

Rule 1002 Airborne Toxic Control Measure (ATCM) For Compression Ignition (CI)  
Engines Used at Stationary Sources

*(Adopted March 27, 2008)*

(Proposed for Amendment September 22, 2011)

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**Rule 1002**

- 1 PURPOSE:** The purpose of this airborne toxic control measure (ATCM) is to reduce diesel particulate matter (PM) from stationary diesel-fueled compression ignition (CI) engines.
- 2 APPLICABILITY:** Except as provided in Section 4 below, this Rule and its requirements apply to any person who either sells a stationary CI engine, offers a stationary CI engine for sale, leases a stationary CI engine, or purchases, owns or operates a stationary CI engine in the District with a rated brake horsepower greater than 50 (>50 bhp), and, as of the effective date of this Rule, any new stationary CI engines of any size in the District.
- 3 EFFECTIVE DATE:** This Rule shall become effective on March 27, 2008. The Airborne Toxic Control Measure for Stationary Compression Ignition Engines (17 California Code of Regulations (CCR) section 93115) shall remain in effect until the adoption of this Rule.
- 4 EXEMPTIONS**
  - 4.1 Agricultural Operations:** This Rule does not apply to any new or in-use stationary diesel-fueled CI engines used in agricultural operations that are subject to Butte County Air Quality Management District (DISTRICT) Rule 1001 of these Rules and Regulations.
  - 4.2 Test Engines:** The requirements specified in Section 7 of this Rule do not apply to single cylinder cetane test engines used exclusively to determine the cetane number of diesel fuels in accordance with American Society for Testing and Materials (ASTM) Standard D 613-03b, "Standard Test Method for Cetane Number of Diesel Fuel Oil," as modified on June 10, 2003, which is incorporated herein by reference.
  - 4.3 District Risk Review:** The requirements specified in Sections 8.2 and 9.2 of this Rule do not apply to in-use stationary diesel-fueled CI engines used in emergency standby or prime applications that, prior to January 1, 2005, were required in writing by the DISTRICT to meet and comply with either minimum technology requirements or performance standards implemented by the DISTRICT from the "Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines," October 2000, which is incorporated herein by reference.
  - 4.4 Engines Subject to OSHPD Replacement:** The requirements specified in Section 8.2 do not apply to permitted in-use stationary emergency standby diesel-fueled CI engines that will be removed from service or replaced prior to January 1, 2009, in accordance with an approved Office of Statewide Health Planning Development (OSHPD) Compliance Plan that has been approved prior to January 1, 2009, except that this exemption does not apply to replacement engines for the engines that are

removed from service under the OSHPD plan.

- 4.5 Engines in Military Operations:** The requirements in Sections 6 and 9 of this Rule do not apply to any stationary diesel-fueled CI engine used solely for the training and testing of United States Department of Defense (U.S. DoD) students or personnel of any U.S. military branch in the operation, maintenance, repair and rebuilding of engines when such training engines are required to be configured and designed similarly to counterpart engines used by the U.S. DoD, U.S. Military services or North Atlantic Treaty Organization (NATO) forces in combat, combat support, combat service support, tactical or relief operations used on land or at sea.
- 4.6 Request for Exemption for Low-Use Prime Engines Outside of School Boundaries:** The Air Pollution Control Officer (APCO) may approve a Request for Exemption from the provisions of Section 9.2.1 of this Rule for any in-use stationary diesel-fueled CI engine located beyond school boundaries, provided the approval is in writing, and the writing specifies all of the following conditions to be met by the owner or operator:
- 4.6.1** the engine is a prime engine;
  - 4.6.2** the engine is located more than 500 feet from a school at all times;
  - 4.6.3** the engine operates no more than twenty (20) hours cumulatively per year. The APCO may use a different number of hours for applying this exemption if the diesel-fueled CI engine is used solely to start a combustion gas turbine engine, provided the number of hours used for this exemption is justified by the DISTRICT, on a case-by-case basis, with consideration of factors including, at a minimum, the operational requirements of a facility using a combustion gas turbine engine and the impacts of the emissions from the engine at any receptor location.
- 4.7 Dual-Fueled Pilot Engines:** The requirements in Sections 8.2.6 and 9.2 of this Rule do not apply to in-use dual-fueled diesel pilot CI engines that use an alternative fuel or an alternative diesel fuel.
- 4.8 Dual-Fueled Landfill Engines:** The requirements in Sections 6, 7, 8, and 9 of this Rule do not apply to dual-fueled diesel pilot CI engines that use diesel fuel and digester gas or landfill gas.
- 4.9 SCR Controlled:** The requirements in Sections 8.2, 8.5 and 9.2 do not apply to in-use stationary diesel-fueled CI engines that have selective catalytic reduction systems.
- 4.10 Testing for NFPA:** The requirements of Section 8.2 do not apply to in-use emergency fire pump assemblies that are driven directly by stationary diesel-fueled CI engines and only operated the number of hours necessary to comply with the testing requirements of National Fire Protection Association (NFPA) 25 "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection

Systems," 2002 edition, which is incorporated herein by reference.

- 4.11 Request for Delay in Implementation for Remotely Located In-Use Prime Engines:** Prior to January 1, 2011 the APCO may approve a Request for Delay in Implementation from the provisions of Section 9.2 of this Rule until January 1, 2011 for any in-use stationary diesel-fueled CI engine, provided the approval is in writing, and the writing specifies all the following conditions to be met by the owner or operator:
- 4.11.1** the engine is a prime engine, and
  - 4.11.2** the engine is located more than one (1) mile from any receptor location, and
  - 4.11.3** the impacts of the emissions from the engine at any receptor location result in:
    - 4.11.3.1** a prioritization score of less than 1.0; and
    - 4.11.3.2** a maximum cancer risk of less than 1 in a million; and
    - 4.11.3.3** a maximum Hazard Index Value of less than 0.1.
- 4.12 Boarding Schools:** The operational restrictions in Section 8.2.5 of this Rule for engines located at or near school grounds do not apply to engines located at or near school grounds that also serve as the students' place of residence, e.g. boarding schools.
- 4.13 Department of Defense Sites:** The requirements of Section 8.2 of this Rule do not apply to any stationary diesel-fueled emergency standby engine primarily used by the U.S. DoD located at Command Transmitter (CT) sites until December 31, 2009. Each stationary diesel-fueled emergency standby engine at a CT site will be allowed a maximum of 100 total annual hours of operation for maintenance and testing.
- 4.14 Test Cells, Performance Testing, Instruction Engines:** Upon the prior written approval of the APCO, the requirements of this ATCM do not apply to stationary CI engines used exclusively:
- 4.14.1** as engine test cells and test stands for testing burners, CI engines, or CI engine components, e.g., turbochargers;
  - 4.14.2** for operation or performance testing of fuels, fuel additives, or emission control devices at research and development facilities; or
  - 4.14.3** for maintenance, repair, or rebuild training at educational facilities.
- 4.15 Engine Availability:** If the CARB Executive Officer or DISTRICT finds, based on verifiable information from the engine manufacturer, distributor, or dealer, that current model year engines meeting the current emission standards are not available or not available in sufficient numbers or in a sufficient range of makes, models, and horsepower ratings, then the CARB Executive Officer or the DISTRICT may allow the sale, purchase, or installation of a new stock engine meeting the emission standards from the previous model year to meet the new stationary diesel-fueled engine emission standards pursuant to Title 13 CCR or 40 Code of Federal

Regulations (CFR) part 89.

