

# **FREQUENTLY ASKED QUESTIONS**

## **AIRBORNE TOXIC CONTROL MEASURE FOR STATIONARY COMPRESSION IGNITION ENGINES**

### **REQUIREMENTS FOR STATIONARY ENGINES USED IN NON-AGRICULTURAL APPLICATIONS**

California Environmental Protection Agency



**Stationary Source Division  
Emissions Assessment Branch**

**MAY 2011**

For the latest Frequently Asked Questions (FAQs) version for Agricultural Engine Requirements please go to <http://www.arb.ca.gov/diesel/ag/documents/faq020708.pdf>.

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# TABLE OF CONTENTS

<u>Contents</u>	<u>Page</u>
General Questions	1
Compliance	6
Emission Standards	7
Exemptions	8
Fuel	8
Engine Sales	9
Portable vs. Stationary	10
Reporting Requirements	10
Test Method	10
Verified Emission Control Systems	11
Certification Data for Stationary CI Engines	11
AB 2588	12

## General Questions

1. **Q: Why develop ATCMs for diesel-fueled engines?**

A: In 1998, the Board identified diesel particulate matter (PM) as a toxic air contaminant (TAC). To reduce public exposure to diesel PM, in 2000, the Board approved the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (Risk Reduction Plan). Integral to this plan is the implementation of control measures to reduce diesel PM such as the ATCM for stationary diesel-fueled engines.

2. **Q: What airborne toxic control measures (ATCMs) or regulations have been promulgated for diesel engines and diesel fuel?**

A: As of 2011, the following ATCMs/regulations have been adopted to reduce emissions of diesel PM and criteria pollutants:

Public Transit Bus Fleet Rule and Emission Standards for New Urban Buses	
Stationary Compression Ignition Engines (agricultural and non-agricultural operations)	Mobile Cargo Handling Equipment at Ports and Intermodal Rail Yards
On-Road Heavy-Duty Diesel-Fueled Residential and Commercial Solid Waste Collection Vehicles	Limit School Bus Idling and Idling at Schools
In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets, and Facilities Where TRUs Operate	Limit Diesel-Fueled Commercial Motor Vehicle Idling
Diesel Particulate Matter from Portable Engines Rated at 50 Horsepower and Greater	On-Road Heavy-Duty Diesel -Fueled Public Agency and Utility Fleets
The California Diesel Fuel Regulations	Statewide Portable Equipment Registration Program
In-Use Off-Road Diesel Vehicles	Auxiliary Diesel Engines Operated on Ocean-Going Vessels At-Berth In a California Port
Limiting Onboard Incineration on Cruise Ships and Oceangoing Ships	In-Use On-Road Diesel-Fueled Heavy-Duty Drayage Trucks
Fuel Sulfur and Other Operational Requirements for Ocean-Going Vessels Within California Waters and 24 Nautical Miles of the California Baseline	Emission Limits and Requirements for Diesel Engines on Commercial Harbor Craft Operated Within California Waters and 24 Nautical Miles of the California Baseline
Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and Other Criteria Pollutants, from In-Use Heavy-Duty Diesel-Fueled Vehicles (on-road)	

For more information on a specific adopted or planned measure, please visit the Diesel Risk Reduction Program webpage at <http://www.arb.ca.gov/diesel/dieselrrp.htm>, the Diesel Fuel Program webpage at <http://www.arb.ca.gov/fuels/diesel/diesel.htm>, the Airborne Toxic Control Measures webpage at <http://www.arb.ca.gov/toxics/atcm/atcm.htm> or the Diesel Activities - Mobile Equipment and Vehicles webpage at <http://www.arb.ca.gov/diesel/mobile.htm>, which contains Marine and Related links.

3. **Q: What is the regulatory history for the Stationary Engine ATCM and what does it regulate?**

A: The ATCM for stationary diesel engines was originally adopted by the Air Resources Board (ARB or Board) at the February 26, 2004, Board Hearing. On November 8, 2004, the Final Regulation Order for the ATCM was approved by the Office of Administrative Law (OAL) and filed with the Secretary of State. The rulemaking became effective December 8, 2004. Among other provisions, the ATCM established emission standards and fuel use requirements for new and in-use stationary engines used in prime and emergency back-up applications (non-agricultural) and for new stationary engines used in agricultural applications.

A modification of the 2004 action was necessary to address the required PM emission standard for new agricultural engines. Therefore, an Emergency Regulatory Amendment was heard at the March 17, 2005 Board Hearing. On April 4, 2005, the Office of Administrative Law approved the amendments to the ATCM which removed the requirement that new stationary agriculture pump engines meet the 0.15g/bhp-hr PM standard. Instead, such engines must meet the appropriate Tier 2 emissions standard. The Board approved a temporary emergency action (Resolution 05-29) to replace the 0.15 g/bhp-hr PM standard for these engines with the appropriate ARB and federal new off-road/nonroad engine certification standards. Following this emergency rulemaking proceeding, ARB conducted another rulemaking in accordance with all procedural requirements of the California Administrative Procedure Act to make a modified version of the emergency amendments permanent at the May 26, 2005 Board Hearing. The final rulemaking package was approved by OAL and filed with the Secretary of the State on September 9, 2005. The regulation became effective that same day.

