

Appendix A1

Outline of Proposed In-Use On-Road Diesel Vehicle Regulation

SUMMARY OF PROPOSED REGULATION ORDER

Title 13, CCR, 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 "Truck and Bus Regulation"

- (a) Purpose – To reduce emissions of diesel particulate matter, oxides of nitrogen, and greenhouse gases from in-use diesel vehicles.
- (b) Scope and Applicability
 - (1) This section describes to whom this regulation applies. This includes persons, businesses, and federal government agencies that own, operate, lease, or rent, diesel powered heavy-duty vehicles, buses, and shuttle vehicles operating in California.
- (c) Exemptions – This section lists for whom the regulation does not apply, such as most previously regulated vehicles, military support vehicles, certain off-road vehicles, two-engine cranes, snow-removal vehicles, historic vehicles, and motor homes.
- (d) Definitions – This section defines the terms used within the regulation such as PM and NO_x BACT, and heavy and medium duty heavy-duty vehicles. PM BACT is defined as highest level VDECS for on-road engines and 0.2 g/bhp-hr or less for off-road engines. The definition of PM BACT includes the provision to extend the compliance date to 2018 should no VDECS be available. NO_x BACT is defined as a 2010 or later model year engine for on-road and a Tier 4 final engine for off-road engines. Finally, medium-duty vehicles are defined as vehicles with a GVWR less than 33,001 lbs excluding any truck-tractors, while heavy-duty includes all truck-tractor and vehicles with a GVWR greater than 33,000 lbs.
- (e) Performance Requirements
 - (1) This sections sets forth general requirements of the regulation including the three compliance options; the (BACT) compliance schedule option, the BACT percentage limits option, and the fleet averaging option which are detailed in sections (f), (g), and (h).
 - (2) Describes how schoolbuses must meet the requirements for PM but not NO_x.
 - (3) Describes the overall compliance requirements for general fleets with schoolbuses sub-fleets.
 - (A) Directs schoolbus sub-fleets to comply with section 2025(j).
 - (B) Allows schoolbus sub-fleets to be combined with other vehicles in the general fleet, to be used for compliance with one of the three options. Prevents vehicles from the general fleet from being used for school bus compliance.
 - (4) Requires drayage vehilces to comply with section 2025(k).
 - (5) Allows divisions of large fleets to comply separately though those divisions.
 - (6) Allows compliance by adding technology, engine replacement, or vehicle replacement.

- (7) With certain exceptions, when using the BACT compliance schedule, requires vehicle owners to possess the required operating and business licenses as set forth by federal and state law.
 - (8) Requires NOx exempt vehicles other than schoolbuses to comply with special NOx exemption requirements.
 - (9) Allows small fleets to optionally meet delayed requirements.
 - (10) Requires all information required to be reported to the Executive Officer.
 - (11) Requires records to be kept.
 - (12) A vehicle in compliance must remain in compliance.
- (f) Details the BACT compliance schedule option – Table 1 sets forth the dates at which vehicles of certain model years must meet PM and NOx BACT. The first compliance date for meeting PM BACT is January 1, 2011 while the first compliance date for NOx is January 1, 2013.
 - (g) Details the BACT Percentage Limits option. – Table 2 set forth the dates at which certain percentages of fleet must comply with PM and NOx BACT.
 - (h) Details the Fleet Averaging Option – This section explains how the fleet averaging option works. It provides the mathematical formulas for determining the PM and NOx Indices and for calculating the PM and NOx Target Rates.
 - (i) Optional Requirements for Small Fleets – This section details the provisions for small fleets. Small fleets can delay compliance until 2013 for one vehicle, 2014 for the next, and 2016 for the third if the second is 2010 model year engine.
 - (1) Fleets with One Vehicle – This section details how owner-operators can comply by upgrading to a vehicle with a 2004 model year engine having the highest level VDECS by 2013 and be in compliance until 2018.
 - (2) Fleets with Two Vehicles – This section states that the second vehicle needs to comply with regulation by 2014.
 - (3) Fleets with Three Vehicles – Three vehicle fleets have the option of delaying compliance of the third vehicle until 2016 if the second is a 2010 model year engine vehicle.
 - (j) Requirements for Schoolbuses – This section contains the requirements for fleets with schoolbuses. It requires pre-1977 schoolbuses to be retired by 2012 and others to have VDECS installed by 2014. Low-use, those that drive less than 1,000 per year, and historic schoolbuses are exempt from the performance requirements. They must continue to report their information to ARB and be subject to audits.
 - (1) Requires pre-1977 schoolbuses to be retired by 2012.
 - (2) Allows schoolbuses to comply with PM BACT using any of the three options.
 - (3) By January 1, 2014, all schoolbuses must have the highest level VDECS installed.
 - (5) Schoolbuses that cannot be retrofitted must be replaced by 2018.
 - (6) Schoolbuses must be safety inspected after retrofitting.
 - (7) Special Provisions for Schoolbuses

- (A) Credit may be granted for hybrid or alternative fuel schoolbuses.
 - (B) Low-use Schoolbuses
 - 1. Low-use schoolbus are exempt.
 - 2. Low-use schoolbuses need not be included when determining compliance.
 - 3. Low-use schoolbuses that exceed a 1,000 miles per are not exempt.
 - (C) Schoolbuses retrofitted before December 31, 2005 are considered in compliance.
- (8) Registered historic schoolbuses are exempt.
- (9) Reporting Requirements for Schoolbus Fleets and Schoolbus Sub-Fleets
- (10) Record Keeping Requirements for Schoolbus Fleets and Schoolbus Sub-Fleets
- (11) Schoolbuses are required to keep records and be subject to audits.
- (k) Requirements for Drayage Trucks and Utility Vehicles – This section specifies that 2004 through 2006 drayage trucks and must comply the requirements of regulation and install VDECS by 2012 for 2004 model year engine trucks and 2013 for 2004-2006 trucks.
- (1) 2004 drayage trucks must install VDECS by January 1, 2012. 2005-2006 trucks must install VDECS by January 1, 2013.
 - (2) Starting in January 1, 2021, all drayage and utility vehicles must comply with the BACT compliance schedule.
- (l) Requirements for Agricultural Fleets – These sections detail the requirements for agricultural fleets (which include agricultural vehicles and non-agricultural vehicles) that utilize any of the agricultural provisions. Agricultural vehicles are defined as fertilizer and crop protection chemical delivery trucks, farmer owned vehicles, vehicles that perform a special function on the farm, and vehicles that transport livestock and harvested crops to the first processing center.
- (1) Low and limited-mileage agricultural vehicles are exempt from the requirements of the regulation until 2023 and 2017, respectively.
 - (2) All non-agricultural vehicles in the agricultural fleet must comply with the BACT compliance schedule or the fleet averaging option.
 - (3) Agricultural fleet owners must report all information about their fleet.
 - (4) Agricultural vehicles replaced must be reported.
 - (5) Any vehicle that exceeds the mileage restrictions must comply with regulation.
- (6) Requirements for limited-mileage agricultural vehicles – These sections detail the requirements for limited-mileage agricultural vehicles. The number of these vehicles is capped based on the number of vehicles reported to be owned on January 31, 2009. The vehicles cannot exceed the annual mileage thresholds of 25,000 for trucks with 2006 model year and newer engines, 20,000 miles for trucks with model year engines 1996 through 2005, and 15,000 for trucks with engine older than 1996. On January 1, 2017 these vehicles must meet the requirements of the regulation.
- (A) The maximum number of limited-mileage agricultural vehicles is capped as of January 1, 2009.

- (B) Allows replacement of a limited-mileage agricultural vehicle by another vehicle that is at least one model year newer provided the original is sold out of the fleet.
 - (C) Total combined mileage of both replaced and replacement vehicles can not exceed the annual mileage thresholds.
 - (D) The exemption on limited-mileage agricultural vehicles ends January 1, 2017.
 - (E) Any vehicle that exceeds the mileage thresholds must comply with regulation.
 - 1. Any limited-mileage vehicle that exceeds the mileage threshold of a limited-mileage vehicle must comply with regulation and limited-mileage cap is decreased by one.
 - (F) The number of limited-mileage vehicles before a merger can never exceed the number of vehicles after the merger.
- (7) Requirements for low-mileage agricultural vehicles – These sections detail the requirements for low-mileage vehicles. The number of the vehicles will be established based on the number reported by January 31, 2010. These vehicles can never exceed 10,000 miles per year and by January 1, 2023, must meet the requirement of the regulation.
- (A) The maximum number of low-mileage agricultural vehicles is capped as of January 1, 2009.
 - (B) Allows replacement of a low-mileage agricultural vehicle by another vehicle that is at least one model year newer provided the original is sold out of the fleet.
 - (C) Total combined mileage of both replaced and replacement vehicles can not exceed the mileage thresholds.
 - (D) Exemption on limited-mileage agricultural vehicles ends January 1, 2023.
 - (E) Until January 1, 2017, a low-mileage vehicle that exceeds the mileage threshold of limited-mileage vehicle must comply with the regulation and the low-mileage vehicle cap is reduced by one.
 - (F) The number of limited-mileage vehicles before a merger can never exceed the number of vehicles after the merger.
 - (G) Until January 1, 2017, a low-mileage vehicle may be moved into the limited-mileage category but the low-mileage vehicle cap will be reduced by one.
- (8) Requirements for specialty agricultural vehicles – Four types of vehicles have been defined as specialty agricultural vehicles and are exempt from the requirements of the regulation until January 1, 2023. These vehicles include nurse rigs used in conjunction with crop dusters, cotton module movers used to move large bales of cotton, water trucks used to reduce dust on farm roads and irrigate crops, and feed trucks used to feed cattle.
- (A) Specialty agricultural vehicles are exempt until January 1, 2023.