- 5 DEFINITIONS:** For purposes of this ATCM, the following definitions apply:
- 5.1 Agricultural Operations:** The growing and harvesting of crops 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. Agricultural operations do not include activities involving the processing or distribution of crops or fowl.
- 5.2 Agricultural Wind Machine:** A stationary CI engine-powered fan used exclusively in agricultural operations to provide protection to crops during cold weather by mixing warmer atmospheric air with the colder air surrounding a crop.
- 5.3 Air Pollution Control Officer (APCO):** The person appointed pursuant to the California Health and Safety Code (HSC) section 40750, or his or her designated representative.
- 5.4 Alternative Fuel:** Natural gas, propane, ethanol, or methanol.
- 5.5 Alternative Diesel Fuel:** Any fuel used in a CI engine that is not commonly or commercially known, sold, or represented by the supplier as diesel fuel No. 1-D or No. 2-D, pursuant to the specifications in ASTM D 975-81, "Standard Specification for Diesel Fuel Oils," as modified in May 1982, which is incorporated herein by reference, or an alternative fuel, and does not require engine or fuel system modifications for the engine to operate, although minor modifications (e.g., recalibration of the engine fuel control) may enhance performance. Examples of alternative diesel fuels include, but are not limited to, biodiesel and biodiesel blends that do not meet the definition of CARB diesel fuel; Fischer-Tropsch fuels; emulsions of water in diesel fuel; and fuels with a fuel additive, unless:
- 5.5.1** The additive is supplied to the engine fuel by an on-board dosing mechanism, or
- 5.5.2** The additive is directly mixed into the base fuel inside the fuel tank of the engine, or
- 5.5.3** 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.
- 5.6 Approach Light System with Sequenced Flasher Lights in Category 1 and Category 2 Configurations (ALSF-1 and ALSF-2):** High intensity approach lighting systems with sequenced flashers used at airports to illuminate specified runways during category II or III weather conditions, where category II means a decision height of 100 feet and runway visual range of 1,200 feet, and category III means no decision height or decision height below 100 feet and runway visual range of 700 feet.

- 5.7 Baseline or Baseline Emissions:** The emissions level of a diesel-fueled engine using CARB diesel fuel as configured upon initial installation or by January 1, 2003, whichever is later.
- 5.8 California Air Resources Board (CARB) Diesel Fuel:** Any diesel fuel that meets the specifications of vehicular diesel fuel, as defined in Title 13 CCR, sections 2281 and 2282.
- 5.9 Cancer Risk:** The characterization of the probability of developing cancer from exposure to environmental chemical hazards, in accordance with the methodologies specified in "The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments," Office of Environmental Health Hazard Assessment, August 2003, which is incorporated herein by reference.
- 5.10 Carbon Monoxide (CO):** A colorless, odorless gas resulting from the incomplete combustion of hydrocarbon fuels.
- 5.11 Certified Engine:** A CI engine that is certified to meet the Tier 1, Tier 2, Tier 3, or Tier 4 Off-Road CI Certification Standards as specified in Title 13 CCR, section 2423.
- 5.12 Combustion Gas Turbine Engine:** An internal combustion gas or liquid-fueled device consisting of compressor, combustor, and power turbine used to power an electrical generator.
- 5.13 Compression Ignition (CI) Engine:** 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.
- 5.14 Control Area:** Any electrical region in California that regulates its power generation in order to balance electrical loads and maintain planned interchange schedules with other control areas.
- 5.15 Cumulatively:** The aggregation of hours or days of engine use, and any portion of an hour or day of engine use, toward a specified time limit(s).
- 5.16 Date of Acquisition or Submittal:** The date the application for the DISTRICT permit was submitted to the DISTRICT, the date of purchase as defined by the date shown on the front of the cashed check, the date of the financial transaction, or the date on the engine purchasing agreement, whichever is earliest.
- 5.17 Date of Initial Installation:** The date on which a new stationary diesel-fueled engine is placed at a location in order to be operated for the first time since delivery from the manufacturer or distributor.

- 5.18 Demand Response Program (DRP):** A program for reducing electrical demand using an Interruptible Service Contract (ISC).
- 5.19 Diesel Fuel:** Any fuel that is commonly or commercially known, sold, or represented by the supplier as diesel fuel, including any mixture of primarily liquid hydrocarbons--organic compounds consisting exclusively of the elements carbon and hydrogen--that is sold or represented by the supplier as suitable for use in an internal combustion, compression-ignition engine.
- 5.20 Diesel-Fueled:** Fueled by diesel fuel, CARB diesel fuel, or jet fuel, in whole or part.
- 5.21 Diesel Particulate Filter (DPF):** An emission control technology that reduces PM emissions by trapping the particles in a flow filter substrate and periodically removes the collected particles by either physical action or by oxidizing (burning off) the particles in a process called regeneration.
- 5.22 Diesel Particulate Matter (PM):** The particles found in the exhaust of diesel-fueled CI engines as determined in accordance with the test methods identified in Section 14 of this Rule.
- 5.23 Digester Gas:** Any gas derived from anaerobic decomposition of organic matter.
- 5.24 Direct-Drive Emergency Standby Fire Pump Engines:** Engines directly coupled to pumps exclusively used in water-based fire protection systems.
- 5.25 DISTRICT:** The Butte County Air Quality Management District and its authorized representatives.
- 5.26 DRP Engine:** An engine that is enrolled in a DRP.
- 5.27 Dual-fuel Diesel Pilot Engine:** A dual-fueled engine that uses diesel fuel as a pilot ignition source at an annual average ratio of less than five (5) parts diesel fuel to 100 parts total fuel on an energy equivalent basis.
- 5.28 Dual-fuel Engine:** Any CI 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 (2) separate fuel systems, which inject both fuels simultaneously into the engine combustion chamber.
- 5.29 Emergency Standby Engine:** A stationary engine that meets the criteria specified

below:

- 5.29.1** Is installed for the primary purpose of providing electrical power or mechanical work during an emergency use and is not the source of primary power at the facility; and
  - 5.29.2** Is operated to provide electrical power or mechanical work during an emergency use; and
  - 5.29.3** Is not operated to supply power to an electric grid or does not supply power as part of a financial agreement with any entity, except as allowed in Sections 8.2.6 and 8.5 of this Rule; and
  - 5.29.4** Is operated under limited circumstances for maintenance and testing, emissions testing, or initial start-up testing, as specified in Section 8 of this Rule; or
  - 5.29.5** Is operated under limited circumstances in response to an impending outage, as specified in Section 8.2.6 of this Rule; or
  - 5.29.6** Is operated under limited circumstances under a DRP as specified in Section 8.5 of this Rule.
- 5.30 Emergency Use:** Providing electrical power or mechanical work during any of the following events and subject to the following conditions:
- 5.30.1** The failure or loss of all or part of normal electrical power service or normal natural gas supply to the facility:
    - 5.30.1.1** Which is caused by any reason other than the enforcement of a contractual obligation the owner or operator has with a third party or any other party; and
    - 5.30.1.2** Which is demonstrated by the owner or operator to the APCO's satisfaction to have been beyond the reasonable control of the owner or operator;
  - 5.30.2** The failure of a facility's internal power distribution system:
    - 5.30.2.1** Which is caused by any reason other than the enforcement of a contractual obligation the owner or operator has with a third party or any other party; and
    - 5.30.2.2** Which is demonstrated by the owner or operator to the APCO's satisfaction to have been beyond the reasonable control of the owner or operator;
  - 5.30.3** The pumping of water or sewage to prevent or mitigate a flood or sewage overflow;
  - 5.30.4** The pumping of water for fire suppression or protection;
  - 5.30.5** The powering of ALSF-1 and ALSF-2 airport runway lights under category II or III weather conditions;
  - 5.30.6** The pumping of water to maintain pressure in the water distribution system for the following reasons:
    - 5.30.6.1** A pipe break that substantially reduces water pressure; or
    - 5.30.6.2** High demand on the water supply system due to high use of water for fire suppression; or
    - 5.30.6.3** The breakdown of electric-powered pumping equipment at