In November 2006, the Board approved amendments to the ATCM to include requirements for stationary in-use agricultural engines. Additional amendments addressed implementation and compliance issues primarily involving non-agricultural emergency standby and prime engines. These issues included streamlining certain fuel reporting requirements, updating electricity tariff schedules, modifying the definitions of California (CARB) diesel fuel and alternative diesel fuel, an alternative compliance demonstration option to the 0.01 g/bhp-hr diesel PM standard, and a “sell-through” provision to allow stationary diesel-fueled engine wholesalers and retailers to sell (and owners or operators to use) stock engines that do not meet new, more stringent emissions standards when they become effective. The amendments also authorized the Executive Officer or local air district to allow the sale, purchase, or installation of a new stock engine from the previous model year to meet new stationary diesel-fueled engine emission standards, if verifiable information is provided documenting that current model year engines meeting the new emission standards are not available in sufficient numbers or in a sufficient range of makes, models, and horsepower ratings. The OAL approved the amendments on September 18, 2007, which became effective October 18, 2007.

In October 2010, the Board approved amendments to the ATCM to more closely align with the emission standards for new stationary diesel-fueled emergency standby engines, including direct-drive fire pump engines, and new prime engines with the federal Standards of Performance for Stationary Compression-Ignition Internal Combustion Engines (NSPS) promulgated July 11, 2006. Amendments to help clarify provisions in the ATCM and address new information, and to remove provisions no longer needed were also approved.

The OAL approved the amendments on May 19, 2011 and became effective the same day.

4. **Q: What are the health effects of exposure to diesel particulate matter?**

A: Diesel engines emit a complex mixture of air pollutants, composed of gaseous and solid material. The visible emissions in diesel exhaust are known as particulate matter or PM, which includes carbon particles or “soot.” In 1998, following a 10-year scientific assessment process, ARB identified diesel PM as a toxic air contaminant based on its potential to cause cancer and other health problems, including respiratory illnesses, and increased risk of heart disease. Subsequent to this action, research has shown that diesel PM also contributes to premature deaths. Health risks from diesel PM are highest in areas of concentrated emissions, such as near ports, railyards, freeways, or warehouse distribution centers. Exposure to diesel PM is a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems.

5. **Q: Who is affected by the ATCM?**

A: Both private businesses and public agencies operating stationary prime and emergency standby diesel engines in California are subject to the ATCM. Emergency standby engines are those that are used only when normal power or natural gas service fails or when needed for fire suppression or flood control. Prime engines are those that are not used for emergency standby purposes. Examples of businesses that are affected include private schools and universities, private water treatment facilities, hospitals, power generation, communications, broadcasting, building owners, agricultural production, banks, hotels,

refiners, resorts, recycling centers, quarries, wineries, dairies, food processing, and manufacturing entities. A variety of public agencies are also affected including military installations, prisons and jails, public schools and universities, and public water and wastewater treatment facilities.

6. **Q: What are the operating requirements and emission standards of the ATCM?**

**A: New Stationary Emergency Standby Engine Standards:** The ATCM requires a 0.15 g/bhp-hr PM emission limit for all stationary CI engines greater than or equal to 50 hp. Annual maintenance and testing hours are limited to 50 hours per calendar year. New emergency standby engines are required to meet the applicable NMHC+NO<sub>x</sub>, HC, and CO tier 2 or tier 3 nonroad CI engine emission standards, and tier 4 standards that do not require add-on controls.

After December 31, 2008, and beginning in model year 2007, any stationary diesel-fueled CI engine, except for fire pump engines, installed in California must be certified to the new nonroad CI engine certification emission standards for all pollutants. Table 1 of the ATCM specifies the emission limits by model year for ranges in maximum power of the engine. Any pre-2007 model year new CI engine installed after December 31, 2008, must meet at a minimum the 2007 model year emission standards **for all pollutants** based on the maximum horsepower of the engine installed (refer to Table 1 in ATCM for emission limits for PM, NMHC+NO<sub>x</sub>, and CO).

**New Stationary Diesel-Fueled Emergency Standby CI Engines > 50 HP**

<b>New Emergency Standby Engines</b>	
<ul style="list-style-type: none"> <li>• Diesel PM limit of <math>\leq 0.15</math> g/bhp-hr,</li> <li>• Refer to Table 1 in ATCM for NMHC+NO<sub>x</sub> and CO standards</li> <li>• And <math>\leq 50</math> hours per year for maintenance and testing purposes.</li> </ul>	
<b>OR UPON DISTRICT APPROVAL</b>	
<ul style="list-style-type: none"> <li>• Diesel PM limit of <math>\leq 0.01</math> g/bhp-hr,</li> <li>• And 51 to 100 hours per year for maintenance and testing purposes.</li> </ul>	

**New Stationary Direct-Drive Emergency Standby Fire Pump Engines > 50 HP**

The 2010 amendments to the ATCM harmonized the emission standards and certification requirements for this subset of stationary emergency standby engines with the federal New Source Performance Standards for Stationary CI Internal Combustion Engines (40 CFR § 60.4202 (d)). Table 2 of the ATCM provides the emission limits for PM, NMHC+NO<sub>x</sub>, and CO.

