APPENDIX A: PROPOSED REGULATION ORDER REGULATION FOR IN-USE OFF-ROAD DIESEL VEHICLES

Amend sections 2449, 2449.1, 2449.2, and 2449.3 in title 13, article 4.8, chapter 9, California Code of Regulations (CCR) to read as follows:

(Note: The amendments are shown in underline to indicate additions and ~~strikeout~~ to indicated deletions. The amendments proposed as part of the Portable Diesel Engine Regulation amendments on January 28, 2010, are still pending, and therefore are shown below in double underline to indicate additions and ~~double strikeout~~ to indicate deletions.)

Article 4.8 In-Use Off-Road Diesel-Fueled Fleets

Section 2449 General Requirements for In-Use Off-Road Diesel-Fueled Fleets

(a) Purpose

The purpose of this regulation is to reduce oxides of nitrogen (NOx), diesel particulate matter (PM), and other criteria pollutant emissions from in-use off-road diesel-fueled vehicles.

(b) Applicability

Except as provided in the paragraphs below, the regulation applies to any person, business, or government agency who owns or operates within California any diesel-fueled or alternative diesel fueled off-road compression ignition vehicle engine with maximum power of 25 horsepower (hp) or greater that is used in a two-engine crane or to provide motive power in a workover rig or to provide motive power in any other motor vehicle that (1) cannot be registered and driven safely on-road or was not designed to be driven on-road, and (2) is not an implement of husbandry or recreational off-highway vehicle. Unless they are workover rigs, two-engine cranes, or two engine water well drilling rigs, vehicles that were designed to be driven on-road, and have on-road engines~~, and still meet the original manufacturer's on-road engine emission certification standard~~ are considered on-road and are specifically excluded from this regulation, even if they have been modified so that they cannot be registered and driven safely on-road. Off-road vehicles that were designed for off-road use ~~and have off-road engines~~ are considered off-road and are subject to this regulation, even if they have been modified so that they can be driven safely on-road.

This regulation also applies to any person who sells a vehicle with such an engine within California.

Persons who provide financing in the form of "finance leases," as defined in California Uniform Commercial Code Section 10103(a)(7), for in-use off-road diesel-fueled vehicles, do not "own" such vehicles for the purposes of this regulation.

Vehicles with engines subject to this regulation are used in construction, mining, rental, government, landscaping, recycling, landfilling, manufacturing, warehousing, ski industry, composting, airport ground support equipment, industrial, and other operations. The regulation does not cover locomotives, commercial marine vessels, marine engines, recreational vehicles, or combat and tactical support equipment. The regulation also does not cover stationary or portable equipment, equipment or vehicles used exclusively in agricultural operations, or equipment already subject to the Regulation for Mobile Cargo Handling Equipment at Ports and Intermodal Rail Yards. Off-road diesel vehicles owned and operated by an individual for personal, non-commercial, and non-governmental purposes are exempt from the provisions of this regulation.

(c) Definitions

(1) "Agricultural operations" means (1) the growing or harvesting of crops from soil (including forest operations) and the raising of plants at wholesale nurseries, but not retail nurseries), or the raising of fowl or animals for the primary purpose of making a profit, providing a livelihood, or conducting agricultural research or instruction by an educational institution, or (2) agricultural crop preparation services such as packinghouses, cotton gins, nut hullers and processors, dehydrators, and feed and grain mills. Agricultural crop preparation services include only the first processing after harvest, not subsequent processing, canning, or other similar activities. For forest operations, agricultural crop preparation services include milling, peeling, producing particleboard and medium density fiberboard, and producing woody landscape materials.

For purposes of this regulation, a vehicle that is used by its owner for both agricultural and nonagricultural operations is considered to be a vehicle engaged in agricultural operations, only if over half of its annual operating hours are for agricultural operations.

(2) "Airport ground support equipment" (GSE) is mobile diesel-fueled off-road compression ignition vehicles used to service and support aircraft operations. GSE vehicles perform a variety of functions, including but not limited to: aircraft maintenance, pushing or towing aircraft, transporting cargo to and from aircraft, loading cargo, and baggage handling. GSE vehicles include equipment types such as baggage tugs, belt loaders, and cargo loaders.

(3) "Alternative diesel fuel" means any fuel used in a compression ignition engine that is not a reformulated diesel fuel as defined in sections 2281 and 2282 of title 13, California Code of Regulations (CCR), 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, and emulsions of water in diesel fuel. A diesel fuel containing a fuel additive will be treated as an alternative diesel fuel unless:
(A) the additive is supplied to the vehicle or 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 vehicle or 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 or vehicle.

(4) "Alternative fuel" means natural gas, propane, ethanol, methanol, gasoline (when used in hybrid electric vehicles 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 fuels.

(5) "Best Available Control Technology" (BACT) means the Verified Diesel Emission Control Strategy ~~exhaust retrofit~~ and ~~accelerated~~ turnover requirements in section~~s~~ 2449.1(a)(2) ~~and 2449.2(a)(2).~~

(6) "Captive a~~A~~ttainment a~~A~~rea f~~F~~leet" means a fleet or an identified subpart of the fleet (fleet portion, consistent with section 2449(d)), in which all of the vehicles in the fleet or fleet portion operate exclusively within the following counties: Alpine, Colusa, Del Norte, Glenn, Humboldt, Lake, Lassen, Mendocino, Modoc, Monterey, Plumas, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz, Shasta, Sierra, Siskiyou, Trinity, Tehama, and Yuba. A fleet or identified fleet portion that operates one or more vehicles outside the counties listed above is not a captive attainment area fleet. Captive Attainment Area Fleets shall be treated as small fleets even if their total maximum power exceeds 2,500 horsepower.

~~***(7) "Carryover retrofit credit"***, as calculated under section 2449.2(a)(2)(A)2., means a way of tracking retrofits accomplished in excess of those required by the BACT retrofit requirements. Fleets may take credit for such excess retrofits in order to do less retrofitting in later years.~~

(7)~~(8)~~ "Carryover BACT ~~turnover~~ credit", as calculated under section 2449.1(a)(2)(A)2., means a way of tracking turnover or PM VDECS installations accomplished in excess of the BACT ~~turnover~~ requirements. Fleets may take credit for such excess turnover or PM VDECS installations to do less turnover or PM VDECS installations in later years.

(8)~~(9)~~ "Combat and t~~T~~actical s~~S~~upport e~~E~~quipment" means equipment that meets military specifications, is owned by the U.S. Department of Defense

and/or the U.S. military services or its allies, and is used in combat, combat support, combat service support, tactical or relief operations or training for such operations.

(9)~~(10)~~ "Common ownership or control" means being owned or managed day to day by the same person, corporation, partnership, or association. Vehicles managed by the same directors, officers, or managers, or by corporations controlled by the same majority stockholders are considered to be under common ownership or control even if their title is held by different business entities.

(10)~~(11)~~ "Compression ignition 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.

(11)~~(12)~~ "Dedicated s~~S~~now r~~R~~emoval v~~V~~ehicle" means a vehicle that is operated exclusively to remove snow from public roads, private roads, or other paths from which snow must be cleared to allow on-road vehicle access. Dedicated snow removal vehicles must have permanently affixed snow removal equipment such as a snow blower or auger and may include, but are not limited to, motor graders, loaders, and snow blowers.

(12)~~(13)~~ "Diesel fuel" has the same meaning as defined in title 13, CCR, sections 2281 and 2282.

(13)~~(14)~~ "Diesel p~~P~~articulate f~~F~~ilter" means an emission control strategy that reduces diesel particulate matter emissions by directing all of the exhaust through a filter that physically captures particles but permits gases to flow through. Periodically, the collected particles are either physically removed or oxidized (burned off) in a process called regeneration.

(14)~~(15)~~ "Diesel particulate matter" (diesel PM) means the particles found in the exhaust of diesel-fueled compression ignition engines. Diesel PM may agglomerate and adsorb other species to form structures of complex physical and chemical properties. The Air Resources Board (ARB) has identified diesel PM as a toxic air contaminant.

~~***(16) "Diesel PM Index"*** means an indicator of a fleet's overall diesel PM emission rate. The diesel PM Index for a specific fleet is determined by summing the product of the maximum power of each engine times the diesel PM Emission Factor, and dividing by the fleet's total maximum power.~~

~~***(17) "Diesel PM Target Rate"*** means the fleet average that a specific fleet must meet in a compliance year in order to show compliance with the fleet average requirements. The Diesel PM Target Rate varies depending on a fleet's~~

~~horsepower distribution. The Diesel PM Target Rate for a specific fleet for each compliance year is determined by summing (adding) the product of the maximum power of each engine times the diesel PM target, and dividing the resulting sum by the fleet's total maximum power.~~

(15)~~(18)~~ "Emergency operation" means helping alleviate an immediate threat to public health or safety. Examples of emergency operation include repairing or preventing damage to roads, buildings, terrain, and infrastructure as a result of an earthquake, flood, storm, fire, other infrequent act of nature, or terrorism. Routine maintenance or construction to prevent public health risks does not constitute emergency operation.

(16)~~(19)~~ "Emission f~~F~~actor" means ~~PM or~~ oxides of nitrogen (NOx) emission rate in grams per brake-horsepower hour (g/bhp-hr) as shown in Appendix A. ~~,~~ ~~unless the engine is a Post-2007 Flexibility Engine (see definition)~~.

~~(A)~~ Engines certified to Family Emission Limits and flexibility engines ~~certified before January 1, 2007~~ must still use the emission factors in Appendix A.

~~(B) For engines that have been retrofit with VDECS, the PM Emission Factor is reduced 50 percent for a Level 2 VDECS, and 85 percent for a Level 3 VDECS; the NOx Emission Factor is reduced by the percentage NOx emission reductions that are verified, if any. The PM Emission Factor is not reduced for a Level 1 VDECS.~~

(17)~~(20)~~ "Equipment i~~I~~dentification n~~N~~umber" means a unique identification number assigned by ARB to each vehicle in an owner's fleet subject to this regulation. All reporting and recordkeeping will link vehicle data with this number.

(18)~~(21)~~ "Executive Officer" means the Executive Officer of the ARB or his or her authorized representative.

(19)~~(22)~~ "Family e~~E~~mission l~~L~~imit" (FEL) means an emission level that is declared by the manufacturer to serve in lieu of an emission standard for certification purposes and for the averaging, banking, and trading program, as defined in title 13, CCR, section 2423.

(20)~~(23)~~ "Fleet" means all off-road vehicles and engines owned by a person, business, or government agency that are operated within California and are subject to the regulation. A fleet may consist of one or more vehicles. A fleet does not include vehicles that have never operated in California.

(21) "Fleet average index" means an indicator of a fleet's overall emission rate. The fleet average index for a specific fleet is determined by summing the product of the maximum power of each engine times the Emission Factor, and dividing by the fleet's total maximum power.

(22) "Fleet average target rate" means the fleet average that a specific fleet must meet in a compliance year in order to show compliance with the fleet average requirements. The fleet average target rate varies depending on a fleet's horsepower distribution. The fleet average target rate for a specific fleet for each compliance year is determined by summing (adding) the product of the maximum power (Max Hp) of each engine times the target, and dividing the resulting sum by the fleet's total maximum power.

(23)~~(24)~~ ***"Fleet o~~O~~wner"*** means, except as qualified below, the person who owns and has possession of the vehicles in the fleet.

"Rental or Leased Fleets" - Vehicles that are owned by a rental or leasing company and that are leased by the same lessee for a period of one year or more may be excluded from the rental company fleet and included in the fleet of the lessee only if such arrangement is delineated in the written lease agreement.

Vehicles that are rented or leased for a period of less than one year must be included in the fleet of the rental or leasing company. Off-road vehicles and engines subject to this regulation that are owned by a lessor and leased to a lessee under a "lease" as defined in California Uniform Commercial Code, section 10103(a)(10), for a duration of at least one year, dated prior to the effective date of these regulations, are considered part of the fleet of the lessee rather than the lessor.

(24)~~(25)~~ "Fleet s~~S~~ize c~~C~~ategory" - Fleets are classified by size as described below. A fleet must meet large fleet requirements if the total vehicles under common ownership or control would be defined as a large fleet. A fleet must meet medium fleet requirements if the total vehicles under common ownership or control would be defined as a medium fleet. Individual federal or state agencies may report as separate fleets, but all vehicles owned by agencies of the United States or the State of California agencies must meet the large fleet requirements. Permanent and year-by-year l~~L~~ow-use vehicles, dedicated snow-removal vehicles, and vehicles used solely for emergency operations need not be included in the total maximum power used to classify fleets by size.

(A) "Large f~~F~~leet" – A fleet with a total maximum power (as defined below) greater than 5,000 horsepower (hp). A fleet must meet large fleet requirements if the total vehicles under common ownership or control would be defined as a large fleet. All fleets owned by the United States, the State of California, or agencies thereof (i.e., an agency in the judicial, legislative, or executive branch of the federal or state government) will be considered as a unit whole and must meet the large fleet requirements.

(B) "Medium f~~F~~leet" – A fleet that is not a small or large fleet.

(C) "Small f~~F~~leet" – A fleet with total maximum power of less than or equal to 2,500 hp that is owned by a business, non-profit organization, or local municipality, or a local municipality fleet in a low population county

irrespective of total maximum power, or a non-profit training center irrespective of total maximum power, or a captive attainment area fleet.

(25)~~(26)~~ "Forest operations" means (A) forest fire prevention activities performed by public agencies, including but not limited to construction and maintenance of roads, fuel breaks, firebreaks, and fire hazard abatement or (B) cutting or removal or both of timber, other solid wood products, including Christmas trees, and biomass from forestlands for commercial purposes, together with all the work incidental thereto, including but not limited to, construction and maintenance of roads, fuel breaks, firebreaks, stream crossings, landings, skid trails, beds for falling trees, fire hazard abatement, and site preparation that involves disturbance of soil or burning of vegetation following forest removal activities. Forest operations include the cutting or removal of trees, tops, limbs and or brush which is processed into lumber and other wood products, and or for landscaping materials, or biomass for electrical power generation. Forest operations do not include conversion of forestlands to other land uses such as residential or commercial developments.

~~(26)(27) "Highest Level Verified Diesel Emission Control Strategy" (VDECS)~~ ~~means the highest level VDECS verified by ARB under its *Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emission from Diesel Engines* (*Verification Procedure*), title 13, CCR, sections 2700-2710, for a specific engine as of 10 months prior to the compliance date, which (1) can be used without impairing the safe operation of the vehicle as demonstrated per section 2449(e)(8), and (2) the diesel emission-control strategy manufacturer and authorized diesel emission-control strategy dealer agree can be used on a specific engine and vehicle combination without jeopardizing the original engine warranty in effect at the time of application.~~

~~Plus designations do not matter; that is, a Level 3 Plus is the same diesel PM level as Level 3; and Level 2 Plus is the same diesel PM level as Level 2.~~

~~The highest level VDECS is determined solely based on verified diesel PM reductions, not based on verified NOx reductions. All Level 3 diesel PM devices are higher than all Level 2 diesel PM devices. Level 1 devices are never considered highest level VDECS for the purpose of this regulation.~~

(26)~~(28)~~ ***"Hour m~~M~~eter l~~L~~og"*** means a log of the hours that a vehicle operated directly taken from the vehicle's hour meter.

(27)~~(29)~~ "Implement of husbandry" is as defined in California Vehicle Code (Veh.Code) division 16.

(28)~~(30)~~ "Local m~~M~~unicipality" means a city, county, city and county, special district, or other public agency, or two or more public entities acting jointly, or the duly constituted body of an Indian reservation or rancheria. Agencies of the

United States of America or the State of California, and departments, divisions, public corporations, or public agencies of this State or of the United States are not considered local municipalities.

(29)~~(31)~~ "Low- p~~P~~opulation c~~C~~ounty l~~L~~ocal m~~M~~unicipality f~~F~~leet" means a fleet owned by a local municipality (as defined above) that is located in a county as defined in title 13, CCR, section 2022(b)(2) and identified in section 2022(c)(2), Table 2, or, using the criteria set forth in title 13, CCR, section 2022.1(c)(4), a local municipality not located in a low-population county that has requested and has received Executive Officer approval to be treated like a municipality in a low-population county. Fleets owned by such local municipalities shall be treated as small fleets even if their total maximum power exceeds 2,500 horsepower.

~~***(32) "Low-use vehicle"*** means a vehicle that operated in California less than 100 hours during the preceding 12-month period running from March 1 to end of February. For example, when reporting in 2009, the hours of use between March 1, 2008 and February 28, 2009 would be used to determine low-use status. To be considered a low-use vehicle, the fleet owner must submit engine operation data from a functioning non-resettable hour meter.~~

~~**(A) Vehicles used outside California** - Vehicles that operate both inside and outside of California can meet the low-use vehicle definition if they are used less than 100 hours per year in California.~~

~~**(B) Three-year rolling average** - A vehicle operated only in California for the previous three years and owned by the same owner during that period will be considered low-use if it operated on average less than 100 hours per year during that previous three-year period.~~

~~**(C) Emergency operation hours** - Hours used for emergency operations are not counted when determining low-use status.~~

(30)~~(33)~~ "Maximum power" (Max Hp) means the engine's net horsepower or net flywheel power certified to Society of Automotive Engineers (SAE) Method J1349 or International Organization for Standardization (ISO) Method 9249. If the engine's net horsepower or net flywheel power certified to SAE Method J1349 or ISO Method 9249 is not readily available, another net horsepower or net flywheel power from the manufacturer's sales and service literature or horsepower from the engine label may be used.

(31)~~(34)~~ "Model year" has the same meaning as defined in title 13, CCR, section 2421(a)(37).

(32)~~(35)~~ "Motor vehicle" has the same meaning as defined in Veh. Code section 415.

(33)~~(36)~~ "New fleet" means a fleet that is acquired or that enters California after January 1, 2011 ~~March 1, 2009~~. Such fleets may include new businesses or out-

of-state businesses that bring vehicles into California for the first time after January 1, 2011 ~~March 1, 2009.~~

~~***(37) "NOx index"*** means an indicator of a fleet's overall NOx emission rate. The NOx Index for a specific fleet is determined by summing the product of the maximum power of each engine times the NOx Emission Factor, and dividing by the fleet's total maximum power.~~

~~***(38) "NOx target rate"*** means the NOx fleet average that a specific fleet must meet in a compliance year in order to show compliance with the fleet average requirements. The NOx Target Rate varies depending on a fleet's horsepower distribution. The NOx Target Rate for a specific fleet for each compliance year is determined by summing (adding) the product of the maximum power (Max Hp) of each engine times the NOx target, and dividing the resulting sum by the fleet's total maximum power.~~

(34)~~(39)~~ "Non- p~~P~~rofit t~~T~~raining c~~C~~enter" means an entity that operates a program for training in the use of off-road vehicles and that (A) is a community college program that trains students in the use of off-road vehicles or (B) qualifies as a non profit or not for profit organization under title 26 Internal Revenue Code section 501(a), (c)(3), (c)(5), or (c)(6). Any vehicles that are not used for an off-road training program are not considered part of a non-profit training center and must be considered a separate fleet.

(35)~~(40)~~ "Off-highway vehicle" is defined in Veh. Code division 16.5.

(36)~~(41)~~ "Operator l~~L~~og" means a log of the hours that a vehicle operated taken from records of vehicle operator hours.

(37)~~(42)~~ "Oxides of nitrogen" (NOx) means compounds of nitric oxide, nitrogen dioxide, and other oxides of nitrogen. Nitrogen oxides are typically created during combustion processes and are major contributors to smog formation and acid deposition.

(38) "Permanent low-use vehicle" means a vehicle that a fleet owner limits to 200 hours of use in all following years, defined as the 12-month period running from January 1 through December 31. For example, if a fleet designates a vehicle as permanent low-use at any point in 2014, that vehicle cannot be used more than 200 hours between January 1, 2015, and December 31, 2015, or during any subsequent January 1 to December 31 period. To be considered a permanent low-use vehicle, the fleet owner must submit the engine hours of operation from a functioning non-resettable hour meter.

(A) Vehicles used outside California - Vehicles that operate both inside and outside of California can meet the permanent low-use vehicle definition if they are used less than 200 hours per year in California.

(B) Emergency operation hours - Hours used for emergency operations are not counted when determining permanent low-use status.

(C) Future increase in hours – Once designated as permanent low use, a vehicle may never again be used more than 200 hours per year by the fleet unless the vehicle meets the adding vehicles requirements in section 2449(d)(6). If the vehicle meets the adding vehicle requirements, the fleet may increase the use to over 200 hours per year, and report the updated status of the vehicle to remove the low-use designation.

(D) No obligation – A fleet is not obliged to designate a vehicle whose use drops below 200 hours per year as a permanent low-use vehicle. If such a vehicle is not designated as permanent low use, its use may increase beyond 200 hours per year in subsequent years without meeting the adding vehicles requirements in section 2449(d)(6).

(39) ~~*(43)*~~ ***"Post-2007 f~~F~~lexibility e~~E~~ngine"*** means an engine certified on or after January 1, 2007 to the implementation flexibility standards in title 13, CCR, section 2423(d). Such flexibility engines are generally labeled as follows by the engine manufacturer:

"THIS ENGINE COMPLIES WITH CALIFORNIA EMISSION REQUIREMENTS UNDER 13 CCR 2423(d)…" or
"THIS ENGINE CONFORMS TO CALIFORNIA OFF-ROAD COMPRESSION-IGNITION ENGINE REGULATIONS UNDER 13 CCR, 2423(d)."

