Shown on the following pages are proposed modifications to the draft proposed regulation dated October 17, 2007 which was presented at the October 2007 workshops. Changes are shown in underline for additions and ~~strikeout~~ for deletions.

DRAFT PROPOSED REGULATION TO REDUCE EMISSIONS OF DIESEL PARTICULATE MATTER, AND OTHER POLLUTANTS FROM IN-USE HEAVY-DUTY DIESEL-FUELED VEHICLES

Adopt new section 2025, in title 13, article 4.5, chapter 1, California Code of Regulations (CCR) to read as follows: (Note that the entire text of section 2025 set forth below is new language proposed to be added to the California Code of Regulations.)

Section 2025. Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and Other Criteria Pollutants, and Greenhouse Gases from In-Use Heavy-Duty Diesel-Fueled Vehicles

(a) *Purpose*.

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

(b) *Scope and Applicability*.

(1) Except as provided in subsection (c), this regulation applies to all heavy duty diesel-fueled or alternative diesel-fueled vehicles with a manufacturer's gross vehicle weight rating (GVWR) greater than 14,000 pounds, that operate ~~within the State of~~in California. It specifically ~~applies to~~ includes:

~~(1)~~(A) Any person, business, or government agency ~~who~~ that owns, leases, rents, or operates such a vehicle within California;

~~(2)~~(B) Any person, business, or government agency ~~who~~ that sells such a vehicle within California;

(C) Any utility that owns, leases, or operates a vehicle subject to the regulation, starting December 31, 2017;

(D) Select public agency vehicles as identified in section 2025(r);

~~(3)~~(E) Vehicles that were designed to be driven on-road even though they might not be registered to be driven on-road;

(F) Schoolbuses, whether owned by a private entity or a public school district or a joint powers authority formed by several public school districts;

~~(4)Mobile and fixed cranes with two engines – both on-road and off-road.~~

~~(5)~~(G) Yard trucks with on-road and off-road engines; and

~~(6)~~(H) Shuttle vehicles of any ~~loaded~~ gross vehicle weight rating as defined in section 2025(d)(50) ~~that provide service to airports~~.

(2) *Severability*. If any subsection, paragraph, subparagraph, sentence, clause, phrase, or portion of this regulation is, for any reason, held invalid, unconstitutional, or unenforceable by any court of competent jurisdiction, such

portion shall be deemed as a separate, distinct, and independent provision, and such holding shall not affect the validity of the remaining portions of the regulation.

(c) *Exemptions*.

This regulation does not apply to:

(1) Vehicles subject to the solid waste collection vehicle rule commencing with title 13, CCR, section 2021;

~~(2)Vehicles subject to the public agency and utility fleet rule commencing with title 13, CCR, section 2022, with the exception of Federal fleets;~~

(2) On-road diesel-fueled heavy-duty vehicles over 14,000 pounds regardless of engine certification, owned or operated by a municipality, that complies with the Best Available Control Technology (BACT) requirements of title 13, section 2022.1(b);

(3) Vehicles subject to the fleet rule for transit agencies commencing with title 13, CCR, section 2023;

(4) Heavy-duty drayage trucks ~~Vehicles subject to~~ complying with the requirements and compliance deadlines of ~~the rule for heavy-duty drayage trucks commencing with~~ title 13, CCR, section 2027(d), until December 31, 2017;

~~(5)~~Vehicles subject to the rule for mobile cargo handling equipment at ports and intermodal railyards commencing with title 13, CCR, section 2479~~;~~

~~(6)School buses owned by a public school district or a joint powers authority formed by several public school districts;~~

~~(7)~~(5) Military tactical support vehicles, as described in title 13, CCR, section 1905;

~~(8)~~(6) Authorized emergency vehicles as described in California Vehicle Code (Veh. Code), section 165;

~~(9)~~(7) Off-road vehicles subject to title 13, CCR, sections 2401, 2421, 2411, 2432, and 2449;

~~(10)~~(8) Dedicated snow-removal ~~equipment~~vehicles as defined in section 2025(d)(10);

~~(11)~~(9) Historic vehicles as defined in section 2025(d)(27); and

~~(12)~~(10) Motor homes for non-commercial private use. ~~; and~~

~~(11)Pickups and other vehicles for non-commercial use, with GVWR less than 14,000 pounds regardless of the GCWR.~~

(d) *Definitions*. For purposes of this regulation, the following definitions apply:

(1) "Alternative Diesel Fuel" means any fuel used in diesel engines that is not a reformulated diesel fuel as defined in sections 2281 and 2282 of title 13, of the California Code of Regulations, 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. Natural gas is not an alternative diesel fuel. An emission control strategy using a fuel additive will be treated as an alternative diesel fuel based strategy unless:

(A) the additive is supplied to the engine fuel by an on-board dosing mechanism, or

(B) the additive is directly mixed into the base fuel inside the fuel tank of the engine, or

(C) the additive and base fuel are not mixed until engine fueling commences, and no more additive plus base fuel combination is mixed than required for a single fueling of a single engine or vehicle.

(2) "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.

(3) "Alternative-Fueled Engine" means an engine that is fueled with a fuel meeting the definition of alternative fuel.

~~(3)~~(4) "Base Registration State" means the state where the vehicle is primarily operated, or from which it is primarily dispatched, or where it is principally garaged or maintained and where the fleet owner has an established place of business.

~~(4)~~(5) "Best Available Control Technology" (BACT) means the exhaust PM and NOx standards that must be met according to the requirements of sections 2025(f)(1) and 2025(f)(2).

~~(5)~~(6) "Commercial Vehicle" means a motor vehicle or combination of motor vehicles ~~used in commerce to transport passengers or property~~as defined in California Veh. Code, section 260.

~~(6)~~(7) "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.

~~(7)~~(8) "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.

~~(8)~~(9) "Two-Engine Crane" for the purposes of this regulation means a mobile diesel-powered machine with a hoisting mechanism mounted on a specially constructed truck chassis; a secondary portable internal combustion engine is used to lift and move materials and objects.

~~(9)~~(10) "Dedicated Snow Removal Vehicle" means a vehicle that has permanently affixed snow removal equipment such as a snow blower or auger and is operated exclusively to remove snow from public roads, private roads, or other paths to allow on-road vehicle access.

~~(10)~~(11) "Diesel Fuel" has the same meaning as defined in Title 13, CCR, sections 2281 and 2282.

~~(11)~~(12) "Diesel Particulate Filter" means an emission control technology 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.

~~(12)~~(13) "Diesel Particulate Matter (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

~~(13)~~(14) "Diesel PM Index" for the purposes of section 2025(g)(5)(A) means an indicator of the overall PM emission rate.