40 CFR § 60.4202 (d) requires manufacturers beginning with the model years in the following table to certify their stationary fire pump CI engines to the applicable emission standards (Table 2 of ATCM) for the same model year and NFPA nameplate power.

<b>Certification Requirements For Stationary Fire Pump Engines</b>		
<b>Engine Power</b>		<b>Starting Model Year</b>
kW < 75	(hp < 100)	2011
$75 \leq$ kW < 130	$(100 \leq$ hp < 175)	2010
$130 \leq$ kW $\leq$ 560	$(175 \leq$ hp $\leq$ 750)	2009
kW > 560	(hp > 750)	2008

**New Stationary Prime CI engines > 50 HP**

In addition to meeting the applicable emission standards for all pollutants in Table 4 of the ATCM, there are additional requirements (e.g., deadlines) for installing new prime or non-emergency engines from a

previous model year. The following requirements are considered the “sell-through” provisions for new prime engines, which is aligned with 40 CFR § 60.4208 (c)-(f) of the NSPS.

(c) After December 31, 2014, owners and operators may not install “prime” stationary CI engines with a maximum engine power greater than or equal to 19 kW (25 hp) and less than 56 kW (75 hp) that do not meet the applicable requirements for 2013 model year non-emergency engines. (A two-year sell-through provision)

(d) After December 31, 2013, owners and operators may not install “prime” stationary CI engines with a maximum engine power greater than or equal to 56 kW (75 hp) and less than 130 kW (175 hp) that do not meet the applicable requirements for 2012 model year non-emergency engines. (A two-year sell-through provision)

(e) After December 31, 2012, owners and operators may not install “prime” stationary CI engines with a maximum engine power greater than or equal to 130 KW (175 HP), including those above 560 KW (750 HP), that do not meet the applicable requirements for 2011 model year non-emergency engine. (A two-year sell-through provision)

(f) After December 31, 2016, owners and operators may not install “prime” stationary CI engines with a maximum engine power greater than or equal to 560 KW (750 HP) that do not meet the applicable requirements for 2015 model year non-emergency engines. (A two-year sell-through provision from tier 4 interim to tier 4 final)

The following table provides a summary of the previously mentioned deadlines for the installation of a new stationary prime diesel-fueled CI engine beginning in the year 2012 as specified in 40 CFR § 60.4208 (c)-(f).

Engine Power	Requirements - Model Year	After Deadline-Date
19 ≤ kW < 56 (25 ≤ HP < 75)	2013	December 31, 2014
56 ≤ KW < 130 (75 ≤ HP < 175)	2012	December 31, 2013
KW ≥ 130 (HP ≥ 175) and those > 560 kW (hp > 750)	2011	December 31, 2012
≥ 560 kW (≥ 750 hp)	2015	December 31, 2016

After December 31, 2008, and prior to the deadlines specified in the above table, any pre 2007 model year (**new or in-use**) stationary diesel-fueled CI engine installed to meet the new prime engine standards for CI engines must meet at a minimum the applicable 2007 model year standards specified in Table 4 of ATCM for all pollutants.

#### **In-Use Stationary Diesel Engines > 50 HP (Installed or permitted prior to January 1, 2005)**

Emergency Standby	Prime
<ul style="list-style-type: none"> <li>• Emergency use: not limited by ATCM</li> <li>• Maintenance and Testing:               <ul style="list-style-type: none"> <li>- ≤ 20 hours/year: Not limited by the ATCM;</li> <li>- 21 to 30 hours/year: Diesel PM limit of ≤ 0.40 g/bhp-hr;</li> <li>- 31 to 50 hours/year: District approval and Diesel PM limit of ≤ 0.15 g/bhp-hr;</li> <li>- 51 to 100 hours/year: District approval and Diesel PM limit of ≤ 0.01 g/bhp-hr.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Diesel PM limit of &lt; 0.01 g/bhp-hr; or</li> <li>• Reduce Diesel PM emissions by 85%; or</li> <li>• Reduce Diesel PM emissions by 30% by January 1, 2006, and meet Diesel PM limit of 0.01 g/bhp-hr limit no later than July 1, 2011.</li> </ul>

#### **New Stationary Diesel Engines ≤ 50 HP**

7. Q. What are the emission standards for new stationary diesel-fueled CI engines less than or equal to 50 hp?

A: **New Prime and New Emergency Standby Engines < 25 hp:** The tier 4 final off-road emission standards for CI engines less than 25 hp were effective on January 2008. Engine manufacturers have

indicated that aftertreatment is not necessary to meet these standards. Thus, the ATCM requires new stationary prime and new emergency standby CI engines less than 25 hp to meet these standards for all pollutants.