~~Post-2007 flexibility engines should use the emission standard to which the engine is certified. For example, a Tier 4 engine flexed back to Tier 2 emission levels should use the Tier 2 PM standard in title 13, CCR, section 2423(b)(1)(A) as the emission factor (converted from grams per kilowatt hour (g/kW-hr) to g/bhp-hr by multiplying by 0.746).~~

(40)~~(44)~~ "Queuing" means the intermittent starting and stopping of a vehicle while the driver, in the normal course of doing business, is waiting to perform work or a service, and when shutting the vehicle engine off would impede the progress of the queue and is not practicable. Queuing does not include the time a driver may wait motionless in line in anticipation of the start of a workday or opening of a location where work or a service will be performed.

(41)~~(45)~~ "Registered and driven safely on-road" means a vehicle meets the requirements to be registered for on-road operation in Veh. Code division 3, chap. 1, article 1, sections 4000 et seq. (i.e., required to be registered or could be registered), and the requirements to be driven safely on-road in "Equipment of Vehicles" requirements in Veh. Code division 12, chap. 1, sections 24000 et seq. and "Size, Weight, and Load" requirements in Veh. Code division 15, sections 35000 et seq. Having a California Special Construction Equipment

plate as defined in California Veh. Code sections 565 and 570 does not constitute registration.

(42)~~(46)~~ "Replacement" means the addition of off-road diesel vehicles to a fleet that had retired one or more off-road diesel vehicles of an equivalent horsepower.

(43)~~(47)~~ "Repower" means to replace the engine in a vehicle with another engine meeting a subsequent engine emissions standard (e.g., replacing a Tier 0 engine with a Tier 2 or later engine).

(44)~~(48)~~ "Responsible o~~O~~fficial" means one of the following:

(A) For a corporation: A president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation,

(B) For a partnership or sole proprietorship: a general partner or the proprietor, respectively

(C) For a municipality, state, federal, or other public agency: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of the U.S. EPA).

(45)~~(49)~~ "Retire" means to take an engine out of service and not operate it again in the State of California. To retire an engine, the vehicle with the engine may be moved outside of California, sold, or scrapped.

(46)~~(50)~~ "Snow removal operations" means removing snow from public roads, private roads, or driveways.

(47)~~(51)~~ "Specialty vehicle" means a vehicle for which no used vehicle with a cleaner engine that can serve an equivalent function and perform equivalent work is available.

(48)~~(52)~~ "Tier 0 e~~E~~ngine" means an engine not subject to the requirements in title 13, CCR, section 2423; Title 40, Code of Federal Regulations (CFR), Part 89; or Title 40, CFR, Part 1039.

(49)~~(53)~~ "Tier 1 e~~E~~ngine" means an engine subject to the Tier 1 new engine emission standards in title 13, CCR, section 2423(b)(1)(A) and/or Title 40, CFR, Part 89.112(a). This also includes engines certified under the averaging, banking, and trading program with respect to the Tier 1 Family Emission Limits (FEL) listed in title 13, CCR, section 2423(b)(2)(A) and/or Title 40, CFR, Part 89.112(d).

(50)~~(54)~~ "Tier 2 e~~E~~ngine" means an engine subject to the Tier 2 new engine emission standards in title 13, CCR, section 2423(b)(1)(A) and/or Title 40, CFR, Part 89.112(a). This also includes engines certified under the averaging, banking, and trading program with respect to the Tier 2 FEL listed in title 13, CCR, section 2423(b)(2)(A) and/or Title 40, CFR, Part 89.112(d).

(51)~~(55)~~ "Tier 3 e~~E~~ngine" means an engine subject to the Tier 3 new engine emission standards in title 13, CCR, section 2423(b)(1)(A) and/or Title 40, CFR, Part 89.112(a). This also includes engines certified under the averaging, banking, and trading program with respect to the Tier 3 FEL listed in title 13, CCR, section 2423(b)(2)(A) and/or Title 40, CFR, Part 89.112(d).

(52)~~(56)~~ "Tier 4 Final e~~E~~ngine" means an engine subject to the final after-treatment-based Tier 4 emission standards in title 13, CCR, section 2423(b)(1)(B) and/or Title 40, CFR, Part 1039.101. This also includes engines certified under the averaging, banking, and trading program with respect to the Tier 4 FEL listed in title 13, CCR, section 2423(b)(2)(B) and/or Title 40, CFR, Part 1039.101.

(53)~~(57)~~ "Tier 4 Interim e~~E~~ngine" means an engine subject to the interim Tier 4 emission standards (also known as transitional) in title 13, CCR, section 2423(b)(1)(B) and/or Title 40, CFR, Part 1039.101. This also includes engines certified under the averaging, banking, and trading program with respect to the Tier 4 FEL listed in title 13, CCR, section 2423(b)(2)(B) and/or Title 40, CFR, Parts ~~1039.101~~1039.102 and 1039.104(g).

(54)~~(58)~~ "Total maximum power" means the sum of maximum power for all of a fleet's engines that are subject to this regulation. Permanent and year-by-year l~~L~~ow-use vehicles, dedicated snow-removal vehicles, and vehicles used solely for emergency operations need not be included in the sum.

(55) "Turnover" means retiring a vehicle, designating a vehicle that formerly operated 200 hours or more per year as a permanent low-use vehicle, repowering a vehicle, rebuilding the engine to a more stringent emissions configuration, or applying a Verified Diesel Emission Control Strategy verified to reduce NOx emissions.

(56)~~(59)~~ "Two- e~~E~~ngine c~~C~~rane" means a mobile diesel-powered machine with a hoisting mechanism mounted on a specially constructed truck chassis or carrier; one engine provides motive power, and a secondary engine is used to lift and move materials and objects.

(57) "Two-engine water well drilling rig" means a mobile diesel-powered drilling rig owned by a water well drilling contractor with a current, valid C-57 license issued by the Contractors State License Board of California and used exclusively to drill water wells with a drilling mechanism mounted on a specialty constructed

truck chasses or carrier; one engine provides motive power, and a secondary engine is used to power the drilling mechanism.

(58)~~(60)~~ "Verified Diesel Emission Control Strategy" (VDECS) means an emissions control strategy~~, designed primarily for the reduction of diesel PM emissions,~~ which has been verified pursuant to the *Verification Procedures, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emission from Diesel Engines (Verification Procedure), title 13, CCR, sections 2700-2710.* VDECS can be verified to reduce PM emissions, or NOx emissions, or both. ~~VDECS can be verified to achieve Level 1 diesel PM reductions (25 percent), Level 2 diesel PM reductions (50 percent), or Level 3 diesel PM reductions (85 percent). VDECS may also be verified to achieve NOx reductions. See also definition of Highest Level VDECS.~~

(A) ***"Highest level PM VDECS"*** means the highest level VDECS verified by ARB to reduce PM under its Verification Procedure. The highest level is determined solely based on verified diesel PM reductions, not based on verified NOx reductions. VDECS can be verified to achieve Level 1 diesel PM reductions (25 percent), Level 2 diesel PM reductions (50 percent), or Level 3 diesel PM reductions (85 percent). All Level 3 diesel PM devices are higher than all Level 2 diesel PM devices. Level 1 PM devices are never considered highest level PM VDECS for the purpose of this regulation. Plus designations do not matter; that is, a Level 3 Plus is the same diesel PM level as Level 3; and Level 2 Plus is the same diesel PM level as Level 2. A PM VDECS shall be considered the highest level PM VDECS only if it (1) can be used without impairing the safe operation of the vehicle as demonstrated per section 2449(e)(8), and (2) the diesel emission-control strategy manufacturer and authorized diesel emission-control strategy dealer agree can be used on a specific engine and vehicle combination without jeopardizing the original engine warranty in effect at the time of application.

(**B)** "**VDECS verified to *r*educe NOx"** means VDECS verified by ARB to reduce NOx under its Verification Procedure. NOx VDECS are not verified by Level, but are verified by the percent reduction in NOx emissions from the engine achieved by the VDECS. See also definition of Verified Percent NOx Reduction.

(59) "Verified percent NOx reduction" means the verified percent reduction in NOx emissions from the engine achieved by the VDECS Verified to Reduce NOx.

(60)~~(61)~~ "VDECS f~~F~~ailure" means the condition of not achieving the emissions reductions to which the VDECS is verified. Such condition could be due to inappropriate installation, damage, or deterioration during use. If a Level 3 VDECS is emitting visible smoke, it ~~should~~shall be assumed to have failed.

(61)~~(62)~~ "Workover rig" means a mobile self-propelled rig used to perform one or more remedial operations, such as deepening, plugging back, pulling and

resetting liners, on a producing oil or gas well to try to restore or increase the well's production.

(62) "Year-by-year low-use vehicle" means a vehicle that operated in California less than 200 hours during the preceding 12-month period running from January 1 to December 31. For example, when reporting in 2014, the hours of use between January 1, 2013 and December 31, 2013 would be used to determine year-by-year low-use status. To be considered a year-by-year low-use vehicle, the fleet owner must submit engine operation data from a functioning non-resettable hour meter.

(A) Vehicles used outside California - Vehicles that operate both inside and outside of California can meet the year-by-year low-use vehicle definition if they are used less than 200 hours per year in California.

(B) Three-year rolling average - A vehicle operated only in California for the previous three years and owned by the same owner during that period will be considered year-by-year low-use if it operated on average less than 200 hours per year during that previous three-year period.

(C) Emergency operation hours - Hours used for emergency operations are not counted when determining year-by-year low-use status.

(d) Performance Requirements –

Fleets that are subject to fleet average requirements may include vehicles and systems used in place of diesel vehicles in their fleet average index and target rate calculations as described in subsection (1) below. ~~Fleets that are subject to fleet average requirements may opt to include hours of operation in the fleet average calculation as described in subsection (2) below.~~ Each fleet must meet the performance requirements in subsections ~~(3) to (10)~~(2) to (9) below. There are differing requirements for large, medium, and small fleets. If various portions of a fleet are under the control of different responsible officials because they are part of different subsidiaries, divisions, or other organizational structures of a company or agency, the fleet portions may comply with the performance requirements separately and be reported separately. However, the total maximum power of the vehicles under common ownership or control determines the fleet size. Captive attainment area fleets, non-profit training centers, and ~~F~~fleets owned by low-population county local municipalities are subject to the small fleet requirements, even if their total maximum power exceeds 2,500 horsepower. Section ~~2449(d)(4)~~2449(d)(3) describes requirements for fleets that change in size.

(1) Vehicles and Systems Used in Place of Diesel Vehicles - Fleets with electric, ~~or~~ alternative fuel, or gasoline-powered vehicles may include such vehicles in their fleet average index and target rate calculations as follows:

(A) ~~Electric and~~ Alternative Fuel and Gasoline-powered Vehicles ~~Purchased on or after January 1, 2007~~

1. Fleets may include an ~~electric and~~ alternative fuel or gasoline-powered vehicle ~~purchased on or after January 1, 2007,~~ with a maximum power 25 horsepower or greater ~~(~~or that replaced a diesel vehicle with maximum

power 25 horsepower or greater~~)~~ in their fleet average index if all of the following conditions are met:

a. The owner can demonstrate it serves a function and performs the work equivalent to that of diesel vehicles and is used for a purpose for which diesel vehicles are predominantly used,

b. The~~ electric or alternative fuel~~ vehicle is used predominantly outdoors,

c. The~~ electric or alternative fuel~~ vehicle is not already included in the fleet average emission level requirements for large spark ignition engine fleets in title 13, Section 2775.1; and

d. ~~If the vehicle is an alternative fuel vehicle, t~~The owner must demonstrate that it is certified to a NOx standard less than or equal to the Tier 1 NOx standard for the same horsepower in title 13, CCR, section 2423(b)(1)(A) and is less than or equal to the NOx emissions of a diesel engine of the same model year and horsepower.

e. If the vehicle is a gasoline-powered vehicle, the owner can identify the diesel vehicle that the gasoline-powered vehicle replaced and show that the diesel vehicle was retired from the fleet within 6 months of the date that the gasoline-powered vehicle was added to the fleet.

2. Fleets may include a diesel vehicle with a maximum power 25 horsepower or greater that has been repowered with an alternative fueled or gasoline-powered engine in their fleet average index and target rate calculations.

3. For the purposes of compliance with section 2449.1(a)(1):

a. Alternative fuel vehicles - Each alternative fuel vehicle, or diesel vehicle that has been repowered with an alternative fuel engine, shall use an Emission Factor equal to the NOx emission standard to which its engine is certified in g/bhp-hr. If the alternative fuel vehicle or engine is not certified to a NOx emission standard, the owner may apply to the Executive Officer to use an emission factor. In the application, the owner must demonstrate that the chosen emission factor is appropriate and not exceeded by the alternative fuel vehicle.

b. Gasoline-powered vehicles – Each gasoline powered vehicle, or vehicle that has been repowered with a gasoline-powered engine, shall use an Emission Factor equal to the gasoline-powered vehicle's or engine's HC+NOx certified emission standard in g/bhp-hr multiplied by 0.95.

4.~~2.~~ Fleets may include a diesel vehicle with a maximum power 25 horsepower or greater that has been converted to alternative fuel or gasoline-power in their fleet average index and target rate calculations. The Emission Factor ~~for NOx~~ remains the same as the emission factor for the diesel vehicle. ~~The Emission Factor for PM is 0.~~

~~3. For the purposes of compliance with sections 2449.1(a)(1) and 2449.2(a)(1), electric vehicles shall be credited as follows:~~

~~**a. Max Hp for Electric Vehicles** - For an electric vehicle that replaced a diesel vehicle in the owner's fleet, the maximum power of the diesel vehicle replaced may be used as the electric vehicle's *Max Hp*. For an electric vehicle added to the fleet, the fleet owner may apply to the~~

~~Executive Officer to use the maximum power of a diesel vehicle that serves the same function and performs equivalent work to that of the electric vehicle. In making his or her determination, the Executive Officer will approve the use of the minimum *Max Hp* of a diesel vehicle that would be required to perform the same functions and equivalent work. If no request to the Executive Officer is received, the electric vehicle's own maximum power rating should~~shall ~~be used.~~

~~**b. Double Credit for Electric in 2010-2016** - For compliance dates in 2010 through 2016, the *Max Hp* of all electric vehicles purchased on or after January 1, 2007 may be doubled in determining the *Max Hp* that is used in calculating the Diesel PM Index, and as appropriate, NOx Index. An *Emission Factor* of 0 may be used. The *Max Hp* of each electric vehicle is included but not doubled in the calculation of Diesel PM Target Rate and NOx Target Rate.~~

~~**c. Single Credit for Electric in 2017 and Later** - For compliance dates in year 2017 and later, the *Max Hp* of all electric vehicles purchased on or after January 1, 2007 is used in determining the *Max Hp* that is used in calculating the Diesel PM and NOx Target Rates, Diesel PM Index, and, as appropriate, NOx Index. An *Emission Factor* of 0 may be used.~~

~~4. For the purposes of compliance with sections 2449.1(a)(1) and 2449.2(a)(1), each alternative fuel vehicle should~~shall ~~use an Emission Factor equal to the emission standard to which its engine is certified in g/bhp-hr. If the alternative fuel vehicle is not certified to a NOx or diesel PM emission standard, the owner may apply to the Executive Officer to use an emission factor. In the application, the owner must demonstrate that the chosen emission factor is appropriate and not exceeded by the alternative fuel vehicle.~~

(B) Electric Vehicles ~~and Alternative Fuel Vehicle Purchased Prior to January 1, 2007~~

1. Fleets may include an electric vehicle with a maximum power 25 horsepower or greater ~~(~~or that replaced a diesel vehicle with maximum power 25 horsepower or greater~~)~~ in their fleet average index if all the following conditions are met:
   a. The owner can demonstrate it serves a function and performs the work equivalent to that of diesel vehicles and is used for a purpose for which diesel vehicles are predominantly used;
   b. The electric vehicle is used predominately outdoors; and
   c. The electric vehicle is not already included in the fleet average emission level requirements for large spark ignition engine fleets in title 13, Section 2775.1.
2. For the purposes of compliance with sections 2449.1(a)(1), electric vehicles shall be credited as follows:
   a. ~~1.~~ **GSE Electric Vehicles Purchased Prior to January 1, 2007 -** ~~:~~ Electric airport GSE vehicles with a maximum power of 25 horsepower or greater ~~(~~or that replaced a diesel vehicle with maximum power 25

horsepower or greater~~)~~ purchased prior to January 1, 2007, may be partially counted in the fleet average calculations as follows:

i.~~a.~~ Max Hp for Electric Vehicles - For an electric vehicle that replaced a diesel vehicle in the owner's fleet, the maximum power of the diesel vehicle replaced may be used as the electric vehicle's *Max Hp*. Otherwise, the electric vehicle's own maximum power rating ~~should~~shall be used.

ii.~~b.~~ Include such vehicle's *Max Hp* times 0.2 as the *Max Hp* in calculating the Fleet Target Rate~~, Diesel PM Index,~~ and, as appropriate, ~~NOx~~ Fleet Average Index in section~~s~~ 2449.1(a)(1), along with an Emission Factor of 0.

b. Non-GSE Electric Vehicles Purchased Prior to January 1, 2007 –

Electric vehicles with a maximum power of 25 horsepower or greater or that replaced a diesel vehicle with maximum power 25 horsepower or greater, purchased prior to January 1, 2007, may be counted in the fleet average calculations as follows:

i. Max Hp for Electric Vehicles - For an electric vehicle that replaced a diesel vehicle in the owner's fleet, the maximum power of the diesel vehicle replaced may be used as the electric vehicle's *Max Hp*. Otherwise, the electric vehicle's own maximum power rating shall be used.

ii. Include such vehicle's *Max Hp* as the *Max Hp* in calculating the Fleet Target Rate, and, as appropriate, the Fleet Average Index in section 2449.1(a)(1), along with an Emission Factor of 0.

c. Electric Vehicles Purchased on or after January 1, 2007

i. Max Hp for Electric Vehicles - For an electric vehicle that replaced a diesel vehicle in the owner's fleet, the maximum power of the diesel vehicle replaced may be used as the electric vehicle's *Max Hp*. For an electric vehicle added to the fleet, the fleet owner may apply to the Executive Officer to use the maximum power of a diesel vehicle that serves the same function and performs equivalent work to that of the electric vehicle. In making his or her determination, the Executive Officer will approve the use of the minimum *Max Hp* of a diesel vehicle that would be required to perform the same functions and equivalent work. If no request to the Executive Officer is received, the electric vehicle's own maximum power rating shall be used.

ii. Double Credit for Electric in 2014-2016 - For compliance dates in 2014 through 2016, the *Max Hp* of all electric vehicles purchased on or after January 1, 2007 may be doubled in determining the *Max Hp* that is used in calculating the Fleet Average Index. An Emission Factor of 0 may be used. The *Max Hp* of each electric vehicle is included but not doubled in the calculation of Fleet Average Target Rate.

iii. Single Credit for Electric in 2017 and Later - For compliance dates in year 2017 and later, the *Max Hp* of all electric vehicles

purchased on or after January 1, 2007 is used in determining the *Max Hp* that is used in calculating the Fleet Average Target Rate, and the Fleet Average Index. An Emission Factor of 0 may be used.

3. Electric vehicles need not be included when determining fleet size, or when calculating the required horsepower for the BACT requirements in section 2449.1(a)(2).

~~2. Non-GSE:~~

~~a. Fleet owners may count a non-GSE electric or alternative fuel vehicle purchased prior to January 1, 2007 in the fleet average calculations if all of the following conditions are met:~~

~~i. The owner can demonstrate it serves a function and performs the work equivalent to that of diesel vehicles and is used for a purpose for which diesel vehicles are predominantly used,~~

~~ii. the electric or alternative fuel vehicle is used predominantly outdoors,~~

~~iii. the vehicle is not already counted toward the fleet average emission level requirements for large spark ignition engine fleets in title 13, CCR, section 2775.1; and~~

~~iv. if the vehicle is alternative fuel vehicle with a certified NOx emission level, the certified NOx emission levels are lower than the NOx standard for the same model year and horsepower in section 2423(b)(1) and Title 40, CFR, Part 89.112(a) and Title 40, CFR, Part 1039.101.~~

~~b. Include such vehicle's *Max Hp* as the *Max Hp* in the calculating the Target Rate, Diesel PM Index, and, as appropriate, NOx Index in sections 2449.1(a)(1) and 2449.2(a)(1). For an electric vehicle, use an *Emission Factor* of 0. For an alternative fuel vehicle, use an Emission Factor equal to the emission standard to which its engine is certified in g/bhp-hr. If the alternative fuel vehicle is not certified to a NOx or diesel PM emission standard, the owner may apply to the Executive Officer to use an emission factor. In the application, the owner must demonstrate that the chosen emission factor is appropriate and not exceeded by the alternative fuel vehicle.~~

(C) Stationary or Portable System Used to Replace Mobile Diesel Vehicle

Fleet owners may apply to the Executive Officer to include electric portable or electric stationary systems that replace mobile diesel vehicles, such as an electric conveyor system used to replace diesel haul trucks at a mine, in the fleet average calculations. The system may be considered in the fleet average calculations by including the maximum power of the diesel vehicles replaced in the calculations of the Fleet Average Target Rate, ~~Diesel PM Index,~~ and ~~NOx~~ Fleet Average Index above, along with an Emission Factor of 0. In order to count such a system, all the following conditions must be met:

1. The owner must demonstrate that it replaced an off-road diesel fueled vehicle subject to this regulation on or after January 1, 2007, and

2. The system is not already counted toward the fleet average emission level requirements for large spark ignition engine fleets in title 13, CCR, section 2775.1 or for portable diesel engine fleets in title 17, CCR, section 93116.3.