- sewage treatment facilities or water delivery facilities; or
- 5.30.7** The day-of-rocket launch and day of space plane vehicle re-entry/landing system checks and tracking performed (in parallel with grid power) by the U.S. DoD at CT sites that occur within the 24-hour time period associated with the scheduled time of the launch or re-entry/landing.
- 5.31 Emission Control Strategy:** Any device, system, or strategy employed with a diesel-fueled CI engine that is intended to reduce emissions including, but not limited to, particulate filters, diesel oxidation catalysts, selective catalytic reduction systems, fuel additives used in combination with particulate filters, alternative diesel fuels, and any combination of the above.
- 5.32 End User:** Any person who purchases or leases a stationary diesel-fueled engine for operation in California. Persons purchasing engines for the sole purpose of resale are not considered "end users."
- 5.33 Enrolled:** The ISC is in effect during the specified time period for an engine in an ISC.
- 5.34 Executive Officer:** The executive officer of CARB, or his or her designated representative.
- 5.35 Facility:** One or more contiguous properties, in actual physical contact or separated solely by a public roadway or other public right-of-way, under common ownership on which engines operate.
- 5.36 Fuel Additive:** Any substance designed to be added to fuel or fuel systems or other engine-related engine systems such that it is present in-cylinder during combustion and has any of the following effects: decreased emissions, improved fuel economy, increased performance of the engine; or assists diesel emission control strategies in decreasing emissions, or improving fuel economy or increasing performance of the engine.
- 5.37 Generator Set:** A CI engine coupled to a generator that is used as a source of electricity.
- 5.38 Hazard Index:** The sum of individual acute or chronic hazard quotients for each substance affecting a particular toxicological endpoint, as determined in accordance with the requirements of "The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments," Office of Environmental Health Hazard Assessment, August 2003, which is incorporated herein by reference.
- 5.39 HC:** The sum of all hydrocarbon air pollutants.
- 5.40 Health Facility:** The same meaning as defined in HSC Section 1250.

- 5.41 In-Use or In-Use Engine:** A stationary CI engine that is used as of the effective date of this Rule, including:
- 5.41.1** A replacement stationary CI engine that is installed to temporarily replace an in-use engine while the in-use engine is undergoing maintenance and testing, provided the replacement engine emits no more than the in-use engine, and the replacement engine is not used more than 180 days cumulatively in any 12-month rolling period; or
  - 5.41.2** An engine that is one (1) of four (4) or more engines owned by an owner or operator and is relocated prior to January 1, 2008 to an offsite location that is owned by the same owner or operator; or
  - 5.41.3** An engine, or replacement for an engine, that is relocated within the same facility or to another offsite facility under the same owner or operator, provided the engine has a valid authorization with the DISTRICT; or
  - 5.41.4** An engine installed at a facility prior to the effective date of this Rule, and relocated within the same facility after the effective date of this Rule.
- 5.42 Incentive Program:** For purposes of this subsection, State or federal incentive funding programs include, but are not limited to, California's Carl Moyer Program, as set forth in Title 17, Part 5, Chapter 9 of the California Health and Safety Code, and the U.S. Department of Agriculture's Environmental Quality Incentives Program (EQIP), as set forth in Title 7, Chapter XIV, Part 1466 CFR.
- 5.43 Initial Start-up Testing:** Operating the engine or supported equipment to ensure their proper performance either:
- 5.43.1** For the first time after installation of a stationary diesel-fueled CI engine at a facility, or
  - 5.43.2** For the first time after installation of emission control equipment on an in-use stationary diesel-fueled CI engine.
- 5.44 Interruptible Service Contract (ISC):** A contractual arrangement in which a utility distribution company provides lower energy costs to a nonresidential electrical customer in exchange for the ability to reduce or interrupt the customer's electrical service during a Stage 2 or Stage 3 alert, or during a transmission emergency.
- 5.45 Jet Fuel:** Fuel meeting any of the following specifications:
- 5.45.1** ASTM D 1655-02, "Standard Specification for Aviation Turbine Fuels," which is incorporated herein by reference. Jet fuels meeting this specification include Jet A, Jet A-1, and Jet B;
  - 5.45.2** Military Detail (MIL-DTL) 5624T, "Turbine Fuels, Aviation, Grades Jet Propellant (JP) JP-4, JP-5, and JP-5/JP8 ST," dated September 18, 1998, which is incorporated herein by reference; and
  - 5.45.3** Military Test (MIL-T) 83133E, "Turbine Fuels, Aviation, Kerosene Types, NATO F-34 (JP-8), NATO F-35, and JP-8+100," dated April 1, 1999, which is incorporated herein by reference.

- 5.46 Landfill Gas:** Any gas derived through any biological process from the decomposition of waste buried within a waste disposal site.
- 5.47 Location:** Any single site at a facility.
- 5.48 Maintenance and Testing:** Operating an emergency standby CI engine to:
- 5.48.1** Evaluate the ability of the engine or its supported equipment to perform during an emergency. "Supported Equipment" includes, but is not limited to, generators, pumps, transformers, switchgear, uninterruptable power supply, and breakers; or
  - 5.48.2** Facilitate the training of personnel on emergency activities; or
  - 5.48.3** Provide electric power for the facility when the utility distribution company takes its power distribution equipment offline to service that equipment for any reason that does not qualify as an emergency use.
- 5.49 Maximum Rated Power:** The maximum brake kilowatt output of an engine as determined from any of the following, whichever is the greatest:
- 5.49.1** The manufacturer's sales and service literature;
  - 5.49.2** The nameplate of the unit; or
  - 5.49.3** If applicable, as shown in the application for certification of the engine.
- 5.50 Model Year:** The stationary CI engine manufacturer's annual production period, which includes January 1st of a calendar year, or if the manufacturer has no annual production period, the calendar year.
- 5.51 Motive Power:** Power or ability to move or propel the vehicle, equipment, or unit from one location to another.
- 5.52 New or New CI Engine:** A stationary CI engine installed at a facility after the effective date of this Rule, including:
- 5.52.1** An engine relocated from an off-site location after the effective date of this Rule; or
  - 5.52.2** A stationary CI engine that has been reconstructed after the effective date of this Rule, unless the sum of the costs of all individual reconstructions of that engine after the effective date of this Rule, is less than 50% of the lowest-available purchase price, determined at the time of the most recent reconstruction, of a complete, comparably-equipped new engine (within + 10% of the reconstructed engine's brake horsepower rating). For purposes of this definition, the cost of reconstruction and the cost of a comparable new engine shall not include the cost of equipment and devices required to meet the requirements of this ATCM.
- 5.53 Nitrogen Oxides (NO<sub>x</sub>):** Compounds of nitric oxide (NO), nitrogen dioxide (NO<sub>2</sub>), and other oxides of nitrogen, which are typically created during combustion

processes and are major contributors to smog formation and acid deposition.

- 5.54 Noncertified Engine:** A CI engine that is not certified to Off-Road CI Certification Standards as specified in Title 13 CCR, section 2423.
- 5.55 Non-Methane Hydrocarbons (NMHC):** The sum of all hydrocarbon air pollutants except methane.
- 5.56 Owner or Operator:** Any person subject to the requirements of this ATCM, including but not limited to:
- 5.56.1** An individual, trust, firm, joint stock company, business concern, partnership, limited liability company, association, or corporation including but not limited to, a government corporation; and
  - 5.56.2** Any city, county, district, commission, the State or any department, agency, or political subdivision thereof, any interstate body, and the federal government or any department or agency thereof to the extent permitted by law.
- 5.57 Particulate Matter (PM):** The particles found in the exhaust of CI engines, which may agglomerate and adsorb other species to form structures of complex physical and chemical properties.
- 5.58 PM Standard Strategy (PMSS):** One or a combination of the following diesel PM control strategies:
- 5.58.1** A certified CI engine that achieves a 0.01 g/bhp-hr PM emission standard; or
  - 5.58.2** A Level 3 Verified Diesel Emission Control Strategy in combination with a certified CI engine that meets the 0.15 g/bhp-hr PM emission standard; or
  - 5.58.3** An 85% PM emission reduction control strategy in combination with a certified CI engine that meets 0.15 g/bhp-hr PM emission standard; or
  - 5.58.4** A certified CI engine that meets the 0.15 g/bhp-hr PM emission standard in combination with one of the emission control strategies identified in Sections 5.58.2 or 5.58.3 of this Rule and meets the requirements of Section 4.15 of this Rule; or
  - 5.58.5** Off-road CI equipment manufactured in compliance with the Transitional Implementation Flexibility Provisions for Equipment Manufacturers specified in Title 13 CCR, section 2423(d); 40 CFR, section 89.102(d); or 40 CFR, section 1039.625 in combination with one of the emission control strategies identified in Sections 5.58.2 or 5.58.3 of this Rule provided the CI engine meets the 0.15 g/bhp-hr PM emission standard; or
  - 5.58.6** A certified CI engine in an engine family identified by the manufacturer to participate in the averaging, banking, or trading program for that model year in compliance with the applicable subparts of 40 CFR, section 89; 40 CFR, section 1039; or Title 13 CCR, section 2423(b)(2), provided the CI engine meets the 0.15 g/bhp-hr PM emission standard and is used in

combination with one of the emission control strategies identified in sections Sections 5.58.2 or 5.58.3; or

**5.58.7** A Tier 4 certified CI engine or a new piece of equipment identified in Section 5.58.5 of this Rule that emits no more than 0.015 g/bhp-hr PM.