~~(14)~~(15) "Diesel PM Target Rate" means the diesel PM fleet average that a specific fleet must meet in a compliance year in order to show compliance with the fleet average requirements.

(16) "Dual-Fuel Engine" means any compression ignition engine that is engineered and designed to operate on a combination of alternative fuels, such as compressed natural gas (CNG) or liquefied petroleum gas (LPG) and diesel fuel or an alternative diesel fuel. These engines have two separate fuel systems, which inject both fuels simultaneously into the engine combustion chamber. A dual-fuel engine is not an alternative-fuel engine.

~~(16)~~(17) "Emergency Vehicle" is as defined in California Veh. Code, section 27156.2.

~~(17)~~(18) "Emergency Operation" means operation of a vehicle to help 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, terrorism, or other infrequent act of nature. Routine operation to prevent public health risks does not constitute emergency operation.

~~(18)~~(19) "Employee" means any operator of a motor vehicle subject to this regulation, including full time, regularly employed drivers; casual, intermittent or occasional drivers; leased drivers and independent, owner operator contractors (while in the course of operating the motor vehicle) who are either directly employed by or under lease to an employer.

~~(19)~~(20) "Employer" means any person or entity who owns, hires, or leases a motor vehicle subject to this regulation and assigns employees (including an individual who is self-employed) to operate such a vehicle.

~~(20)~~(21) "Engine Emission Factor" means a diesel PM or oxides of nitrogen (NOx) emission rate in grams per mile (g/mile) as shown in Attachment A.

~~(21)~~(22) "Executive Officer" means the Executive Officer of the ARB or his or her authorized representative.

~~(21)"Farm Vehicle"~~

~~(22)~~(23) "Fleet" means the total number of on-road vehicles and engines owned by a person, business, or government agency. A fleet ~~includes~~ may consist of one or more vehicles.

~~(A)~~"Rental or Leased Fleets" - Vehicles that are owned by a rental company and that are rented or leased by the same lessee for a period of one year or more may be excluded from the rental company's 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 company.

~~On-road heavy-duty diesel-fueled vehicles~~ 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.

A vehicle leased to a lessee is considered part of the fleet of the lessor if a written lease prohibits the lessee from modifying the leased vehicle to comply with this regulation.

~~(23)~~(24) "Heavy-Duty Pilot Ignition Engine" means an engine designed to operate using an alternative fuel, except that diesel fuel is used for pilot ignition at an average ratio of no more than one part diesel fuel to ten parts total fuel on an energy equivalent basis. An engine that can operate or idle solely on diesel fuel at any time does not meet this definition.

~~(24)~~(25) "Heavy heavy-duty diesel vehicle (HHD)" for the purposes of this regulation, means a diesel motor vehicle having a manufacturer's loaded vehicle weight rating greater than 33,000 pounds.

~~(25)~~(26) "Highest Level Verified Diesel Emission Control System (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 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.

(A) The highest level VDECS is determined solely based on verified diesel PM reductions, not based on verified NOx reductions. Plus designations do not affect the diesel PM level assigned to a VDECS; that is, a Level 3 Plus is the same diesel PM level as Level 3.

(B) Level 1 devices are never considered highest level VDECS for the purpose of this regulation.

~~(26)~~(27) "Historic Vehicle" means a vehicle that qualifies for a historical vehicle license plate pursuant to the California Veh. Code, section 5004, and is operated or moved over the highway primarily for the purpose of historical exhibition or other historic vehicle club activities.

~~(27)~~(28) "Hybrid Diesel Electric Vehicle" means a heavy-duty vehicle that combines two motive power sources: an energy storage system such as batteries or ultra-capacitors, and an auxiliary power unit which converts consumable fuel energy into mechanical or electrical energy. The electric motors must provide partial or complete power to drive the vehicle's wheels. In addition, energy otherwise lost as heat during braking is captured through regenerative braking to charge the energy storage system.

~~(28)~~(29) "Hybrid Diesel Hydraulic Vehicle" means a heavy-duty vehicle that combines a diesel engine with a hydraulic system. The fluid remains on the vehicle in a closed system and used repeatedly. The hydraulic system provides one or more of the following processes: motive power for starting the vehicle from a stop; motive power for accelerating the vehicle, and; recapture of energy when the vehicle decelerates.

~~(29)~~(30) "Hybrid Diesel Pneumatic Vehicle" means a heavy-duty vehicle that combines a diesel engine with a pneumatic system. The pneumatic fluid is compressed air. The pneumatic fluid may be expanded to provide motive power and compressed to capture energy within the diesel engine, or in a separate assembly. The pneumatic system provides one or more of the following processes: motive power for starting the vehicle from a stop; motive power for accelerating the vehicle, and; recapture of energy when the vehicle decelerates.

~~(30) "Implement of Husbandry" is as defined in California Veh. Code, division 16, chap. 1, sections 36000 et seq.~~

(31) "International Registration Plan" (IRP) is a registration reciprocity agreement among states of the United States and provinces of Canada providing for

payment of license fees on the basis of total distance operated in all jurisdictions.

(32) "Loaded Vehicle Weight Rating" is the greater of Gross Vehicle Weight Rating or Gross Combined Weight Rating as defined in California Veh. Code section 350.

(33) “Low-use Vehicle” means a vehicle whose propulsion engine was operated in California for fewer than 1,000 miles and less than 100 hours during the preceding 12-month period running from January 1 to the end of December. ~~To be considered a low-use vehicle, the fleet owner must submit engine operation data from a properly functioning odometer and non-resettable hour meter. Hours and mileage used in emergency operations are not counted when determining low-use status.~~

(34) "Medium heavy-duty diesel vehicle (MHD)" for the purposes of this regulation, means a diesel motor vehicle having a manufacturer's loaded vehicle weight rating less than or equal to 33,000 pounds.

(35) “Mileage Exempt Vehicle” is a heavy heavy-duty diesel vehicle that is operated fewer than 7,500 miles and less than 250 hours per year, regardless of where it is operated, and is exempt from the NOx performance requirements according to section 2025(i)(2);

~~(35)~~(36) “Motor carrier” is ~~the registered owner, lessee, licensee, or bailee of any vehicle subject to this regulation, who operates or directs the operation of any such vehicle on either a for-hire or not-for-hire basis. The term includes a motor carrier's agents, officers, or representatives as well as employees responsible for hiring, supervising, training, assigning, or dispatching drivers. For purposes of this regulation, this definition includes the term employer~~the same as defined in California Veh. Code section 408.

~~(36)~~(37) “Motor Home” means a single vehicular unit built on, or permanently attached to, a self-propelled motor vehicle chassis, chassis cab, or van, which becomes an integral part of the completed vehicle, designed for human habitation for recreational or emergency occupancy.