(D) Hybrid Off-Road Vehicles

Fleets may include a hybrid off-road diesel vehicle with a maximum power 25 horsepower or greater in their fleet average index and target rate calculation. The Emission Factor for the hybrid vehicle shall be equal to the NOx emission standard to which its engine is certified in g/bhp-hr. If a fleet owner wishes to use different Emission Factor, other than the standard to which the engine is certified, the owner may apply to the Executive Officer to use an alternative emission factor. The Executive Officer shall approve the alternative emission factor if, in the fleet owner's application, the owner demonstrates that the chosen emission factor is appropriate and not exceeded by the hybrid vehicle.

~~**(D) Gasoline-Powered Vehicles Used to Replace Diesel Vehicles -** Fleets may include a gasoline-powered vehicle of 25 horsepower or greater that replaces a diesel vehicle on or after January 1, 2007 in their fleet average only if all the following conditions are met:~~

~~1. The owner can identify the diesel vehicle that the gasoline-powered vehicle replaced and show that the diesel vehicle was retired from the fleet within 6 months of the date that the gasoline-powered vehicle was added to the fleet.~~

~~2. The gasoline-powered vehicle serves the same function as the diesel vehicle that it replaced and is of similar horsepower.~~

~~3. The fleet would continue to be in compliance with the fleet average emission level requirements for large spark ignition engine fleets in title 13, CCR, section 2775.1 if the gasoline-powered vehicle that replaces a diesel vehicle were excluded from the large spark ignition average.~~

~~4. The owner must demonstrate the gasoline-powered vehicle is certified to a NOx standard less than or equal to the Tier 1 NOx standard for the same horsepower in title 13, CCR, section 2423(b)(1)(A) and less than or equal to the NOx emissions of a diesel engine of the same model year and horsepower.~~

~~If qualified, the gasoline-powered vehicle may use the maximum horsepower of the diesel vehicle replaced, a diesel PM emission factor of zero (0), and a NOx emission factor equal to the gasoline-powered vehicle's HC+NOx certified emission standard in g/bhp-hr multiplied by 0.95.~~

~~***(2) Hours in Fleet Average Option*** – As an alternative to the formulas for calculating NOx index and diesel PM index in sections 2449.1(a)(1) and 2449.2(a)(1), fleet owners may opt to include annual hours of operation for all engines in the fleet on the compliance date in the calculation as follows:~~

~~NOx Index = 1.18 times [SUM of (Max Hp for each engine in fleet on compliance date multiplied by NOx Emission Factor for each engine in fleet on~~

~~compliance date multiplied by Annual Hours of Operation for each engine in fleet on compliance date since the previous year's compliance date)] divided by [SUM of (Max Hp for each engine in fleet on compliance date multiplied by Annual Hours of Operation for each engine in fleet on compliance date since the previous year's compliance date)]~~

~~Diesel PM Index = 1.18 times [SUM of (Max Hp for each engine in fleet on compliance date multiplied by PM Emission Factor for each engine in fleet on compliance date multiplied by Annual Hours of Operation for each engine in fleet on compliance date since the previous year's compliance date)] divided by [SUM of (Max Hp for each engine in fleet on compliance date multiplied by Annual Hours of Operation for each engine in fleet on compliance date since the previous year's compliance date)]~~

~~Fleets that choose this option must have non-resettable hour meters on each vehicle in the fleet and must include hours in all index calculations for the compliance date.~~

(2)~~(3)~~ Idling - The idling limits in section ~~2449(d)(3)~~2449(d)(2) shall be effective and enforceable immediately upon this regulation being certified by the Secretary of State. Fleets must meet the following idling limits.

(A) Idling Limit - No vehicle or engines subject to this regulation may idle for more than 5 consecutive minutes. Idling of a vehicle that is owned by a rental company is the responsibility of the renter or lessee, and the rental agreement ~~should~~shall so indicate. The idling limit does not apply to:

1. idling when queuing,
2. idling to verify that the vehicle is in safe operating condition,
3. idling for testing, servicing, repairing or diagnostic purposes,
4. idling necessary to accomplish work for which the vehicle was designed (such as operating a crane),
5. idling required to bring the machine system to operating temperature, and
6. idling necessary to ensure safe operation of the vehicle.

(B) Written Idling Policy - As of March 1, 2009, medium and large fleets must also have a written idling policy that is made available to operators of the vehicles and informs them that idling is limited to 5 consecutive minutes or less.

(C) Waiver - A fleet owner may apply to the Executive Officer for a waiver to allow additional idling in excess of 5 consecutive minutes. The Executive Officer shall grant such a request upon finding that the fleet owner has provided sufficient justification that such idling is necessary.

(3)~~(4)~~ Changing Fleet Size –

(A) Small fleets that become medium or large fleets must meet the medium or large fleet requirements, respectively, on the reporting date two years subsequent to the year they became a medium or large fleet.
(B) Large fleets that become medium fleets may meet either the medium or large fleet requirements on the next reporting date. Large fleets that become small fleets may meet either the small or large fleet requirements on the next reporting date.
(C) Medium fleets that become small fleets may meet either the small or medium fleet requirements on the next reporting date. Medium fleets that become large fleets must meet the large fleet requirements on the reporting date two years subsequent to the year they became a large fleet.

(4)~~(5)~~ New Fleets

(A) New large and medium fleets – New large and medium fleets must meet the closest future large fleet average requirement~~s~~ in sections 2449.1(a)(1) ~~and 2449.2(a)(1)~~ immediately on purchasing vehicles subject to the regulation or bringing such vehicles into the State of California for the first time after January 1, 2011 ~~March 1, 2009~~. New fleets do not have the option of complying with the BACT requirements in section~~s~~ 2449.1(a)(2) ~~and 2449.2(a)(2)~~ when they enter the state for the first time. For the next applicable compliance date that must be met, the new fleet can choose to meet either the fleet average requirements, or comply with the BACT requirements. For example, if a medium fleet enters the State of California on January 1, 2012, it must meet the January 1, 2014 large fleet average requirements immediately upon entering the state. However, the next applicable compliance date for this fleet is not until the first medium fleet compliance date of January 1, 2017, at which time, the fleet may fulfill the compliance requirements by meeting either the fleet average requirements or the BACT requirements.

(B) New small fleets – New small fleets must meet the fleet average requirements in section 2449.1(a)(1)(A)1.b. for the closest future small fleet compliance date immediately upon purchasing vehicles subject to the regulation or bringing such vehicles into the State of California for the first time after January 1, 2011. New small fleets do not have the option of complying with the BACT requirements in section 2449.1(a)(2) when they enter the state for the first time. For the next applicable compliance date that must be met, the new fleet can meet either the fleet average requirements, or comply with the BACT requirements.

(C) All new fleets - New fleets must comply with the idling requirements in section ~~2449(d)(3)~~2449(d)(2) immediately upon purchasing vehicles subject to the regulation or upon bringing such vehicles into the State. New fleets must report vehicles subject to the regulation to ARB within 30 days of purchasing or bringing such vehicles into the State, in accordance with the requirements in section 2449(g).

(5)~~(6)~~ Fleet Ownership Transferred – If ownership of an entire fleet that was meeting the BACT requirements in lieu of the fleet average requirements is transferred to a new fleet owner who did not own a fleet before the transfer of ownership, the fleet may continue to meet the BACT requirements. That is, transfer of ownership to a new owner who did not own a fleet before does not automatically require the fleet to begin meeting the fleet average requirements in sections 2449.1(a)(1) ~~and 2449.2(a)(1)~~. Existing fleets may acquire other entire fleets without condition if both fleets were in compliance with the individual fleet requirements. If existing fleets acquire portions of fleets or entire fleets that did not previously comply with the regulation, however, they must meet the requirements for adding vehicles in section ~~2449(d)(7)~~2449(d)(6) when adding the entire fleet.

(6)~~(7)~~ Adding Vehicles – The requirements in (A) ~~to~~ through (C) below apply to all fleets, except they do not apply to vehicles owned by a lessor and returned to the lessor fleet at the end of a lease, during which the vehicles were included in the fleet of the lessee. Vehicles returned to a lessor fleet must, however, be included in the lessor fleet's fleet average demonstration on subsequent compliance dates. For the purposes of this requirement, a vehicle may be assumed to meet the engine emission standard tier in effect for the model year of the engine.

(A) ~~Beginning March 1, 2009~~Ban on adding Tier 0s – Effective upon the United States Environmental Protection Agency (U.S. EPA) issuing authorization for this regulation,~~Beginning March 1, 2009~~ a fleet may not add a vehicle with a Tier 0 engine to its fleet. The engine tier must be Tier 1 or higher.

(B) Tier 2 or higher –Beginning March 1, 2011, for large and medium fleets, a fleet may add a vehicle with a Tier 1 engine if and only if the vehicle has an EIN number that ARB assigned to the vehicle prior to March 1, 2011, and both the fleet selling and the fleet purchasing the vehicle with the Tier 1 engine must have reported to ARB by March 1, 2011, or have entered the state for the first time after March 1, 2011. Beginning March 1, 2011, fleets may not add a Tier 1 vehicle that did not have an EIN assigned by ARB prior to March 1, 2011. Beginning on January 1, 2013, for large and medium fleets, and January 1, 2016, for small fleets, a fleet may not add any vehicle with a Tier 1 engine. The engine tier must be Tier 2 or higher.

(C) Tier 3 or higher – Beginning January 1, 2018, for large and medium fleets, and January 1, 2023, for small fleets, a fleet may not add a vehicle with a Tier 2 engine to its fleet. The engine tier must be Tier 3 or higher.

~~(B) Between the First and Final Target Dates~~ ~~- The following requirements apply between March 1, 2010 and March 1, 2020 for large fleets, between March 1, 2013 and March 1, 2020 for medium fleets, and between March 1, 2015 and March 1, 2025 for small fleets.~~

~~1. Fleets Meeting the Target Rates~~ ~~- If a fleet met the fleet average target rates in sections 2449.1(a)(1) and 2449.2(a)(2) on the previous compliance date, when it adds a vehicle to its fleet, the fleet must~~

~~demonstrate that the fleet still meets the fleet average target rates within three months of adding the vehicle. That is, fleets may not add vehicles that cause them to exceed the most recent fleet average target rates. The added vehicle also must be included in the fleet average demonstration required in sections 2449.1(a) and 2449.2(a) on the next compliance date.~~

~~**2. Fleets Not Meeting the Fleet Average Targets** - If a fleet did not meet the fleet average requirements in sections 2449.1(a)(1) and 2449.2(a)(1) on the previous compliance date, the fleet may not add a vehicle to its fleet that would further increase its emissions above the fleet average target rate, as described below.~~

~~**a. Large and Medium Fleets** - A large or medium fleet that met the BACT requirements in sections 2449.1(a)(2) and 2449.2(a)(2) instead of the fleet average requirements in sections 2449.1(a)(1) and 2449.2(a)(1) on the most recent compliance date may not add a vehicle to its fleet unless all of the following conditions are met:~~

~~i. The engine is Tier 2 or higher. (For the purposes of this requirement, a vehicle may be assumed to meet the new engine emission standard tier in effect for the model year unless the engine is a flexibility engine certified January 1, 2007 or later to the implementation flexibility standards at title 13 CCR, section 2423(d), in which case the emission standard tier to which the engine is certified should be used.).~~

~~ii. The vehicle engine's NOx Emission Factor (after being adjusted for any VDECS) is less than or equal to the NOx Target in Table 1 for engines in the same horsepower group for the most recent compliance date.~~

~~**b. Small Fleets** – A small fleet that met the BACT requirements in section 2449.2(a)(2) instead of the fleet average requirements in section 2449.2(a)(1) on the most recent compliance date may not add a vehicle to its fleet unless the following condition is met:~~
~~The vehicle engine is Tier 2 or higher. (For the purposes of this requirement, a vehicle may be assumed to meet the new engine emission standard tier in effect for the model year unless the engine is a flexibility engine certified January 1, 2007 or later to the implementation flexibility standards at title 13 CCR, section 2423(d), in which case the emission standard tier to which the engine is certified should be used).~~

~~**(C) After the Final Target Date** - Commencing respectively on March 1, 2020 for large and medium fleets, and March 1, 2025 for small fleets, no fleet owner may add a vehicle to his fleet, unless the vehicle is equipped with an engine meeting the Tier 3, Tier 4 interim, or Tier 4 final emission standards.~~

(7)~~(8)~~ VDECS Installation – Before installing a VDECS on a vehicle, the fleet owner must ensure that:

(A) The VDECS is verified for use with the engine and vehicle, as described in the Executive Order for the VDECS.
(B) Use of the vehicle is consistent with the conditions of the Executive Order for the VDECS.
(C) The diesel emission control strategy is installed in a verified configuration.
(D) The engine ~~to be retrofit~~ on which the VDECS is to be installed is tuned up so that it meets engine manufacturer's specifications prior to VDECS installation.
(E) The VDECS label will be visible after installation.

(8)~~(9)~~ VDECS Maintenance – If a fleet owner installs a VDECS to meet the requirements in section 2449.1(a) ~~or 2449.2(a)~~, the VDECS must be kept installed until the VDECS fails or is damaged. Requirements for VDECS failure or damage are in section 2449(e)(1). The owner of a vehicle ~~retrofit~~ with a VDECS must ensure all maintenance on the VDECS and engine is performed as required by the respective manufacturers.

(9)~~(10)~~ Compliance After the Final Target Date –

~~(A)~~ Commencing respectively on January 1, 2024 ~~March 1, 2020~~, for large and medium fleets, and on January 1, 2029, for small fleets, if a ~~large or medium~~ fleet does not meet the applicable ~~NOx~~ fleet average target rate for the final target date in section 2449.1(a)(1), the fleet must continue to meet the BACT ~~turnover~~ requirements in section 2449.1(a)(2)~~(A)~~ and report annually each year until it does so. Vehicles exempt from turnover or having VDECS installed under sections 2449.1(a)(2)(A)4. and 2449.1(a)(2)(A)5., respectively, are exempt from the requirements of this paragraph.

~~(B) Except as provided below, commencing respectively on March 1, 2021 for large and medium fleets, and March 1, 2026 for small fleets, all vehicles in each fleet must be equipped with the highest level VDECS. The vehicles must be retrofit at the annual retrofit rate required in section 2449.2(a)(2)(A)1. for BACT PM retrofits, and the fleet must report annually until all vehicles have been retrofitted. In meeting the requirements of this paragraph, the fleet owner may not use any previously accrued carryover PM retrofit credits. The following engines and vehicles are exempt from the requirements of this paragraph:~~

~~1. Permanent and year-by-year l~~Low-use vehicles,

~~2. Engines for which there is no highest level VDECS (i.e., for which there is no Level 2 or 3 VDECS, or for which there is a Level 2 or 3 VDECS which cannot be used without impairing the safe operation of the vehicle as demonstrated per section 2449(e)(8)),~~

~~3. Engines equipped with an original equipment manufacturer diesel particulate filter that came new with the vehicle,~~

~~4. Engines already retrofit with a Level 2 or 3 VDECS that was the highest level VDECS available at time of installation, and~~

~~5. Vehicles in large and medium fleets that have not yet met the NOx fleet average target rate for the final target date in section 2449.1(a)(1).~~

(e) Special Provisions/Compliance Extensions

(1) VDECS Failure - In the event of a failure or damage of a VDECS, the following conditions apply:

(A) Failure or Damage During the Warranty Period. If a VDECS fails or is damaged within its warranty period and it cannot be repaired, the fleet owner must replace it with the same level VDECS or higher for the vehicle within 90 days of the failure.

(B) Failure or Damage Outside the Warranty Period.

1. Before Final Target Date - If a VDECS fails or is damaged outside of its warranty period before January 1, 2024 ~~March 1, 2021~~ for large and medium fleets, or before January 1, 2029 ~~March 1, 2026~~ for small fleets, and cannot be repaired, and if the fleet could not meet an applicable fleet average target for the most recent compliance date without the failed VDECS, the fleet owner must replace the failed or damaged VDECS within 90 days of its failure, with the highest level VDECS available for the engine at time of failure.

2. After Final Target Date - If a VDECS fails or is damaged outside of its warranty period on or after January 1, 2024 ~~March 1, 2021~~ for large and medium fleets, or on or after January 1, 2029 ~~March 1, 2026~~ for small fleets, and cannot be repaired, the fleet owner must replace the failed or damaged VDECS within 90 days of its failure with the highest level VDECS available for the engine at time of failure, regardless of whether the fleet met the applicable fleet average requirement for the most recent compliance date.

(2) Fuel-based Strategy VDECS -

(A) If a fleet owner determines that the highest level VDECS for a large percentage of his fleet would be a Level 2 fuel verified as a diesel emission control strategy, and implementation of this VDECS would require installation of a dedicated storage tank, then the fleet owner may request prior approval from the Executive Officer to allow use of the level 2 fuel-based strategy across its fleet.

(B) Waiver for Discontinuation of Fuel Verified as a Diesel Emission Control Strategy. If a fleet owner has relied upon a fuel verified as a diesel emission control strategy to meet an applicable fleet average requirement and has to discontinue use of the fuel due to circumstances beyond the fleet owner's control, the fleet owner may apply to the Executive Officer no later than 30 days after discontinuing use of the fuel for a compliance waiver of up to two years to provide it time to return to compliance with the applicable fleet average requirement. The Executive Officer then has 30 days to act upon the request. Fleets that did not meet the applicable fleet average requirement in the most recent compliance year may not apply for this waiver.

(3) Exemption for Vehicles Used for Emergency Operations - Vehicles used solely for emergency operations are exempt from the performance requirements in sections 2449(d), 2449.1(a), ~~2449.2(a)~~ and ~~2449.3(d)~~2449.2(d) but still must be labeled and reported in accordance with sections 2449(f) and (g). Vehicles used solely for emergency operations need not be included when calculating fleet average indices or target rates, when determining fleet size, or when calculating the required horsepower for the BACT ~~turnover and retrofit~~ requirements in section~~s~~ 2449.1(a)(2) ~~and 2449.2(a)(2)~~.

Owners of vehicles brought into California for emergency operations that last longer than three months must report such entry to ARB and request an equipment identification number within three months of entering the state. Vehicles used solely for emergency operations and that stay in California for less than three months do not have to be labeled. For vehicles used both for emergency operations and for other purposes, hours of operation accrued when the vehicle is used for emergency operations do not need to be included when determining whether the vehicle meets the permanent or year-by-year low-use vehicle definition.

(4) Special Provisions for Snow Removal Vehicles - Dedicated snow removal vehicles are exempt from the performance requirements in sections 2449(d), 2449.1(a), ~~2449.2(a)~~ and ~~2449.3(d)~~2449.2(d) but still must be labeled and reported in accordance with sections 2449(f) and (g). Dedicated snow removal vehicles need not be included when calculating fleet average indices or target rates, when determining fleet size, or when calculating the required horsepower for the BACT ~~turnover and retrofit~~ requirements in section~~s~~ 2449.1(a)(2) ~~and 2449.2(a)(2)~~. Publicly owned vehicles used exclusively to support snow removal operations (such as a loader without a special snow removal attachment), but which do not meet the dedicated snow removal vehicle definition, are exempt from the performance requirements in sections 2449(d), 2449.1(a), ~~2449.2(a)~~ and ~~2449.3(d)~~2449.2(d) but still must be labeled and reported in accordance with sections 2449(f) and (g).

(5) Use of Experimental Diesel Emission Control Strategies - If a fleet owner wishes to use an experimental, or non-verified, diesel emission control strategy, the owner must first obtain approval from the Executive Officer for a compliance extension. To obtain approval, the owner must demonstrate either that (A) a VDECS is not available or not feasible or not safe for their vehicle or application, or (B) that use of the non-verified strategy is needed to generate data to support verification of the strategy. The owner or operator shall keep documentation of this use in records as specified by the Executive Officer. The application must include emissions data and detailed control technology description demonstrating the experimental control achieves at least a Level 2 diesel PM emission reduction. If the application demonstrates that the strategy achieves at least 50 percent reductions in diesel PM, it may be treated like a Level 2 VDECS. If the application demonstrates that the strategy achieves at least 85 percent

reductions in diesel PM, it may be treated like a Level 3 VDECS. If the application demonstrates that the strategy achieves a NOx reduction over 15%, the NOx reduction may be counted.

Upon approval by the Executive Officer, each vehicle engine ~~retrofit~~ with the experimental strategy will be allowed to operate for a specified time period necessary to make a determination that the experimental strategy can achieve the projected emissions reductions. The vehicle equipped with the experimental strategy will be considered to be in compliance during the specified time period. A fleet owner who participates in an experimental diesel emission control program approved by the Executive Officer may retain carryover ~~retrofit PM~~ BACT credits ~~or carryover turnover credits~~ actually accumulated during the experiment, regardless of whether the experiment achieved the projected emissions reductions or whether the strategy is eventually verified. If a strategy installed in an experimental diesel emission control program approved by the Executive Officer fails to be verified or is removed, it will no longer count in the fleet's fleet average calculations. The fleet owner must bring the fleet into compliance prior to the expiration of the experimental diesel emission control strategy extension.

(6) Compliance Extension for Equipment Manufacturer or Installer Delays - A fleet owner who has purchased new equipment (including VDECS) or vehicles in order to comply with this regulation, will be excused from immediate compliance if the new equipment or vehicles have not been received due to manufacturing or installer delays as long as all the conditions below are met:

(A) The equipment or vehicle was purchased, or the fleet owner and seller had entered into contractual agreement for the purchase, at least four months prior to the required compliance date, or - for a VDECS purchased to replace a failed or damaged VDECS – the fleet owner and seller had entered into contractual agreement for the purchase within 60 days of the VDECS failure.

(B) Proof of purchase, such as a purchase order or signed contract for the sale, including engine specifications for each applicable piece of equipment, must be maintained by the fleet owner and provided to an agent or employee of ARB upon request.