**5.59 Portable CI Engine:** A CI engine that is designed and capable of being carried or moved from one location to another. Indica of portability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform. For the purposes of this Regulation, dredge engines on a boat or barge are considered portable. The engine is not portable if:

**5.59.1** The engine or its replacement is attached to a foundation, or if not so attached, will reside at the same location for more than twelve (12) consecutive months. The period during which the engine is maintained at a storage facility shall be excluded from the residency time determination. Any engine, such as a back-up or stand-by engine, that replaces an engine(s) at a location, and is intended to perform the same or similar function as the engine(s) being replaced, will be included in calculating the consecutive time period. In that case, the cumulative time of all engines, including the time between the removal of the original engine(s) and installation of the replacement engine(s), will be counted toward the consecutive time period; or

**5.59.2** The engine remains or will reside at a location for less than twelve (12) consecutive months if the engine is located at a seasonal source and operates during the full annual operating period of the seasonal source, where a seasonal source is a stationary source that remains in a single location on a permanent basis (at least two (2) years) and that operates at that single location at least three (3) months each year; or

**5.59.3** The engine is moved from one location to another in an attempt to circumvent the portable residence time requirements.

**5.60 Prime CI Engine:** A stationary CI engine that is not an emergency standby CI engine and is the primary power source for a facility, equipment, or other source.

**5.61 Prioritization Score:** The numeric value used to rank facilities in order of their potential to pose significant risk to human receptors. Prioritization scores are calculated per the process described in the "CAPCOA Air Toxics 'Hot Spots' Program Facility Prioritization Guidelines," California Air Pollution Control Officer's Association (CAPCOA), July 1990, which is incorporated herein by reference.

**5.62 Rated Brake Horsepower (bhp):** The maximum brake horsepower output of an engine as determined from any of the following, which reflects the engine's configuration as of January 1, 2005 or date of intial installation, whichever is later:

**5.62.1** The manufacturer's sales and service literature;

**5.62.2** The nameplate of the engine; or

**5.62.3** If applicable, as shown in the application for certification of the engine.

- 5.63 Receptor Location:** Any location outside the boundaries of a facility where a person may experience exposure to diesel exhaust due to the operation of a stationary diesel-fueled CI engine. Receptor locations include, but are not limited to, residences, businesses, hospitals, daycare centers, and schools.
- 5.64 Reconstruction:** The rebuilding of the engine or the replacement of engine parts, including pollution control devices, but excluding operating fluids, lubricants, and other consumables such as air filters, fuel filters, and glow plugs that are subject to regular replacement.
- 5.65 Rotating Outage:** A controlled, involuntary curtailment of electrical power service to consumers as ordered by the Utility Distribution Company.
- 5.66 School or School Grounds:** Any public or private school, including building or structure, playground, athletic field, or other areas of improved school property, used for purposes of the education of more than twelve (12) children in kindergarten or any of grades 1 to 12, inclusive, but does not include any private school in which education is primarily conducted in a private home(s).
- 5.67 Selective Catalytic Reduction (SCR) System:** An emission control system that reduces NO<sub>x</sub> emissions through the catalytic reduction of NO<sub>x</sub> in diesel exhaust by injecting nitrogen-containing compounds into the exhaust stream, such as ammonia or urea.
- 5.68 Seller:** Any person who sells, leases, or offers for sale any stationary diesel-fueled engine directly to end users.
- 5.69 Stage 2 Alert:** An official forecast or declaration by the California Independent System Operator that the operating reserves of electrical power will fall or have fallen below 5%.
- 5.70 Stage 3 Alert:** An official forecast or declaration by the California Independent System Operator that the operating reserves of electrical power will fall or have fallen below 1.5%.
- 5.71 Stationary CI Engine:** A CI engine that is designed to stay in one (1) location, or remains in one (1) location. A CI engine is stationary if:
- 5.71.1** The engine is not portable as defined in this Rule; and
  - 5.71.2** The engine does not provide motive power; and
  - 5.71.3** The engine or its replacement is attached to a foundation, or if not so attached, resides at the same location for more than twelve (12) consecutive months. Any engine such as backup or standby engines, that replaces an engine at a location and is intended to perform the same or

similar function as the engine(s) being replaced, shall be included in calculating the consecutive time period. The cumulative time of all engines, including the time between the removal of the original engine(s) and installation of the replacement engine(s), will be counted toward the consecutive time period; or

- 5.71.4** The engine remains or will reside at a location for less than twelve (12) consecutive months if the engine is located at a seasonal source and operates during full annual operating period of the seasonal source, where a seasonal source is a stationary source that remains in a single location on a permanent basis (at least two (2) years) and that operates at that single location at least three (3) months each year; or
- 5.71.5** The engine is moved from one location to another in an attempt to circumvent the twelve (12) month residence time requirement. The period during which the engine is maintained at a storage facility shall be excluded from the residency time determination.
- 5.72 Stationary Source:** Any building, structure, facility, or installation that emits any pollutant directly or as fugitive emissions. Building, structure, facility, or installation includes all pollutant emitting activities which:
- 5.72.1** Are under the same ownership or operation, or which are owned or operated by entities which are under common control; and
- 5.72.2** Belong to the same industrial grouping either by virtue of falling within the same two-digit standard industrial code or by virtue of being part of a common industrial process, manufacturing process, or connected process involving a common raw material; and
- 5.72.3** Are located on one or more contiguous or adjacent properties.
- 5.73 Stock Engine:** A certified CI engine that has never been placed in service and is part of a supply of engines offered for sale, rent, or lease by a person or firm who offers for sale, rent, or lease engines and related equipment for profit.
- 5.74 Transmission Constrained Area:** The specific location that is subject to localized operating reserve deficiencies due to the failure of the normal electrical power distribution system.
- 5.75 Transmission Emergency:** An official forecast or declaration by the California Independent System Operator that the available electrical power transmission capacity to a transmission constrained area is insufficient and may result in an uncontrolled local grid collapse in the transmission constrained area.
- 5.76 Utility Distribution Company:** One of several organizations that control energy transmission and distribution in California. Utility Distribution Companies include, but are not limited to, the Pacific Gas and Electric Company, the San Diego Gas and Electric Company, Southern California Edison, Los Angeles Department of Water

and Power, the Imperial Irrigation District, and the Sacramento Municipal Utility District.

**5.77 Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines (Verification Procedure):** The CARB regulatory procedure codified in Title 13 CCR, sections 2700-2710, which is incorporated herein by reference, that engine manufacturers, sellers, owners, or operators may use to verify the reductions of diesel PM or NOx from in-use diesel engines using a particular emission control strategy.

**5.78 Verified Diesel Emission Control Strategy:** An emission control strategy, designed primarily for the reduction of diesel PM emissions, which has been verified pursuant to the Verification Procedure.

