of this use in records as specified in paragraph (h)(1)(G). Each mobile cargo handling equipment engine will be considered to be in compliance for the duration of the experiment, until the extension expires. The owner or operator must bring the mobile cargo handling equipment into compliance within six months of the end of the annual compliance extension. The Executive Officer shall grant an exemption upon determining that the owner or operator has met the conditions specified below:

- (A) The engine owner or operator has applied to the Executive Officer for a compliance extension six months prior to each compliance deadline, including annually if the owner or operator wishes to continue with the experimental controls. The application must include emissions data demonstrating the experimental control achieves at least a Level 1 diesel PM emission reduction through:
1. off-road engine certification test data for the cargo handling equipment engine;
 2. engine manufacturer test data;
 3. emissions test data from a similar engine;
 4. emissions test data used in meeting the requirements of the Verification Procedure for the emission control strategy implemented; or
 5. emissions testing conducted under the following conditions:
 - a. baseline testing may be conducted with the emission control strategy in place, provided the test sample is taken upstream of the emission control strategy;
 - b. control strategy testing shall be performed on the cargo handling equipment engine with full implementation of the emission control strategy;
 - c. the percent change from baseline shall be calculated as the baseline emissions minus control strategy emissions, with the difference being divided by the baseline emissions and the result expressed as a percentage;

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- d. the same test method shall be used for determining both baseline emissions and control strategy emissions; and
 - e. diesel PM, NO_x, CO, HC, NMHC, and CO₂ testing shall be done in accordance with one of the following methods:
 - i. International Organization for Standardization (ISO) 8178 Test procedures: ISO 8178-1: 1996(E) (“ISO 8178 Part 1”); ISO 8178-2: 1996(E) (“ISO 8178 Part 2”); and ISO 8178-4: 1996(E) (“ISO 8178 Part 4”), which are incorporated herein by reference; or
 - ii. Title 13, California Code of Regulations, section 2423, “Exhaust Emission Standards and Test Procedures – Off-Road Compression Ignition Engines,” which is incorporated herein by reference.
- (B) The application for extension also includes the following: explanation demonstrating that the highest level VDECS are not feasible for the specific equipment or application (if applicable), identification of each engine (serial number, engine manufacturer, model year, family, and series), description of the emission control system to be demonstrated, the contact information for the emission control system supplier, letter of intent from the supplier that they intend to apply for verification of the experimental system;
- (C) The owner or operator must bring the mobile cargo handling equipment into compliance within six months of the end of the compliance extension period;
- (D) If VDECS are available, or become available during the extension period, and are determined to be feasible for the specific engine and equipment type, the owner or operator must demonstrate that the experimental control achieves equivalent to or better than a Level 1 VDECS; and
- (E) No experimental diesel particulate matter emission control strategy may be used on mobile cargo handling equipment after December 31, 2015.
- (4) Compliance Extension for Equipment Manufacturer Delays. An owner or operator who has purchased new equipment in order to comply with subsection (e), including an owner or operator who has been granted a compliance extension per subsections (f)(2), (f)(3), or (f)(5), will be considered to be in compliance if the new equipment has not been received due to manufacturing delays, as long as the following conditions are met:
- (A) The equipment was purchased, or the owner or operator and seller had entered into contractual agreement for the purchase, at least six months prior to the required compliance date as specified in subsection (e); and
 - (B) Proof of purchase, such as a purchase order or signed contract for the sale, including engine specifications for each applicable equipment, must be maintained by the owner or operator and provided to an agent or employee of ARB upon request.

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- (5) Compliance Extension for Yard Trucks Having VDECS with Minimum Use Requirements. If VDECS were installed on a yard truck prior to December 31, 2005, and the minimum use requirements of the VDECS is later than the compliance date as specified in subsection (e)(2)(B), compliance may be extended to a maximum of three years past the installation date of the VDECS if the following conditions exist:

- (A) The VDECS was installed using funding from a public agency; and
- (B) The funding program stipulated minimum use requirements that would expire after the required compliance date as specified in subsection (e)(2)(B).

(g) Diesel Emission Control Strategy Special Circumstances

An owner or operator shall maintain the original level of Compliance Option on each engine once that engine is in compliance, and is not required to upgrade to a higher level of Compliance Option, except under specified special circumstances, as follows:

- (1) Diesel Emission Control Strategy Failure or Damage. In the event of a failure or damage of a diesel emission control strategy, the following conditions apply:
 - (A) Failure or Damage during the Warranty Period. If a diesel emission control strategy fails or is damaged within its warranty period and the diesel emission control strategy manufacturer or authorized dealer determines it cannot be repaired, the owner or operator shall replace the diesel emission control strategy with either the same level diesel emission control strategy or another approved Compliance Option as defined in subsection (e)(3) within 90 days of diesel emission control strategy failure.
 - (B) Failure or Damage Outside of Warranty Period. If a diesel emission control strategy fails or is damaged outside of its warranty period, and it cannot be repaired, the owner or operator shall apply a Compliance Option within 90 days, as defined in subsection (e)(3).