**New Emergency Standby Engines greater than or equal to 25 hp but less than 50 hp:** These engines are required to meet the tier 4 interim off-road emission standards for all pollutants. Tier 4 final is not required because aftertreatment is necessary to meet the 0.02 g/bhp-hr PM emission standard.

**New Direct-Drive Fire Pump Engines:** The NSPS contains specific emission standards for new stationary fire pump CI engines with a maximum hp less than or equal to 50 hp. The 2010 amendments to the ATCM harmonized the ATCM requirements for direct-drive fire pump CI engines with the NSPS. The standards are summarized in the following table.

Maximum Engine Power	Model Year (s)	PM	NMHC+NO <sub>x</sub>	CO
kW<8 (hp<11)	2010 and earlier	1.0 (0.75)	10.5 (7.8)	8.0 (6.0)
	2011+	0.40 (0.30)	7.5 (5.6)	.....
8≤ kW <19 (11 ≤ hp < 25)	2010 and earlier	0.80 (0.60)	9.5 (7.1)	6.6 (4.9)
	2011+	0.40 (0.30)	7.5 (5.6)	.....
19≤ kW <37 (25 ≤ hp < 50)	2010 and earlier	0.80 (0.60)	9.5 (7.1)	5.5 (4.1)
	2011+	0.30 (0.22)	7.5 (5.6)	.....

8. Q: How does the ATCM address Demand Response Program engines, engines located near schools, and engines located in remote areas?

A: **DRP Programs:** DRPs are programs for reducing electrical demand. Typically there is a contractual agreement between an engine owner/operator and an electric supply company to provide load reduction during periods of peak demand in return for economic compensation or benefit. The ATCM allows emergency standby engines to participate in two specific types of DRPs: interruptible service contracts (ISCs) and the San Diego Gas and Electric Company’s Rolling Reduction Blackout Program (RBRP). Both of the ISC and RBRP engines are only allowed to operate under each program if blackouts are imminent or already triggered. These engines are also subject to more stringent diesel PM emission limits and limits on the total annual hours of DRP operation.

**Engines Located Near Schools:** The ATCM restricts the operation of emergency standby diesel-fueled engines located within 500 feet of a school. These engines are **not** permitted to operate for non-emergency purposes (including operation for DRP purposes) between the hours of 7:30 am and 3:30 pm on days when school is in session, unless the engine can meet a diesel PM emission standard of 0.01 g/bhp-hr.

**Engines Located in Remote Areas:** The ATCM gives each District the authority to delay the implementation of the ATCM’s requirements for remotely located in-use prime engines until the year 2011. A remotely located engine is one that is at least one mile (1.0 miles) from the nearest receptor location. In order to qualify for the delay, the remotely located engine must also meet minimum risk-based limits.

9. Q: What are the requirements for engines enrolled in ISCs or RBRP?

A: The ATCM allows companies enrolled in either an ISC or RBRP to use their diesel-fueled emergency standby engine (s) provided the DRP engine meets a progressively more stringent PM emissions standard when operating under an ISC or a RBRP. Basically any company enrolled in an ISC or RBRP on or after January 1, 2008, that uses its DRP engine (s) to replace electrical service interrupted because of its contractual obligation must demonstrate their DRP engines meet a 0.01 g/bhp-hr diesel PM standard. However, for RBRP companies the more stringent diesel PM emission standard does not apply if their initial enrollment date is prior to January 1, 2008. In contrast, the initial enrollment date is not relevant to companies enrolled in an ISC. Any company enrolled in an ISC on or after January 1, 2008, that uses its DRP engine (s) to replace electrical service interrupted by its contractual obligation must

demonstrate their DRP engine (s) must meet a 0.01 g/bhp-hr PM emission standard. The applicability of the 0.01 g/bhp-hr diesel PM emission standard is determined by the definition of “enrolled” in the ATCM. This definition was designed to have different meanings depending on which DRP a company is enrolled in. An advisory was sent to California Air Pollution Control or Executive Officer’s alerting them of the impending compliance date that explained the requirements as it applies to emergency standby engines used in response to their ISC or RBRP obligation. The following website provides a link to the Advisory sent to California Air Pollution Control or Executive Officer explaining the January 1, 2008, compliance date for stationary diesel engines enrolled in a DRP:

<http://www.arb.ca.gov/diesel/statport.htm>.

## Compliance

10. Q: How are owners and operators of stationary diesel engines used in Demand Response Programs to demonstrate compliance?