**6 FUEL AND FUEL ADDITIVE REQUIREMENTS:** Except as provided for in Section 4 of this Rule, no owner or operator of a new or in-use stationary prime or emergency diesel-fueled CI engine shall fuel the engine with any fuel unless the fuel is one of the following:

**6.1** CARB Diesel Fuel; or

**6.2** An alternative diesel fuel that is:

**6.2.1** Biodiesel;

**6.2.2** A biodiesel blend that does not meet the definition of CARB Diesel Fuel;

**6.2.3** A Fischer-Tropsch fuel; or

**6.2.4** An emulsion of water in diesel fuel; or

**6.3** Any alternative diesel fuel that is not identified in Section 6.2 above and meets the requirements of the Verification Procedure; or

**6.4** An alternative fuel; or

**6.5** CARB Diesel Fuel used with fuel additives that meets the requirements of the Verification Procedure; or

**6.6** Any combination of fuels noted in Section 6.1 through Section 6.5 above.

**7 EMISSION STANDARDS FOR NEW STATIONARY DIESEL-FUELED ENGINES, LESS THAN OR EQUAL TO 50 BRAKE HORSEPOWER (<50 BHP):** Except as provided in Section 4 of this Rule, no person shall sell, offer for sale, or lease for use in California any stationary diesel-fueled CI engine that has a rated brake horsepower less than or equal to 50, unless the stationary diesel engine meets the the applicable Engine Standards (Title 13 CCR, section 2423) for PM, NMHC+NOx, and CO for the same maximum rated power and operation as follows:

- 7.1 New Prime Engines and New Emergency Standby Engines rated at less than 25 bhp shall meet the current Off-Road CI Engine Standards (Title 13, CCR, section 2423) for PM, NMHC+NO<sub>x</sub>, and CO.
- 7.2 New Emergency Standby Engines rated at greater than or equal to 25 bhp but less than 50 bhp shall meet the Tier 4 interim Off-Road CI Engine Standards (Title 13, CCR, section 2423) for PM, NMHC+NO<sub>x</sub>, and CO.
- 7.3 New stationary direct-drive emergency standby diesel-fueled fire pump engines with a maximum rated brake horsepower less than or equal to 50 bhp shall meet the requirements in 40 CFR, PART 60.4202, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (2006).

## 8 EMERGENCY STANDBY DIESEL-FUELED CI ENGINES (>50 BHP) OPERATING REQUIREMENTS AND PM EMISSION STANDARDS

- 8.1 **New Engine PM Standards:** New stationary emergency standby diesel-fueled engines (>50 bhp) shall:
  - 8.1.1 emit diesel PM at a rate less than or equal to 0.15 g/bhp-hr; and
  - 8.1.2 after December 31, 2008, be certified to the the new non-road CI engine emission standards for all pollutants for 2007 and later model year engines as specified in 40 CFR Parts 60, 85, et al. Standards of Performance for Stationary Compression-Ignition Internal Combustion Engines.
- 8.2 **Emergency Standby Diesel-Fueled CI Engine (>50 bhp) Operating Requirements:** Except as provided in Section 4 of this Rule and in accordance with the applicable compliance schedules specified in Sections 11 and 12 of this Rule, the following operating requirements shall apply and are summarized in Table 2 (next page):
  - 8.2.1 An owner or operator in California shall not operate a stationary emergency standby diesel-fueled CI engine (>50 hp) that emits diesel PM at a rate:
    - 8.2.1.1 greater than 0.40 g/bhp-hr, more than twenty (20) hours per year for maintenance and testing purposes;
    - 8.2.1.2 less than or equal to 0.40 g/bhp-hr, more than thirty (30) hours per year for maintenance and testing purposes;
    - 8.2.1.3 less than or equal to 0.15 g/bhp-hr, more than fifty (50) hours per year for maintenance and testing purposes; or
    - 8.2.1.4 that meets the PMSS, more than 100 hours per year for maintenance and testing purposes.
  - 8.2.2 This Subsection does not limit engine operation for emergency use and for emission testing to show compliance with Section 8.2 of this Rule.

<p>Table 2: Summary of the Emission Standards and Operating Requirements for Stationary Emergency Standby Diesel-Fueled CI Engines &gt;50 BHP (See Section 8.2)</p>
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Diesel PM Standards (g/bhp-hr)	Maximum Allowable Annual Hours of Operation for Engines Meeting the Following Diesel PM Standards		
	Emergency Use	Non-Emergency Use	
		Emission Testing to show Compliance <sup>1</sup>	Maintenance & Testing (hours/year)
>0.40 <sup>2</sup>	Not Limited by ATCM <sup>2</sup>	Not Limited by ATCM <sup>2</sup>	20
>0.15 and ≤0.40	Not Limited by ATCM <sup>2</sup>	Not Limited by ATCM <sup>2</sup>	30
>0.01 and ≤0.15	Not Limited by ATCM <sup>2</sup>	Not Limited by ATCM <sup>2</sup>	50
≤PMSS	Not Limited by ATCM <sup>2</sup>	Not Limited by ATCM <sup>2</sup>	100

<sup>1</sup> Emission testing limited to testing to show compliance with Section 8.2.

<sup>2</sup> May be subject to emission or operational restrictions as defined in current applicable DISTRICT Rules, Regulations, or policies.

**8.2.3** The DISTRICT may approve up to a maximum of forty (40) annual hours of operation for maintenance and testing purposes at a health facility for engines subject to the requirements of Sections 8.2.1.1 and 8.2.1.2 of this Rule.

**8.2.4** Upon written request by the owner or operator, the DISTRICT may provide additional hours of operation to perform testing on an engine that has experienced a breakdown or failure during maintenance. Upon DISTRICT approval, these additional hours of operation will not be counted in the maximum allowable annual hours of operation for the emergency standby CI engine that provided the electrical power.

**8.2.5 At-School and Near-School Provisions:** An owner or operator shall not operate a stationary emergency standby diesel-fueled CI engine that does not meet the PM Standard Strategy for non-emergency use, including maintenance and testing, during the following periods:

**8.2.5.1** whenever there is a school sponsored activity, if the engine is located on school grounds, and

**8.2.5.2** between 7:30 a.m. and 3:30 p.m. on days when school is in session, if the engine is located within 500 feet of school grounds.

**8.2.6 Rotating Outages:** An owner or operator shall not operate any stationary emergency standby diesel-fueled CI engine (>50 bhp) in response to the notification of an impending rotating outage, unless all the following criteria are met:

- 8.2.6.1 the engine's Permit to Operate allows operation of the engine in anticipation of a rotating outage, or the DISTRICT has established a policy or program that authorizes operation of the engine in anticipation of a rotating outage; and
- 8.2.6.2 the Utility Distribution Company has ordered rotating outages in the control area where the engine is located, or has indicated it expects to issue such an order at a specified time; and
- 8.2.6.3 the engine is located in a specific location that is subject to the rotating outage; and
- 8.2.6.4 the engine is operated no more than thirty (30) minutes prior to the time when the Utility Distribution Company officially forecasts a rotating outage in the control area; and
- 8.2.6.5 the engine operation is terminated immediately after the Utility Distribution Company advises that a rotating outage is no longer imminent or in effect.

**8.3 The DISTRICT:**

- 8.3.1 may establish more stringent diesel PM emission rate standards; and
- 8.3.2 may establish more stringent limits on hours of maintenance and testing on a site-specific basis; and
- 8.3.3 shall determine an appropriate limit on the number of hours of operation for demonstrating compliance with other DISTRICT Rules and initial start-up testing.

**8.4 New Direct-Drive Emergency Standby Fire Pump Engines:** New direct-drive emergency standby diesel-fueled fire-pump engines (>50 bhp) shall:

- 8.4.1 Meet the applicable emissions standards for diesel PM as specified in Table 3: PM Emission Standards for New Stationary Emergency Standby Direct-Drive Fire Pump Engines >50 BHP below for the model year and NFPA nameplate power rating ; and
- 8.4.2 Meet the new fire pump engine certification requirements and emission standards required by 40 CFR section 60.4202(d.) Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (2006); and
- 8.4.3 Not operate more than the number of hours necessary to comply with the testing requirements of the NFPA 25 "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems," 2002 edition, which is incorporated herein by reference. This Subsection does not limit engine operation for emergency use and for emission testing to show compliance with Section 8.4 of this Rule.