(h) Recordkeeping Requirements

Beginning December 31, 2006, an owner or operator shall maintain the following records or copies of records at port and intermodal rail yard facilities where applicable. The owner or operator shall provide the following records for inspection to an agent or employee of ARB upon request, including copies of these records at the department's expense, for all mobile cargo handling equipment subject to compliance with the regulation:

- (1) Records Kept at Terminal. The owner or operator shall keep the following records accessible either in hard copy format or computer records at the terminal where the mobile cargo handling equipment normally resides:

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- (A) Owner or Operator Contact Information
 - 1. Company name
 - 2. Contact name, phone number, address, e-mail address
 - 3. Address of equipment

- (B) Equipment and Engine Information
 - 1. Make of equipment and engine
 - 2. Model of equipment and engine
 - 3. Engine family (if applicable)
 - 4. Engine serial number
 - 5. Year of manufacture of equipment and engine (if unable to determine, approximate age)
 - 6. Rated brake horsepower
 - 7. Control equipment (if applicable)
 - a. Type of diesel emission control strategy
 - b. Serial number of installed diesel emission control strategy
 - c. Manufacturer of installed diesel emission control strategy
 - d. Model of installed diesel emission control strategy
 - e. Installation date of installed diesel emission control strategy
 - f. Level of control (1, 2, or 3); if using a Level 1 or 2, include the reason for the choice
 - g. Documentation for Minimum Use Requirement Compliance Extension pursuant to paragraph (f)(1)

- (C) Records of maintenance for each installed diesel emission control strategy

- (D) Fuel(s) Used
 - 1. CARB Diesel
 - 2. Ultra-low sulfur (15 ppm) diesel
 - 3. Alternative diesel fuel (specify)
 - 4. Alternative fuel (specify)
 - 5. Combination (dual fuel) (specify)
 - 6. Other (specify)

- (E) Operation Information
 - 1. Describe general use of engine
 - 2. Typical load (percent of maximum bhp rating)
 - 3. Typical annual hours of operation
 - 4. If seasonal, months of year operated and typical hours per month operated

- (F) For each engine for which an owner or operator is claiming an exemption pursuant to paragraph (f)(2), the retirement date correlated to the information in paragraph (h)(1) above

- (G) For each engine for which an owner or operator is claiming an extension pursuant to paragraph (f)(4), the records of the test plan, including start and end dates of the experiment; diesel particulate matter emission control

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strategy manufacturer name and contact information (representative, address, and phone number); name and type of experimental diesel particulate matter emission control strategy; and targeted data to be generated by experiment, correlated to the information in paragraph (h)(1) above

- (H) For each engine for which an owner or operator is claiming an extension pursuant to paragraph (f)(5), the purchase order or signed contract between the owner or operator and seller of the new equipment that has been purchased in order to comply with subsection (e)
- (I) A statement of compliance, prepared beginning January 1, 2007, and renewed each January 1 thereafter until January 1, 2016, certifying that the owner's or operator's engines are in compliance as required, including the following:
 - 1. "The mobile cargo handling equipment at terminal (insert terminal name and name of port or intermodal rail yard) are in compliance with title 13, California Code of Regulations, section 2479;" and
 - 2. The owner's or operator's name, business address, business telephone; and
 - 3. The signature of the owner or operator or its agent and date signed.
- (2) Records Kept in Mobile Cargo Handling Equipment. For each mobile cargo handling equipment, the owner or operator shall keep the following information affixed to the driver's side door jamb, or another readily accessible location known by the owner or operator of each mobile cargo handling equipment, in the form of a legible and durable label:
 - (A) For each installed diesel emission control strategy, label information as specified in title 13, CCR, section 2706(g), and the installation date; or
 - (B) For each mobile cargo handling equipment that has installed a certified on-road or off-road engine in order to comply with subsection (e), the engine make, model, and installation date; or
 - (C) Engine model year and planned compliance date; or
 - (D) Engine model year and retirement date for an engine for which an owner or operator is claiming an exemption pursuant to paragraph (f)(2); or
 - (E) Engine model year and beginning and ending date of the test plan for an engine for which an owner or operator is claiming an extension pursuant to paragraph (f)(4); or
 - (F) Engine model year and date of purchase of replacement engine or equipment for which an owner or operator is claiming an extension pursuant to paragraph (f)(5).