A: Owners and operators are to submit emissions data as necessary, to show compliance with emission standards defined in, section 93115.6 (c) *Operating Requirements and Emission Standards for New and In-Use Emergency Standby Diesel-Fueled CI Engines (>50 hp) Used in Demand Response Programs (DRP Engines)*. Emissions data should be provided in accordance with the provisions of section 93115.13 ATCM for Stationary CI Engines – Compliance Demonstration

11. Q: For in-use emergency standby engines that comply with the ATCM by simply reducing their maintenance and testing hours to below 20 hours per year, is January 1, 2006, the first day you must record data?

A. No. The ATCM requires that a monthly log of usage information relating to the use of emergency standby engines be recorded starting on January 1, 2005. (see section 93115.10 (g) Reporting Requirements for Emergency Standby Engines)

12. Q: When will Districts begin enforcing the 20 hour-per-year limit?

A. The ATCM requires that owners be in compliance by January 1, 2006. However, depending on the specifics of their local ATCM-based rules and permitting programs, Districts may elect to enforce the hour limit prior to January 1, 2006. Both ARB staff and the Districts agree that the enforcement of the 20 hour per year limit should begin no later than January 1, 2007. (Note that the term “year” is meant to reflect a twelve-month period as defined by the district for compliance purposes. Depending on the district, it can mean calendar year, fiscal year, or a rolling twelve-month period.)

13. Q: Will “post-control” testing be adequate to demonstrate compliance if a non-certified control device is installed?

A: If an owner or operator installs a control device that has not been evaluated through the ARB’s Verification Procedure (see <http://www.arb.ca.gov/diesel/verdev/home/home.htm>), the owner can show compliance with the ATCM’s emission limits (e.g. 0.15 g/bhp-hr diesel PM limit) by source testing the engine after the control has been installed. Source testing should be conducted in accordance with the applicable requirements of section 93115.14 - *Test Methods*. If compliance is with a percent reduction (e.g., 85% reduction of diesel PM emissions from baseline levels) then baseline, or “pre-control” testing may also be required.

14. Q: If a “certified” device is installed will compliance testing be required or can parameters be monitored to determine compliance?

A: Yes, parameter monitoring is an option a District can pursue to demonstrate ongoing compliance with the requirements of the ATCM. The ATCM only specifies the requirements for initial compliance. It is left to each District to determine the best approach for ensuring on-going compliance. The “certification” the commenter is referring to is actually correctly termed “verification” and is in reference to the verification of emission reduction claims in accordance with the ARB’s Verification Procedure (see <http://www.arb.ca.gov/diesel/verdev/home/home.htm>).

15. Q: Does the ATCM provide alternatives to demonstrate compliance to meet the 0.01 g/bhp-hr diesel PM emission standard besides source testing?

A: Yes, section 93115.13 (f) is included in the ATCM to provide owners or operators with alternative compliance options to demonstrate compliance to the 0.01 g/bhp-hr diesel PM emission standard of sections 93115.6 through 93115.9. The alternative compliance strategies are intended to recognize that a certified engine that emits no more than 0.15 g/bhp-hr of diesel PM in combination with an emission control strategy that achieves at least 85 % reduction in PM essentially meets the 0.01 g/bhp-hr diesel-PM without the need to confirm exact compliance through additional source testing. Never the less, the air district that issues the permit to operate has the final authority in determining compliance to any emission standard or operating requirement of the ATCM, which may include source tests to demonstrate compliance.

16. Q: How often will an owner be required to source test a diesel engine to show ongoing compliance with the requirements of the ATCM?

A: The ATCM does not establish ongoing compliance testing requirements. It is left to each District's discretion to determine the appropriate approach for ensuring on-going compliance with the ATCM emission standards. ARB staff anticipates that most emergency standby engines will comply with the ATCM by limiting their maintenance and testing annual hours of operation to less than 20. For these owners, no emission testing is required. For those owners that must show on-going compliance with an emission standard, ARB recommends that District's use parameter monitoring (e.g. exhaust temperature, backpressure, exhaust opacity) as a screen in determining which owners would be required to source test to show compliance. The operating ranges of the parameters would be engine and control equipment specific. For example, to ensure the proper operation of the CleanAir Systems PERMIT™ diesel particulate filter, the engine's exhaust temperature must be at or above 300° Celsius for 30 percent of operating time or two hours, whichever is longer. (For a complete list of operating criteria for the PERMIT DPF go to <http://www.arb.ca.gov/diesel/verdev/verifiedtechnologies/stationary.htm>).

## **Emission Standards**

17. Q: Is it an oversimplification to state that either an emergency standby diesel engine meets the diesel PM standards in subsection 93115.6 (b)(3)(A) the diesel PM standards and operating requirements for in-use emergency standby engines, with Verified Emission Controls or the engine is subject to the additional standards in subsection 93115.6 (b)(3)(B) the HC, NOx, NMHC+NOx, and CO standards? In other words, can an engine meet one of subsection 93115.6 (b)(3)(A) standards inherently as manufactured without an "emission control strategy" and thereby not trigger the "additional standards"?