(C) The new equipment or vehicles are immediately placed into operation upon receipt.

(D) Documentation from the manufacturer or the installer that there is a delay, such that the equipment or vehicle will be received or installed after the compliance date.

(7) Exemption for <u>Permanent and Year-by-year</u> Low-Use Vehicles – <u>Permanently designated and year-by-year l</u>~~L~~ow-use vehicles are exempt from the performance requirements in sections ~~2449(d)(4)~~<u>2449(d)(3)</u> through ~~2449(d)(6)~~<u>2449(d)(5)</u> and ~~2449(d)(8)~~<u>2449(d)(7)</u> through ~~2449(d)(10)~~<u>2449(d)(9)</u>, 2449.1(a), ~~2449.2(a)~~ and ~~2449.3(d)~~<u>2449.2(d)</u>, but still must meet the idling limits in section ~~2449(d)(3)~~<u>2449(d)(2)</u> ~~and adding vehicles requirements in section~~

~~2449(d)(7) ~~and be labeled and reported in accordance with sections 2449(f) and (g). Permanent and year-by-year l~~L~~ow-use vehicles need not be included when calculating fleet average indices or target rates, when determining fleet size, or when calculating the required horsepower for the BACT ~~turnover and retrofit~~ requirements in section~~s~~ 2449.1(a)(2) ~~and 2449.2(a)(2).~~

Vehicles that formerly met the permanent low-use vehicle definition, but whose use increases to 200 hours per year or greater must meet the adding vehicles requirements in section ~~2449(d)(7)~~2449(d)(6) and ~~meet the BACT requirements or~~ be included in the fleet average calculation by the next compliance date. For example, a formerly designated permanent low-use engine that exceeds ~~100~~200 hours per year between January ~~March~~ 1, ~~2013~~2015 and December 31, 2015 ~~February 28, 2014~~ must be included in the fleet average indices and target rates reported in ~~2014~~2016. Vehicles that formerly met the year-by-year low-use vehicle definition, but whose use increases to 200 hours per year or greater do not have to meet the adding vehicles requirements in section 2449(d)(6), but must be included in the fleet average calculation by the next compliance date.

(8) VDECS That Impairs Safe Operation of Vehicle - A fleet owner may request that the Executive Officer find that a VDECS ~~should~~shall not be considered the highest level VDECS available because (A) it cannot be safely installed or operated in a particular vehicle application, or (B) its use would make compliance with federal or state requirements for safety or health, or an ongoing local air district permit condition, such as for use of a diesel oxidation catalyst, technologically infeasible. If a VDECS manufacturer states that there is no safe or appropriate method of mounting its VDECS on the requesting party's vehicle, then the VDECS will not be considered safe. The Executive Officer shall accept the official findings of the responsible federal or state agency (i.e., the federal or state agency that promulgates safety requirements) that compliance with the requirements of this regulation would make compliance with the federal and state safety or health requirements technologically infeasible. In the absence of such a declaration by the VDECS manufacturer or official findings of a responsible federal or state agency, the requesting party shall provide other documentation to support its claims. Documentation must include published reports and other findings of federal, state or local government agencies, independent testing laboratories, engine or equipment manufacturers, or other equally reliable sources. The request will only be approved if the requesting party has made a thorough effort to find a safe method for installing and operating the VDECS, including considering the use of mirrors, various locations for VDECS mounting, and use of an actively regenerated VDECS. The Executive Officer shall review the documentation submitted and any other reliable information that he or she wishes to consider and shall make his or her determination based upon the totality of the evidence. Upon finding that a VDECS cannot be installed without violating the safety standards prescribed under federal or state requirements for safety or health, the Executive Officer shall issue a determination that there is no highest level VDECS available. The Executive Officer shall inform the

requesting party, in writing, of his or her determination, within 60 days of receipt of the request. Parties may appeal the Executive Officer's determination as described in (A) and (B) below. During the appeal process described in (A) and (B) below, the requesting party may request the administrative law judge to stay compliance until a final decision is issued. If the stay is granted and the Executive Officer denies the requesting party's request, the requesting party has six months from the date of the Executive Officer's final written decision to bring his or her fleet back into compliance.

(A) Appeals – Hearing Procedures -

1. Any party whose request has been denied may request a hearing for the Executive Officer to reconsider the action taken by sending a request in writing to the Executive Officer. A request for hearing shall include, at a minimum, the following:
   a. name of the requesting party;
   b. copy of the Executive Officer's written notification of denial;
   c. a concise statement of the issues to be raised, with supporting facts, setting forth the basis for challenging the denial (conclusory allegations will not suffice);
   d. a brief summary of evidence in support of the statement of facts required in c. above; and
   e. the signature of an authorized person requesting the hearing
2. A request for a hearing shall be filed within 30 days from the date of issuance of the notice of the denial.
3. A hearing requested pursuant to this section shall be heard by a qualified and impartial hearing officer appointed by the Executive Officer. The hearing officer may be an employee of the ARB, but may not be any employee who was involved with the denial at issue. In a request for reconsideration, the hearing officer, after reviewing the request for hearing and supporting documentation provided under paragraph 1. above, shall grant the request for a hearing if he or she finds that the request raises a genuine and substantial question of law or fact.
4. If a hearing is granted, the hearing officer shall schedule and hold, as soon as practicable, a hearing at a time and place determined by the hearing officer.
5. Upon appointment, the hearing officer shall establish a hearing file. The file shall consist of the following:
   a. the determination issued by the Executive Officer which is the subject of the request for hearing;
   b. the request for hearing and the supporting documents that are submitted with it;
   c. all documents relating to and relied upon by the Executive Officer in making the initial determination to deny the requesting party's original claim; and
   d. correspondence and other documents material to the hearing.

6. The hearing file shall be available for inspection by the applicant at the office of the hearing officer.
7. An applicant may appear in person or be represented by counsel or by any other duly-authorized representative.
8. The ARB may be represented by staff or counsel familiar with the regulation and may present rebuttal evidence.
9. Technical rules of evidence shall not apply to the hearing, except that relevant evidence may be admitted and given probative effect only if it is the kind of evidence upon which reasonable persons are accustomed to relying in the conduct of serious affairs. No action shall be overturned based solely on hearsay evidence, unless the hearsay evidence would be admissible in a court of law under a legally recognized exception to the hearsay rule.
10. Declarations may be used upon stipulation by the parties.
11. The hearing shall be recorded either electronically or by a certified shorthand reporter.
12. The hearing officer shall consider the totality of the circumstances of the denial, including but not limited to, credibility of witnesses, authenticity and reliability of documents, and qualifications of experts. The hearing officer may also consider relevant past conduct of the applicant including any prior incidents involving other ARB programs.
13. The hearing officer's written decision shall set forth findings of fact and conclusions of law as necessary.
14. Within 30 days of the conclusion of a hearing, the hearing officer shall submit a written proposed decision, including proposed finding as well as a copy of any material submitted by the hearing participants as part of that hearing and relied on by the hearing officer, to the Executive Officer. The hearing officer may recommend to the Executive Officer any of the following:
    a. uphold the denial as issued;
    b. modify the denial; or
    c. overturn the denial in its entirety.
15. The Executive Officer shall render a final written decision within 60 working days of the last day of hearing. The Executive Officer may do any of the following:
    a. adopt the hearing officer's proposed decision;
    b. modify the hearing officer's proposed decision; or
    c. render a decision without regard to the hearing officer's proposed decision.

(B) Appeals – Hearing Conducted by Written Submission. In lieu of the hearing procedure set forth in (A) above, an applicant may request that the hearing be conducted solely by written submission. In such case the requestor must submit a written explanation of the basis for the appeal and provide supporting documents within 20 days of making the request. Subsequent to such a submission the following shall transpire:

1. ARB staff shall submit a written response to the requestor's submission and documents in support of the Executive Officer's action no later than 10 days after receipt of requestor's submission;
2. The applicant may submit one rebuttal statement which may include supporting information, as attachment(s), but limited to the issues previously raised;
3. If the applicant submits a rebuttal, ARB staff may submit one rebuttal statement which may include supporting information, as attachment(s), but limited to the issues previously raised; and
4. The hearing officer shall be designated in the same manner as set forth in section 2449(e)(8)(A)3. above. The hearing officer shall receive all statements and documents and submit a proposed written decision and such other documents as described in section 2449(e)(8)(A)13. above to the Executive Officer no later than 30 working days after the final deadline for submission of papers. The Executive Officer's final decision shall be mailed to the applicant no later than 60 days after the final deadline for submission of papers.
5. The Executive Officer shall render a final written decision within 60 working days of the last day of hearing. The Executive Officer may do any of the following:
   a. adopt the hearing officer's proposed decision;
   b. modify the hearing officer's proposed decision; or
   c. render a decision without regard to the hearing officer's proposed decision.

(9) Compliance Flexibility for Delays in Availability of Tier 3 or Tier 4 Vehicles- If the Executive Officer finds that there is a delay in availability of vehicles with engines meeting the Tier 3 or Tier 4 interim or final emission standards so that vehicles with Tier 3 or Tier 4 interim or final engines to meet a fleet's needs are not available or not available in sufficient numbers or in a sufficient range of makes, models, and sizes, then the Executive Officer may grant an extension to the fleet from the requirements in sections 2449.1(a)(1)~~, 2449.2(a)(1),~~ and 2449.1(a)(2)~~. and 2449.2(a)(2).~~ If such a delay affects a group of fleets, the Executive Officer may issue an extension to all fleets with similar characteristics. Any such delay must be documented based on verifiable information from the fleet regarding its vehicle needs and/or verifiable information from the equipment manufacturer, engine manufacturer, distributor, and/or dealer regarding the unavailability of appropriate vehicles with Tier 3 or Tier 4 interim or final engines.

(10) Exemption for Vehicles Awaiting Sale - Vehicles in the possession of dealers, financing companies, or other entities who do not intend to operate the vehicle nor offer the vehicle for hire, that are operated only to demonstrate functionality to potential buyers or to move short distances while awaiting sale or for maintenance purposes are exempt from all requirements in sections 2449, 2449.1, and 2449.2~~, and 2449.3~~.

(11) Exemption for Vehicle Used Over Half the Time for Agriculture - A vehicle that is used by its owner for agricultural operations for over half of its annual operating hours but that is not used exclusively for agricultural operations is exempt from the performance requirements in section 2449(d), and 2449.1(a), ~~and 2449.2(a),~~ but still must be labeled and reported in accordance with sections 2449(f) and (g). Vehicles used exclusively for agricultural operations are completely exempt from the performance, labeling, and reporting requirements. A vehicle that is rented or leased for use by others is exempt only if it is exclusively used for agricultural operations.

(12) Exemption for Vehicles Used Solely on San Nicolas or San Clemente Islands - Vehicles used solely on San Nicolas or San Clemente Islands are exempt from all requirements in section 2449. If the land use plans for the islands are changed to allow use by the general public of the islands, this exemption shall no longer be applicable.

(13) Exemption for Job Corps Vehicles – Vehicles used by the Job Corps nonprofit apprenticeship training program are exempt from the performance requirements in sections 2449(d), 2449.1(a), ~~2449.2(a)~~ and ~~2449.3(d)~~2449.2(d) but still must be labeled and reported in accordance with sections 2449(f) and (g).

(14) Two-Engine Cranes – Both engines in a two-engine crane are subject to this regulation. For purposes of the rounding provisions in section 2449.1(a)(2)(~~a~~A)~~7~~8., neither engine in the two-engine crane is required to be turned over until the horsepower required to be turned over under section 2449.1(a)(2)(A)1. is at least half the sum of the maximum power of the primary and secondary engine in the two-engine crane.

(15) On-road Registered Vehicles with Off-road Engines – If a workover rig or other on-road registered vehicle subject to this regulation with an off-road engine is repowered and will be registered and driven on-road, it must be repowered with an on-road certified engine of the same model year or newer as the engine being replaced.

(16) Two-Engine Water Well Drilling Rigs – Both engines in a two-engine water well drilling rig are subject to this regulation. For the purposes of the rounding provisions in section 2449.1(a)(2)~~(a)7~~ A.8., neither engine in the two-engine water well drilling rig is required to be turned over until the horsepower required to be turned over under section 2449.1(a)(2)(A)1. is at least half the sum of the maximum power of the primary and secondary engine in the two-engine water well drilling rig.

(17) Fleets with 500 hp or less – Fleets with 500 hp or less total maximum power may meet the optional compliance schedule listed in Table 1 instead of the small fleet requirements in 2449.1(a)(1)(A)1.b. and 2449.1(a)(2)(A)1.c. This percent of

engine hp must be met or exceeded, and the rounding provisions in section 2449.1(a)(2)(A)8 do not apply. For compliance with this section, all vehicles in the fleet must be included; no vehicles qualify for exemptions.

Optional Compliance Schedule for Fleets with 500 HP or Less

Compliance Date: March 1 of Year	Percent of Fleet (by horsepower) Which Must Have a Tier 2 or Higher Engine
2019	25
2022	50
2026	75
2029	100

Fleets with 500 hp or less may choose to comply with either the above optional compliance schedule or the small fleet requirements. If the fleet alternates from the BACT schedule to the optional compliance path above, the fleet must comply with the most recent requirements of the optional compliance schedule. For example a fleet switching to the optional compliance schedule above in 2025 must meet the 2022 requirements of the optional compliance schedule. A fleet switching to BACT from the optional compliance schedule must begin meeting the fleet average or BACT requirements for small fleets on the next compliance date for small fleets. If a fleet grows larger than 500 hp, that fleet must begin meeting the fleet average or BACT requirements for small fleets on the next compliance date for the applicable fleet size category.

(f) Labeling –
All vehicles with engines subject to the regulation must be labeled with an ARB-issued equipment identification number (EIN). Electric and alternative fuel vehicles, stationary or portable systems, and gasoline-powered vehicles used to replace diesel vehicles under section 2449(d)(1)~~(C)~~ must also be labeled with an ARB-issued EIN. ARB will issue unique EIN to the fleet owner for each vehicle subject to the regulation in response to the initial reporting described in section 2449(g)(1) and, for vehicles added in the 30 days before the annual reporting date, the annual reporting described in section 2449 (g)(2). Vehicles with two engines that provide motive power will receive two EINs. All owners of vehicles subject to the regulation must comply with the following labeling requirements.

(1) Application for EIN for added vehicle – Notwithstanding the requirements for vehicles used for emergency operations in section 2449(e)(3), if a fleet owner adds a vehicle to his California fleet or brings a vehicle into California from outside the state, the fleet owner has 30 days from the date of purchase or the date the vehicle enters California to apply to ARB for an EIN or, if the vehicle already has an EIN, to inform ARB of the purchase using forms approved by the Executive Officer for submittal of required reporting information. If the reporting date under section 2449(g)(2) occurs before 30 days after purchase, the annual reporting may serve as the application for an EIN.

Applications for an equipment identification number ~~should~~shall be submitted electronically per the guidelines approved by the Executive Officer for electronic data reporting, or mailed or delivered to ARB at the address listed immediately below:

California Air Resources Board
Mobile Source Control Division (In-Use Off-road Diesel)
P.O. Box 2815
Sacramento, CA 95812.

(2) Affixing Equipment Identification Number – Within 30 days of receipt of the ARB-issued EIN, fleet owners shall permanently affix or paint the EIN(s) on the vehicle in clear view according to the following specification:

(A) The EIN shall be white on a red background, unless the vehicle is part of a Captive Attainment Area Fleet, in which case the EIN shall be white on a green background.

(B) The EIN shall be located in clear view on ~~the right (starboard)~~both sides of the outside of the vehicle approximately 5 feet above the ground, or, if the vehicle is not 5 feet tall, lower on the vehicle.

(C) Each character shall be at least 3 inches (7.6 centimeters) in height and 1.5 inches (3.8 centimeters) in width.

(D) The EIN shall be maintained in a manner that retains its legibility for the entire life of the vehicle.

(E) Vehicles reported to ARB prior to January 1, 2013, may apply a label to the right (starboard) side of the vehicle only, except that the vehicle must have an identical EIN label placed on the left (port) side of the vehicle by January 1, 2013.

(F) Vehicles that are part of a Captive Attainment Area fleet and reported to ARB prior to January 1, 2013, may be labeled with an EIN that is in white on a red background, except that the vehicle must have the EIN label replaced by one displaying white on a green background by January 1, 2013.

(g) Reporting –

Reporting is required for each and every fleet. Large and medium fleets may report separately for different divisions or subsidiaries of a given company or agency. Fleet owners may submit reporting information using forms (paper or electronic) approved by the Executive Officer.

(1) Initial reporting – All fleet owners must submit the information in section 2449(g)(1)(A) through (G) to ARB by their initial reporting date. In the initial reporting, fleet owners must report information regarding each vehicle subject to this regulation that was in their fleet on March 1, 2009. Systems or non-diesel fueled vehicles that are used in place of a vehicle that would be subject to this regulation must also be reported. The initial reporting date for large fleets is April 1, 2009. The initial reporting date for medium fleets is June 1, 2009. The initial reporting date for small fleets is August 1, 2009. Notwithstanding the

aforementioned reporting dates, the initial reporting date for two-engine water well drilling rigs is April 1, 2011. Reports must include the following information:

(A) Fleet Owner –

1. Fleet owner's name;
2. Corporate parent name (if applicable);
3. Corporate parent taxpayer identification number (if applicable);
4. Company taxpayer identification number;
5. Address;
6. Responsible person name;
7. Responsible person title;
8. Contact name;
9. Contact phone number;
10. Contact email address (if available);
11. Whether the fleet owner is a low population county local municipality fleet;
12. Whether the fleet owner has an approval from the Executive Officer to be treated as if in a low-population county;
13. Whether the fleet owner is a non-profit training center;
14. Whether the fleet has an idling policy documented and available to employees;
15. Whether the fleet is using a fuel-based strategy as an emissions control strategy;
16. Whether the fleet is a Captive Attainment Area Fleet.

(B) Vehicle List – A list of each vehicle subject to this regulation along with the following information for each vehicle:

1. Vehicle type;
2. Vehicle manufacturer;
3. Vehicle model;
4. Vehicle model year;
5. Vehicle serial number; (i.e., for workover rigs and two-engine cranes and two-engine water well drilling rigs, vehicle identification number);
6. Whether the vehicle is a permanent or year-by-year low-use vehicle;
7. If the vehicle is a permanent or year-by-year low-use vehicle, whether the vehicle was operated outside of California during the previous compliance year;
8. Whether the vehicle is a specialty vehicle;
9. Whether the vehicle is a vehicle used solely for emergency operations;
10. Whether the vehicle is a dedicated snow removal vehicle;
11. Whether the vehicle is used for agricultural operations for over half of its annual operating hours;
12. Whether the vehicle is an electric vehicle that replaced a diesel vehicle;
13. Whether the vehicle has had a VDECS installed, or been ~~retrofit,~~ repowered, or replaced with Surplus Off-road Opt-in for NOx program funding and, if so, the start and end dates of the contract period;
14. Whether the vehicle has had a VDECS installed, or been ~~retrofit,~~ repowered, or replaced with Carl Moyer program funding;

15. Whether the vehicle has had a VDECS installed ~~been retrofit~~ through a demonstration program, and - if so - which program;
16. EIN if it has already been assigned.
17. License plate number, if vehicle has a license plate.

(C) Engines - For each engine that powers a vehicle listed per section 2449(g)(1)(B) report the following information.

1. Engine manufacturer;
2. Engine model;
3. Engine family (if any);
4. Engine serial number;
5. Engine model year;
6. Engine maximum power;
7. Engine displacement;
8. Whether the engine is a repower and – if so – date repowered;
9. If the engine is a Post-2007 flexibility engine, an engine certified to on-road standards, or an engine certified by ARB or U.S. Environmental Protection Agency to a lower emission standard than shown in Appendix A, the emission standard to which the engine is certified and the certification Executive Order or certificate number;
10. Whether the engine has been rebuilt to a more stringent emissions configuration.

(D) Verified Diesel Emission Control Strategies - For each VDECS that is installed on an engine listed per section 2449(g)(1)(C) report the following information.

1. VDECS Manufacturer;
2. VDECS Family;
3. Verification level;
4. Verified percent NOx reduction (if any);
5. Date installed;
6. VDECS Serial Number.