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- (3) Each owner or operator shall maintain these records for each mobile cargo handling equipment until it is sold outside of the State of California or is no longer used at a port or intermodal rail yard in the State of California. If ownership is transferred, the seller shall convey the records to the buyer.

(i) Reporting Requirements

- (1) Compliance Plan. By January 31, 2007, each owner or operator of in-use mobile cargo handling equipment subject to the requirements of subsection (e) shall provide the following information to the Executive Officer:

- (A) Information listed in paragraph (h)(1), and

- (B) An identification of the planned control strategy (Compliance Plan) for each mobile cargo handling equipment listed in paragraph (h)(1) that, when implemented, will result in compliance with subsection (e). If applicable, the information should include the Executive Order number issued by the Executive Officer for a Diesel Emission Control Strategy that has been approved by the Executive Officer through the Verification Procedure. The Compliance Plan is not binding and can be changed by the owner or operator prior to the required compliance date(s).

- (2) Demonstration of Compliance. By no later than the earliest applicable compliance date specified in subsections (e)(2)(B) or (e)(3)(C), the owner or operator of an in-use mobile cargo handling equipment subject to the requirements of subsection (e) shall provide the following information to the Executive Officer:

- (A) Information listed in (h)(1), and

- (B) An identification of the control strategy implemented for each mobile cargo handling equipment in accordance with the requirements of subsection (e) for purposes of demonstrating compliance.

- (3) Annual Reporting. Each terminal owner or operator shall submit an annual report to the Executive Officer by January 31, 2007, and by each January 31 annually, through 2016 as described below:

- (A) Company name;

- (B) Contact name, phone number, address, e-mail address;

- (C) Address of equipment, including name of port or intermodal rail yard where equipment is operated; and

- (D) A signed affidavit stating the completeness and accuracy of the annual report.

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- (4) Reporting for Off-Road Equipment that Does Not Handle Cargo at any Time. Each terminal owner or operator to whom subsection (c)(3) applies, shall submit a report to the Executive Officer by January 31, 2007, as described below:

(A) Owner or Operator Contact Information

1. Company name
2. Contact name, phone number, address, e-mail address
3. Address of equipment

(B) Equipment and Engine Information

1. Make of equipment and engine
2. Model of equipment and engine
3. Engine family (if applicable)
4. Engine serial number
5. Year of manufacture of equipment and engine (if unable to determine, approximate age)
6. Rated brake horsepower
7. Control equipment (if applicable)
 - a. Type of diesel emission control strategy
 - b. Serial number of installed diesel emission control strategy
 - c. Manufacturer of installed diesel emission control strategy
 - d. Model of installed diesel emission control strategy
 - e. Installation date of installed diesel emission control strategy
 - f. Level of control (1, 2, or 3)

(C) Fuel(s) Used

1. CARB Diesel
2. Ultra-low sulfur (15 ppm) diesel
3. Alternative diesel fuel (specify)
4. Alternative fuel (specify)
5. Combination (dual fuel) (specify)
6. Other (specify)

(D) Operation Information

1. Describe general use of engine
2. Typical load (percent of maximum bhp rating)
3. Typical annual hours of operation
4. If seasonal, months of year operated and typical hours per month operated

(j) Right of Entry

An agent or employee of the Air Resources Board has the right of entry to port and intermodal rail yard cargo handling facilities for the purpose of inspecting on-road and off-road cargo handling equipment and their records to determine compliance to these regulations.

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(k) Prohibitions

No person who is engaged in this State in the business of selling to an ultimate purchaser, or renting or leasing new or used mobile cargo handling equipment, including, but not limited to, manufacturers, distributors, and dealers, shall sell, offer for sell, import, deliver, purchase, receive, or otherwise acquire a new or used mobile cargo handling equipment for the purpose of selling, renting, or leasing, that does not meet the performance requirements of this regulation.

(l) Severability

If any subsection, paragraph, subparagraph, sentence, clause, phrase, or portion of this regulation is, for any reason, held invalid, unconstitutional, or unenforceable by any court of competent jurisdiction, such portion shall be deemed as a separate, distinct, and independent provision, and such holding shall not affect the validity of the remaining portions of the regulation.

NOTE: Authority cited: sections 39600, 39601, 39618, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 43013, 43018, California Health and Safety Code. Reference: sections 39618, 39650, 39658, 39659, 39666, 39667, 39674, 39675, 42400 et seq., 42402 et seq., 42410, 40717.9, 43013, and 43018.