- (B) The EO will approve vehicles under the following conditions:
 - 1. The total number in the San Joaquin Valley Air Basin does not exceed 1,100, and
 - 2. The total number statewide does not exceed 2,200.
 - (C) Vehicles exceeding the above numbers must comply with the regulation.
 - 1. The EO will notify owners of vehicle that exceed the numbers.
- (9) Labeling Requirements for Agricultural Vehicles
- (A) Agricultural vehicles must be labeled with:
 - 1. The letters AG shall be black on a white background and,
 - 2. Be located in clear view on the left and right door of the vehicle.
- (m) Requirements for Two-Engine Sweepers – This section requires two-engine sweepers to install the highest level VDECS on the auxiliary engine when the propulsion engine is required to meet the requirement of the proposed regulation. Uncontrolled Tier 0 auxiliary engines can operate no more than 250 hours per year until 2014 and 100 hours thereafter.
- (1) Two-engine sweepers must install the highest level VDEC on the auxiliary engine of the sweeper when the propulsion engine is required to meet the regulation.
 - (2) Two-engine sweepers may not operate any Tier 0 auxiliary engine more than 250 hours until January 1, 2014 and 100 hours thereafter.
 - (3) Labeling Requirements for Two-Engine Sweepers with Tier 0 Auxiliary Engines
 - (A) Within 30 days of the reporting date, fleet owners must permanently affix or paint an SW identification label on each two engine sweeper.
 - (B) Sweepers with Tier 0 auxiliary engines must label the vehicle with letters SW that are black on a white background.
 - (C) The label shall be located in clear view on left and right side of the vehicle.
- (n) Requirements for a New Fleet and Adding Vehicles to a Fleet. New fleets and vehicles being added must comply with regulation as of the date added.
- (1) New Fleet Requirements. New fleets must comply with the regulation immediately upon purchasing vehicles or bringing them into California.
 - (2) Adding Vehicles to a Fleet. Any vehicle not complying with the BACT compliance schedule must meet the fleet's BACT percentage limits or fleet averaging and file a report within 30 days.
 - (A) Fleets complying with the BACT percentage limits may not add vehicles that that would put them out of compliance.
 - (B) Fleets complying with fleet averaging option may not add vehicles that would put them out of compliance.
- (o) Exemptions, Compliance Extensions, and Credits. This section details the parameters for claiming any exemption for NOx mileage exempt vehicles, vehicles that operated solely in the NOx exempt areas, Cab-over-engine vehicles pulling 57 foot trailers, unique vehicles, low-use vehicles, three-day pass vehicles, vehicles

awaiting sale, vehicles operating on San Nicolas or San Clemente islands, vehicles performing early action, hybrid vehicles, alternative fuel vehicles, extensions for manufacturer delays, changes in exempt status, failure of VDECS, fuel-based VDECS, use of experimental DECS, and VDECS that impair safety.