A: Yes, an engine that is subject to the diesel PM standard in subsection 93115.6 (b)(3)(A), that can meet the diesel PM standard without the addition of emission control equipment, or meets it through the installation of Verified control equipment (see <http://www.arb.ca.gov/diesel/verdev/home/home.htm>) for information on the Verification Procedure) is not subject to the additional standards defined in subsection 93115.6 (b)(3)(B). The primary purpose of the additional standards is to prevent the increase of non-diesel PM emissions resulting from the installation of diesel PM control equipment not verified through the Verification Procedure.

18. Q: If I wanted to take an existing stationary in-use engine and test it to show compliance with the appropriate Off-Road Standards what would that entail?

A: You would test the engine in accordance with the appropriate ISO 8178-4 test cycle, using one of the methods identified in section 93115.14 - Test Methods, or an alternative method approved by the District. The identified test methods require the weighted test results for each pollutant (NOx, HC, NMHC+NOx, and CO) to be compared to the appropriate exhaust certification standard. The exhaust certification standards can be found in Title 13, California Code of Regulations Section (13 CCR) Section 2423, Table 1 (see <http://ccr.oal.ca.gov>).

## Exemptions

19. Q: Exemption section 93115.3 (n) applies to in-use direct-drive fire pump engines. Does it only apply to fire pumps that provide water to sprinkler systems in buildings?

A: No. Exemption section 93115.3 (n) applies to any direct drive fire pump that is used *solely* to pressurize a fire suppression system and operated the number of hours necessary to comply with the inspection, maintenance, and testing requirements of NFPA 25. ARB's intention in establishing the exemption in section 93115.3 (n) was to exempt in-use direct-drive fire pump assemblies that are operated only the number of hours necessary to comply with NFPA 25. Initially, we thought the only in-use fire-pump assemblies complying with NFPA 25 were located in buildings to pressurize sprinkler systems. WSPA and POTW's have come to us stating that they have in-use direct-drive pumps that are used solely for fire-suppression and are operated in accordance with NFPA 25. Our direction to them was that if they are used solely for fire suppression and are operated in accordance with NFPA 25, then they too would qualify for the exemption. However, if they are called into service for reasons other than fire suppression, i.e., POTW pumps that pressurize water lines due to a pipe break, they would not qualify for this exemption.

20. Q: Where can copies of the National Fire Protection Association (NFPA) Standards be found?

A: NFPA Standards can be purchased through the following website: <http://www.nfpa.org/index.asp>.

21. Q: Can ARB provide assistance in identifying specific engines that may have been exempt by District Rules?

A: Unfortunately, no. Our current workload and limited resources does not allow us to take on such a task.

22. Q: When new, more stringent emission standards become effective, engine wholesalers and dealers within California can be left with an inventory of potentially non-compliant stock engines. Currently, wholesalers cannot return these engines to the manufacturer or sell them outside their sales territory. These engines represent a potentially significant financial loss to California wholesalers and dealers. Does the ATCM provide a limited time period that these prior-year engines may be sold, i.e., a "sell-through" provision?

A: The ATCM provides a limited exemption to ensure a smooth transition to new, more stringent emission standards for new prime engines only. The answer in question #6 for new prime engines greater than 50 hp contains the deadlines for installing an engine from a previous model year, and the model year requirements that must be met by an engine installed after the deadline date. The time periods begin when the new tiered standards (based on hp and model year) are in effect and end (deadline) on the date specified in the applicable subparts.

## Fuel

23. Q: Can ARB confirm that whatever "CARB Diesel" is available in the marketplace is the diesel fuel (not including alternative fuels) allowed for use by new and in-use engines after January 1, 2006?

A: The commenter is correct in assuming that ATCM-compliant CARB diesel is the formulation of CARB diesel available in the marketplace at the time of purchase. New engines and in-use prime engines are allowed to use diesel fuels that meet the definition of CARB Diesel at the time of purchase. In-use emergency standby engines are required to add only diesel fuels that meet the definition of CARB diesel at the time of purchase.

24. Q: What can be done in the field to determine if the diesel fuel qualifies as CARB diesel?

A: Two approaches can be used to enforce the fuel requirement. One is to review fuel purchase records that account for all fuel used in the engine and all fuel purchased for use in the engine. These records

must identify the fuel as CARB diesel. The other is to pull a sample of the fuel from the fuel tank and test it to determine if it meets the specifications of CARB diesel (see <http://www.arb.ca.gov/testmeth/slb/fuel.htm> for Test Methods for Determining Parameters of Diesel).

25. Q: The ATCM does not recognize that the refueling practices for emergency standby engines, which are based upon need and can vary from engine to engine, are significantly different than those for prime engines, which are typically fueled on regular schedules. Emergency standby CI engines may also be refueled from a centralized location that delivers varying quantities of complying CARB diesel fuel to multiple engines at different locations. An additional concern is the records or logs of fuel deliveries and subsequent disbursement to emergency standby engines may be handled at a central location or an offsite location. How can owners/operators in these situations demonstrate compliance with the ATCM fuel requirements for emergency standby engines?