~~(37)~~(38) “New Fleet” means a fleet that is acquired or that enters California after December 31, 2009. Such fleets may include new businesses or out-of-state businesses that bring vehicles into California for the first time after December 31, 2009.

(39) “NOx Exempt Areas” are 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.

(40) “NOx Exempt Vehicle” is any vehicle subject to this regulation which is exempt from the NOx performance requirements for the compliance years indicated in paragraphs (A) through (D) below. The vehicle may be:

(A) A schoolbus as defined in section 2025 (d)(48);

(B) A vehicle subject to this regulation that operates exclusively in the NOx exempt areas defined in section 2025(d)(39). Such a vehicle is exempt from the NOx requirements prior to December 31, 2017;

(C) A vehicle subject to this regulation that is granted a compliance extension under the early action provision of section 2025(i)(1). Such a vehicle is exempt prior to December 31, 2013; or

(D) A mileage exempt vehicle, as defined in section 2025(d)(35).

~~(38)~~(41) "NOx Index" for the purposes of section 2025(g)(6)(C) means an indicator of the overall NOx emission rate.

~~(39)~~(42) "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 model-year distribution.

~~(40)~~(43) "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, and to the formation of particulate matter.

~~(41)~~(44) "Owner" means either (A) the person registered as the owner of a vehicle by the California Department of Motor Vehicles (DMV), or its equivalent in another state, province, or country; or (B) a person shown by the registered owner to be legally responsible for the vehicle's maintenance. The person identified as the owner on the registration document carried on the vehicle at the time a citation is issued shall be deemed the owner unless that person demonstrates that another person is the owner of the vehicle.

~~(42)~~(45) "Person" means an individual, corporation, business trust, estate, trust, partnership, limited liability company, association, joint venture, government, governmental subdivision, agency, or instrumentality, public corporation, or any other legal or commercial entity.

~~(43)~~(46) "Registered and driven safely on-road" means a vehicle meets the requirements to be registered for on-road operation in California Veh. Code division 3, chap. 1, article 1, section 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.

~~(44)~~(47) "Repower" means to replace the engine in a vehicle with a newer engine certified to lower emission standards for PM or NOx or both as applicable.

~~(45)~~(48) "Responsible Official" 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).

(49) "Schoolbus" is a motor vehicle as defined in California Veh. Code, section 545.

~~(46)~~(50) "Shuttle vehicle" means a diesel-powered motor vehicle of any ~~loaded~~ gross vehicle weight rating which transports passengers ~~to the airport~~ in either a shared ride service for hire on a fixed route and fixed schedule to and from predetermined locations; or group travel service for hire on a prereserved basis, provided that the vehicle has a passenger-carrying capacity of 8 or more persons, excluding the driver~~, and visits the airport at least 10 times each day~~.

~~(47)~~(51) "Special Equipment ~~Registration~~" means ~~registration of~~ specialized vehicles~~, which are incidentally operated on the highway, and are exempt from regular registration. These vehicles are only occasionally operated or moved over the highways~~ in the categories identified in California Veh. Code, sections 5011, 5015, and 5016.

(52) "Utility" is the same as defined in title 13, CFR, section 2022(b).

~~(48)~~(53) "Verified Diesel Emission Control System" (VDECS) means an emissions control strategy, designed primarily for the reduction of diesel PM emissions, which has been verified pursuant to the *Verification Procedures*. 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.

~~(49)~~(54) "VDECS Failure" 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 be assumed to have failed.

~~(50)~~(55) "Yard Truck" means a vehicle that is specifically designed to move trailers around freight yards. Yard trucks are also known as yard goats, trailer spotters or jockeys.

(e) *Requirements*

Beginning with the applicable effective dates, ~~all fleets~~ a fleet owner must comply with the following requirements of this regulation:

(1) Each fleet must comply with the best available control technology (BACT) requirements of subsection (f) or the fleet average requirements of subsection (g), or a combination of both, as applicable.

(2) A utility fleet must comply with the BACT requirements of subsection (f)(2) starting December 31, 2017 or the alternative requirement of 2025(g)(6)(C).

(3) A fleet owner who is exempt from the NOx performance requirements must comply with the requirements of section 2025(i)(2).

~~(2)~~(4) Engines and vehicles must be labeled as specified in subsection (j).

~~(3)~~(5) Information specified in subsection (k) must be reported to the Executive Officer.

~~(4)~~(6) Records must be kept as specified in subsection (l).

~~(5)~~(7) An owner is required to keep each vehicle in compliance with this regulation once it is in compliance, so long as the owner is operating the vehicle in California.

(f) *Best Available Control Technology (BACT)*

(1) *Phase 1 BACT Requirement*.

Beginning with the applicable effective date, ~~the~~ a fleet owner must comply with the BACT emission standards of paragraphs (A) and (B) for each vehicle within its fleet according to the Phase 1 compliance schedule shown in Table 1. The fleet owner may also opt to comply with the early compliance provision of section 2025(i)(1)

(A) The exhaust emissions of NOx from each vehicle must be less than or ~~equal~~ equivalent to the NOx exhaust emissions from ~~a~~ an engine meeting the 2007 model-year engine standard.

1. For ~~pre-2004 engine model years~~engines certified to the 2003 or prior model year engine emissions standard, the engine will be deemed equivalent to an engine that meets the 2007 federal NOx emissions standards for heavy-duty diesel fueled engines if the NOx exhaust emissions ~~must be~~are reduced by at least 70 percent ~~to be equivalent to an engine that meets the 2007 federal emissions standards for heavy-duty diesel fueled engines~~.
2. For ~~engine model years 2004 to 2006~~engines certified to the 2004 through 2006 model year heavy-duty engine emissions standard, the engine will be deemed equivalent to an engine that meets the 2007 federal NOx emissions standards for heavy-duty diesel fueled engines if the NOx exhaust emissions ~~must be~~are reduced by at least

40 percent ~~to be equivalent to an engine that meets the 2007 federal emissions standards for heavy-duty diesel fueled engines~~.

(B) All vehicles in the fleet must be equipped with the highest level VDECS for PM by the applicable compliance deadline. ~~This is not required for a vehicle~~ An engine originally equipped with a diesel particulate filter by the manufacturer meets this requirement. ~~with a diesel particulate filter~~

Table 1: Phase 1 BACT Compliance Schedule

Engine Model-Years	*Compliance Deadline, as of December 31*
Pre-1998	2010
1998 – 2002	2011
2003 - 2004	2012
2005 and newer	2013

(2) *Phase 2 BACT Requirement.* After December 31, 2013, the fleet owner must meet the BACT emissions standards of paragraphs A and B of this subsection according to the Phase 2 compliance schedule shown in Table 2.