(E) Non-Diesel Vehicle Used in Place of a Diesel Vehicle - For each electric, alternative fueled, or gasoline fueled vehicle, report the information listed in sections 2449(g)(1)(B)1. through 2449(g)(1)(B)5. and sections 2449(g)(1)(C)1. through 2449(g)(1)(C)6. as well as

1. Date purchased;
2. If the vehicle replaced a diesel vehicle in the fleet, the horsepower of the diesel vehicle replaced and the date replaced;
3. If not electric, the NOx and PM emission factor;

(F) Stationary or Portable Systems Used in Place of a Diesel Vehicle - For stationary or portable systems that are used in place of a diesel vehicle, report the following information:

1. Description of the system;
2. Type and number of vehicles that would otherwise be used;
3. Horsepower of the vehicle(s) that would otherwise be used;

(G) Credit for Early Actions - Fleet owners claiming credit for early action must report information required under sections 2449(g)(1)(B)1. through

2449(g)(1)(B)5. and sections 2449(g)(1)(C)1. through 2449(g)(1)(C)6. for each vehicle for which credit is claimed. As appropriate, the following information must also be reported:

1. For each vehicle within the fleet that was repowered with a Tier 1 or newer engine prior to March 1, 2009, the date of repower;
2. For each vehicle within the fleet that ~~was retrofit with the~~ had the highest level PM VDECS installed ~~available at the time of retrofit~~ prior to March 1, 2009, the date of installation ~~retrofit~~ and whether Carl Moyer Incentive Program funding was used to pay for the VDECS ~~retrofit;~~
3. Fleet owners claiming early credit for retirement or replacement of any vehicles per section 2449.1(a)(2)(A)~~(2)~~.a.ii., or 2449.1(a)(2)(A)~~(2)~~.a.iv. ~~or 2449.2(a)(2)(A)(2)a.iv.~~ must report information on each and every vehicle within the fleet between March 1, 2006 and March 1, 2010, as required under sections 2449(g)(1)(B)1. through 2449(g)(1)(B)4. and sections 2449(g)(1)(C)1. through 2449(g)(1)(C)6. as well as the date of any purchase and/or retirement between March 1, 2006 and March 1, 2010.
4. ~~Fleet owners claiming credit for reduced activity in the fleet per section 2449.1(a)(2)(A)(2)a.iv. or 2449.2(a)(2)(A)2.a.iii. must report to the Executive Officer the total hours of use for each vehicle in the fleet, excepting vehicles claimed for early retirement credit, for the twelve month period January 1, 2007, to December 31, 2007 as well as the twelve month period March 1, 2009, to February 28, 2010. Fleets that do not have hourly reporting records of each vehicle in the fleet must submit to the Executive Officer copies of information that is verifiable and substantively demonstrates a reduction in fleet activity from July 1, 2007, to March 1, 2010.~~

(2) Annual Reporting and ~~Compliance Certification~~ Responsible Official Affirmation of Reporting – All fleet owners must review and update the information submitted under section 2449(g)(1) annually, and submit the information in section 2449(g)(2)(A) through (C) to ARB by the reporting date of each subsequent reporting year. The ~~large fleet~~ reporting date for all fleets is March 1~~April 1, the medium fleet reporting date is June 1, and the small fleet reporting date is August 1~~. Fleet owners must report information regarding each vehicle subject to this regulation as it was on December 31 ~~March 1~~ of the year prior to the reporting year (for example, by March 1, 2018, fleets must report each vehicle as it was at the end of the day on December 31, 2017). Large fleets must report annually each year from 2010 to ~~2021~~ 2023. Medium fleets must report annually each year ~~2012 to 2021~~2016 to 2023. Small fleets must report annually each year from ~~2014 to 2026~~2018 to 2028. Any fleet that fails to meet the fleet average target rate for the final target date in section 2449.1(a)(1) ~~or 2449.2(a)(1)~~ must continue to report annually each year until it does so. ~~After the final target date in 2449.2(a)(1), any fleet that is required to apply VDECS under section 2449.2(a)(2) must continue to report each year until the March 1 after all such retrofits are complete.~~ Any fleet that operates permanent ~~designated~~ or year-by-year low-use vehicles must continue to report annually for

each permanent or year-by-year low-use vehicle for as long as the fleet owns or operates the vehicle. Fleets may use forms (paper or electronic) approved by the Executive Officer for submittal of the required reporting information.

(A) ~~Compliance Certification~~ Responsible Official Affirmation of Reporting – Each year that annual reporting is required, a fleet shall submit to ARB ~~A~~an affirmation ~~certification~~ signed by a responsible official or a designee thereof that the information reported is accurate and that the fleet is in compliance with the regulation. The ~~certification~~ affirmation must be submitted on a form (paper or electronic) approved by the Executive Officer. If a designee signs the ~~compliance certification~~ affirmation of reporting, a written statement signed by the responsible official designating the designee must be attached to the ~~compliance certification~~ affirmation of reporting and submitted to ARB. This written statement designating the designee must only be attached the first time a designee signs the affirmation of reporting. If a new designee is appointed at a later time, another written statement signed by the responsible official designating a new designee must be submitted. If the fleet is a Captive Attainment Area Fleet, the ~~certification~~ affirmation must certify that the fleet's vehicles did not operate outside the counties listed in 2449(c)(6) in the prior year.

(B) Changes Since Last Reporting - If any information reported per section 2449(g)(1) has changed since either the initial or last annual report filed with ARB, the fleet owner must, in its next annual report identify such changes. Such changes include vehicles removed from the fleet, vehicles added to the fleet through purchase or by bringing into California, vehicles newly designated as permanent or year-by-year low-use or specialty vehicles, repowers, and VDECS installed ~~retrofits.~~ If there are no changes, the fleet shall indicate that there have been no changes since the last report.

(C) Engine Hour Meter Readings – Engine hour meter readings must be reported for each engine in the following cases.

~~1. If the fleet has chosen the hours in fleet average option, the fleet owner shall report two engine hour meter readings, one from on or before March 1 of the prior year and one from on or after March 1 of the current year, and the dates of reading for every engine in the fleet.~~

1.~~2.~~ For vehicles that fleet owners intend to designate as year-by-year low-use, report two engine hour meter readings, one from on or before January 1 ~~March 1~~ of the prior year and one from on or after December 31 ~~March 1~~ of the prior year, and the dates of reading. If using the three-year rolling average definition of year-by-year low-use, report two hour meter readings, one from on or before January 1 ~~March 1~~ of the first year of the three year period and one from on or after December 31 ~~March 1~~ of the third year ~~current year~~. For vehicles that fleet owners intend to designate as permanent low-use vehicles, report one engine hour meeting reading from on or before January 1 of the current year. For each year thereafter, report the engine hour meeting reading from on or after December 31 of the prior year. Permanent and year-by-year l~~L~~ow-use vehicles used in emergency operations, must report the total hours

used in emergency operations. Additionally, for vehicles designated as permanent or year-by-year low-use that operate both inside and outside California, the fleet owner shall submit a log that contains the following information.

a. Each date the vehicle entered California and the hour meter reading upon entry;

b. Each date the vehicle exited California and the hour meter reading upon exit.

2.~~3.~~ For vehicles that are used in agricultural operations, the fleet owner shall report two engine hour meter readings, one from on or before January 1 ~~March 1~~ of the prior year and one from on or after December 31 ~~March 1~~ of the prior ~~current~~ year, and the dates of such readings. Also the fleet owner shall report~~,~~ the total number of hours the vehicle has been used in non-agricultural use.

(3) New Fleet Reporting – New fleets must submit the information in section 2449(g)(1)(A) through (G) to ARB for vehicles subject to the regulation within 30 days of purchase or bringing such vehicles into the State. Beginning the first January 1 ~~March 1~~ that is more than 30 days after the date of purchase or bringing a vehicle into the State, new fleets must comply with the annual reporting requirements in section 2449(g)(2).

(4) Selling Vehicles – Any person selling a vehicle with an engine subject to this regulation in California must notify ARB within 30 days from the date the vehicle was sold. If the reporting date under section 2449(g)(2) occurs within 30 days of the vehicle being sold, the annual reporting may serve as the notification to ARB that the vehicle was sold.

(h) Record keeping –

Fleet owners must maintain copies of the information reported under section 2449(g), as well as the records described in section 2449(h) below, and provide them to an agent or employee of the ARB within five business days upon request. Records must be kept at a location within the State of California.

(1) Changes Since Last Reporting Period - Documentation of any additions, deletions, or changes to the fleet since the last reporting. Documentation may include bills of sale, purchase orders, or other documentation.

(2) Vehicles Not Yet Labeled - For newly purchased or acquired vehicles or vehicles recently brought into the state that have not yet been labeled per section 2449(f)(2), records must be kept of the vehicle purchase date or the date the vehicle entered the state.

(3) Engines Rebuilt to a More Stringent Emissions Configuration - Records of engines that are rebuilt to a more stringent emissions configuration in accordance with Title 40, CFR, Part 89.130 and Part 1068.120 must be kept as

long as the engine remains in operation. For a fleet to claim credit for rebuild to a more stringent emissions configuration of a Tier 1 engine rated at or above 37 kW that is exempt from the requirements in Title 40, CFR, Part 89.130 and title 13, CCR, section 2423(l), the Tier 1 engine must be rebuilt in accordance with the rebuild practices of those sections and the fleet must keep the records that would have been required if the engine were not exempt from those requirements. Records must include the following information:

(A) The name of the company that performed the rebuild, address, contact name, and contact phone number for that company;
(B) An invoice, or proof of purchase of the engine rebuild;
(C) The date(s) the engine upgrade was performed;
(D) All records required under Title 40, CFR, Part 1068.120 or, for engines exempt from Title 40, CFR, Part 1068.120, the records that would be required if the engine were not exempt;
(E) All records required under title 13, CCR, section 2423(l) or, for engines exempt from 13, CCR, section 2423(l), the records that would be required if the engine were not exempt.

(4) VDECS Failure – Records of any VDECS failure and replacement.

(5) VDECS Serial Numbers – Records of the serial numbers of the VDECS installed on each vehicle.

(6) Manufacturer Delay – For any vehicles or VDECS for which the fleet owner is utilizing the equipment manufacturer delay provision in section 2449(e)(6), proof of purchase, such as a purchase order or signed contract for the sale, including engine specifications for each applicable piece of equipment or vehicle.

(7) Records Pertaining to Executive Officer Approval – Records of Executive Officer approval of any of the following:

(A) A waiver to allow additional idling in excess of 5 consecutive minutes;
(B) Upon discontinuation of a fuel verified as a Diesel Emission Control Strategy, approval for up to two years additional time to come back into compliance with the applicable fleet average requirement;
(C) A finding that a VDECS ~~should~~shall not be considered the highest level VDECS available due to safety concerns;
(D) Approval to use the maximum power of a diesel vehicle that serves the same function as an electric vehicle;
(E) Approval of an alternative fuel vehicle NOx emission standard;
(F) Approval of a vehicle designation as a specialty vehicle;
(G) Approval of and experimental diesel PM control strategy;
(H) Approval to grant an extension to the fleet from the requirements when Tier 4 vehicles are not available;
(I) Approval to use a fuel strategy as an emissions control strategy as in section 2449(e)(2);

~~*(8)* ***Credit for Reduced Activity*** – Each fleet owner that claims credit for reduced fleet activity with vehicle specific data per sections 2449.1(a)(2)(A)(2)a.iv. or 2449.2(a)(2)(A)2.a.iii. shall maintain the records setting forth the total hours of use of each vehicle in the fleet for each of the twelve month periods indicated in 2449(g)(1)(G)4. A fleet that submits non-vehicle specific data claiming credit for reduced fleet activity, per sections 2449.1(a)(2)(A)(2)a.v. or 2449.2(a)(2)(A)(2)a.iv., must keep a record of all of the information submitted to ARB to support its claim of reduced fleet activity.~~

~~*(9)*~~ ***Credit for Early Retirement or Replacement*** – Each fleet owner that claims credit for the retirement or replacement of vehicles from March 1, 2006, to March 1, 2010, per sections 2449.1(a)(2)(A)2.a.ii. or 2449.1(a)(2)(A)~~(2)~~.a.iv. ~~or 2449.2(a)(2)(A)(2)a.iv.~~ shall maintain records substantiating the fleet's claim of previous ownership for those vehicles.

****(~~*10*~~*9*) ***Record Retention*** – Each fleet owner shall maintain the records for each vehicle subject to the regulation and for the overall fleet as long as the owner has a fleet or January 1 ~~March 1~~, 2030, whichever is earlier. If vehicle ownership is transferred, the seller shall convey the vehicle records including vehicle data per section 2449(g)(1)(B), engine data per section 2449(g)(1)(C), and VDECS data per section 2449(g)(1)(D) to the buyer. If fleet ownership is transferred, the seller shall convey the fleet records including fleet data per sections 2449(g)(1)(A) through (G) to the buyer. Any person selling a vehicle with an engine subject to this regulation in California must maintain records of the disclosure of regulation applicability required by Section 2449(j) for three years after the sale.

(i) Right of Entry –

For the purpose of inspecting off-road vehicles and their records to determine compliance with these regulations, an agent or employee of ARB, upon presentation of proper credentials, has the right to enter any facility (with any necessary safety clearances) where off-road vehicles are located or off-road vehicle records are kept.

(j) Disclosure of Regulation Applicability –

Any person selling a vehicle with an engine subject to this regulation in California must provide the following disclosure in writing to the buyer on the bill of sale, "When operated in California, any off-road diesel vehicle may be subject to the California Air Resources Board In-Use Off-road Diesel Vehicle Regulation. It therefore could be subject to retrofit or accelerated turnover requirements to reduce emissions of air pollutants. For more information, please visit the California Air Resources Board website at http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm."

(k) Penalties –

Any person who fails to comply with the performance requirements of this regulation, who fails to submit any information, report, or statement required by this regulation, or who knowingly submits any false statement or representation in any application, report, statement, or other document filed, maintained, or used for the purposes of compliance with this regulation may be subject to civil or criminal penalties under sections 39674, 39675, 42400, 42400.1, 42400.2, 42400.3.5, 42402, 42402.1, 42402.2, 42402.4, 42403, and 43016 of the Health and Safety Code. In assessing penalties, the Executive Officer will consider factors, including but not limited to the willfulness of the violation, the length of time of noncompliance, whether the fleet made an attempt to comply, and the magnitude of noncompliance.

(l) ARB Certificate of Reported Compliance –

After the initial reporting required by section 2449(g)(1) and the annual reporting and ~~compliance certification~~ responsible official affirmation of reporting required by section 2449(g)(2) is received by ARB, if the report~~ing~~ and affirmation indicates the fleet is in compliance with the requirements of the in-use off-road diesel vehicle regulation, ARB will provide the fleet with a Certificate of Reported Compliance with the In-Use Off-road Diesel Vehicle Regulation. The certificate may be revoked if ARB subsequently discovers that the reports submitted to ARB have material errors or omissions.

(m) Severability –

If any subsection, paragraph, subparagraph, sentence, clause, phrase, or portion of section 2449, 2449.1, or 2449.2~~, or 2449.3~~ 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 39002, 39515, 39516, 39600, 39601, 39602, 39650, 39656, 39658, 39659, 39665, 39667, 39674, 39675, 40000, 41511, 42400, 42400.1, 42400.2, 42400.3.5, 42402, 42402.1, 42402.2, 42402.4, 42403, 43000, 43000.5, 43013, 43016, 43018, and 43018.2, Health and Safety Code. Reference: Sections 39002, 39515, 39516, 39600, 39601, 39602, 39650, 39656, 39657, 39658, 39659, 39665, 39667, 39674, 39675, 40000, 41511, 42400, 42400.1, 42400.2, 42402.2, 43000, 43000.5, 43013, 43016, 43018, and 43018.2, Health and Safety Code.

Section 2449.1 ~~NOx~~ Performance Requirements

(a) Performance Requirements

Each fleet must meet the fleet average requirements in this section by January ~~March~~ 1 of each year or demonstrate that it met the best available control technology (BACT) requirements as described in section 2449.1(a)(2). ~~There are differing requirements for large and medium fleets. Small fleets are not subject to the NOx performance requirements.~~

If various portions of a fleet are under the control of different responsible officials because they are part of different subsidiaries, divisions, or other organizational structures of a company or agency, the fleet portions may comply with the performance requirements separately and be reported separately. A fleet may have some fleet portions that meet the definition of captive attainment area fleet and some fleet portions that do not. However, the total maximum power of the vehicles under common ownership or control determines the fleet size. Once a fleet begins to comply and report separately as fleet portions, the fleet portions must continue to comply and report separately, and the fleet portions must meet the adding vehicle requirements in section ~~2449(d)(7)~~2449(d)(6) just as if they were separate fleets.

Captive attainment area fleets, and f~~F~~leets owned by low-population county local municipalities, are subject to the small fleet requirements, even if their total maximum power exceeds 2,500 horsepower. ~~Captive attainment area fleets are not subject to the NOx performance requirements.~~ Section ~~2449(d)(4)~~2449(d)(3) describes requirements for fleets that change size.

(1) Fleet Average Requirements

(A) Fleet Average Requirements ~~for Large and Medium Fleets~~

1. ~~NOx~~ Fleet Average - For each compliance date, a ~~large or medium~~ fleet ~~that is not a captive attainment area fleet~~ must demonstrate that its ~~NOx~~ Fleet Average Index was less than or equal to the calculated ~~NOx~~ Fleet Average Target Rate.

The equation for calculating ~~NOx~~ Fleet Average Target Rate is below:

~~NOx~~ Fleet Average Target Rate = [SUM of (*Max Hp* for each engine in fleet multiplied by *Target* for each engine in fleet) for all engines in fleet] divided by [SUM of (Max *Hp*) for all engines in fleet]

where Target ~~is the NOx target~~ in g/bhp-hr is shown in ~~from~~ Table 1. To find the Target for each engine, read the value for the appropriate row based on the compliance year and the appropriate column based on the engine's maximum power from Table 1 for medium and large fleets, and Table 2 for small fleets.

The equation for calculating ~~NOx~~ Fleet Average Index is below:

~~NOx~~ Fleet Average Index = [SUM of (*Max Hp* for each engine in fleet multiplied by ~~NOx~~ *Emission Factor* multiplied by the *VDECS Factor* for each engine in fleet) for all engines in fleet] divided by [SUM of (Max *Hp*) for all engines in fleet]

VDECS Factor

VDECS	VDECS Factor
No VDECS Installed	1
Highest Level PM VDECS	0.7
Highest Level PM VDECS with NOx Reduction	(1 Minus (0.3 + (Verified Percent NOx Reduction Divided by 170)))
NOx Reduction (Not Highest Level PM VDECS)	(1 Minus (Verified Percent NOx Reduction Divided by 170))

a. Fleet average targets for large and medium fleets - Table 1 shows the targets used to calculate the ~~NOx~~ Fleet Average Target Rate for each compliance date for large and medium fleets. The Emission Factors are defined in Appendix A.

Table 1 – Large and Medium Fleet ~~NOx~~ Targets For Use in Calculating ~~NOx~~ Fleet Average Target Rates [g/bhp-hr]

	Targets for each Max Hp Group							
Compliance Date: January 1 of Year	25-49 hp	50-74 hp	75-99 hp	100-174 hp	175-299 hp	300-599 hp	600-750 hp	>750 hp
2014 (Large Fleets Only)	5.8	6.5	7.1	6.4	6.2	5.9	6.1	7.2
2015 (Large Fleets Only)	5.6	6.2	6.7	6	5.8	5.5	5.6	6.8
2016 (Large Fleets Only)	5.3	5.8	6.2	5.5	5.3	5.1	5.2	6.5
2017	5.0	5.4	5.5	4.9	4.7	4.5	4.6	6.0
2018	4.7	5.0	4.8	4.3	4.1	4.0	4.0	5.5
2019	4.4	4.6	4.1	3.7	3.5	3.4	3.4	5.0
2020	4.1	4.2	3.4	3.1	2.9	2.8	2.9	4.5
2021	3.8	3.8	2.7	2.5	2.3	2.2	2.3	4.0
2022	3.5	3.4	2.0	1.9	1.7	1.7	1.7	3.5
2023	3.3	3.0	1.4	1.3	1.5	1.5	1.5	3.5

	~~NOx Targets for each Max Hp Group~~							
~~Compliance Date: March 1 of Year~~	~~25-49 hp~~	~~50-74 hp~~	~~75-99 hp~~	~~100-174 hp~~	~~175-299 hp~~	~~300-599 hp~~	~~600-750 hp~~	~~>750 hp~~
~~2010 (large fleets only)~~	~~5.8~~	~~6.5~~	~~7.1~~	~~6.4~~	~~6.2~~	~~5.9~~	~~6.1~~	~~7.2~~
~~2011 (large fleets only)~~	~~5.6~~	~~6.2~~	~~6.7~~	~~6.0~~	~~5.8~~	~~5.5~~	~~5.6~~	~~6.8~~
~~2012 (large fleets only)~~	~~5.3~~	~~5.8~~	~~6.2~~	~~5.5~~	~~5.3~~	~~5.1~~	~~5.2~~	~~6.5~~
~~2013~~	~~5.1~~	~~5.5~~	~~5.7~~	~~5.1~~	~~4.9~~	~~4.7~~	~~4.8~~	~~6.1~~
~~2014~~	~~4.9~~	~~5.1~~	~~5.2~~	~~4.7~~	~~4.5~~	~~4.3~~	~~4.4~~	~~5.7~~
~~2015~~	~~4.6~~	~~4.8~~	~~4.8~~	~~4.3~~	~~4.1~~	~~3.9~~	~~4.0~~	~~5.3~~
~~2016~~	~~4.4~~	~~4.4~~	~~4.3~~	~~3.8~~	~~3.6~~	~~3.5~~	~~3.6~~	~~4.9~~
~~2017~~	~~4.2~~	~~4.1~~	~~3.8~~	~~3.4~~	~~3.2~~	~~3.1~~	~~3.2~~	~~4.5~~
~~2018~~	~~4.0~~	~~3.7~~	~~3.3~~	~~3.0~~	~~2.8~~	~~2.7~~	~~2.7~~	~~4.1~~
~~2019~~	~~3.7~~	~~3.4~~	~~2.8~~	~~2.6~~	~~2.3~~	~~2.3~~	~~2.3~~	~~3.8~~
~~2020~~	~~3.5~~	~~3.2~~	~~2.4~~	~~2.2~~	~~1.9~~	~~1.9~~	~~1.9~~	~~3.4~~

b. Fleet average targets for small fleets - Table 2 shows the targets used to calculate the Fleet Average Target Rate for each compliance date for small fleets. The Emission Factors are defined in Appendix A.