A: The ARB staff understands these impracticalities, and did not intend to require facilities to keep individual engine fuel purchase records for emergency standby engines. To address these concerns, the ARB approved amendments to the ATCM in November 2006 that modified the fuel reporting requirements in section 9315.10 (g)(G) to clearly state the owner/operator shall document the use of CARB diesel fuel or any fuel other than CARB diesel through the retention of fuel purchase records indicating that the fuel purchased and/or added to an emergency standby engine or to any fuel tank directly attached to an emergency standby engine meets the fuel requirements of the ATCM. In addition, the requirement to retain fuel purchase records only on-site was amended to allow retention of these records at an offsite central location within California.

26. Q: Can B-20 (a 20% biodiesel and 80% CARB diesel blend) be marketed and sold in California as CARB Diesel?

A: Yes, it can be sold or marketed as CARB diesel fuel provided the biodiesel blend meets CARB specifications for aromatic and sulfur content (13 CCR, sections 2281, 2282. CCR sections are found at <http://www.oal.ca.gov/>) and meet ASTM D975 for diesel fuel as required by the Division of Measurement Standards (DMS website: <http://www.cdffa.ca.gov/dms/>).

27. Q: I currently operate a stationary diesel-fueled engine on a 100% non-diesel fuel (e.g. B-100). How does the stationary ATCM impact me?

A: The ATCM allows the use of 100 % biodiesel and biodiesel blends. However, the engine is subject to all requirements of the ATCM.

### **Engine Sales**

28. Q: If an owner sells an engine for salvage is the owner responsible for the engine complying with new engine standards?

A: No. The new engine standards apply only engines sold *for use* in California.

29. Q: Would an engine that is sold to a rental operation be considered a portable engine?

A: It depends on how it is ultimately used. For example, if a gen-set is rented by a facility and is operated as a stationary engine, i.e., operated for over 12 consecutive months and remains at one location at the facility for the 12 month period, then that engine would be subject to the requirements of the ATCM. If it is rented as a portable engine, i.e., rented to more than one facility during a 12 month period, it would not meet the definition of a stationary engine and would be considered portable.

30. Q: If an ATCM-compliant engine that is greater than 50 hp and currently meets the in-use engine requirements is moved from California to another state and operated in that state, and then moved back to California to operate again as a stationary engine, is the owner now required to meet the new engine standards upon re-installation at a California facility?

A: Yes. A new engine is one that is installed at a facility after January 1, 2005. The engine in the above scenario is required to meet the new engine standards upon re-installation at the old California facility or installation at a new California facility.

### **Portable versus Stationary**

31. Q: Is a portable engine that remains at one facility for more than 12 months subject to the requirements of the stationary engine ATCM?

A: It is only considered stationary if it remains in one location (or footprint) at the facility for more than 12 months. However, deliberate circumvention of the stationary ATCM requirements by moving an engine is not allowed. As such, a portable engine that is moved within a facility for the sole purpose of avoiding the stationary engine requirements is subject to district enforcement action. Defining when movement of an engine is considered by the District as circumvention, and when it is not, can be less than obvious. Some districts have addressed this issue by requiring owners to define the “legitimate business purpose” for moving a stationary engine.

### **Reporting Requirements**

32. Q: Are there any reporting requirements for prime engines?

A: Yes. Owners and operators of prime engines are required to submit to their District information on the engine and how it is used in accordance with the requirements of section 93115.10 (a)(3), and information on the control strategy that they choose to comply with in accordance with 93115.10 (a)(4).

33. Q: What forms or format would ARB expect the reports on data be submitted from the Districts? When will ARB ask for these reports?

A: The ATCM requires facilities to submit diesel engine information to the district by July 1, 2005, and this information is passed on to ARB shortly thereafter. A spreadsheet with all of the data fields required to be reported has been created so that facilities may submit data to districts in a standard electronic format. The current draft of this spreadsheet can be found at <http://www.arb.ca.gov/ab2588/diesel/spreadsheet.xls>. Any format that provides the required data fields may be used at the discretion of the district.

34. Q: Are there any reporting requirements for companies enrolled in an RBRP or ISC?

A: Yes. The 2010 amendments to the ATCM require the San Diego Gas and Electric Company and any owner or operator of an ISC engine to provide a complete and updated inventory for each diesel-fueled engine enrolled in their respective DRP annually to their local air district and the Executive Officer (EO) of ARB. The updated inventory must contain all the information specified in the applicable sections of the ATCM, i.e., section 93115.10.(g) or (h). This report must be submitted no later than 90 days after December 31<sup>st</sup> of any given year. If the EO determines at any future date that the report is not necessary, the EO will notify the effected parties by December 31<sup>st</sup> of any given year.