Table 3: PM Emission Standards for New Stationary Emergency Standby Direct-Drive Fire Pump Engines > 50 BHP (See Section 8.4)

Maximum Engine	Model Year(s)	PM g/bhp-hr (g/kW-hr)
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Power		
50 ≤ HP < 100 (37 ≤ kW < 75)	2010 and earlier 2011+ <sup>1</sup>	0.60 (0.80) 0.30 (0.40)
100 ≤ HP < 175 (75 ≤ kW < 130)	2009 and earlier 2010+ <sup>2</sup>	0.60 (0.80) 0.22 (0.30)
175 ≤ HP < 600 (130 ≤ kW < 450)	2008 and earlier 2009+ <sup>3</sup>	0.40 (0.54) 0.15 (0.20)
600 ≤ HP < 750 (450 ≤ kW < 560)	2008 and earlier 2009+	0.40 (0.54) 0.15 (0.20)
HP > 750 (kW > 560)	2007 and earlier 2008+	0.40 (0.54) 0.15 (0.20)

<sup>1</sup>For model years 2011-2013, manufacturers, owners, and operators of the fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 revolutions per minute (rpm) may comply with the emission limitations for 2010 model year engines.

<sup>2</sup>For model years 2010-2012, manufacturers, owners, and operators of the fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 revolutions per minute (rpm) may comply with the emission limitations for 2009 model year engines.

<sup>3</sup>In model years 2009-2011, manufacturers of the fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 revolutions per minute (rpm) may comply with the emission limitations for 2008 model year engines.

#### **8.5 Additional Operating Requirements and Emission Standards for Emergency Standby Stationary Diesel-Fueled CI Engines Used in DRPs).**

**8.5.1** DRP Engines enrolled in an ISC after January 1, 2008 shall meet the more stringent of :

**8.5.1.1** PM Standard Strategy; or

**8.5.1.2** The current model year diesel PM standard as specified in the Off-Road CI Engine Standards for off-road engines with the same maximum rated power (Title 13 CCR, section 2423) which are in effect on the date of ISC enrollment.

**8.5.2** DRP Engines enrolled in an ISC after January 1, 2008, shall:

**8.5.2.1** Comply with the limitations on the hours of operation for maintenance and testing as specified in Section 8.2.1.4 of this Rule; and

**8.5.2.2** Not operate more than 150 hours per year for ISC operation.

**8.5.3** After a DRP is terminated by either the Utility Distribution Company or the engine owner or operator, the DRP engine shall remain subject to the requirements of Section 8.5 of this Rule above as if the DRP were still in effect.

**8.6** Owners or operators that choose to meet the diesel PM standards with emission control strategies that are not verified through the Verification Procedure shall be required to source test in accordance with the requirements in Section 13 of this Rule.

### **9 STATIONARY PRIME DIESEL-FUELED CI ENGINE (>50 BHP) EMISSION**

**STANDARDS**

**9.1 New Stationary Prime Diesel-Fueled CI Engine (>50 bhp) Emission Standards:** Except as provided in Section 4 of this Rule, no person shall sell, purchase, offer for sale, or lease for use in California a new stationary prime diesel-fueled CI engine that has a rated brake horsepower greater than 50 unless it meets the following applicable emission standards, and no owner or operator shall operate any new stationary prime diesel-fueled CI engine that has a rated brake horsepower greater than 50 unless it meets all of the following emission standards and operational and installation requirements (which are summarized in Table 4 below.):

Table 4: Summary of the Emission Standards for New Stationary Prime Diesel-Fueled CI Engines >50 BHP (See Section 9.1)		
Diesel PM Standards <sup>1</sup> (g/bhp-hr)		
PM Standard Strategy  OR  For the following power ratings and model year ranges, meet the PM Standard shown below		
Maximum Engine Power	Model Year(s)	PM g/bhp-hr (g/kW-hr)
$50 \leq \text{HP} < 75$ $(37 \leq \text{kW} < 56)$	2013+	0.02 (0.03)
$\text{HP} > 750$ $(\text{kW} > 560)$	2011+	0.02 (0.03)

<sup>1</sup> May be subject to additional emission limitations as specified in current DISTRICT Rules, Regulations, or policies governing distributed generation.

- 9.1.1 Diesel PM Standard:** All new stationary prime diesel-fueled CI engines (>50 bhp) shall emit diesel PM at a rate that meets the PM Standard Strategy as defined in Section 5.58 of this Rule, or shall meet the diesel PM standard, as specified in 40 CFR Parts 60, 85, et al. Standards of Performance for Stationary Compression-Ignition Internal Combustion Engines in effect on the date of acquisition or submittal, as defined in Section 5.16 of this Rule.
- 9.1.2** Owners and operators shall not install new prime diesel-fueled CI engines from a previous model year unless it meets the applicable requirements and deadlines specified in 40 CFR § 60.4208 (c)-(f).
- 9.1.3** New stationary prime diesel-fueled CI engines that are used to provide electricity near the place of use (also known as "distributed generation") may be subject to additional emission limitations as specified in current

DISTRICT Rules, policies, or Regulations governing distributed generation;

**9.1.4** The DISTRICT may establish more stringent diesel PM emission rate limits on a site-specific basis.

**9.2 In-Use Stationary Prime Diesel-Fueled CI Engine (>50 bhp) Emission Standards:** Except as provided in Section 4 of this Rule, no owner or operator shall operate an in-use stationary prime diesel-fueled CI engines (>50 bhp) in California unless it meets the following requirements (which are summarized in Table 4 next page):

**9.2.1 Diesel PM Standards:** All in-use stationary prime diesel-fueled CI engines (>50 bhp) certified in accordance with the Off-Road CI Engine Standards (Title 13 CCR, section 2423) shall comply with either Option 1 or Option 2 below. All engines not certified in accordance with the Off-Road CI Engine Standards (Title 13, CCR, section 2423) shall comply with Option 1, Option 2, or Option 3 below:

**9.2.1.1 Option 1:** Reduce the diesel PM emission rate by at least 85%, by weight, from the baseline level, in accordance with the appropriate compliance schedule specified in Sections 11 and 12 of this Rule;

**9.2.1.2 Option 2:** Emit diesel PM at a rate that meets the PM Standard Strategy in accordance with the appropriate compliance schedule as specified in Sections 11 and 12;

**9.2.1.3 Option 3:** Reduce the diesel PM emission rate by at least 30% from the baseline level by no later than January 1, 2006, and emit diesel PM at a rate that meets the PM Standard Strategy by no later than July 1, 2011.

Table 4: Summary of the Emission Standards for In-Use Stationary Prime Diesel-Fueled CI Engines > 50 BHP (See Section 9.2)	
Diesel PM	Other Pollutants
Diesel PM Standards	HC, NO <sub>x</sub> , NMHC+NO <sub>x</sub> , and CO

(g/bhp-hr)		Standards (g/bhp-hr)
Applicability	Standard	
All off-road certified in-use prime engines	85% reduction from baseline levels (Option 1)	For engines with emission control strategies not verified through the verification procedure: Off-Road CI Engine Certification Standards for an off-road engine of the model year and maximum rated power of the engine installed to meet the applicable PM standard, or Tier 1 standards. <sup>1</sup>
	OR PM Standard Strategy (Option 2)	
Only in-use prime engines NOT certified in accordance with the Off-Road Compression Ignition Standards	85% reduction from baseline levels (Option 1)	OR
	OR	Both (i) and (ii) must be met:
	PM Standard Strategy (Option 2)	(i) No increase in HC or NO <sub>x</sub> emissions above 10% from baseline levels
	OR	OR
	[30% reduction from baseline levels	(ii) No increase in CO above 10% from baseline levels
	AND	
	0.01 g/bhp-hr by no later than July 1, 2011] (Option 3)	

<sup>1</sup>. The option to comply with the Tier 1 standards is available only if no off-road engine certification standards have been established for an off-road engine of the same model year and maximum rated power as the new stationary emergency standby diesel-fueled CI engine.