Table 2 – Small Fleet Targets
For Use in Calculating Fleet Average Target Rates [g/bhp-hr]

	Targets for each Max Hp Group							
Compliance Date: January 1 of Year	**25-49 hp**	**50-74 hp**	**75-99 hp**	**100-174 hp**	**175-299 hp**	**300-599 hp**	**600-750 hp**	**>750 hp**
2019	5.8	6.5	7.1	6.4	6.2	5.9	6.1	7.2
2020	5.6	6.2	6.7	6.0	5.8	5.5	5.6	6.8
2021	5.3	5.8	6.2	5.5	5.3	5.1	5.2	6.5
2022	5.0	5.4	5.5	4.9	4.7	4.5	4.6	6.0
2023	4.7	5.0	4.8	4.3	4.1	4.0	4.0	5.5
2024	4.4	4.6	4.1	3.7	3.5	3.4	3.4	5.0
2025	4.1	4.2	3.4	3.1	2.9	2.8	2.9	4.5
2026	3.8	3.8	2.7	2.5	2.3	2.2	2.3	4.0
2027	3.5	3.4	2.0	1.9	1.7	1.7	1.7	3.5
2028	3.3	3.0	1.4	1.3	1.5	1.5	1.5	3.5

(2) BACT Requirements – Each year, each fleet must determine if it will be able to meet the fleet average requirements for the next January ~~March~~ 1 compliance date, and if not, the following BACT requirement must be met. If a fleet does not meet the ~~NOx~~ Fleet Average Target ~~r~~Rate in section 2449.1(a)(1), it must meet the BACT ~~turnover~~ requirements in section 2449.1(a)(2)(A) below.

(A) ~~Turnover~~ BACT Requirements for Fleets Not Meeting ~~NOx~~ Fleet Average Target Rate – A fleet may meet the ~~turnover~~ BACT requirements by performing turnover as defined in section 2449(c)(55) or applying the highest level PM VDECS as defined in section 2449(c)(58)(A). ~~retiring a vehicle, designating a vehicle as a low-use vehicle, repowering a vehicle, rebuilding the engine to a more stringent emissions configuration, or applying a VDECS verified to achieve NOx reductions. If repowering a vehicle or rebuilding the engine to a more stringent emissions configuration, the new engine must be Tier 2 or higher and must be a higher tier than the engine replaced or rebuilt. The method for counting VDECS verified to achieve NOx reductions is specified in section 2449.1(a)(2)(A)8.~~

1. ~~Turnover~~ BACT Rate – If a fleet does not meet the ~~NOx~~ Fleet Average Target Rate in section 2449.1(a)(1), it must demonstrate that it has turned over or applied the highest level PM VDECS to the required percent of the total maximum power of the fleet that existed on January ~~March~~ 1 of the previous year since January ~~March~~ 1 of the previous year and on or before December 31 of the previous year. Any carryover ~~turnover~~ BACT credit previously accrued may be applied towards the BACT requirements ~~turnover required~~ in a later year. The required ~~turnover~~ percentages of fleet horsepower to turn over or apply the highest level PM VDECS to ~~percents to demonstrate on~~ for each compliance date are described below in a. through c. ~~e.~~

a. Large fleets –

i. 2014: 4.8 percent
ii: 2015 to 2017: 8 percent
iii. 2018 to 2023: 10 percent

b. Medium fleets –

i. 2017: 8 percent
ii. 2018 to 2023: 10 percent

c. Small fleets –

2019 to 2028: 10 percent

~~a) 2010: 8 percent.~~
~~b) 2011 and 2012 4.8 percent.~~
~~c) 2013:~~
~~i. 14.4 percent for large fleets that did not meet the NOx fleet average target in 2011 or 2012,~~
~~ii. 11. 2 percent for large fleets that met the NOx fleet average target in 2011 but not 2012, and~~

~~iii. 8 percent for large fleets that met the NOx fleet average target in 2012 and for all medium fleets.~~

~~d) 2014 and 2015: 8 percent.~~

~~e) 2016 and later: 10 percent.~~

2. Carryover ~~turnover~~ BACT credit –

a. Beginning - All fleets may earn or accumulate credits for taking early action in accordance with the following sections i through vi, but with the exception of such credits for taking early action, all fleets begin with zero carryover BACT credit on January 1, 2013. ~~All fleets begin with zero carryover turnover credit on March 1, 2009. All fleets may begin accumulating carryover turnover credit on March 1, 2009.~~ To claim credit, fleets must submit to ARB and retain records as described in sections 2449(g) and (h).

i. Credit for Early Repowers and Rebuilds to More Stringent Emissions Standards – Credit for early repowers can only be claimed for engines that remain in the fleet on the compliance date that the credit is taken. Fleets that have repowered their vehicles with Tier 1 or higher engines or rebuilt the engine from a lower Tier to a Tier 1 or more stringent emissions standard before March 1, 2009 will accumulate a carryover BACT ~~turnover~~ credit (in horsepower) equal to: the maximum power of the vehicles repowered and the engines rebuilt in accordance with the preceding ~~the maximum power of Tier 1 or higher repower engines installed in affected vehicles before March 1, 2009~~. Fleets that repower their Tier 0 or Tier 1 vehicles with Tier 2 or higher engines, or rebuild the engines in their Tier 0 or Tier 1 vehicles to a Tier 2 or more stringent emissions standard, by the following deadlines, will accumulate a carryover BACT credit (in horsepower) equal to the maximum power of the vehicles repowered and the engines rebuilt in accordance with the preceding:

1. Large fleets: January 1, 2013
2. Medium fleets: January 1, 2016
3. Small fleets: January 1, 2018

~~The credit can only be claimed for engines that remain in the fleet in the year that the credit is taken.~~

ii. Credit for Early Replacement – Fleets that have replaced their Tier 0 vehicles at an average rate greater than 8 percent of total maximum power per year between March 1, 2006 and March 1, 2009 will accumulate carryover turnover credit (in horsepower) equal to: [(Total maximum power of Tier 0 vehicles retired between March 1, 2006 and March 1, 2009) minus (Total maximum power of Tier 0 vehicles added between March 1, 2006 and March 1, 2009) minus (Total credit for early retirement claimed under section (iii ~~vi~~) below)] minus [(Total maximum power of fleet on

March 1, 2007 times 0.08) plus (Total maximum power of fleet on March 1, 2008 times 0.08) plus (Total maximum power of fleet on March 1, 2009 times 0.08)]. Tier 0 vehicles repowered with newer engines are counted under (i) above and shall not be counted under (ii).

iii. Double Credit for Early VDECS Installations ~~NOx Retrofits~~ ~~–~~If fleets install a VDECS by the deadlines shown below for the applicable fleet size, fleets ~~that have installed VDECS that have been verified as achieving NOx reductions on their vehicles before March 1, 2011~~ will accumulate carryover ~~turnover~~ BACT credit (in horsepower) equal to: 2 times the ~~multiplied by (Verified Percent NOx Reduction divided by 60 percent) multiplied by (M~~ maximum power on which VDECS ~~verified to achieve NOx reductions~~ are installed ~~before March 1, 2011)~~ by the applicable deadline:

1. Large fleets: January 1, 2013
2. Medium fleets: January 1, 2016
3. Small fleets: January 1, 2018

Fleets that install VDECS verified to reduce NOx by the same deadlines will accumulate an additional carryover BACT credit (in horsepower) equal to: 2 times the (Verified Percent NOx Reduction divided by 120 percent) multiplied by (Maximum power of the engines on which fleets install VDECS verified to reduce NOx).

~~**iv. Credit for Reduced Fleet Activity** – Fleets that demonstrate a reduction in fleet activity will accumulate carryover turnover credit (in horsepower). Fleet activity is defined as the sum of [(Total maximum power of the vehicle) times (Number of hours the vehicle was operated in the applicable 12 month period)] for each vehicle in the fleet.~~

~~1. Carryover turnover credit generated from reduced activity may only be applied toward the March 1, 2010, or March 1, 2011 compliance dates.~~

~~2. Fleets that receive credit for the retirement of any vehicle prior to March 1, 2010, per section (v) below, can not count that vehicle in the calculation of reduced activity credit.~~

~~3. Carryover turnover credit shall be calculated for the fleet, not including those vehicles retired for credit under section (v) below, as:~~

~~[(Fleet activity for January 1, 2007, to December 31, 2007) minus (Fleet activity for March 1, 2009, to February 28, 2010, including vehicles added to the fleet) divided by (fleet activity for January 1, 2007, to December 31, 2007)] multiplied by (Total maximum power of fleet on July 1, 2007)~~

~~4. Fleet owners must use vehicle specific data, including but not limited to hour meter logs or operator logs linking operators to specific vehicles, from July 1, 2007, to March 1, 2010, as described in section 2449(g)(1)(G)4 to document vehicle activity.~~

~~5. Fleets that do not have hour meter logs or vehicle-specific operator logs or equivalent records that are verifiable and substantively demonstrate activity for all vehicles in the fleet:~~

~~A. May use other verifiable indicators that are directly related to reduced vehicle operation to demonstrate an overall reduction in fleet activity from July 1, 2007, to March 1, 2010, including but not limited to records of overall off-road diesel fuel use for the fleet, as described in section 2449(g)(1)(G)4. However, such fleets must subtract the total credit for early retirement claimed under section (v) below from their reduced activity credit.~~

~~B. May use indicators, including but not limited to revenue or total vehicle operator employment, that demonstrate a reduction in business or staffing but that do not directly correspond to vehicle or fleet activity. To qualify for a credit using such indirectly-correlated indicators, the fleet must be able to provide some evidence of overall reduced fleet activity. The Executive Officer will grant a fleet using such indicators a maximum 20 percent credit for demonstrated reduced activity not directly related to vehicular operation. Such fleets must also subtract from the 20 percent reduced activity credit any credits received for early retirement claimed under section (v) below credit. Fleets must not apply for credit using indicators that would demonstrate reduced business or staffing if the fleet has information or records that demonstrate the fleet has not reduced overall vehicle activity.~~

iv ~~v~~. Credit for Early Retirement – Fleets that reduce overall horsepower from March 1, 2006, to March 1, 2010, accumulate carryover BACT ~~turnover~~ credit (in horsepower) equal to 0.5 times the following: [(Total maximum horsepower of the fleet on March 1, 2006, including low-use vehicles) minus (Total maximum horsepower of the fleet on March 1, 2010, including low-use vehicles)]. In accordance with Section 2449.1(a)(2)(A)2.c, large fleets may use any such credit to meet any BACT requirements that Section 2449.1(a)(2)(A)(1) may require them to meet in the year ending January 1, 2015, or in any subsequent year. Notwithstanding Section 2449.1(a)(2)(A)2.c, large fleets may not use any such credit to meet any BACT requirements that Section

2449.1(a)(2)(A)(1) may require them to meet in the year ending on January 1, 2014.

v. Credit for Reduced Fleet Horsepower– Fleets that reduce their overall horsepower from March 1, 2010, to February 28, 2011, will accumulate carryover BACT credit (in horsepower) equal to: (Total maximum horsepower of the fleet on March 1, 2010) minus (Total maximum horsepower of the fleet on February 28, 2011).

vi. Credit for Interim Replacement – Fleets that replace over 8 percent of the fleet's total maximum power in Tier 0 and Tier 1 vehicles in any one year in any one of the specified periods will accumulate carryover BACT credit (in horsepower) equal to: (Combined total of maximum power of Tier 0 and Tier 1 vehicles retired over the year) minus (Combined total of maximum power of Tier 0 or Tier 1 vehicles added over the year) minus (Total maximum power of fleet at the end of the year times 0.08). In each year, the replacement or retirement of vehicles will be summed from January 1 to December 31 of that year, excepting 2011, during which the replacement or retirement will be summed from March 1 to December 31. Fleets shall exclude Tier 0 vehicles repowered with Tier 1 or higher engines, or rebuilt to a Tier 1 or more stringent emissions standard, from all such calculations.
1. Large fleets: March 1, 2011 to December 31, 2012
2. Medium fleets: March 1, 2011 to December 1, 2015
3. Small fleets: March 1, 2011 to December 1, 2017

b. Accumulating carryover BACT ~~turnover~~ credit –

~~i. 2010-2015 -~~ Beginning on January 1,2013 for large fleets, on January 1, 2016 for medium fleets, and on January 1, 2018 for small fleets, ~~From March 1, 2010 through March 1, 2015 for large fleets and from March 1, 2013 through March 1, 2015 for medium fleets~~ a fleet will accumulate~~s~~ carryover ~~turnover~~ credit each year it turns over or applies the highest level PM VDECS to more than the required percent of its maximum power specified in section 2449.1(a)(2)(A)1. The amount accumulated is the maximum power that has been turned over or to which highest level PM VDECS has been applied in excess of the percentage required ~~percent~~ in the 12 months prior to January ~~March~~ 1 of the year for ~~in~~ which the carryover BACT credit is being calculated. ~~From March 1, 2010, through March 1, 2012, a medium fleet accumulates carryover turnover credit each year the total horsepower it turns over exceeds 8 percent of its maximum power.~~

~~ii. After 2015 -~~ ~~After March 1, 2015, a fleet will accumulate carryover turnover credit each year it turns over more than 10 percent of its maximum power. The amount accumulated is the maximum power~~

~~turned over in the 12 months prior to March 1 of the year in which the carryover is calculated plus the carryover turnover credit used minus the required 10 percent.~~

~~**iii. Repower Credit** - From March 1, 2010 through March 1, 2012, a for medium fleets that did not accumulate any credit under (i) above shall accumulate carryover turnover credit each year equal to the total maximum power of Tier 2 or higher repower engines installed in affected vehicles in the 12 months prior to March 1 of the year in which the carryover is calculated. From March 1, 2010 through March 1, 2011, a large fleet that did not accumulate any credit under (i) above shall accumulate carryover turnover credit each year equal to the total maximum power of Tier 2 or higher repower engines installed in affected vehicles in the 12 months prior to March 1 of the year in which the carryover is calculated.~~

c. Using carryover BACT ~~turnover~~ credit - Accumulated carryover BACT ~~turnover~~ credit may be applied to meeting the BACT ~~turnover~~ requirements of section 2449.1(a)(2)(A)1 in a later year. The amount of carryover BACT ~~turnover~~ credit used to meet the BACT ~~turnover~~ requirements in any one year is subtracted from the carryover BACT ~~turnover~~ credit total available in subsequent years. The amount of actual turnover or horsepower the highest level PM VDECS was installed on ~~or retrofits~~ plus the amount of carryover BACT ~~turnover~~ credit used must equal the minimum BACT requirements described in ~~turnover required by~~ section 2449.1(a)(2)(A)1.

3. Order of BACT Requirements ~~*Turnover*~~ - All Tier 0 and Tier 1 engines in a fleet ~~that were not subject to a PM standard for new engines (Tier 0 and Tier 1 with no PM standard, i.e., Tier 1 engines between 50 and 174 horsepower)~~, except those in vehicles that qualify for an exemption from the BACT requirements ~~under section 2449.1(a)(2)(A)4~~., must be turned over before the turnover of any other higher tier engines may be counted toward the BACT ~~turnover~~ requirements in section 2449.1(a)(2)(A) or toward accumulating carryover BACT ~~turnover~~ credit. A fleet may, however, receive carryover BACT ~~turnover~~ credit per section 2449.1(a)(2)(A)2.a.iii. and 2449.1(a)(2)(A)9 for a VDECS ~~verified to achieve NOx reductions~~ installed on an engine, regardless of the engine's tier.

4. Exemptions from BACT for medium and large fleets – ~~A vehicle is exempt from the turnover of section 2449.1(a)(2)(A)1. if all vehicles in the fleet that do not qualify for an exemption under this section have been turned over and the vehicle meets one of the following conditions:~~ For medium and large fleets, a vehicle is exempt from the BACT requirements of section 2449.1(a)(2)(A)1. if it qualifies for one or more of the exemptions set forth in section 2449(e) or meets one of the conditions listed in section a through e below. A fleet that does not meet the fleet

averages in section 2449.1(a)(1)(A)(1) must meet the BACT requirements with the vehicles that do not qualify for an exemption under either Section 2449(e) or this section, provided that nothing shall require a fleet to apply a VDECS to any vehicle. Where all of the vehicles in a fleet qualify for an exemption under either this section or section 2449(e), the fleet is exempt from the BACT and fleet average requirements in that year. The exemptions set forth in this section do not lower the total maximum power on which the BACT requirements are calculated.

a. On the compliance date, the vehicle is less than 10 years old from the date of manufacture;

b. The vehicle meets all of the following specialty vehicle criteria:

i. The fleet has turned over all other vehicles first,

ii. No repower is available for the specialty vehicle, as demonstrated to the Executive Officer,

iii. A used vehicle with a cleaner engine is not available to serve a function and perform the work equivalent to that of the specialty vehicle, as demonstrated to the Executive Officer, and

iv. The specialty vehicle has ~~been retrofit with~~ the highest level VDECS installed,

c. The vehicle ~~has~~ had ~~been retrofitted within the last six years with~~ a Level 2 or 3 PM VDECS installed within the last six years ~~that~~ and such VDECS was highest level PM VDECS at the time of the installation ~~retrofit~~, or

d. The vehicle has a Tier 4 interim or Tier 4 final engine.

e. The vehicle has the highest level PM VDECS installed prior to January 1, 2013, ~~March 1, 2011~~, except that this exemption may be applied to no more than 15 percent of a fleet's total horsepower as of January 1, 2013 ~~March 1, 2010~~.

i. If before January 1, 2013, the fleet has installed the highest level PM VDECS on more than 15 percent of the fleet's January 1, 2013, total horsepower, the fleet may apply this exemption to any vehicles with the highest level PM VDECS installed, as long the total horsepower of those vehicles does not exceed the 15 percent exemption threshold established in sectione. above.

ii. The highest level PM VDECS must remain on the vehicle in order to maintain this exemption. If a VDECS fails, the fleet must replace the VDECS in accordance with section 2449(e)(1) to maintain this exemption for the vehicle.

5. Exemptions from BACT for Small Fleets – For small fleets, a vehicle is exempt from the BACT requirements of section 2449.1(a)(2)(A)1. if it qualifies for one or more of the exemptions set forth in section 2449(e) or meets one of the conditions listed in section a through e below. A fleet that does not meet the fleet averages in section 2449.1(a)(1)(A)(1) must meet the BACT requirements with the vehicles that do not qualify for an exemption under either Section 2449(e) or this section, provided that

nothing shall require a fleet to apply a VDECS to any vehicle. Where all of the vehicles in a fleet qualify for an exemption under either this section or section 2449(e), the fleet is exempt from the BACT and fleet average requirements in that year. The exemptions set forth in this section do not lower the total maximum power on which the BACT requirements are calculated.

a. On the compliance date, the vehicle is less than 10 years old from the date of manufacture;

b. The vehicle meets all of the following specialty vehicle criteria described above in section 2449.1(a)(2)(A)4.b.

c. There is no highest level VDECS available for the vehicle's engine as of 10 months prior to the compliance date (i.e., there is no Level 2 or 3 VDECS, or there is no Level 2 or 3 VDECS which can be used without impairing the safe operation of the vehicle as demonstrated per section 2449(e)(8)),

d. The vehicle's engine is equipped with an original equipment manufacturer diesel particulate filter that came new with the vehicle, or the vehicle has a Tier 4 interim or Tier 4 final engine.

e. The vehicle's engine has already been retrofitted with a Level 2 or 3 VDECS that was the highest level PM VDECS available at time of installation. An engine with a Level 2 VDECS that was not the highest level VDECS at time of installation does not qualify for this exemption.

6 ~~5~~. Delay Tier 2 ~~1~~ turnover - All vehicles with a Tier 2 ~~1~~ or higher engine are exempt from the BACT ~~turnover~~ requirements through~~until the compliance year ending~~ January 1, 2015 ~~March 1, 2013~~ (i.e., the first turnover of or VDECS installations on Tier 2 ~~1~~ or higher engines would be required between January 1, 2015 and December 31, 2015 ~~March 2, 2012 and March 1, 2013~~), provided that all Tier 0 and Tier 1 vehicles in the fleet owner's fleet that do not qualify for an exemption under section 2449.1(a)(2)(A)4. have been turned over.

7 ~~6~~. Designating vehicle as permanent low-use – In the year in which a fleet designates ~~A fleet may designate~~ a vehicle that was formerly used ~~100~~200 hours or more per year as a permanent low-use vehicle, ~~by limiting its use to less than 100 hours per year and committing to keep its use less than 100 hours per year.~~ the fleet will accumulate carryover BACT credit (in horsepower) equal to the maximum power of such vehicle. Only the designation of a vehicle that was formerly used 200 hours or more per year as a permanent low-use vehicle will qualify a fleet to receive such carryover BACT credit. For example, a fleet could designate a vehicle used 500 hours in 2016 as permanent low use on December 31, 2016, for credit toward the January 1, 2017 requirements, and limit the vehicle hours from January 1, 2017, to December 31, 2017 (and all future years) to 200 or less.

~~a. Only vehicles formerly used 100 hours or more per year may be so designated. Vehicles so designated may be counted toward the turnover requirements.~~

b. ~~Once designated as low-use, a vehicle may never again be used more than 100 hours per year by the fleet unless the vehicle meets the adding vehicles requirements in section 2449(d)(7).~~

~~c. A fleet is not obliged to designate a vehicle whose use drops below 100 hours per year as low-use, or to count it toward the turnover requirements. If such a vehicle is not designated as low-use, its use may increase beyond 100 hours per year in subsequent years.~~

8 ~~7~~. Rounding - If the horsepower to meet BACT requirements~~d to be turned over~~ under section 2449.1(a)(2)(A) is less than half of the maximum power of the lowest horsepower engine in the fleet that is subject to the BACT ~~turnover~~ requirements, the next engine is not required to be turned over or have a highest level PM VDECS applied to it. However, on the next year's compliance date, any horsepower not accounted for ~~turned over~~ due to this rounding provision must be added to the BACT requirements~~d turnover~~ under section 2449.1(a)(2)(A). Once the required horsepower ~~to be turned over~~ equals or exceeds half of the maximum power of the next engine in the fleet that is subject to the BACT ~~turnover~~ requirements, the next engine must be turned over or have a highest level PM VDECS applied to it.