(A) The exhaust emissions of NOx from each ~~vehicle~~ engine must be less than or equal to the NOx exhaust emissions from ~~a 2010 model-year engine~~an engine meeting the 2010 engine standard.

~~1.For pre-2004 engine model years, the NOx emissions must be reduced by more than 85 percent to be equivalent to an engine that meets the 2010 federal emissions standards for heavy-duty diesel fueled engines~~.

~~3.~~1. For ~~engine model years 2004 to 2006~~engines certified to the 2004 through 2006 heavy-duty engine emissions standard, the engine will be deemed equivalent to an engine that meets the 2010 federal NOx emissions standards for heavy-duty diesel fueled engines if the NOx exhaust emissions ~~must be~~are reduced by more than 85 percent. ~~to be equivalent to an engine that meets the 2010 federal emissions standards for heavy-duty diesel fueled engines~~

~~3.~~2. For ~~engine~~ engines certified to the 2007 model year emissions standard, ~~2007,~~ the engine will be deemed equivalent to an engine that meets the 2010 federal NOx emissions standards for heavy-duty diesel fueled engines if the NOx exhaust emissions ~~must be~~are reduced by more than ~~75~~ 70 percent. ~~to be equivalent to an engine that meets the 2010 federal emissions standards for heavy-duty diesel fueled engines.~~

(B) All vehicles in the fleet must be equipped with the highest level VDECS for PM by the applicable compliance deadline. ~~This is not required for a vehicle~~ An engine originally equipped with a diesel particulate filter by the manufacturer meets this requirement. ~~with a diesel particulate filter.~~

Table 2: Phase 2 BACT Compliance Schedule

Engine Model-Years	*Compliance Deadline, as of December 31*
Pre-2004	2017
2004 - 2006	2018
2007	2019
2008	2020
2009	2021

(g) *Optional Fleet Averaging*

(1) ~~Owners~~ A fleet owner may, at ~~their~~ its option, include all of ~~their~~ its vehicles in the fleet averaging provisions.

(2) 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 fleet averaging performance requirements separately and be reported separately.

(3) A fleet owner who elects to be subject to the fleet averaging compliance option of section 2025(g) is subject to the reporting requirements of ~~sub~~section (k) for the applicable portion of the fleet.

~~(4)An owner of a new fleet who elects to be subject to the fleet averaging compliance option of section 2025(g) must meet the fleet average requirements in sections 2025(g)(5) and (6) immediately on purchasing vehicles subject to the regulation or bringing such vehicles into the State of California for the first time after December 31, 2009.~~

~~(5)~~(4) *Optional NOx Fleet Average*.

(A) A fleet owner must demonstrate that on December 31 of each year, starting in 2010 and ending on December 31, 2021, the NOx Index of the applicable portion of the fleet was less than or equal to the calculated NOx Target Rate, except if meeting provisions in ~~(h)~~ section (6)(6) below.

NOx exempt vehicles, as defined in section 20205(d)(40), need not be included in the calculation of the NOx Index or the NOx fleet average for those years that the vehicle is exempt.

(B) *NOx Index*: The following equation is to be used to calculate the NOx Index.

~~*NOx Index* = $\frac{(Sum\ of\ EF_{(MY)}\ for\ each\ HHD\ vehicle) + (Sum\ of\ EF_{(MY)}\ for\ each\ MHD\ vehicle)}{Total\ number\ of\ vehicles}$~~

~~Where: $EF_{(MY)}$ = NOx Emissions Factor (g/mile) as defined in Attachment A for each engine model year~~

~~MHD = Number of medium heavy-duty vehicles (less than or equal to 33,000 lbs loaded vehicle weight rating)~~

~~HHD = Number of heavy heavy-duty vehicles (over 33,000 lbs loaded vehicle weight rating)~~

$$NOx\ Index = \frac{Sum\ of\ EF_{(HHD)} + Sum\ of\ EF_{(MHD)}}{Total\ number\ of\ vehicles\ subject\ to\ the\ NOx\ requirements}$$

Where:

$EF_{(HHD)}$ = The NOx emission factor as defined in Attachment A for each heavy heavy duty (HHD) vehicle subject to the NOx requirements.

$EF_{(MHD)}$ = The NOx emission factor as defined in Attachment A for each medium heavy duty (MHD) vehicle subject to the NOx requirements.

(C) *NOx Target Rate*: The following equation is to be used to calculate the NOx Target Rate.

~~*NOx Target Rate* = $\frac{Sum\ of\ Target_{(CY)}\ for\ each\ MHD\ and\ HHD\ vehicle}{Total\ number\ of\ vehicles}$~~

~~Where:~~

~~$Target_{(CY)}$ = Targets in Table 3 to be used to calculate the NOx target rate for each compliance year.~~

~~MHD = same as defined in section 2025(g)(5)(B)~~

~~HHD = same as defined in section 2025(g)(5)(B)~~

$$NOx\ Target\ Rate = \frac{Sum\ of\ Target_{(HHD)} + Sum\ of\ Target_{(MHD)}}{Total\ number\ of\ vehicles\ subject\ to\ the\ NOx\ requirements}$$

Where:

$Target_{(HHD)}$ = The NOx target from Table 3 for each HHD vehicle subject to the NOx requirements.

$Target_{(MHD)}$ = The NOx target from Table 3 for each MHD vehicle subject to the NOx requirements.

Table 3: Fleet NOx Targets
to be Used to Calculate NOx Target Rates (g/mile)

Compliance Deadline, as of December 31	*Fleet NOx Targets for each compliance deadline*	
	MHD	**HHD**
2010	~~11.5~~10.5	~~14.0~~17.0
2011	~~8.9~~8.3	~~11.0~~13.7
2012	~~6.4~~6.0	~~9.0~~10.3
2013	3.8	~~6.3~~7.0
2014	3.8	~~6.3~~ 7.0
2015	3.8	~~6.3~~7.0
2016	3.8	~~6.3~~7.0
2017	3.8	~~6.3~~7.0
2018	3.1	~~5.1~~5.7
2019	2.4	~~3.9~~4.3
2020	~~1.5~~1.6	~~2.7~~3.0
2021	0.8	~~1.4~~1.6

~~(6)~~(5) *Optional PM Fleet Average*.

(A) A fleet owner must demonstrate that on December 31 of each year, starting in 2010 and ending on December 31, 2021, the PM Index of the applicable portion of the fleet was less than or equal to the calculated PM Target Rate.