**9.2.2 Additional Standards:** Owners or operators that choose to meet the diesel PM limits defined in Section 9.2 of this Rule with emission control strategies that are not verified through the Verification Procedure shall either:

**9.2.2.1** Meet the applicable HC, NO<sub>x</sub>, NMHC+NO<sub>x</sub>, and CO standards for off-road engines of the same model year and

maximum rated power as specified in the Off-Road CI Engine Standards (Title 13 CCR, section 2423). If no standards have been established for an off-road engine of the same model year and maximum rated power as the in-use stationary prime diesel-fueled CI engine, then the in-use stationary prime diesel-fueled CI engine shall meet the Tier 1 standards in Title 13 CCR, section 2423 for an off-road engine of the same maximum rated power, irrespective of the new stationary emergency standby diesel-fueled CI engine's model year; or

- 9.2.2.2 Not increase CO emission rates by more than 10% above baseline; and
  - 9.2.2.3 Not increase HC or NO<sub>x</sub> emission rates by more than 10% above baseline, or
  - 9.2.2.4 Not increase the sum of NMHC and NO<sub>x</sub> emission rates above baseline.
- 9.2.3 The DISTRICT may establish more stringent diesel PM emission rate standards.

## 10 RECORDKEEPING, REPORTING, AND MONITORING REQUIREMENTS

### 10.1 Reporting Requirements for Owners or Operators of New and In-Use Stationary CI Engines, Including Non-Diesel-Fueled CI Engines, Having a Rated Horsepower Greater than 50 (> 50 bhp)

10.1.1 Except as provided in Sections 4 and 10.1.3 of this Rule, upon installation or no later than July 1, 2005, whichever is later, each owner or operator shall submit to the APCO the following information for each new and in-use stationary CI engine (>50 bhp):

- 10.1.1.1 Owner/Operator Contact Information;
- 10.1.1.2 Company name;
- 10.1.1.3 Contact name, phone number, address, e-mail address;
- 10.1.1.4 Address of engine(s);
- 10.1.1.5 Engine Information:
  - 10.1.1.5.1 Make,
  - 10.1.1.5.2 Model,
  - 10.1.1.5.3 Engine Family,
  - 10.1.1.5.4 Serial number,
  - 10.1.1.5.5 Year of manufacture (if unable to determine, approximate age),
  - 10.1.1.5.6 Rated Brake Horsepower Rating,
  - 10.1.1.5.7 Exhaust stack height from ground,
  - 10.1.1.5.8 Engine Emission Factors and supporting data for PM, NO<sub>x</sub> and NMHC separately or NMHC+NO<sub>x</sub>, and CO, (if available) from manufacturers data, source tests, or other sources (specify),

- 10.1.1.5.9 Diameter of stack outlet,
    - 10.1.1.5.10 Direction of outlet (horizontal or vertical),
    - 10.1.1.5.11 End of stack (open or capped),
    - 10.1.1.5.12 Control equipment (if applicable):
      - 10.1.1.5.12.1 Turbocharger,
      - 10.1.1.5.12.2 Aftercooler,
      - 10.1.1.5.12.3 Injection Timing Retard,
      - 10.1.1.5.12.4 Catalyst,
      - 10.1.1.5.12.5 Diesel Particulate Filter,
      - 10.1.1.5.12.6 Other;
  - 10.1.1.6 Fuel(s) Used:
    - 10.1.1.6.1 CARB Diesel,
    - 10.1.1.6.2 Jet fuel,
    - 10.1.1.6.3 Diesel,
    - 10.1.1.6.4 Alternative diesel fuel (specify),
    - 10.1.1.6.5 Alternative fuel (specify),
    - 10.1.1.6.6 Combination (Dual fuel) (specify),
    - 10.1.1.6.7 Other (specify);
  - 10.1.1.7 Operation Information, including:
    - 10.1.1.7.1 Describe general use of engine,
    - 10.1.1.7.2 Typical load (percent of maximum bhp rating),
    - 10.1.1.7.3 Typical annual hours of operation,
    - 10.1.1.7.4 If seasonal, months of year operated and typical hours per month operated,
    - 10.1.1.7.5 Fuel usage rate (if available);
  - 10.1.1.8 Receptor Information, including:
    - 10.1.1.8.1 Nearest receptor description (receptor type),
    - 10.1.1.8.2 Distance to nearest receptor (feet or meters),
    - 10.1.1.8.3 Distance to nearest school grounds;
  - 10.1.1.9 A statement whether the engine is included in an existing AB 2588 emission inventory.
- 10.1.2 Except as provided in Section 4 of this Rule, no later than 180 days prior to the earliest applicable compliance date specified in Sections 11 and 12 of this Rule, each owner or operator of an in-use stationary diesel-fueled CI engine greater than 50 brake horsepower (>50 bhp) shall provide the APCO with an identification of the control strategy for each stationary diesel-fueled CI engine that when implemented will result in compliance with Sections 8 and 9 of this Rule. If applicable, the information should include the Executive Order number issued by the CARB Executive Officer for a Diesel Emission Control Strategy that has been approved by the CARB Executive Officer through the Verification Procedure.
- 10.1.3 The APCO may exempt the owner or operator from providing all or part of the information identified in Sections 10.1.1 and 10.1.2 above if there is a current record of the information in the owner or operator's permit to operate, permit application, DISTRICT registration program, or other

DISTRICT records.

- 10.1.4** Upon written request by the CARB Executive Officer, an APCO shall provide to the CARB Executive Officer a written report of all information identified in Sections 10.1.1 and 10.1.2.

**10.2 Demonstration of Compliance with Emission Limits**

**10.2.1** Prior to the installation of a new stationary diesel-fueled CI engine at a facility, the owner or operator of the new stationary diesel-fueled CI engine(s) subject to the requirements of Section 8.1, 8.2.6, 8.4, 8.5 or 9.1 of this Rule shall provide emissions data to the APCO in accordance with the requirements of Section 13 of this Rule for purposes of demonstrating compliance.

**10.2.2** By no later than the earliest applicable compliance date specified in Sections 11 or 12 of this Rule, the owner or operator of an in-use stationary diesel-fueled CI engine(s) subject to the requirements of Section 8.2 or 9.2 of this Rule shall provide emissions and/or operational data to the APCO in accordance with the requirements of Section 13 for purposes of demonstrating compliance.

**10.3 Notification of Loss of Exemption**

**10.3.1** Owners or operators of in-use stationary diesel-fueled CI engines, who are operating under an exemption specified in Section 4 of this Rule from all or part of the requirements of Sections 8 or 9 of this Rule shall notify the APCO within five (5) days after they become aware that the exemption no longer applies and shall demonstrate compliance with the applicable requirements of Sections 8 or 9, no later than 180 days after the date the exemption no longer applies; or

**10.3.2** An owner or operator of an in-use stationary diesel-fueled CI engine(s) subject to the requirements of Sections 8 or 9 shall provide emissions data to the APCO in accordance with the requirements of Section 13 for purposes of demonstrating compliance pursuant to Section 10.3.1 above.

**10.4 Monitoring Equipment**

**10.4.1** A non-resettable hours meter with a minimum display capability of 9,999 hours shall be installed upon engine installation on all engines subject to all or part of the requirements of Sections 8 or 9 unless the DISTRICT determines on a case-by-case basis that a non-resettable hours meter with a different minimum display capability is appropriate in consideration of the historical use of the engine and the owner or operator's compliance history.

**10.4.2** All DPF engines shall be installed or equipped with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached.

**10.4.3** The APCO may require the owner or operator to install and maintain additional monitoring equipment for the particular emission control strategy(ies) used to meet the requirements of Sections 8 or 9.

**10.5 Reporting Provisions for Exempted Prime and Emergency Engines:** An owner or operator of an engine subject to Sections 4.3 and 4.6 of this Rule shall keep records of the number of hours the engines are operated on a monthly basis. Such records shall be retained for a minimum of 36 months from the date of entry. Record entries made within 24 months of the most recent entry shall be retained on-site, either at a central location or at the engine's location, and made immediately available to the DISTRICT staff upon request. Record entries made from 25 to 36 months from the most recent entry shall be made available to DISTRICT staff within five (5) working days from the DISTRICT's request.