9 ~~8~~. ~~Turnover~~ BACT Credit for NOx VDECS ~~Retrofits~~ - VDECS ~~that have been~~ verified ~~as achieving~~ to reduce NOx ~~reductions~~ may be used to satisfy the BACT ~~turnover~~ requirements in section 2449.1(a)(2)(A)1 on each compliance date as follows:

For VDECS verified to reduce NOx but not as achieving PM reductions, BACT ~~Turnover~~ credit for NOx VDECS ~~retrofits~~ equals (Verified Percent NOx Reduction divided by 60 percent) multiplied by (Maximum power of the vehicle to which the the VDECS was applied to ~~on which VDECS verified to achieve NOx reductions was installed in last 12 months~~).

For VDECS verified to reduce NOx and that are also the highest level PM VDECS, or for VDECS that have been verified as achieving NOx reductions and is installed on an engine that also has a highest level PM VDECS that is verified separately, BACT credit for VDECS verified to reduce NOx equals (Verified Percent NOx Reduction divided by 120 percent) multiplied by (Maximum power of the vehicle to which the the VDECS was applied to).

This credit is applied in addition to credit for installing the highest level PM VDECS in section 2449.1(a)(2)(A)2.b. BACT ~~Turnover~~ credit for NOx VDECS ~~retrofits~~ may be applied to meet the ~~turnover~~ BACT requirements of section 2449.1(a)(2)(A)1 or to accumulate carryover BACT ~~turnover~~ credit.

10. Delayed Requirements for Early Compliance – Large fleets are exempt from the January 1, 2014 performance requirements if the sum of the fleet's NOx credits on March 1, 2010, exceeded 8 percent of the fleet's March 1, 2009 horsepower. To determine eligibility, ARB will take the sum of: Early Repower credit gained under 2449.1(a)(2)(A)(2)(a)i. plus Early Replacement credit gained under 2449.1(a)(2)(A)(2)(a)ii. plus Early VDECS credit for VDECS under 2449.1(a)(2)(A)(2)(a)iii. plus credit for Early Retirement gained under 2449.1(a)(2)(A)(2)(a)iv. plus turnover credit gained from March 1, 2009, to February 28, 2010, that was not accounted for under section 2449.1(a)(2)(A)(2)(a)iv. If the sum of these credits exceeds (Total maximum power of the fleet on March 1, 2009 times 0.8), then the fleet will not be required to meet either the January 1, 2014, fleet average or the January 1, 2014 BACT requirements. This provision shall not have the effect of reducing any credit that any fleet would otherwise have the right to receive in 2014 or in any subsequent year, even if such credit provided all or part of the basis for a finding that such fleet had NOx credits on March 1, 2010, in excess of 8 percent of such fleet's horsepower on March 1, 2009.

Note: Authority cited: Sections 39002, 39515, 39516, 39600, 39601, 39602, 40000, 41511, 43000, 43000.5, 43013, 43016, 43018, and 43018.2, Health and Safety Code. Reference: Sections 39002, 39515, 39516, 39600, 39601, 39602, 39650, 39656, 39657, 39658, 39659, 39665, 39667, 43000, 43000.5, 43013, 43016, 43018, and 43018.2, Health and Safety Code.

Section 2449.2 PM Performance Requirements

(a) Performance Requirements -

Each fleet must meet the fleet average requirements in section 2449.2(a)(1) by March 1 of each year or demonstrate that it met the best available control technology (BACT) requirements as described in section 2449.2(a)(2). There are differing requirements for large and medium, and small fleets. If various portions of a fleet are under the control of different responsible officials because they are part of different subsidiaries, divisions, or other organizational structures of a company or agency, the fleet portions may comply with the performance requirements separately and be reported separately. However, the total maximum power of the vehicles under common ownership or control determines the fleet size. Fleets owned by low-population county local municipalities are subject to the small fleet requirements, even if their total maximum power exceeds 2,500 horsepower. Section 2449(d)(4) describes requirements for fleets that change size.

(1) Fleet Average Requirements

(A) Fleet Average Requirements for Large and Medium Fleets

1. Diesel PM Fleet Average - For each compliance date, a large or medium fleet must demonstrate that its Diesel PM Index was less than or equal to the calculated Diesel PM Target Rate.

The equation for calculating Diesel PM Target Rate is below:

Diesel PM
Target Rate = [SUM of (*Max Hp* for each engine in fleet multiplied by *Target* for each engine in fleet*)* for all engines in fleet] divided by [SUM of (Max *Hp*) for all engines in fleet]

where Target is the Diesel PM target in g/bhp-hr from Table 2. To find the Target for each engine, read the value for the appropriate row based on the compliance year and the appropriate column based on the engine's maximum power from Table 2.

The equation for calculating Diesel PM Index is below:

Diesel PM Index = [SUM of (*Max Hp* for each engine in fleet multiplied by PM *Emission Factor* for each engine in fleet) for all engines in fleet] divided by [SUM of (Max *Hp*) for all engines in fleet]

Table 2 shows the targets used to calculate the Diesel PM Target Rate for each compliance date for large and medium fleets. The Emission Factors are defined in Appendix A.

Table 2 – Large and Medium Fleet PM Targets
For Use in Calculating PM Target Rates [g/bhp-hr]

	PM Targets for each Max Hp Group							
Compliance Date: March 1 of Year	25-49 hp	50-74 hp	75-99 hp	100-174 hp	175-299 hp	300-599 hp	600-750 hp	>750 hp
2010 (large fleets only)	0.46	0.60	0.62	0.33	0.23	0.18	0.20	0.30
2011 (large fleets only)	0.46	0.60	0.62	0.33	0.23	0.18	0.20	0.30
2012 (large fleets only)	0.39	0.43	0.46	0.26	0.16	0.14	0.14	0.24
2013	0.39	0.43	0.46	0.26	0.16	0.14	0.14	0.24
2014	0.29	0.23	0.24	0.18	0.11	0.11	0.11	0.18
2015	0.29	0.23	0.24	0.18	0.11	0.11	0.11	0.18
2016	0.21	0.18	0.19	0.14	0.08	0.08	0.08	0.11
2017	0.21	0.18	0.19	0.14	0.08	0.08	0.08	0.11
2018	0.12	0.12	0.13	0.10	0.06	0.06	0.06	0.08
2019	0.12	0.12	0.13	0.10	0.06	0.06	0.06	0.08
2020	0.08	0.08	0.07	0.06	0.03	0.03	0.03	0.06

(B) Fleet Average Requirements for Small Fleets - Small fleets must meet a PM fleet average beginning in 2015. To meet the PM fleet average, for each compliance date, a small fleet must demonstrate that its Diesel PM Index was less than or equal to the calculated Diesel PM Target Rate.

The equations for calculating Target Rates and Diesel PM Index are below:

Diesel PM Target Rate = [SUM of ((Max Hp for each engine in fleet multiplied by Target for each engine in fleet)] divided by [SUM of (Max *Hp*) for all engines in fleet]

where Target is the PM target in g/bhp-hr from Table 3. To find the Target for each engine, read the value for the appropriate row based on the compliance year and the appropriate column based on the engine's maximum power from Table 3.

Diesel PM Index = [SUM of (*Max Hp* multiplied by PM *Emission Factor*) for each engine in fleet] divided by [SUM of (Max *Hp*) for all engines in fleet]

Table 3 shows the targets used to calculate the Diesel PM Target Rate for each compliance date for small fleets. The Emission Factors are defined in Appendix A.

Table 3 – Small Fleet PM Targets
For Use in Calculating PM Target Rates [g/bhp-hr]

	PM Targets for each Max Hp Group							
Compliance Date: March 1 of Year	25-49 hp	50-74 hp	75-99 hp	100-174 hp	175-299 hp	300-599 hp	600-750 hp	>750 hp
2015	0.46	0.60	0.62	0.33	0.23	0.18	0.20	0.30
2016	0.46	0.60	0.62	0.33	0.23	0.18	0.20	0.30
2017	0.39	0.43	0.46	0.26	0.16	0.14	0.14	0.24
2018	0.39	0.43	0.46	0.26	0.16	0.14	0.14	0.24
2019	0.29	0.23	0.24	0.18	0.11	0.11	0.11	0.18
2020	0.29	0.23	0.24	0.18	0.11	0.11	0.11	0.18
2021	0.21	0.18	0.19	0.14	0.08	0.08	0.08	0.11
2022	0.21	0.18	0.19	0.14	0.08	0.08	0.08	0.11
2023	0.12	0.12	0.13	0.10	0.06	0.06	0.06	0.08
2024	0.12	0.12	0.13	0.10	0.06	0.06	0.06	0.08
2025	0.08	0.08	0.07	0.06	0.03	0.03	0.03	0.06

(2) BACT Requirements – Each year, each fleet must determine if it will be able to meet the fleet average requirements for the next March 1 compliance date, and if not, the following BACT requirement must be met. If a fleet does not meet the Diesel PM Target Rate in section 2449.2(a)(1), it must meet the BACT Retrofit Requirements in section 2449.2(a)(2)(A). Fleets that fail to meet both an applicable NOx target rate in section 2449.1(a)(1) and the Diesel PM Target Rates in section 2449.2(a)(1) in a compliance year must first meet the BACT turnover requirements in section 2449.1(a)(2) in that year and then meet the BACT Retrofit Requirements in section 2449.2(a)(2)(A) in that year.

(A) PM Retrofit Requirements for Fleets Not Meeting Diesel PM Target Rate

1. PM Retrofit Rate - If a fleet does not meet the Diesel PM Target Rate in section 2449.2(a)(1), it must demonstrate that it has retrofit the required percent of its total maximum power (not including specialty vehicles retrofitted and exempted from turnover in section 2449.1(a)(2)(A)4.b.) with highest level VDECS since March 1 of the previous year. Any carryover retrofit credit previously accrued may be applied towards the retrofits required. If the VDECS is not new (i.e., is being reused), it must have been taken from a vehicle that is no longer operating in California. Fleets may count acquisition of vehicles with Tier 4 interim or Tier 4 final engines or retirement of Tier 0 vehicles toward the retrofit requirement as described below. The required retrofit percents to demonstrate on each compliance date are described below in a. through d.

a. 2010: 20 percent.

b. 2011 and 2012:

c. 2013 and later: 36 percent for large fleets that did not meet the PM fleet average target in 2011 or 2012, 28 percent for large fleets that met the PM fleet average target in 2011 but not 2012, and 20

~~percent for large fleets that met the PM fleet average target in 2012 and for all medium fleets.~~

~~d. 2014: 20 percent.~~

~~a. Turnover to Tier 4 In Lieu of Retrofitting~~ ~~- If since March 1 of the previous year, a fleet acquired Tier 4 interim or Tier 4 final engines already equipped with an original equipment manufacturer diesel particulate filter or vehicles equipped with such engines, the total maximum power of the Tier 4 interim and Tier 4 final engines may be counted toward the required hp to be retrofit under section 2449.2(a)(2)(A)1. or used to accumulate carryover PM retrofit credit if during that same period, the fleet also retired Tier 0, 1, 2, or 3 engines with that total maximum power or greater.~~

~~b. Retirement of Tier 0 Vehicles in Lieu of Retrofitting for Fleets with Reduced Horsepower~~ ~~- If since March 1 of the previous year, a fleet's total maximum power has decreased, the lesser of the total maximum power of Tier 0 vehicles retired since March 1 of the previous year and the total horsepower by which the fleet has been decreased may be counted toward the required hp to be retrofit under section 2449.2(a)(2)(A)1. Such retirement of Tier 0 vehicles may not be used to accumulate carryover PM retrofit credit. Retired Tier 0 vehicles that are counted toward the required hp to be retrofit under this subsection may not be used in subsection a. above to demonstrate that the fleet retired Tier 0, 1, 2, or 3 engines with at least the total maximum power of the Tier 4 engines added.~~

~~b.~~ c. Conversion or Repower of Diesel Vehicles to Alternative Fuel or Gasoline-Powered ~~- Fleets that convert or repower a diesel vehicle subject to the regulation to alternative fuel or gasoline-powered may count the max power of the vehicle converted or repowered toward the required hp to be retrofit under section 2449.2(a)(2)(A)1. or to accumulate carryover PM BACT retrofit credit.~~

~~2. Carryover PM retrofit credit~~ –

~~a. Beginning~~ ~~- All fleets for vehicles remaining in their fleets begin with zero carryover retrofit credit on March 1, 2011 2009. All fleets may begin accumulating carryover retrofit credit on March 1, 2009.~~

~~i. Double Credit for Early PM Retrofits~~ ~~– Fleets that have installed the highest level VDECS on their vehicles before January 1, 2010 will accumulate a carryover retrofit credit equal to: 2 multiplied by total maximum power of engines on which highest level VDECS was installed before January 1, 2010, unless the contract for funding the VDECS stipulates single credit for installation of the VDECS.~~

~~ii. Credit for Other PM Retrofits Before Initial Compliance Date –~~ ~~Small and medium fleets that install highest level VDECS on their vehicles before March 1, 2012 will accumulate carryover retrofit credit equal to; 2 multiplied by total maximum power of engines on~~

which highest level VDECS was installed. Small fleets that install highest level VDECS on their vehicles between March 1, 2012 and February 28, 2014 accumulate carryover PM BACT retrofit credit equal to total maximum power of engines on which highest level VDECS was installed.

iii. Credit for Reduced Fleet Activity– Fleets that demonstrate a reduction in fleet activity will accumulate carryover retrofit credit (in horsepower). Fleet activity is defined as the sum of [(Total maximum power of the vehicle) times (Number of hours the vehicle was operated in the applicable 12 month period)] for each vehicle in the fleet.

1. Carryover retrofit credit generated from reduced activity may only be applied toward the March 1, 2010, or March 1, 2011 compliance dates.
2. Fleets that receive credit for the retirement of any vehicle prior to March 1, 2010, per section (iv) below, can not count that vehicle in the calculation of reduced activity credit.
3. Carryover retrofit credit shall be calculated for the fleet, not including those vehicles retired for credit under section (iv) below, as:

    [(Fleet activity for January 1, 2007, to December 31, 2007) minus (Fleet activity for March 1, 2009, to February 28, 2010, including vehicles added to the fleet) divided by (fleet activity for January 1, 2007, to December 31, 2007)] multiplied by (Total maximum power of fleet on July 1, 2007)

4. Fleet owners must use vehicle specific data, including but not limited to hour meter logs or operator logs linking operators to specific vehicles, from July 1, 2007, to March 1, 2010, as described in section 2449(g)(1)(G)4 to document vehicle activity.
5. Fleets that do not have hour meter logs or vehicle-specific operator logs or equivalent records that are verifiable and substantively demonstrate activity for all vehicles in the fleet:
    A. May use other verifiable indicators that are directly related to reduced vehicle operation to demonstrate an overall reduction in fleet activity from July 1, 2007, to March 1, 2010, including but not limited to records of overall off-road diesel fuel use for the fleet, as described in section 2449(g)(1)(G)4. However, such fleets must subtract the total credit for early retirement claimed under section (iv) below from their reduced activity credit.
    B. May use indicators, including but not limited to revenue or total vehicle operator employment, that demonstrate a

reduction in business or staffing but that do not directly correspond to vehicle or fleet activity. To qualify for a credit using such indirectly-correlated indicators, the fleet must be able to provide some evidence of overall reduced fleet activity. The Executive Officer will grant a fleet using such indicators a maximum 20 percent credit for demonstrated reduced activity not directly related to vehicular operation. Such fleets must also subtract from the 20 percent reduced activity credit any credits received for early retirement claimed under section (iv) below. Fleets must not apply for credit using indicators that would demonstrate reduced business or staffing if the fleet has information or records that demonstrate the fleet has not reduced overall vehicle activity.

iv. Credit for Early Retirement – Fleets that reduce overall horsepower from March 1, 2006, to March 1, 2010, begin with carryover retrofit credit (in horsepower) equal to: (Total maximum horsepower of the fleet on March 1, 2006) minus (Total maximum horsepower of the fleet on March 1, 2010).

b. Accumulating carryover PM BACT retrofit credit – Beginning March 1, 2011 for large fleets, March 1, 2013 for medium fleets, and March 1, 2015 for small fleets, a fleet will accumulate carryover retrofit credit each year the total horsepower it retrofits plus the carryover retrofit credit it uses exceeds the required percent of its maximum power specified in section 2449.2(a)(2)(A)1. The amount accumulated is the maximum power retrofit plus the carryover retrofit credit used minus the required percent in the past 12 months prior to March 1. A large fleet also accumulates carryover retrofit credit on March 1, 2010 if the sum of the double retrofit credit earned from March 1, 2009 to January 1, 2010 plus the single retrofit credit earned from January 1, 2010 to March 1, 2010 exceeds 20 percent of its maximum horsepower. The amount accumulated is the sum of double credit retrofit credit earned from March 1, 2009 to January 1, 2010 plus the single credit earned from January 1, 2010 to March 1, 2010 in excess of 20 percent of fleet's maximum horsepower in the past 12 months.

c. Using carryover PM retrofit credit - Accumulated carryover retrofit credit may be applied to meeting the retrofit requirements of section 2449.2(a)(2)(A)1. in a later year. The amount of carryover retrofit credit used to meet the retrofit requirements in any one year is subtracted from the carryover retrofit credit total available in subsequent years. The amount of actual retrofit plus the amount of carryover retrofit credit used must equal the minimum BACT retrofit rate required by section 2449.2(a)(2)(A)(1).

3. Order of PM Retrofit – No Level 2 VDECS may be counted toward the retrofit requirements in section 2449.2(a)(2)(A) until all engines in vehicles

older than 5 years for which the highest level VDECS available is a Level 3 VDECS have been retrofit, except for specialty vehicles utilizing the exemption in section 2449.1(a)(2)(A)4.b. for which Level 2 is the highest level VDECS.

4. Exemptions – A vehicle is exempt from the retrofit requirements in section 2449.2(a)(2)(A)1. if all vehicles in the fleet that do not qualify for an exemption under the following conditions have been retrofitted, and the vehicle meets one of the following conditions:

a. On the date of compliance, the vehicle is less than 5 years old from the vehicle's date of manufacture,

b. There is no highest level VDECS available for the vehicle's engine (i.e., there is no Level 2 or 3 VDECS, or there is no Level 2 or 3 VDECS which can be used without impairing the safe operation of the vehicle as demonstrated per section 2449(e)(8)),

c. The vehicle's engine is equipped with an original equipment manufacturer diesel particulate filter that came new with the vehicle, or

d. The vehicle's engine has already been retrofitted with a Level 2 or 3 VDECS that was the highest level VDECS available at time of installation. An engine with a Level 2 VDECS that was not the highest level VDECS at time of installation does not qualify for this exemption.

5. Rounding - If the horsepower required to be retrofit under section 2449.2(a)(2)(A) is less than half of the maximum power of the lowest horsepower engine in the fleet that is subject to the retrofit requirements, the next engine is not required to be retrofitted. However, on the next year's compliance date, any horsepower not retrofit due to this rounding provision must be added to the required retrofit under section 2449.2(a)(2)(A). Once the required horsepower to be retrofit equals or exceeds half of the maximum power of the next engine in the fleet that is subject to the retrofit requirements, the next engine must be retrofitted.

(3) Adding Vehicles After the Final Target Date – Commencing respectively on March 1, 2020 for large and medium fleets, and March 1, 2025 for small fleets, if a fleet owner adds a vehicle to his fleet and the engine did not come with an original equipment manufacturer diesel particulate filter, it must be equipped with the highest level VDECS within 3 months of acquisition.

Note: Authority cited: Sections 39002, 39515, 39516, 39600, 39601, 39602, 39650, 39656, 39658, 39659, 39665, 39667, 39674, 39675, 40000, 41511, 42400, 42400.1, 42400.2, 42400.3.5, 42402, 42402.1, 42402.2, 42402.4, 42403, 43000, 43000.5, 43013, 43016, 43018, and 43018.2, Health and Safety Code. Reference: Sections 39002, 39515, 39516, 39600, 39601, 39602, 39650, 39656, 39657, 39658, 39659, 39665, 39667, 39674, 39675, 40000, 41511, 42400, 42400.1, 42400.2, 42402.2, 43000, 43000.5, 43013, 43016, 43018, and 43018.2, Health and Safety Code.

~~*2449.3*~~2449.2 Surplus Off-Road Opt-In for NOx (SOON) Program

(a) ***Purpose***

To achieve additional reductions of oxides of nitrogen (NOx) emissions from in-use off-road diesel-fueled vehicles in California. The reductions must be surplus to those that would otherwise be achieved through implementation of title 13, California Code of Regulations, sections 2449, and 2449.1 ~~and 2449.2~~, "Regulation for In-Use Off-Road Diesel Vehicles".

(*b*) ***Applicability***

(1) ***District Applicability*** - Section ~~2449.3~~2449.2 applies to any air quality management district or air pollution control district (jointly referred to hereafter as air district) whose governing board elects to opt into the provisions of this section as set forth in section ~~2449.3(f)~~2449.2(f) below.

(2) ***Fleet Applicability*** – Section ~~2449.3~~2449.2 applies to a fleet that:
(A) Operates individual vehicles within the air district;
(B) As of January 1, 2008, on a statewide level, consisted of more than 40 percent Tier 0 and Tier 1 vehicles, and;
(C) Has a statewide fleet with maximum power greater than 20,000 horsepower (hp). excluding the hp from engines in two-engine cranes and the hp from single engine cranes formerly subject to the Cargo Handling Equipment Regulation and the hp from two-engine water well drilling rigs.

(c) ***Definitions***

The definitions in title 13, CCR, section 2449(c) apply, along with the following definitions:

(1) ***Contract period*** means the period of time in which the vehicle participates in the program and is under contract to the air district to achieve additional emission reductions.
(2) ***Operated within the district*** means a vehicle that currently operates within the boundaries of the air district and, during the three years immediately prior to the solicitation deadline, operated at least one hundred hours per year and operated more hours within the boundaries of the air district than in any other district.
(3) ***Project*** means actions on one vehicle to reduce NOx emissions, such as retrofit, repower, or vehicle replacement, for which funding is requested.
(4) ***Solicitation*** means a public announcement by the air district, requesting that fleets submit grant applications to the air district to participate in emission reduction incentive programs under this section.
(5) ***Solicitation deadline*** means the last day, as provided in the solicitation, that an application may be physically received by the air district.

(d) ***Requirements***

(1) If an air district, having held a public hearing and opted into the SOON program and made the program mandatory per section ~~2449.3(e)(9)~~2449.2(e)(9), issues a

solicitation for applications for funding under the SOON program, and if the solicitation so requires, a fleet that meets the applicability criteria of subsection (b) on the date of the solicitation must, before the solicitation deadline, do the following:

(A) **Report to District and ARB** - File a report, in a format approved by the Executive Officer, of all information required under section 2449(g) with the air district and ARB on its statewide fleet and that part of the fleet that has operated within the air district, as defined in section (c)(2) above. If the solicitation deadline is before April 1, 2009, the fleet must provide information regarding the fleet as it existed on January 1, 2008. If the solicitation deadline is on or after April 1, 2009, the fleet must provide the information that was reported to ARB on the most recent April 1 reporting date.

(B) **Calculate ~~NOx~~** fleet average **index** - Determine the ~~NOx~~ fleet average index for vehicles that operated within the air district for the year in which the solicitation deadline occurs according to the formula in section 2449.1(a)(1)(A)1.

(C) **Calculate ~~NOx~~** fleet average **target rate** - Determine the ~~NOx~~ fleet average target rate for vehicles that operated within the air district for the year in which the solicitation deadline occurs according to the formula in section 2449.1(a)(1)(A)1, and using the ~~NOx~~ targets set forth in Table 1 below. If there is no ~~NOx~~ fleet average target rate for the year in which the solicitation deadline occurs, the nearest future target rate ~~should~~shall be used.

Table 1: ~~NOx~~ Targets for each Max Hp Group [g/bhp-hr]								
Compliance Date: January~~March~~ 1 of Year	**25-49 hp**	**50-74 hp**	**75-99 hp**	**100-174 hp**	**175-299 hp**	**300-599 hp**	**600-750 hp**	**>750 hp**
2011	5.6	6.2	6.7	6.0	5.4	5.1	5.3	6.4
2014	~~4.9~~ 5.8	~~5.1~~ 6.5	~~5.2~~ 7.1	~~4.7~~ 6.4	~~2.8~~ 3.9	~~2.7~~ 3.7	~~2.7~~3.7	~~4.2~~ 5.3
2017	~~4.2~~ 5.0	~~4.1~~ 5.4	~~3.8~~ 5.5	~~3.4~~ 4.9	~~1.5~~ 2.2	~~1.5~~ 2.2	~~1.5~~ 2.2	~~3.2~~ 4.3
2020	~~3.5~~ 4.1	~~3.2~~ 4.2	~~2.4~~ 3.4	~~2.2~~ 3.1	~~0.9~~ 1.4	~~0.9~~ 1.3	~~0.9~~ 1.4	~~2.6~~ 3.4
2023	~~3.5~~ 3.3	~~3.2~~ 3.0	~~2.4~~ 1.4	~~2.2~~ 1.3	~~0.9~~ 0.7	~~0.9~~ 0.7	~~0.9~~ 0.7	~~2.6~~ 2.7

(D) **Apply for funding** – Except as provided in section ~~2449.3(d)(2)~~2449.2(d)(2) and ~~2449.3(e)(3)~~2449.2(e)(3) below, a fleet for which the ~~NOx~~ fleet average index, as calculated in section ~~2449.3(d)(1)(B)~~2449.2(d)(1)(B), is greater than the ~~NOx~~ fleet average target rate, as calculated in section ~~2449.3(d)(1)(C)~~2449.2(d)(1)(C), must apply for SOON funding. The application submitted must be completed according to the guidelines and conditions established under the solicitation and, if the necessary NOx retrofits, repower, or vehicle replacements are available, must indicate how NOx retrofits, repowers, or vehicle replacements for which funding is requested will bring the ~~NOx~~ fleet average index for vehicles that operated within the air district from where it would have been under compliance with section 2449.1 to less than or equal to the ~~NOx~~ fleet average target rate calculated in section ~~2449.3(d)(1)(C)~~2449.2(d)(1)(C). The application must

also indicate whether the fleet wants the application to be given high priority for SOON program funding by the district. The funding priority shall be determined under the air district guidelines developed per section ~~2449.3(f)(2)~~2449.2(f)(2).

(E) **Achieve NOx reductions** - Fleets that receive SOON program funding must complete the actions for which they were funded per the conditions of the solicitation. Fleets that do not receive requested SOON program funding are not required to take actions beyond compliance with the in-use off-road diesel vehicle regulation, as specified in sections 2449, and 2449.1~~, and 2449.2~~.

(2) **Fleets not meeting the applicability provisions** - A fleet that operates individual vehicles within the air district, but does not meet the applicability provisions of sections ~~2449.3(b)(2)(B)~~2449.2(b)(2)(B) and ~~2449.3(b)(2)(C)~~2449.2(b)(2)(C), are not required to file a report with the ARB or the air district under section ~~2449.3(d)(1)~~2449.2(d)(1). It is also not required to apply for funding under subsection (d)(1)(D), but may file a report with ARB or the air district under section ~~2449.3(d)(1)~~2449.2(d)(1) and apply for funding if the ~~NOx~~ fleet average index calculated for its fleet operating within the air district exceeds the ~~NOx~~ fleet average target rate, and the fleet would like to qualify for funding. If the air district approves the fleet's application for funding, the fleet must achieve the NOx reductions as set forth in subsection (d)(1)(E). Participating in the SOON program in one year does not obligate the fleet to participate in subsequent years.

(3) **Air districts that opt into the SOON program** – Districts must prioritize requested projects based on the optimum NOx cost-effectiveness and on whether the fleet requesting the SOON program funding has requested high priority for SOON program funding. Air districts must report to ARB, in a format approved by the Executive Officer, all projects funded under the SOON program, including the equipment identification number of all vehicles funded.

(*e) Special Provisions* –

(1) ***Accounting for the in-use off-road diesel vehicle rule*** -

(A) Reductions achieved through the SOON program must be surplus, over the entire contract period, to those required by the "Regulation for In-Use Off-Road Diesel Vehicles", sections 2449 and 2449.1 ~~2449.2~~ above.

(B) During the contract period, vehicles equipped with NOx retrofits, repowered with new engines, or that have been replaced using SOON program funding, cannot use this lower emission rate to calculate the Fleet Average Targets, Fleet Average Indices, ~~NOx indices, PM indices, NOx target rates, PM target rates,~~ turnover credit and retrofit credit under section~~s~~ 2449.1 ~~and 2449.2~~. Instead, for the purposes of calculating the Fleet Average Targets, Fleet Average Indices, ~~NOx indices, PM indices, NOx target rates, PM target rates,~~ turnover credit and retrofit credit under section~~s~~ 2449.1 ~~and 2449.2~~, these vehicles must be reflected as if the actions taken under the SOON program did not occur. Actions taken using SOON program funding may be used for determining compliance under section~~s~~ 2449.1 ~~and 2449.2~~ after the completion of the SOON program project contract period for that vehicle. For example, if a Tier 0 vehicle is repowered with a Tier 3 engine with SOON

program funds, for purposes of compliance with sections 2449.1 and 2449.2, that vehicle is still treated as if it were a Tier 0 until the end of the contract period for the SOON program project.

(C) If a fleet pays for a retrofit that is installed concurrently with a repower or vehicle replacement funded with SOON program funding, the fleet may count the retrofit toward determining compliance under section 2449.22449.1. If a fleet's vehicle is repowered using SOON program funding with a Tier 4 engine that comes with an original engine manufacturer diesel particulate filter, and if the fleet pays a portion of the repower costs such that it offsets the cost of an equivalent retrofit diesel particulate filter, the fleet may count the retrofit toward determining compliance under section 2449.22449.1.

(2) ***Turnover in section 2449.1*** - A fleet may apply to the Executive Officer for an extension from the requirements in section 2449.1(a)(2)(A) if, using the accounting provisions in section 2449.3(e)(1)2449.2(e)(1), section 2449.1(a)(2)(A) would require, prior to March 1, 2014, a fleet to turn over vehicles that are Tier 2 or better. The exemptions in section 2449.1(a)(2)(A)4.a. and section 2449.1(a)(2)(A)5. for vehicles less than 10 years old and Tier 1 vehicles do not apply to the SOON program.

(3) ***Compliance plans*** - In addition to a SOON program application, a fleet applying for SOON program funding must prepare and submit to the air district a compliance plan, in the format described in the district guidelines, laying out the actions it is required to take under sections 2449.1 and 2449.2 and the actions for which it is applying for funding under section 2449.32449.2. Compliance plans must demonstrate that in the absence of any actions taken to satisfy section 2449.32449.2, the fleet will be able to meet the requirements of sections 2449.1 and 2449.2 through the remaining actions set forth in the plan.

(4) ***Surplus*** - Participation in the SOON program does not reduce the actions required for any fleet to comply with any requirements in the statewide in-use off-road diesel vehicle regulation under sections 2449.1 and 2449.2.

(5) ***Tracking devices*** - An air district may require any vehicle repowered, retrofitted, or replaced with incentive money through the SOON program to be equipped with a vehicle location device (per the air district's guidelines and conditions for receiving funding) to ensure that the vehicle is used in the air district for the required percent of operating hours.

(6) ***Particulate Matter Retrofits*** -

a. The exemption from retrofit requirements for vehicles less than 5 years old in section 2449.2(a)(2)(A)4.a.2449.1(a)(2)(A)5. does not apply to vehicles that are replaced or repowered with SOON program funds.

b. If a fleet has a vehicle that has been retrofitted within the last six years with a Level 2 or 3 VDECS, which was the highest level VDECS at the time of retrofit, the fleet may but is not required to apply for SOON funding for that vehicle.

c. A fleet that receives SOON funding to repower or replace a vehicle is not required to install the highest level VDECS along with the repower or replacement.

(7) ***Funding Guidelines*** - Projects funded under the SOON program with Carl Moyer program money must be administered consistent with applicable Carl Moyer program guidelines, except as noted in section

~~2449.3(e)(6)c~~2449.2(e)(6)c. If a project is funded from other sources, the SOON program must be administered consistent with any applicable guidelines. The air district shall develop guidelines for administration of the SOON program, as provided in section ~~2449.3(f)(2)~~2449.2(f)(2).

(8) ***Vehicles Scheduled to Leave District*** – A fleet that has operated within the air district as defined in section ~~2449.3(c)(1)~~2449.2(c)(1) but that is planning to move vehicles out of the air district such that the vehicles will not operate enough hours in the air district to qualify for SOON funding may leave such vehicles out of the ~~NOx~~ fleet average index calculation in section ~~2449.3(d)(1)(B)~~2449.2(d)(1)(B), the ~~NOx~~ fleet average target rate calculation in section ~~2449.3(d)(1)(C)~~2449.2(d)(1)(C), and the application for funding in section ~~2449.3(d)(1)(D)~~2449.2(d)(1)(D). The fleet must submit a statement under penalty of perjury to the district for each such vehicle stating its intent to move each such vehicle out of the district.

(9) ***Voluntary or Mandatory Nature of SOON***- An air district, having held a public hearing and opted into this regulation, may issue a solicitation for applications for funding under the SOON program.

a. For fleets in the South Coast Air Quality Management District and San Joaquin Valley Air Pollution Control District, solicitations with a deadline before April 2, 2009, shall be voluntary. For solicitations with a deadline on or after April 2, 2009, the South Coast Air Quality Management District and San Joaquin Valley Air Pollution Control District may elect to make participation by fleets voluntary or mandatory.

b. In any district other than the South Coast Air Quality Management District or San Joaquin Valley Air Pollution Control District, for solicitations with a deadline before April 2, 2010, participation by fleets is voluntary. For solicitations with a deadline on or after April 2, 2010, the district may choose to make participation by fleets voluntary or mandatory.

c. The solicitation shall announce the air district's decision regarding voluntary or mandatory participation.

(f) Local Air District Opt-In

(1) To participate in the SOON program, an air district's governing board must hold a formally noticed public hearing, where public comment is taken, and, by majority vote, elect to opt into the program. As part of this hearing, for years when section ~~2449.3(e)(9)~~2449.2(e)(9) gives the district a choice between a voluntary and mandatory SOON program, the air district's governing board must decide whether participation by fleets is voluntary or mandatory.

(2) ***District Guidelines*** - An air district opting into section ~~2449.3~~2449.2 must develop, through a public process including a duly noticed public workshop and formally noticed public hearing, additional administrative provisions necessary to implement this section, including, but not limited to, funding guidelines (as required under section ~~2449.3(e)(7)~~2449.2(e)(7)), compliance planning requirements, and reporting and monitoring requirements. Funding guidelines may include limitations on the cost-effectiveness of projects that may be funded and must include the method used for prioritizing projects based on cost-effectiveness and whether applying fleets requested high priority for SOON

program funding, and a description of any requirements on fleets that receive SOON funding to pay part of the SOON project cost. Compliance planning guidelines must indicate the format and length of compliance plans. Air district guidelines may include a pre-application process that collects vehicle data (model year, horsepower, hours of use) and then requires full SOON project applications only for vehicles likely to receive funding.

(3) ***ARB Approval of District Guidelines*** **-** Before any guidelines, including administrative or funding guidelines, approved by an air district take effect, they must be approved by the Executive Officer. Air district staff shall submit proposed guidelines to the Executive Officer before they are acted on by the district's governing board. The Executive Officer will respond within 30 days with a description of any required changes to the proposed guidelines necessary for Executive Officer approval. In evaluating proposed air district guidelines, the Executive Officer shall consider, among other factors, the adequacy of cost-effectiveness criteria, whether fleet requests for high priority for SOON funding are given preference, and uniformity of district guidelines between air districts. After guidelines are adopted by a district's governing board, air district staff shall submit the adopted guidelines to the Executive Officer. The Executive Officer will respond within 30 days with approval or a description of any required changes to the guidelines.

(4) ***ARB Authority*** – ARB has sole authority to enforce the requirements of section ~~2449.3~~2449.2. The Executive Officer retains the authority to review any district's administration of section ~~2449.3~~2449.2 and to address any unforeseen circumstances or events.

Note: Authority cited: Sections 39002, 39515, 39516, 39600, 39601, 39602, 43000, 43000.5, 43013, 43016, and 43018, Health and Safety Code. Reference: Sections 39002, 39515, 39516, 39600, 39601, 39602, 39650, 39656, 39657, 39658, 39659, 39665, 39667, 43000, 43000.5, 43013, 43016, and 43018, Health and Safety Code.

Appendix A –

Use the values in these tables ~~unless engine is a Post-2007 Flexibility Engine, or~~ unless the engine is an engine certified to on-road standards.

Engines certified to on-road standards ~~should~~shall use the standard to which the engine is certified. ~~Flexibility engines certified January 1, 2007 or later should~~shall ~~use the emission standard to which the engine is certified.~~ Engines certified to Family Emission Limits and flexibility engines ~~certified before January 1, 2007~~, ~~should~~shall still use the emission factors in the table below.

Replacement engines produced per title 13, CCR, section 2423(j) ~~should~~shall use the engine model year of the engine replaced. For an engine certified to an emission standard lower than that shown in these tables for its model year, the emission standard to which the engine is certified may be used, provided that the certification Executive Order or certificate number is provided along with the initial and annual reporting required by section 2449(g)(1) and 2449(g)(2).

If the model year of an engine is unknown because it is missing a serial number, manufacturer's build code, and/or an engine family number, and the engine manufacturer or authorized representative is unable to determine the model year of the engine by examining the engine's build and components, such an engine shall be treated as a 1969 model year engine. If a manufacturer can bracket the model year of an engine (for example that an engine was built between 1987 and 1994) by examining the engine's build and components, the earliest date the engine could have been manufactured shall be used as the model year of that engine (in the example, 1987).

~~For engines that have been retrofit with VDECS, the PM Emission Factor is reduced 50 percent for a Level 2 VDECS, and 85 percent for a Level 3 VDECS; the NOx Emission Factor is reduced by whatever percentage NOx emission reductions are verified. The PM Emission Factor is not reduced for a Level 1 VDECS.~~

PM Emissions Factors by Horsepower and Year (g/bhp-hr)								
Engine Model Year	Horsepower Group							
	25-49	50-74	75-99	100-174	175-299	300-599	600-750	Over 750
1900-1969	0.950	1.200	1.200	1.100	1.100	0.950	0.950	0.950
1970-1971	0.950	1.200	1.200	0.940	0.940	0.810	0.810	0.810
1972-1987	0.950	1.200	1.200	0.780	0.780	0.680	0.680	0.680
1988	0.950	0.980	0.980	0.540	0.540	0.490	0.490	0.490
1989-1995	0.950	0.980	0.980	0.540	0.540	0.490	0.490	0.490
1996	0.950	0.980	0.980	0.540	0.40	0.40	0.40	0.500
1997	0.950	0.980	0.980	0.600	0.40	0.40	0.40	0.500
1998	0.950	1.090	1.090	0.600	0.40	0.40	0.40	0.500
1999	0.60	1.090	1.090	0.600	0.40	0.40	0.40	0.500
2000	0.60	1.090	1.090	0.600	0.40	0.40	0.40	0.40
2001	0.60	1.090	1.090	0.600	0.40	0.15	0.40	0.40
2002	0.60	1.090	1.090	0.600	0.40	0.15	0.15	0.40
2003	0.60	1.090	1.090	0.22	0.15	0.15	0.15	0.40
2004	0.45	0.30	0.30	0.22	0.15	0.15	0.15	0.40
2005	0.45	0.30	0.30	0.22	0.15	0.15	0.15	0.40
2006	0.45	0.30	0.30	0.22	0.15	0.15	0.15	0.15
2007	0.45	0.30	0.30	0.22	0.15	0.15	0.15	0.15
2008	0.22	0.22	0.30	0.22	0.15	0.15	0.15	0.15
2009	0.22	0.22	0.30	0.22	0.15	0.15	0.15	0.15
2010	0.22	0.22	0.30	0.22	0.15	0.15	0.15	0.15
2011	0.22	0.22	0.30	0.22	0.015	0.015	0.015	0.07
2012	0.22	0.22	0.015	0.015	0.015	0.015	0.015	0.07
2013	0.02	0.02	0.015	0.015	0.015	0.015	0.015	0.07
2014	0.02	0.02	0.015	0.015	0.015	0.015	0.015	0.07
2015 and later	0.02	0.02	0.015	0.015	0.015	0.015	0.015	0.03

NOx Emissions Factors by Horsepower and Year (g/bhp-hr)								
Engine Model Year	Horsepower Group							
	25-49	50-74	75-99	100-174	175-299	300-599	600-750	Over 750
1900 – 1969	7.2	14.8	14.8	15.9	15.9	15.2	15.2	15.2
1970 – 1971	7.2	14.8	14.8	14.8	14.8	14.1	14.1	14.1
1972 – 1979	7.2	14.8	14.8	13.6	13.6	13.0	13.0	13.0
1980 – 1987	7.2	14.8	14.8	12.5	12.5	11.9	11.9	11.9
1988	7.1	9.9	9.9	9.3	9.3	8.9	8.9	8.9
1989 – 1995	7.1	9.9	9.9	9.3	9.3	8.9	8.9	8.9
1996	7.1	9.9	9.9	9.3	6.9	6.9	6.9	8.9
1997	7.1	9.9	9.9	6.9	6.9	6.9	6.9	8.9
1998	7.1	6.9	6.9	6.9	6.9	6.9	6.9	8.9
1999	6.2	6.9	6.9	6.9	6.9	6.9	6.9	8.9
2000	6.2	6.9	6.9	6.9	6.9	6.9	6.9	6.9
2001	6.2	6.9	6.9	6.9	6.9	4.2	6.9	6.9
2002	6.2	6.9	6.9	6.9	6.9	4.2	4.2	6.9
2003	6.2	6.9	6.9	4.3	4.3	4.2	4.2	6.9
2004	4.9	4.9	4.9	4.3	4.3	4.2	4.2	6.9
2005	4.9	4.9	4.9	4.3	4.3	4.2	4.2	6.9
2006	4.9	4.9	4.9	4.3	2.6	2.6	2.6	4.2
2007	4.9	4.9	4.9	2.6	2.6	2.6	2.6	4.2
2008	4.9	3.0	3.0	2.6	2.6	2.6	2.6	4.2
2009	4.9	3.0	3.0	2.6	2.6	2.6	2.6	4.2
2010	4.9	3.0	3.0	2.6	2.6	2.6	2.6	4.2
2011	4.9	3.0	3.0	2.6	1.5	1.5	1.5	2.6
2012	4.9	3.0	2.5	2.5	1.5	1.5	1.5	2.6
2013	3.0	3.0	2.5	2.5	1.5	1.5	1.5	2.6
2014	3.0	3.0	2.5	2.5	0.3	0.3	0.3	2.6
2015 and later	3.0	3.0	0.3	0.3	0.3	0.3	0.3	2.6