(B) *PM Index.* The following equation is to be used to calculate the PM Index:

~~*PM Index* = $\dfrac{(\textit{Sum of } PMEF_{(MY)} \textit{ for each HHD vehicle}) + (\textit{Sum of } PMEF_{(MY)} \textit{ for each MHD vehicle})}{\textit{Total number of vehicles}}$~~

~~Where:~~

~~$PMEF_{(MY)}$ = PM Emissions Factor (g/mile) is as defined in Attachment A for each engine model year~~

~~MHD = Number of medium heavy-duty vehicles (less than or equal to 33,000 lbs loaded vehicle weight rating)~~

~~HHD = Number of heavy heavy-duty vehicles (over 33,000 lbs loaded vehicle weight rating)~~

$$PM\ Index = \frac{Sum\ of\ PMEF_{(HHD)} + Sum\ of\ PMEF_{(MHD)}}{Total\ number\ of\ vehicles\ subject\ to\ the\ PM\ fleet\ averaging\ requirement}$$

Where:

$PMEF_{(HHD)}$ = The PM emission factor (g/mile) as defined in Attachment A for each heavy heavy duty (HHD) vehicle.

$PMEF_{(MHD)}$ = The PM emission factor (g/mile) as defined in Attachment A for each medium heavy duty (MHD) vehicle.

(C) *PM Target Rate*: The following equation is to be used to calculate the PM Target Rate.

~~*PM Target Rate* =~~ $\dfrac{Sum\ of\ PM\ Target_{(CY)}\ for\ each\ MHD\ and\ HHD\ vehicle}{Total_{(PM)}}$

~~Where:~~

~~$PM\ Target_{(CY)}$ = Targets in Table 4 to be used to calculate the PM target rate for each compliance year.~~

~~HHD = same as defined in section 2025(g)(6)(B)~~

~~MHD = same as defined in section 2025(g)(6)(B)~~

$$PM\ Target\ Rate = \frac{Sum\ of\ PMTarget_{(HHD)} + Sum\ of\ PM\ Target_{(MHD)}}{Total\ number\ of\ vehicles\ subject\ to\ the\ PM\ fleet\ averaging\ requirement}$$

Where:

$PMTarget_{(HHD)}$ = The PM target (g/mile) from Table 4 for each HHD vehicle subject to the PM fleet averaging requirements.

$PMTarget_{(MHD)}$ = The PM target (g/mile) from Table 4 for each vehicle subject to the PM fleet averaging requirements.

Table 4: Fleet PM Targets
to be Used to Calculate PM Target Rates (g/mile)

Compliance Deadline, as of December 31	*Fleet PM Targets for each compliance deadline*	
	MHD	**HHD**
2010	~~0.450~~0.38	~~0.560~~0.710
2011	~~0.300~~0.27	~~0.410~~0.510
2012	~~0.200~~0.17	~~0.260~~0.310
2013	0.06	~~0.100~~0.110
2014	0.06	~~0.100~~0.110
2015	0.06	~~0.100~~0.110
2016	0.06	~~0.100~~0.110
2017	0.06	~~0.100~~0.110
2018	0.06	0.100
2019	~~0.060~~0.05	~~0.100~~0.090
2020	~~0.060~~0.04	~~0.100~~0.080
2021	~~0.060~~0.03	~~0.100~~0.070

~~(7)~~(6) *Maximum Requirements for Fleets Not Meeting the NOx and PM Targets*.

(A) Each year, if the owner of a fleet does not meet the NOx Target Rate in 2025(g)(4)(C) or the Diesel PM Target Rate in 2025(g)(5)(C), the owner must meet the requirements in 2025(g)(6)(B) and (C) below as applicable.

(B) *BACT Compliance Alternative for Phase 1*. If the fleet owner does not meet the fleet averaging requirements of sections ~~2025(g)(6) and (7)~~2025(g)(4) and (5) on a compliance date on or before December 31, 2013, the owner must comply with the requirements of paragraphs 1., 2., and 3. below~~. the owner must demonstrate that each year since December 31, 2010, at least a certain percentage (per Table 5) of the total fleet that existed on December 31 of the compliance year have been brought into compliance with the 2007 model-year emissions equivalent BACT standard, for NOx or PM, of section 2025(f)(1).~~

1. If the NOx target is not met, the owner can demonstrate that each year since December 31, 2010, at least a certain percentage (per Table 5) of the engines that exist on December 31 of the compliance year meet the requirements of section 2025(f)(1)(A), or are equivalent to a 2007 model-year or newer engine.

2. If the PM target is not met, the owner can demonstrate that a certain percentage (per Table 5) of the engines that exist on December 31 of the compliance year are equipped with the highest level VDECS for PM or are equipped by the manufacturer with a diesel particulate filter.

3. If the calculated number of engines in each model-year group required to be brought into BACT compliance is not equal to a whole number,

the owner shall round up to a whole number when the fractional part of the required number of engines is equal to or greater than 0.5, and round down if less than 0.5.

Table 5: Percent of Total Fleet That Must Comply with Phase 1 BACT standard

Compliance Deadline as of December 31	Percent of Total Fleet
2010	25%
2011	50%
2012	75%
2013	100%

(C) *BACT Compliance Alternative for Phase 2*. If a fleet owner does not meet the fleet averaging requirements of sections 2025(g)(4) and (5) on a compliance date on or after December 31, 2017, the owner must demonstrate compliance with the requirements of paragraphs 1., 2., and 3. below.

1. If the NOx target is not met, the owner can demonstrate that each year beginning December 31, 2017, at least a certain percentage (per Table 6) of the engines that existed on December 31 of the compliance year meet the requirements of section 2025(f)(2)(A), or are equivalent to a 2010 model-year engine.
2. If the PM target is not met, the owner can demonstrate that a certain percentage (per Table 6) of the engines are equipped with the highest level VDECS for PM or are equipped by the manufacturer with a diesel particulate filter.
3. If the calculated number of engines in each model-year group required to be brought into BACT compliance is not equal to a whole number, the owner shall round up to a whole number when the fractional part of the required number of engines is equal to or greater than 0.5, and round down if less than 0.5.

Table 6: Percent of Total Fleet That Must Comply with Phase 2 BACT Standard

Compliance Deadline as of December 31	Percent of Total Fleet
2017	25%
2018	50%
2019	75%
2020	100%

~~(8)~~(7) *Fleets of Three Vehicles or Fewer*.

The compliance schedule shown in Table 7 may be used by fleets of 1, 2 or 3 vehicles to comply with the PM and NOx performance requirements of section 2025((f)(1).

Table 7: Phase 1 Compliance schedule for Fleets of Three Vehicles or Fewer

Number of vehicles in Fleet	Comply with 2007-equivalent emissions requirement of section 2025(f)(1) by December 31 of each year shown below
1	2012
2	2011 and 2013
3	2010, 2012 and 2013

(h) *Meeting the Compliance Requirements*.

A fleet may meet the BACT or fleet averaging requirements by applying a VDECS that will achieve PM or NOx reductions or both as required, replacing an engine, or replacing a vehicle.

(1) *New Fleets*. Owners of new fleets must meet the requirements of section 2025(e) and section 2025 (f) or (g) immediately on purchasing vehicles subject to the regulation or bringing such vehicles into the State of California for the first time after December 31, 2009. The owner of the new fleet 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 of section 2025(k).

(2) *Adding Vehicles*. A fleet owner who elects to be subject to the fleet averaging requirements of section 2025(g) may not add vehicles that cause the fleet to exceed the fleet average target rates for the previous compliance date. Within 30 days of adding the vehicle, the fleet owner must report the addition to the Executive Officer, and demonstrate that the fleet ~~still meets the fleet average target rates~~complies with the requirements of the previous compliance date.

(3) *VDECS Installation*– Before installing a VDECS on a vehicle, the vehicle 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 is tuned up so that it meets engine manufacturer's specifications prior to VDECS installation.

(E) The VDECS label will be visible after installation.

(4) *VDECS Maintenance*. The owner of a vehicle retrofit with a VDECS must ensure all maintenance on the VDECS and engine is performed as recommended by the respective manufacturers.

(i) *Special Provisions and Compliance Extensions.*

A fleet owner may be granted an extension to a compliance deadline based on one of the following reasons.

(1) *Compliance Extension Based on Early Action*.

If a fleet owner installs the highest level VDECS for PM on one or more vehicles before December 31, 2009, then the owner may delay compliance with the requirements of section 2025(f)(1) until December 31, 2013 for each vehicle that has been retrofitted early.

~~The NOx emission factor for these vehicles need not be included in the fleet average prior to 2103, and these vehicles are not included in the number used in the calculation of the NOx fleet average.~~

(2) *Exemption From NOx Performance Requirements*.

To be considered for this exemption, the owner must keep adequate records as described in section 2025(l) and comply with the reporting requirements of section 2025(k).

A vehicle exempt from the NOx performance requirement must be equipped with the highest level VDECS for PM or originally equipped by the manufacturer with a diesel particulate filter as required by section 2025(f)(1)(B). If there is no Level 2 or Level 3 VDECS available for the exempt vehicle, the engine must be replaced with one that can be equipped with a Level 2 or Level 3 device.

~~(2)~~(3) *Unique Vehicles*.

Two-Engine Cranes. [Staff is proposing to make these vehicles, including both the drive engine and secondary engine, subject to the provisions of the off-road in-use regulation (title 13, section 2449)].

(4) *Credit for Hybrid Diesel ~~Hybrid-Electric~~ Vehicles.*

~~In order to qualify for this provision, the hybrid-electric drive system must be certified using the "California Interim Certification Procedures for 2004 and Subsequent Model Hybrid-Electric Vehicles.~~An owner may be granted a credit for using hybrid diesel vehicles defined in sections 2025(d)(28), (29), and (30) ~~If~~ the owner can demonstrate that the ~~a~~ fuel economy of the hybrid diesel vehicle is improved by ~~improvement of~~ at least ~~X~~ 20 percent compared to a diesel vehicle of the same model year ~~and horsepower~~which performs a similar function and has a similar configuration to that of the hybrid diesel vehicle.

~~the~~ With this demonstration by the owner, the Executive Officer will grant the following credit towards compliance with the fleet average. For each compliance date through December 31, 2017, the number of diesel hybrid vehicles may be doubled in determining the number of vehicles used to calculate the PM and NOx

indices and the PM and NOx target rates. ~~Y percent NOx reduction credit that may be used towards compliance with the fleet average~~.

(5) *Credit for Alternative Fuel Vehicles.*

If the vehicle has an alternative fuel engine or heavy-duty pilot ignition engine, it ~~must be certified to the emission standards of model-year 2007 engines~~ may be included in the fleet average. The NOx index woud be based on the engine standard to which it was certified and the PM index would be zero.

(6) *Failure or Damage of a VDECS*.

In the event of a failure or damage of a diesel emission control strategy, the following conditions apply:

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

(B) *Failure or Damage Outside of Warranty Period*. If a VDECS fails or is damaged outside of its warranty period, and it cannot be repaired, then within 90 days of the failure, the owner must replace the failed VDECS with the highest level VDECS available for the engine at time of failure.

~~(6)~~(7) *Fuel-Based Strategy VDECS*.

(A) If a fleet owner determines that the highest level VDECS for a large percentage of the 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 owner may request prior approval from the Executive Officer to allow use of the Level 2 fuel-based strategy across its fleet.

(B) If a fleet owner who has relied upon a fuel verified as a diesel emission control strategy to meet the fleet average requirements in 2025(g) discontinues use of the fuel due to circumstances beyond the fleet owner's control, the owner may apply to the Executive Officer no later than 30 days after discontinuation for up to two years additional time to come back into compliance with the fleet average requirements in 2025(g). The Executive Officer then has 30 days to act upon the request. Fleets that did not meet the fleet average requirements in 2025(g) in the most recent compliance year may not apply for this extension.

~~(7)~~(8) *Exemption for Vehicles Used for Emergency Operations*.

(A) Emergency vehicles, as defined in section 2025(d)(17), are exempt from the performance requirements in section 2025(e), but must be labeled and reported in accordance with sections 2025(j) and (k). Emergency vehicles need not be included when calculating fleet average indices or target rates in section 2025(g).

(B) For vehicles used both for emergency operations as defined in section 2025(d)(18), and for other purposes, hours of operation and mileage accrued when the vehicle is used for emergency operations do not need to be included when determining whether the vehicle meets the low-use vehicle definition. If the vehicle meets the low-use definition of section (d)(33), it is exempt from the performance requirements of section 2025 (e), but it is subject to the requirements of section 2025(i)(9) for low-use vehicles.

~~(8)~~(9) *Exemption for Low-Use Vehicles*.

(A) Low-use vehicles are exempt from the performance requirements of section 2025(e) but must still be labeled and reported in accordance with sections 2025(j) (k) and (l). To be considered a low-use vehicle, the fleet owner must submit engine operation data from a properly functioning odometer and non-resettable hour meter. Hours and mileage used in emergency operations are not counted when determining low-use status. Low-use vehicles need not be included when calculating fleet average indices or target rates.

(B) Vehicles that formerly met the low-use vehicle definition, but whose use will increase ~~increased~~ to 100 hours per year or greater or whose mileage will increase ~~increased~~ to 1,000 miles or greater, must immediately meet the performance requirements of section 2025(f) or (g) ~~BACT requirements or be included in the fleet average calculation by the next~~ for the prior compliance date. ~~For example, a formerly low-use engine that exceeds 1000 miles or 100 hours per year between January 1, 2013 and December 31, 2013 must be included in the fleet average indices and target rates reported for the December 31, 2013 compliance deadline.~~

(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 or 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 section 2025

(11) *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 (1) a VDECS is not available or not feasible for their vehicle or application, or (2) 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 ~~to the Executive Officer~~ must include emissions data and a detailed description of the control technology demonstrating the experimental control strategy achieves at least a Level 2 diesel PM emission reduction. If the application demonstrates that the strategy achieves at least 50 percent reduction 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. ~~The owner shall document the use of the experimental control technology in records as specified in the approval~~

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.

The fleet owner must bring the fleet into compliance prior to the expiration of the experimental diesel emission control strategy extension.

(12) *Compliance Extension for Equipment Manufacturer Delays*:

An 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 delays as long as all the conditions below are met:

(A) The equipment or vehicle was purchased, or the owner and seller had entered into contractual agreement for the purchase, at least ~~six~~ four months prior to the required compliance date;

(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 owner and provided to an agent or employee of ARB upon request;

(C) The owner must demonstrate that a down payment; was made for the equipment; and

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

~~(9)*VDECS that Impairs Safe Operation of Vehicle*.~~

~~A fleet owner may request that the Executive Officer find that a VDECS should 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 occupational safety and health requirements or an ongoing local air district permit condition, such as for use of a diesel oxidation catalyst, impossible. 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. In the absence of such a declaration by the VDECS~~

~~manufacturer, the requesting party shall provide other documentation to support its claims. 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.~~

(j) *Labeling Requirements*.

For certain vehicles subject to this regulation, beginning January 1, 2010, the owner shall keep the following information in the form of a legible and durable label affixed to the exterior of driver's side door or another readily accessible location known to the driver of each vehicle. (The vehicles subject to this requirement will be identified at a later date

(k) *Reporting.*

The owner of a fleet is subject to the reporting requirements of sections 2025(k)(1) and (2) if the owner has elected to be subject to the optional fleet averaging requirements of section 2025(g). The owner must notify the Executive Officer of this election in writing by June 30, 2009. The notification letter must include the name of the responsible official and the location where the records will be kept. If a company or agency opts to comply with fleet averaging performance requirements separately for different divisions or subsidiaries according to section 2025(g)(2), then the company or agency must report separately for the different portions of the fleet.

The owner of a vehicle subject to the special provisions of section 2025 (i) must also comply with the reporting requirements of sections 2025(k)(1) and (2).

(1) *Initial Reporting ~~for Fleet Averaging Option~~*. Fleet owners subject to the reporting requirement must submit the information set forth in section 2025(k)(1)(A) through (C) by December 31, 2009. The owner must use forms approved by the Executive Officer.

(A) *Owner Contact Information*: Fleet owner's name, ~~Name~~ name of responsible person, corporate parent (if applicable), name of company or agency, motor carrier identification number, street address, telephone number, email address (if available), and company taxpayer identification number.

(B) *Vehicle Information*. A list of all vehicles subject to the fleet averaging requirements and the following information for each vehicle:

1. Vehicle type,
2. Vehicle identification number,
3. Vehicle manufacturer,
4. Vehicle model,
5. Vehicle model year,
6. State where the vehicle is registered and type of registration plate,
7. License plate number,
8. Whether the vehicle is a low-use vehicle,

9. Whether the vehicle is a dedicated emergency vehicle,
10. Whether the vehicle is a dedicated snow removal vehicle,
11. Whether the vehicle is a hybrid vehicle as defined in section 2025(d)(28) through (30)

(C) *Engine Information*. For each engine that propels the vehicle:

1. Engine manufacturer,
2. Engine family,
3. Engine serial number,
4. Engine model year

(D) *For Verified Diesel Emission Control Strategies*,~~retrofit emission control equipment~~ (if any)

1. T~~t~~ype of VDECS installed
2. VDECS manufacturer
3. VDECS family name,
4. S~~s~~erial number,
5. D~~d~~ate installed,
3. Verification level and year of verification (percent reduction (PM or NOx))

~~(C)~~(E) *Low-Use Vehicles*. For vehicles that owners intend to define as low-use, report:

1. Owner, vehicle, and engine information identified in sections 2025 (k)(1)(A) (B) and (C),
2. M~~m~~ileage on January 1, 2009 and December 31, 2009,
3. Two hour-meter readings, one from on or before December 31, 2009 and one from on or after January 1, 2009, and
4. The dates of the readings.

(F) *Vehicles Exempt from the NOx Performance Standard*.

1. For the mileage exemption for a vehicle that meets the definition of section 2025(d)(40(D), report one or more from the following list as applicable:
   a. Owner, vehicle, and engine information listed in sections 2025 (k)(1)(A) (B), (C), and (D)
   b. Odometer readings at the start and end of the current compliance period
   c. Evidence that the owner filed a Heavy Highway Vehicle Use Tax Return and was granted a suspension of the tax based on mileage use for the vehicle during the current compliance period.
   d. Records from a tracking device approved by ARB and in a format approved by ARB. ,
   e. Detailed operation and maintenance records if they provide a means of tracking the activity of the vehicle.

2. For NOx-exempt vehicles as defined in section (d)(40)(D), report::
   a. Owner, vehicle, and engine information listed in sections 2025 (k)(1)(A) (B), (C), and (D)~~;~~
   b. Records from a tracking device approved by ARB and in a format approved by ARB.

(2) *Annual Reporting and Compliance Certification*. All fleet owners subject to the reporting requirement of section 2025(k) must review and update the information submitted under section 2025(k)(1) annually, and submit the information in section 2025(k)(2)(A) through (C) to ARB by the January 31 reporting date of each subsequent reporting year. Fleet owners must report their fleet as it was on December 31 of the reporting year. Owners subject to the reporting requirement must report annually each year from 2010 to 2020. Any owner that operates low-use vehicles must continue to report annually for each low-use vehicle for as long as the fleet owns or operates the vehicle. Fleets must use forms (paper or electronic) approved by the Executive Officer for submittal of the required reporting information.

(A) *Compliance Certification*. A 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 must be submitted on a form approved by the Executive Officer. If a designee signs the compliance certification, a written statement signed by the responsible official designating the designee must be attached to the compliance certification and submitted to ARB.

(B) *Changes Since Last Reporting.* Any additions, deletions, or changes to the fleet must be reported. Such changes may include vehicles removed from the fleet, vehicles added to the fleet through purchase or by bringing into California, vehicles newly defined as low-use or repowers, and retrofits. If there are no changes, the fleet owner may indicate there are no changes.

(C) *Low-Use Vehicles*. For each vehicle, report the applicable hour meter readings or odometer readings for the last 12 months and the dates of reading. Fleet owners must report two hour meter readings, one from before or on December 31 of the previous year and one from on or after December 31 of the current year.

(3) *New Fleet Reporting*. New fleets must submit the information in section 2025(k)(1)(A) through (E) for vehicles subject to the regulation to ARB within 30 days of purchase or bringing such vehicles into the State. Beginning the first December 31 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 2025(k)(2).

(l) *Record Keeping*. The owner of a fleet shall maintain the following records as applicable. The owner shall provide these records to an agent or employee of the ARB within five business days upon request.

The owner of a fleet subject to the reporting requirements of section 2025(l) must maintain copies of the information reported under section 2025(l), as well as the records described in paragraphs (1) through (6) below

(1) *Changes Since Last Reporting Period* - Any additions, deletions, or changes to the fleet since the last reporting.

(2) *VDECS Failure.* Records of any VDECS failure and replacement.

(3) *Fuel-based Strategy.* Documentation of any approval from ARB Executive Officer to use a fuel strategy as in section 2025(i)(7) and the most recent two years' worth of records of purchase that demonstrate usage.

(4) *Experimental Diesel Emission Control Strategy*. For fleets using an experimental diesel PM control strategy, record of approval from the Executive Officer for use of the experimental diesel control strategy, the test plan and test data used in the experimental diesel control strategy application, and other records as specified in the approval.

(5) *Manufacturer Delay*. For any vehicles or VDECS for which the fleet owner is utilizing the equipment manufacturer delay provision in section 2025~~(j)(10)~~(i)(12), 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

(6) *Records to be Kept in the Vehicle*.

(A) VDECS Documentation. For each engine requiring a VDECS to comply with the regulation, the owner shall keep the following documentation in the vehicle and provide it upon request to an agent or employee of the ARB

1. A statement signed by the installer at the time of installation of the VDECS affirming that the VDECS was installed by an authorized installer, and providing the following information for each engine:
   a. The name of the person installing the device
   b. The date the device was installed
   c. Type of VDECS installed,
   d. Manufacturer
   e. VDECS family name,
   f. Serial number,
   g. Its verification level and year of verification.

(m) *Record Retention* – Each owner shall maintain the records for each vehicle subject to section 2025(k) and (l) until it is retired or January 1, 2023, whichever is earlier. If vehicle ownership is transferred, the seller shall transfer the vehicle records to the buyer. If fleet ownership is transferred, the seller shall transfer the fleet records to the buyer. Dealers must maintain records of the disclosure of regulation applicability required by section 2025(o) for three years after the sale.

(n) *Right of Entry*. For the purpose of inspecting ~~on-road~~ vehicles and their records to determine compliance with this regulation, an agent or employee of ARB, upon presentation of proper credentials, has the right to enter any facility (with any necessary safety clearances) where ~~on-road~~ vehicles are located or on-road vehicle records are kept.

(o) *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, "An on-road heavy-duty diesel or alternative-diesel vehicle operated in California may be subject to the California Air Resources Board Regulation to Reduce Particulate Matter and Criteria Pollutant Emissions from In-Use On-Road Heavy-Duty Diesel Vehicles. It therefore could be subject to exhaust 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/

(p) *Compliance Requirement.*

(1) *Vehicle Owner*. The vehicle owner shall comply with all applicable requirements and compliance schedules set forth in this regulation

(2) *Motor Carrier*. The motor carrier shall verify that each vehicle dispatched by the motor carrier is in compliance with the regulation.

(3) *Lessee and Lessor*. In any contract that a lessor and lessee enter that has an effective date of December 31, 2009 or later, the lease shall clearly specify whether or not the leased vehicles are to be excluded from the owner's fleet for the duration of the lease, or the responsibility will be that of the lessee.

(q) *Non-Compliance*. 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, 42402,. 2, 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.

(r) *Changes to title 13, section 2022*. Staff is proposing the following modifications:

(1) If a municipality or utility owns vehicles over 14,000 pounds GVWR that fall outside the scope of title 13, section 2022, the municipality may opt to include those vehicles in the fleet now subject to section 2022 and comply with those requirements by December 31, 2008. Otherwise, those vehicles outside the scope of section 2022 are subject to the BACT requirements of section 2025(f).

(2) Redefine Group 3 engine model years to include engine model-years 2003 and newer to be subject to the title 13, section 2022.

(3) Vehicles owned by utilities are subject to section 2025(e)(2)

(s) *Changes to title 13, section 2449*. Requirements for cranes with two engines. Staff is proposing to make these vehicles, including both the drive engine and secondary engine, subject to the provisions of the off-road in-use regulation (title 13, section 2449). The crane's portable engines will no longer be subject to the ATCM for portable engines.

Authority and References –

ATTACHMENT A

Table A-1

PM Emissions Factors by Model Year and Loaded Vehicle Weight Rating (g/mile)

~~Engine Model Year~~	~~Less than or equal to 33,000 lbs (MHD)~~	~~Greater than 33,000 lbs (HHD)~~
~~Pre-1987~~	~~1.52~~	~~2.60~~
~~1987-1993~~	~~0.50~~	~~2.60~~
~~1994-2003~~	~~0.50~~	~~0.70~~
~~2004-2006~~	~~0.43~~	~~0.70~~
~~2007-2009~~	~~0.06~~	~~0.10~~
~~2010~~	~~0.03~~	~~0.06~~

Engine Certification Standard Model Year	Less than or equal to 33,000 lbs (MHD)	Greater than 33,000 lbs (HHD)
Pre-1991	1.65	3.36
1991-1993	0.84	1.25
1994-2006	0.43	0.81
2007-2009	0.06	0.11
2010 and newer	0.03	0.07

Table A-2

NOx Emissions Factors by Model Year and Loaded Vehicle Weight Rating (g/mile)

~~Engine Model Year~~	~~Less than or equal to 33,000 lbs (MHD)~~	~~Greater than 33,000 lbs (HHD)~~
~~Pre-2004~~	~~14.0~~	~~21.2~~
~~2004-2006~~	~~6.8~~	~~11.1~~
~~2007-2009~~	~~3.8~~	~~6.3~~
~~2010~~	~~0.8~~	~~1.4~~

Engine Certification Standard Model Year	Less than or equal to 33,000 lbs (MHD)	Greater than 33,000 lbs (HHD)
2003 and older	14.2	22.0
2004-2006	6.7	12.0
2007-2009	3.8	7.0
2010 and newer	0.8	1.6