### **Test Method**

35. Q: When will a practical field test method for diesel particulate be available?

A: ARB staff developed a research project with the objective of developing a short, relatively inexpensive test method for measuring in-use PM emissions from stationary engines in the field. This short test is based on the current Front Half CARB Method 5 sampling procedures. This method includes a modification of existing filter-based PM measurement methods. And the short test correlates with the current off-road diesel engine certification test as specified in CFR/ISO, and also correlate with

variants of the Full CARB Method 5 test procedure (the Front Half Method 5 and the filter-only portion of the Front Half Method 5).

The Final Research Report can be found at the following website location:

[http://www.arb.ca.gov/diesel/documents/Method\\_5\\_Project\\_Final\\_Report\\_04\\_10\\_09.pdf](http://www.arb.ca.gov/diesel/documents/Method_5_Project_Final_Report_04_10_09.pdf).

### **Verified Emission Control Systems**

36. Q: Where can we find a current listing of ARB's verified diesel emission control technologies for stationary engines?

A: The detailed information such as the Executive Orders, compatible engines, and operating criteria for these technologies may be found at the following website:

<http://www.arb.ca.gov/diesel/verdev/vt/stationary.htm>

37. Q: Can ARB provide a list of control strategies currently in the verification procedure?

A: ARB cannot provide a list of control strategies currently in the verification process due to confidentiality issues.

38. Q: Can ARB provide a list of equipment approved for both 30% diesel PM emission control and 85% diesel PM emission control?

A: ARB currently provides information on all verified control technologies at the following website:

<http://www.arb.ca.gov/diesel/verdev/home/home.htm>.

39. Q: The term "emission control strategy" is defined in a very broad sense to include virtually any design feature of an engine that reduces emissions. Can a technology that arguably targets non-PM emissions also be an unverified strategy that triggers the additional standards?

A: The purpose of the "Additional Standards" requirements as defined in section 93115.6 (b)(3)(B) is to guard against increases of NO<sub>x</sub>, HC, CO emissions when non-Verified diesel PM emission control strategies are employed to reduce diesel PM emissions from in-use emergency standby engines. In the example given, the in-use turbocharged engine in its current OEM configuration meets the diesel PM standard. The "Additional Standards" requirements would not be triggered since the engine was not modified.

If the in-use engine was modified to meet a diesel PM emission standard, the "Additional Standard" requirements would only be triggered if the emission control strategy was not Verified (for more on the Verification Procedure, go to <http://www.arb.ca.gov/diesel/verdev/home/home.htm>). The reason for this is because Verified Devices must conform to the NO<sub>x</sub>, HC, and CO requirements identified in the Verification Procedure. Non-Verified diesel PM control strategies must meet the appropriate off-road certification standard (with Tier 1 standards as a backstop), or must not increase emissions of CO, HC, or NO<sub>x</sub> by more than 10% (see section 93115.3 6 (b)(3)(B)).

### **Certification Data for Stationary CI Engines**

40. Q: Where do I find engine certification data if it is not provided by ARB through its Off-Road Certification Database?

A: Engine certification data is provided by the U.S. EPA at the following link

<http://www.epa.gov/otaq/certdata.htm#largeng>

For stationary CI engines subject to the ATCM, please click on the engine category "Non-road Large Compression Ignition (CI). This will take you to on-highway and non-road engine data by model year. Scroll to the applicable model year of your engine and open/download the applicable ZIP file, which contains data for on-highway, non-road, and stationary non-road engines.

**AB 2588**

41. Q: When is the planned adoption date for changes to AB 2588 that will expand the program applicability to include most diesel engines?

A: The ARB adopted amendments to the AB 2588 Air Toxics “Hot Spots” Emission Inventory Criteria and Guidelines Regulation (Title 17, California Code of Regulations, Section 93300.5) on November 16, 2006. On August 27, 2007, the OAL approved the amendments. The amendments became effective on September 26, 2007.

Among other amendments, the “Hot Spots” requirements now harmonize with the ATCM for stationary diesel-fueled engines currently in effect. This is being done to minimize duplicative requirements, and to ensure that potential risks from all engines are evaluated and mitigated where necessary. To illustrate, a new chapter was added on diesel engine reporting requirements and other minor revisions to bring the Guidelines Regulation up to date. In essence, the amendments to the Guidelines Regulation are written to have the “Hot Spots” Program catch up with existing actions already being taken to address diesel engines and other activities already being implemented in California.

Overall, the amendments were designed to leverage the inventory reporting and risk reductions that are required under the stationary diesel engine ATCM, including in-use agricultural diesel-fueled engines. The net result is the amendments were written to minimize duplicative efforts, and to focus requirements on those facilities that may have significant residual risk after the ATCM is fully implemented.

Further questions regarding this subject should be directed to Chris Halm, Staff Air Pollution Specialist, Community Health Section, at (916) 323-4865 or [chalm@arb.ca.gov](mailto:chalm@arb.ca.gov).