A fleet owner may be granted an extension to a compliance deadline if:

- (1) **Exemption from NOx Performance Requirements.** The EO will exempt the following vehicles from the NOx requirements, but they will continue to be subject to the PM requirements.
 - (A) A NOx mileage exempt vehicle prior to January 1, 2021.
The mileage accrued during emergency operations need not be counted in determining whether a vehicle met the definition of a NOx mileage exempt vehicle.
 - (B) A vehicle that operates solely in the NOx exempt area prior to January 1, 2021 except for vehicle repairs or service.
 - (C) Schoolbuses.
- (2) **Exemption for Cab-Over-Engine (COE) Truck-Tractors.** A COE truck-tractor that meets certain requirements may delay compliance until January 1, 2018. A COE that exclusively pulls a 57 foot trailer may delay until 2018 the requirements of the proposed regulation provided the vehicle engine is at least a 2004 model year engine and highest level PM VDECS is installed.
 - (A) Applies to COEs used exclusively to pull 57 foot trailers.
 - (B) Must still meet the PM requirements.
 - (C) Must have at least a 2004 model year engine.
 - (D) All other vehicles in the fleet must comply with the regulation.
 - (E) The provision does not apply if the length law is changed to allow longer vehicles to drive length restricted roads currently in effect.
- (3) **Provisions for Unique Vehicles.** The EO will not require a unique vehicle to be replaced until January 1, 2021 for which no used vehicle exists and no NOx device is available. It must comply with the PM requirement.
- (4) **Exemption for Low-Use Vehicles and Three Day Pass Vehicles.**
 - (A) Vehicles that drive less than 1,000 miles or operate less than 100 hours per year are exempt from the requirement of the regulation but must continue to report and keep records.
 - (B) The mileage accrued during emergency operations need not be counted in determining whether a vehicle meets the definition of a NOx mileage exempt vehicle.
 - (C) Vehicles that exceed the 1,000 mile limit must comply with the regulation.
 - (D) Each year, a fleet may allow one vehicle within that fleet to travel in California for one single three day period per year without complying with regulation.

- (5) **Exemption for Vehicles Awaiting Sale** – Vehicles in dealer or financing inventories, or other companies involved in vehicle sales are exempt from the regulation.
- (6) **Exemption for Vehicles Used Solely on San Nicolas or San Clemente Islands** - Vehicles operated on San Nicolas or San Clemente Islands are exempt.
- (7) **Compliance Extension Based on Early Action.**
A vehicle with the highest level PM VDECS installed before January 1, 2010, can delay compliance until January 1, 2014.
- (8) **Credit for Hybrid Vehicles**
 - (A) Prior to January 1, 2018, the EO will provide special treatment for hybrids that demonstrate a 20 percent or better fuel economy improvement.
 - (B) Hybrids will be counted as two vehicles when complying using the fleet averaging option.
- (9) **Credit for Alternative Fuel Vehicles** - Alternatively fueled vehicles can use the NOx emission factor for the engine for which it has been certified in calculating the NOx index and zero for the PM index.
- (10) **Compliance Extension for Emissions Control Device Manufacturer Delays:**
Owners will be provided extra time if a VDECS, a replacement engine, or vehicle on order did not arrive in time to comply.
 - (A) The owner and seller must have entered into contractual agreement for the purchase at least four months prior.
 - (B) The owner must identify the vehicle.
 - (C) Proof of purchase must be maintained by the owner.
 - (D) The new or retrofitted vehicles must be immediately placed into service.
- (11) **Change in Exemption Status.** A vehicle that no longer qualifies for an exemption must immediately bring the fleet into compliance.
- (p) **Special Provisions for VDECS and Experimental Diesel Emission Control Strategies**
 - (1) VDECS Requirements
 - (A) VDECS Installation. Before installing, the owner must ensure that:
 1. The VDECS is verified for use with the engine and vehicle.
 2. The conditions of the Executive Order for the VDECS are met.
 3. The VDECS is installed in a verified configuration.
 4. The engine to be retrofit meets engine manufacturer's specifications.
 5. The VDECS label will be visible after installation.
 - (B) VDECS Maintenance. VDECS must remain installed and vehicle owners must ensure that the engine is properly maintained.

- (2) Failure or Damage of a VDECS.
 - (A) Provisions for failure or Damage During the Warranty Period.
 - (B) Provisions for Failure or Damage Outside of Warranty Period.
 - (3) Provisions for Fuel-Based Strategy VDECS.
 - (4) Provisions for Use of Experimental Diesel Emission Control Strategies.
 - (5) Provisions for VDECS That Impairs Safe Operation of Vehicle – Provisions will be made for vehicles where installation of a VDECS would render a vehicle unsafe.
 - (A) Appeals – Hearing Procedures – Sets forth the appeals process
 - (B) Appeals – Hearing Conducted by Written Submission.
- (q) Reporting - This section contains the details of the reporting that is required for fleets complying using the BACT percent limits, the fleet averaging option, or the special provisions and compliance extensions. It requires vehicle, owner, VDECS, and usage information to be reported annually, in addition to any information regarding fleet changes and a certificate signed by responsible official.
- (1) **Fleets must notify the EO of the compliance option** that it has selected. Separate divisions may report separately for the different portions of the fleet.
 - (2) Each year, fleets report on their fleet as it was on January 1 of the current compliance year.
 - (3) Owner Contact Information: Compliance reports must include the listed information.
 - (4) Vehicle Information.
 - (5) Engine Information.
 - (6) Verified Diesel Emission Control Strategies.
 - (7) Availability of Highest Level VDECS
- (8) **Low-Use Vehicles.**
 Low-use vehicles must report the following:
- (A) Owner, vehicle, and engine information
 - (B) Odometer readings taken on January 1 and December 31 of the compliance year.
 - (C) Hour meter readings taken on January 1 and December 31 of the compliance year.
 - (D) The dates of the odometer and hour-meter readings.
 - (E) Tracking system information. Fleets may use other documentation of operation and location, such as IRP records.
- (9) **Vehicles in Agricultural Fleets.**
 Agricultural fleet owners must report vehicle information by January 31, 2009 until January 1, 2023:
- (A) Information required in the general reporting section.
 - (B) What type agricultural vehicle is being claimed or none.
 - (C) Which specialty vehicle is being claimed.

- (D) Odometer readings taken on January 1, 2011 and every January 1 thereafter.
 - (E) Vehicle being replacement information.
- (10) **Vehicles used in emergency operation** - Emergency vehicle qualifying information.
- (11) **Vehicles Exempt from the NOx Performance Standard.**
- (A) Exemption Based on Early Action – Early action qualifying information.
 - (B) NOx Mileage Exempt Vehicles – NOx mileage exemption qualifying information
- (12) **Compliance Certification** - Reports submitted include a written statement signed by the responsible official assuring the accuracy of the reports.
- (13) **Changes Since Last Reporting** – Requires reporting of any additions, deletions, or changes to the fleet since the last report filed.
- (14) **New Fleet Reporting.** New fleets that elect to utilize the BACT percent limits or the fleet averaging option must report their vehicles within 30 days.
- (r) Record Keeping – This section contains the record keeping requirements and the requirement to make the available to an ARB employee if requested. Records include bills of lading, proof of vehicle type, proof of transference of ownership, and information about VDECS failures if applicable.
- (1) Fleets shall maintain the records and make them available upon request.
 - (2) Fleets shall keep copies of reported information.
 - (3) Motor Carrier or Broker
 - (A) Must keep bills of lading and other documentation.
 - (4) Agricultural Fleets
 - (A) Proof that all low, limited, and specialty agricultural vehicles were used exclusively in agricultural operations.
 - (B) Records demonstrating that each vehicle was operational, functional and capable of performing the duty for which it was designed.
 - (C) Bills of lading for delivery of fertilizer or crop protection products.
 - (D) Proof of transference of ownership.
 - (E) Proof of ownership.
 - (5) Changes Since Last Reporting Period.
 - (6) Electronic Tracking – For fleets using electronic tracking systems, summary and detailed records
 - (7) VDECS Failure – Maintain records of any VDECS failure and replacement.
 - (8) Fuel-based Strategy – Documentation of any approval by the EO.
 - (9) Experimental Diesel Emission Control Strategy.
 - (10) Manufacturer Delay.
 - (11) Maintenance of VDECS Records
 - (A) VDECS Documentation.

1. Installer statement affirming proper installation of the VDECS and all other relevant information.

- (s) Audit of Records - Owners must make records available to ARB at its request.
- (t) Record Retention - Owners must maintain records for 3 years.
- (u) Right of Entry - An agent or employee of ARB has the right to enter any facility.
- (v) Disclosure of Regulation Applicability – Sellers of vehicles must make buyers aware of this regulation.
- (w) Compliance Requirement – Details the general compliance requirements, compliance requirements for motor carriers and brokers, and Certificate of Reported Compliance, and lease contracts.
 - (1) Requires vehicle owners to comply with all applicable requirements and compliance schedules.
 - (2) Requires motor carriers and brokers to verify that any vehicle hired or dispatched complies with requirements of the regulation.
 - (3) Provides a mechanism through which fleets can demonstrate reported compliance.
 - (4) Requires lease contracts with an effective dates later than January 1, 2010 to specify in which fleet the vehicle will reside.
- (x) ARB Certificate of Reported Compliance - A certification of reported compliance will be issued upon receipt of a report indicating compliance.
- (y) Non-Compliance.
- (z) Severability