**10.6 Reporting Requirements for Emergency Standby Engines**

**10.6.1** Each owner or operator of an emergency standby diesel-fueled CI engine shall keep records and prepare a monthly summary that shall list and document the nature of use for each of the following:

**10.6.1.1** Emergency use hours of operation;

**10.6.1.2** Maintenance and testing hours of operation;

**10.6.1.3** Hours of operation for emission testing to show compliance with Sections 8.1 and 8.2 of this Rule;

**10.6.1.4** Initial start-up testing hours;

**10.6.1.5** If applicable, hours of operation to comply with the requirements of NFPA 25;

**10.6.1.6** Hours of operation for all uses other than those specified in Sections 10.6.1.1 through 10.6.1.5 above;

**10.6.1.7** If applicable, DRP engine hours of operation, and

**10.6.1.8** The fuel used:

**10.6.1.8.1** For engines operated exclusively on CARB Diesel Fuel, the owner or operator shall document the use of CARB Diesel Fuel through the retention of fuel purchase records indicating that the only fuel purchased for supply to an emergency standby engine was CARB Diesel Fuel; or

**10.6.1.8.2** For engines operated on any fuel other than CARB Diesel Fuel, fuel records demonstrating that the only fuel purchased and added to an emergency standby engine or engines, or to any fuel tank directly attached to an emergency standby engine or engines, meets the requirements of Section 6 of this Rule.

**10.6.2** Records shall be retained for a minimum of 36 months. Records for the prior 24 months shall be retained on-site, either at a central location or at the engine's location, or at an offsite central location within California, and shall be made immediately available to the DISTRICT staff upon request. Records for the prior 25 to 36 months shall be made available to

DISTRICT staff within five (5) working days from request.

**10.7 Additional Reporting Requirements for the Stationary Emergency Standby Diesel-Fueled CI Engines Used To Fulfill the Requirements of an Interruptible Service Contract (ISC)**

**10.7.1** The owner or operator of an ISC engine shall provide to the DISTRICT the following information, as necessary to the extent the DISTRICT does not already have the information:

**10.7.1.1** For each diesel-fueled engine enrolled in the ISC:

**10.7.1.1.1** Owner's Company Name (if applicable);

**10.7.1.1.2** Contact name, phone number, e-mail address;

**10.7.1.1.3** Model year and engine manufacturer;

**10.7.1.1.4** Annual hours of operation under ISC, and

**10.7.1.1.5** Diesel PM emissions rate of the engine (g/bhp-hr).

**10.7.2** The owner or operator shall update the information as necessary to reflect the current inventory of ISC engines and shall provide the updated information to the DISTRICT upon request.

**11 COMPLIANCE SCHEDULE FOR OWNERS OR OPERATORS OF THREE OR FEWER ENGINES (>50 BHP)**

**11.1** All owners and operators of three (3) or fewer engines located within the District, who will meet the requirements of Section 8.2.1 of this Rule solely by maintaining or reducing the current annual hours of operation for maintenance and testing, shall be in compliance with the annual hours of operation limits beginning January 1, 2006.

**11.2** All owners and operators of three (3) or fewer engines located within the District, which are not in compliance with Section 11.1 above but are required to meet the requirements of Sections 8.2 or 9.2 of this Rule, shall comply with Sections 8.2 or 9.2, whichever applies, according to the following schedule:

**11.2.1** All pre-1989 through 1989 model year engines, inclusive, shall be in compliance by no later than January 1, 2006;

**11.2.2** All 1990 through 1995 model year engines, inclusive, shall be in compliance by no later than January 1, 2007; and

**11.2.3** All 1996 and later model year engines shall be in compliance by no later than January 1, 2008.

**12 COMPLIANCE SCHEDULE FOR OWNERS OR OPERATORS OF FOUR (4) OR MORE ENGINES (>50 BHP)**

**12.1** All owners and operators of four (4) or more engines located within the District, who will meet the requirements of Section 8.2.1 of this Rule solely by maintaining or reducing the current annual hours of operation for maintenance and testing, shall be in compliance with the annual hours of operation limits beginning January 1, 2006.

- 12.2** All owners and operators of four (4) or more engines located within the District, who are not in compliance with Section 12.1 above but are required to meet the requirements of Sections 8.2 or 9.2 of this Rule, shall comply with Sections 8.2 or 9.2, whichever applies, according to the following schedules:
- 12.2.1** Pre-1989 Through 1989 Model Year Engines, Inclusive, Schedule of Engines in Compliance by Percent :
    - 12.2.1.1** 50% by January 1, 2007,
    - 12.2.1.2** 75% by January 1, 2008,
    - 12.2.1.3** 100% by January 1, 2009;
  - 12.2.2** 1990 through 1995 Model Year Engines, Inclusive, Schedule of Engines in Compliance by Percent :
    - 12.2.2.1** 30% by January 1, 2007,
    - 12.2.2.2** 60% by January 1, 2008,
    - 12.2.2.3** 100% by January 1, 2009;
  - 12.2.3** 1996 and Later Model Year Engines, Schedule of Engines in Compliance by Percent :
    - 12.2.3.1** 50% by January 1, 2008,
    - 12.2.3.2** 100% by January 1, 2009.

### **13 COMPLIANCE DEMONSTRATION**

- 13.1** Upon approval by the APCO, the following sources of data may be used in whole or part to demonstrate compliance with the emissions standards or requirements of Sections 7 through 9 of this Rule:
- 13.1.1** off-road engine certification test data for the stationary diesel-fueled CI engine,
  - 13.1.2** engine manufacturer test data,
  - 13.1.3** emissions test data from a similar engine,
  - 13.1.4** emissions test data used in meeting the requirements of the Verification Procedure for the emission control strategy implemented.
- 13.2** Emissions testing of a stationary diesel-fueled CI engine, for purposes of showing compliance with the requirements of Sections 7 through 9, shall be done in accordance with the methods specified in Section 14 of this Rule.
- 13.3** For purposes of emissions testing, the particulate matter (PM) emissions from a dual-fueled stationary CI engine, which uses as its fuel a mixture of diesel fuel and other fuel(s), shall be deemed to be 100% diesel PM.
- 13.4** Emissions testing for the purposes of determining the percent change from baseline shall include baseline and emission control strategy testing subject to the following conditions:
- 13.4.1** Baseline testing may be conducted with the emissions control strategy in place, provided the test sample is taken upstream of the emissions control

strategy and the presence of the emissions control strategy is shown to the APCO's satisfaction as having no influence on the emissions test results;

- 13.4.2** Control strategy testing shall be performed on the stationary diesel-fueled CI engine with full implementation of the emissions control strategy;
  - 13.4.3** The percent change from baseline shall be calculated as the baseline emissions minus control strategy emissions, with the difference being divided by the baseline emissions and the result expressed as a percentage; and
  - 13.4.4** The same test method shall be used for determining both baseline emissions and control strategy emissions.
- 13.5** Emission testing for the purposes of demonstrating compliance with an emissions level shall be performed on the stationary diesel-fueled CI engine with the emissions control strategy fully implemented.

## **14 TEST METHODS**

- 14.1** The following test methods shall be used to determine diesel PM, HC, NO<sub>x</sub>, CO and NMHC emission rates:
- 14.1.1** Diesel PM emission testing shall be done in accordance with one of the following methods:
    - 14.1.1.1** CARB Method 5, "Determination of Particulate Matter Emissions from Stationary Sources," as amended July 28, 1997, which is incorporated herein by reference.
      - 14.1.1.1.1** For purposes of this Subsection, diesel PM shall be measured only by the probe catch and filter catch and shall not include PM captured in the impinger catch or solvent extract.
      - 14.1.1.1.2** The tests are to be carried out under steady state operation. Test cycles and loads shall be in accordance with ISO-8178 Part 4 or alternative test cycle approved by the APCO.
      - 14.1.1.1.3** The APCO may require additional engine or operational duty cycle data if an alternative test cycle is requested; or
    - 14.1.1.2** International Organization for Standardization (ISO) 8178 Test procedures: ISO 8178-1:1996(E) ("ISO 8178 Part 1") ISO 8178-2: 1996(E) ("ISO 8178 Part 2"); and ISO 8178-4:1996(E) ("ISO 8178 Part 4"), which are incorporated herein by reference; or
    - 14.1.1.3** Title 13 CCR, section 2423, "Exhaust Emission Standards and Test Procedures - Off-Road CI Engines," which is incorporated herein by reference.
  - 14.1.2** NO<sub>x</sub>, CO and HC emissions testing shall be done in accordance with one of the following methods:

