

**AIR POLLUTION CONTROL DISTRICT
COUNTY OF SAN DIEGO**

**AIRBORNE TOXIC CONTROL MEASURE (ATCM) FOR
STATIONARY COMPRESSION IGNITION (CI) ENGINES**

WORKSHOP REPORT

A workshop notice for the implementation of the Airborne Toxic Control Measure (ATCM) for Stationary Compression Ignition (CI) Engines (Title 17 of the California Code of Regulations (CCR), Section 93115) was mailed to all individuals who have stationary engine permits or an application for a stationary CI engine in San Diego County, engine sellers in San Diego, and the San Diego Farm Bureau. Notices were also mailed to all Economic Development Corporations and Chambers of Commerce in San Diego County, the U.S. Environmental Protection Agency (EPA), the California Air Resources Board (CARB), and other interested parties.

A workshop was held on November 30, 2004. One hundred thirty-two people attended the workshop. Comments were received during the workshop. The comments and Air Pollution Control District (District) responses are as follows:

1. WORKSHOP COMMENT

This regulation contains separate emission standards and requirements for in-use and new engines. When is an engine considered in-use according to this regulation and, therefore, may comply with the more flexible in-use engine standards?

DISTRICT RESPONSE

In order for an engine to be considered “in-use” under this regulation, it must be installed prior to January 1, 2005, or be an engine that is:

- An engine that received an Authority to Construct from the District prior to December 8, 2004.
- A replacement stationary engine that is installed to temporarily replace (for less than 180 days) an in-use engine while the in-use engine is undergoing maintenance and testing.
- An engine that is one of four or more in-use engines owned by the same owner or operator that is relocated prior to January 1, 2008, to an offsite location owned by the same owner or operator.
- An engine installed prior to or on January 1, 2005, in a facility used for agricultural operations and is subsequently relocated to an offsite location that is owned by the same owner or operator.
- An engine installed at a facility prior to January 1, 2005, and relocated within the same facility after January 1, 2005.

Except for the above-mentioned scenarios, all engines installed or relocated from an offsite location after January 1, 2005, are considered a new engine under this regulation.

2. WORKSHOP COMMENT

If an engine application was submitted with the District in October, will the District issue an Authority to Construct prior to December 8, 2004?

DISTRICT RESPONSE

The District attempted to process all applications received for stationary diesel engines prior to December 8, 2004, but could not issue an Authority to Construct before this date for all applications under evaluation. However, the District focused on evaluating applications for engines where the application submittal indicated the engine could not comply with the ATCM standards for a new stationary diesel engine. For these applications, the District completed evaluation prior to December 8, 2004, and issued an Authority to Construct, if appropriate.

3. WORKSHOP COMMENT

The regulation requires engine owners or operators to submit several reports. What reports does this regulation require the engine owner or operator to submit? When must the reports be submitted? To whom does the engine owner or operator submit these reports?

DISTRICT RESPONSE

For each in-use engine, the ATCM requires that engine owners or operators submit two reports to the District: the *Engine Data Report Form* and the *Compliance Strategy Reporting Form*. The *Engine Data Report Form* must be submitted to the District by July 1, 2005, and the *Compliance Strategy Reporting Form* must be submitted to the District no later than 180 days prior to the engine's applicable compliance date. The compliance date for most engines is January 1, 2006, which means the compliance strategy information must also be submitted by July 1, 2005. The forms are available on the District's website along with instructions on how to complete them. The forms should be sent to Dan Speer, Manager of the Mechanical Engineering Section, at 9150 Chesapeake Drive, San Diego, CA 92123. They may also be faxed to (858) 650-4659, Attn: Dan Speer or e-mailed to Dan Speer at Dan.Speer@sdcounty.ca.gov. A second public workshop was held on May 18, 2005, to further assist with the submittal of this required information. For additional information visit the District website at

<http://www.sdapcd.org/comply/DieselATCM/ATCMrequire.html>.

For new engines, the owner or operator must submit the specified engine data prior to the engine installation. This information would normally be included in the application to the District for an Authority to Construct. The District has revised its supplemental application form to address the ATCM engine data requirements.

The regulation also requires that engine owners or operators, who have an engine exempt from the any part of the regulation, immediately notify the District after they become aware that an exemption no longer applies. These notifications should be sent to Dan Speer of the Mechanical Engineering Division.

Starting in 2005, any person who sells an engine less than 50 brake horsepower (bhp) or sells an engine larger than 50 bhp to agricultural operations must submit an annual report on all engines sold during the year to the Executive Officer of the Air Resources Board by January 31 of the following calendar year. The report must provide specified engine data for each engine sold. Send the report to Peggy Taricco, Manager of CARB's Technical Services Division by e-mail at ptaricco@arb.ca.gov or mail to Air Resources Board, P.O. Box 2815, Sacramento, CA 95812, Attn: Peggy Taricco.

4. WORKSHOP COMMENT

The ATCM has requirements for engines "near" a school. Please define "near."

DISTRICT RESPONSE

The regulation limits the operation of emergency engines for maintenance and testing purposes that are located within 500 feet of school grounds. The 500 feet is measured from the stack of the engine to the property boundary of the school grounds. School grounds do not include unimproved school property. Engines located within 500 feet of school grounds are not allowed to operate for testing and maintenance purposes between the hours of 7:30 a.m. and 3:30 p.m. on days when school is in session. The regulation also prohibits operating emergency engines located on school grounds for maintenance and testing whenever there is a school-sponsored activity. Neither of these limitations applies if an engine emits no more than 0.01 grams per brake horsepower hour (g/bhp-hr) of diesel particulate matter.

Emergency operation near schools or on school grounds is not restricted by this regulation.

5. WORKSHOP COMMENT

What constitutes a school or school grounds? Do college campuses count as schools under this regulation?

DISTRICT RESPONSE

The regulation defines "school" as any public or private school used for the purposes of education of more than twelve children in kindergarten or any of the grades 1 to 12. Therefore, college campuses are not considered schools under this regulation. "School grounds" is defined as any building or structure, playground, athletic field, or other areas of school property, but does not include unimproved school property.

6. WORKSHOP COMMENT

Is this regulation going to require source testing of new engines?

DISTRICT RESPONSE

This regulation does not specifically require source testing, but allows the District to decide if source testing is necessary. In many situations, the District will not require source testing of new engines, for example, an engine certified by EPA or CARB to comply with emission standards. In other situations, a determination for source test requirements will be made on an engine-specific basis. The District may require source testing in some situations if it is necessary to determine compliance with emission standards in the regulation.

7. WORKSHOP COMMENT

How is the District going to determine the allowed hours per year of operation for maintenance and testing for each in-use emergency standby engine?

DISTRICT RESPONSE

In the regulation, the allowable maintenance and testing hours per year for in-use emergency standby engines is based on an engine's diesel particulate matter emission rate. The District will accept a variety of sources for determining an engine's diesel particulate matter emissions including manufacturer's specifications, EPA certification data, CARB verification tests, and source test data. To determine how many hours per year for maintenance and testing each emergency standby engine is allowed, the District will compare an engine's diesel particulate matter emission rate to what is allowed in the regulation and assign maintenance and testing hours accordingly. The comparison will include the effects of any add-on pollution control systems or alternative diesel fuel. In addition, if an in-use engine's diesel particulate matter emission rate is such that the regulation may allow the engine to operate for up to 50 or 100 hours per year, but only with District approval, the District may require a health risk assessment in addition to the diesel particulate emission rate to determine the allowed hours of operation.

8. WORKSHOP COMMENT

The regulation lists three test methods for diesel particulate matter emission testing in the ATCM: CARB Method 5, International Standard Organization (ISO) 8178, and Title 13, CCR, Section 2423. Does the site get to choose what source test may be used for determining diesel particulate matter emissions? Does the air agency provide services to conduct these test methods?

DISTRICT RESPONSE

The ATCM does not require a source test be conducted, but if the District determines a source test is necessary to determine compliance then a test in accordance with any one of the three listed test methods could be utilized. The District would select the test method in consultation with the engine owner or operator. The ATCM also gives the District authority to approve alternative test methods. For any test not performed by the District, the engine owner or operator will have to submit a test protocol, which would include the test method, to the District for

approval. The District does provide services to conduct tests, but it is currently only equipped to perform CARB Method 5.

9. WORKSHOP COMMENT

When must an engine owner or operator of an in-use emergency engine comply with the limited hours of maintenance and testing required by the regulation?

DISTRICT RESPONSE

All owners or operators of in-use emergency engines that are complying with the ATCM by limiting their hours of operation for maintenance and testing without the use of an emission control strategy (for example add-on controls or alternative diesel fuel), must begin limiting their annual hours of maintenance and testing by January 1, 2006. For engines that will comply by utilizing an emission control strategy, the compliance date is phased in between January 1, 2006, and January 1, 2009, depending on the model year of the engine and the number of engines owned in San Diego County by the engine owner.

10. WORKSHOP COMMENT

Will the District automatically send a new permit with the operating limitations for emergency engines required by the ATCM to engine owners and operators? Do we have to submit an application to comply with the ATCM or reapply for a new permit to comply with the ATCM?

DISTRICT RESPONSE

The District will not automatically change permit conditions. The procedure for changing permit conditions will depend on the type of engine and how the owner or operator chooses to comply with the requirements of the ATCM.

Owners or operators of emergency engines that elect to limit their maintenance and testing hours to 20 or 30 hours per year without the use of an emission control strategy will have their permit conditions changed without needing to submit an application. For these engines, the District will use the *Compliance Strategy Reporting Form*, which is required to be submitted by July 1, 2005, as a basis to determine what engines fall into this category. The engine permit holder will have the right to appeal changed conditions on the revised permit for 30 days after issuance of the revised permit. In this case, the engine owner or operator must comply with the ATCM annual maintenance and testing limitation during calendar year 2006 and each year thereafter, even if the District permit has not yet been modified.

Owners or operators of in-use emergency engines that elect to be allowed up to 50 hours per year for maintenance and testing without the use of an emission control strategy must submit an application for evaluation with the ATCM requirements and to modify permit conditions. The District must receive these applications by July 1, 2005.

Owners or operators of engines that elect to use an emission control strategy to comply with the ATCM, must submit an application for evaluation with the ATCM requirements to modify permit conditions and receive an Authority to Construct for the emission control strategy. The District must receive this application no later than 180 days prior to the engine's first compliance date in the ATCM. The compliance date may be as soon as January 1, 2006, for some engines, which means the application is due July 1, 2005.

11. WORKSHOP COMMENT

Regarding emergency standby engines, can we assume diesel particulate matter emissions are greater than 0.4 g/bhp-hr and limit hours of maintenance and testing to 20 hours per year without having to do any additional testing of the engine?

DISTRICT RESPONSE

Yes, if an engine owner or operator does not know the diesel particulate matter emission rate of their engine they may assume it is greater than 0.4 g/bhp-hr and comply by limiting their hours of maintenance and testing to 20 hours per year. This compliance option will not require testing to comply with the regulation.

12. WORKSHOP COMMENT

Our permits are up for renewal in the spring. Will the renewed permit contain the new ATCM conditions automatically put onto my permit?

DISTRICT RESPONSE

No. See response to Comment No.10.

13. WORKSHOP COMMENT

Will new measures apply to federal government owned sites, for example military locations?

DISTRICT RESPONSE

Yes, with the exception of an exemption for engines used exclusively for the training and testing of Department of Defense personnel in the rebuilding of engines, this regulation applies to stationary CI engines owned by the federal government and operated in California.

14. WORKSHOP COMMENT

Do I assume that any fire pump engine is covered by this ATCM? What about the exemption [Subsection (c)(16)] in the ATCM regarding fire pump testing to comply with National Fire Protection Association 25 standards? Does this regulation apply to portable fire pump engines?

DISTRICT RESPONSE

All stationary diesel engines powering fire pumps are covered by this regulation. The regulation contains a partial exemption that only applies to in-use direct-drive fire pumps that are required to meet the testing requirements in National Fire Protection Association 25. This exemption only excludes direct-drive fire pumps from the emission standards and limitations in hours for maintenance and testing, but does not exempt these fire pumps from the recordkeeping and reporting requirements. The exemption does not apply to back-up engines that operate generators, which in turn operate the fire pumps.

Portable fire pumps are excluded from this regulation because this regulation only applies to stationary engines. An ATCM for portable diesel-fueled engines, which does apply to portable diesel-fueled fire pump engines, was recently promulgated by the state and was effective on March 11, 2005. The District plans to hold a public workshop on the ATCM for Portable Diesel-Fueled Engines on June 28, 2005.

15. WORKSHOP COMMENT

This question is in regards to the exemption for engines permitted under the interim Risk Management Guidance developed by CARB (Subsection (c)(6)). Can we assume that any engine that received a permit in the last four years is exempt under this exemption because it followed the Risk Management Guidance during permitting?

DISTRICT RESPONSE

The District has not, in writing, required permitted engines to comply with the minimum technology requirements or performance standards from the *Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines*, October 2000. Therefore, this exemption does not apply to most engines in San Diego County.

16. WORKSHOP COMMENT

Where can I find a list of verified emission control devices for diesel particulate matter?

DISTRICT RESPONSE

A list of CARB verified control technologies for reducing diesel particulate matter emissions is maintained by CARB and located on their website at

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

17. WORKSHOP COMMENT

The title and applicability do not say diesel-fueled engines only, but the applicability does say diesel particulate matter. Is your engine exempt if it is not diesel-fueled? Are liquefied natural gas and liquefied petroleum gas engines subject to this regulation?

DISTRICT RESPONSE

This regulation applies to all stationary CI engines. This primarily means diesel-fueled engines, but could also apply to CI engines using fuel other than diesel. The regulation defines a CI engine as an engine with operating characteristics significantly similar to the theoretical diesel combustion cycle or an engine where power is regulated by controlling fuel supply in lieu of a throttle. A CI engine can also be described as not spark ignited. If an owner or operator has an engine running on liquefied petroleum gas or liquefied natural gas that is CI, it will be subject to this regulation. However, diesel particulate emission would be zero if no diesel fuel is burned (i.e., the engine is not dual fueled). Contact the District if you have questions about the applicability of the ATCM to your engine.

18. WORKSHOP COMMENT

What alternative diesel fuels have been verified by CARB? How can we get an alternative diesel fuel verified?

DISTRICT RESPONSE

No alternative diesel fuels have been verified by CARB for use in stationary engines to date. Alternative diesel fuels must go through the same verification procedure as other diesel particulate matter control strategies. The CARB verification website contains all the information regarding the verification process. The website address is <http://www.arb.ca.gov/diesel/verdev/verdev.htm>. However, see response to Comment No. 19.

19. WORKSHOP COMMENT

If an engine owner or operator chooses to comply with the ATCM fuel requirement by using an alternative diesel fuel, does the fuel need to be verified by CARB?

DISTRICT RESPONSE

In general, the alternative diesel fuel must be verified by CARB if an engine owner or operator chooses to comply with the ATCM fuel requirement by using an alternative diesel fuel. However, CARB may consider that some biodiesel blends such as B20, which is 20 percent biodiesel and 80 percent CARB diesel, meet the definition of CARB diesel and are CARB diesel for purpose of the ATCM. Therefore, such fuels do not need to be verified.

20. WORKSHOP COMMENT

This question relates to Title V sources that may have emergency engines and fire pumps included in their Title V permit. How are these facilities' permits going to be processed? Because of how the District's permit process works, will it make the required Title V permit changes a significant modification?

DISTRICT RESPONSE

Title V facilities have several options for modifying their Title V permit to incorporate the ATCM requirements. Since the ATCM is a state regulation and not a federally applicable requirement, the permit conditions to comply with the ATCM need not be federally enforceable. However, because of the way EPA interprets the Title V regulations, the permit conditions addressing the ATCM requirements may become federally enforceable depending on how the conditions are incorporated into the Title V permit.

If a facility elects to comply with the ATCM solely by limiting their maintenance and testing hours without the use of an emission control strategy, the facility may incorporate the new permit conditions reflecting the ATCM requirements in the Title V permit through an administrative permit amendment to the Title V permit. In this case, the conditions added to the Title V permit would only be locally enforceable and not federally enforceable. Facilities that elect to follow this course should submit an application for the Title V administrative permit amendment along with their *Compliance Strategy Reporting Form* (see the response to Comment No. 10). This process is applicable to both permitted and registered engines, which do not explicitly appear in the Title V permit.

Alternatively, a facility complying with the ATCM solely by limiting an engine's testing and maintenance hours could follow the process outlined in the response to Comment No. 10 without applying for an administrative permit amendment to the Title V permit. In this case, the new conditions addressing the ATCM requirements would be considered federally enforceable by EPA because they were initially issued through the District's regular permitting system and not through the Title V permit process. The District permit modification would be considered a Section 502(b)(10) change under Title V and would not be immediately incorporated in the Title V permit. However, pursuant to Rule 1410, the revised District permit would be incorporated in the Title V permit whenever the Title V permit was subsequently modified or renewed.

If a facility elects to modify an engine to comply with the ATCM, such as by installing new add-on air pollution control equipment, and a District Authority to Construct is required, then the conditions addressing the ATCM requirements would, of necessity, be federally enforceable. EPA views all District Authority to Construct conditions as federally applicable requirements. In this case, the modification could be considered a minor permit modification, a significant permit modification, or a Section 502(b)(10) change under Title V, depending on the nature and extent of the modification, and would be incorporated in the Title V permit in the manner prescribed in Regulation XIV. (See also the response to Comment No. 10.)

21. WORKSHOP COMMENT

Does the ATCM fuel requirement to use CARB diesel fuel apply to engines less than 50 bhp?

DISTRICT RESPONSE

No, the use of CARB diesel fuel as required in the ATCM does not apply to engines less than 50 bhp.

22. WORKSHOP COMMENT

Is there any indication when CARB will move to the 15 parts per million sulfur content for diesel fuel?

DISTRICT RESPONSE

CARB diesel fuel meeting a 15 parts per million sulfur content is required to be phased into the fuel supply starting in June 2006. All CARB diesel used to fuel motor vehicles at the retail level must comply with the standard by September 1, 2006, except for fuel at low-use threshold facilities.

23. WORKSHOP COMMENT

If a facility has large amounts of diesel fuel in onsite storage tanks, will they be required to empty their tanks and replace the fuel with CARB diesel fuel?

DISTRICT RESPONSE

The regulation requires that all new and in-use prime engines and new emergency standby engines begin using CARB diesel fuel as of January 1, 2006. For in-use emergency standby engines, the regulation requires that after January 1, 2006, only CARB diesel fuel be added to fuel tanks directly attached to the engine. A tank directly attached to an in-use emergency engine does not have to be emptied, but that tank may only be refueled with CARB diesel fuel after January 1, 2006. Onsite diesel fuel storage tanks that are not directly attached to an in-use emergency engine may not be used to fuel stationary diesel engines unless the fuel is CARB diesel fuel after January 1, 2006. It should be noted that District Rule 69.4.1 and Rule 12 already require that diesel engines use CARB diesel. With rare exceptions, any engine subject to the ATCM is also subject to Rule 69.4.1 or Rule 12.

24. WORKSHOP COMMENT

What will you accept as proof for type of fuel purchased?

DISTRICT RESPONSE

The District will accept any documentation demonstrating that the engine owner or operator purchased CARB diesel fuel. The documentation may include, but is not limited to, a bill of lading, sales invoice, or receipt.

25. WORKSHOP COMMENT

How can a facility keep fuel records if individual operators do not have control over the fueling of engine tanks? If a facility purchases diesel fuel in bulk and then the fuel is distributed to

individual remotely located emergency engines, how are engine operators going to keep fuel records for each individual emergency engine?

DISTRICT RESPONSE

The regulation requires owners or operators of in-use emergency standby engines to document fuel use through the retention of fuel purchase records that account for all fuel used in the engine and also a log of the amount of fuel used by each engine. If a facility purchases diesel fuel in bulk, which is then distributed to individual engines, the device distributing fuel to the isolated engines should be able to measure the amount of fuel distributed to each engine. This amount can be recorded upon distribution. The records for each engine should contain entries for the amount of fuel added on a monthly basis. Information pertaining to the purchase records of the fuel need not address each engine individually.

26. WORKSHOP COMMENT

For in-use emergency standby generators, will you be able to rely on manufacturer information to determine diesel particulate matter emission rate?

DISTRICT RESPONSE

In general, yes. If the District determined that a given manufacturer's data was unreliable, additional data could be requested. However, the District anticipates that this situation would occur rarely, or not at all.

27. WORKSHOP COMMENT

What requirements in this regulation apply to engines less than 50 bhp?

DISTRICT RESPONSE

This regulation contains emission standards for new engines less than 50 bhp sold, leased, or purchased for use in California. New engines sold in California smaller than 50 bhp must meet the current CARB Off-Road Compression-Ignition Engine Standards (title 13, CCR, section 2423) for particulate matter, non-methane hydrocarbons, oxides of nitrogen, and carbon monoxide. These standards are based on the maximum rated power of the engine. These standards apply to anyone who sells engines to end users for operation in California. See Comment No. 3.

28. WORKSHOP COMMENT

Will there be additional monitoring and recordkeeping required by this new ATCM, and if so, is there a guidance document anywhere for the new requirements?

DISTRICT RESPONSE

The ATCM does require additional monitoring and recordkeeping, but no guidance documents are currently available to assist in compliance with these requirements. Subsection (e)(4) of the ATCM contains all the monitoring, reporting, and recordkeeping required by the regulation. Subsection (e)(4)(I) specifically describes the monthly log required for each emergency engine. Also, see response to Comment No. 31.

29. WORKSHOP COMMENT

If I have an emergency engine that needs add-on control technology to comply with this regulation and I do not have to install the control strategy until January 1, 2008, how many hours of maintenance and testing is my engine allowed annually until January 1, 2008?

DISTRICT RESPONSE

The engine will continue to be allowed the number of hours for maintenance and testing currently specified by their District permit. Provided the engine is not modified, the hours allowed per year would not change until the appropriate compliance date associated with each engine. If the engine were modified, the number of hours might change as a result of the District's evaluation of the application to modify the engine, but the ATCM requirements would not have to be addressed until the ATCM compliance date.

30. WORKSHOP COMMENT

Does the requirement to keep monthly records apply only to emergency engines larger than 50 bhp?

DISTRICT RESPONSE

Yes, the monthly recordkeeping requirement only applies to emergency standby engines larger than 50 bhp. However, in addition to ATCM requirements, any engine may have other recordkeeping requirements specified in its permit to ensure compliance with District Rules and Regulations.

31. WORKSHOP COMMENT

Do the monthly records for emergency standby engines have to be kept onsite or reported to the District?

DISTRICT RESPONSE

The monthly records for emergency standby engines must be kept for a minimum of 36 months from the date of entry. Log entries recorded within the last 24 months must be made

immediately available for District staff when requested. Log entries 25 to 36 months old must be made available to District staff within 5 working days of the request.

32. WORKSHOP COMMENT

Do engines located on tribal lands have to comply with this ATCM?

DISTRICT RESPONSE

The ATCM does not automatically apply to engines owned by an Indian tribe on tribal land. Pursuant to the federal Clean Air Act Section 301(d), a tribe itself or EPA is primarily responsible for determining whether it will apply the ATCM to engines owned by the tribe or others on tribal land. The ATCM may be applicable to engines owned or operated by non-Indians or even by members of the tribe, as determined on a case-by-case analysis, weighing especially the tribe's sovereign interest and history of regulating the source and the spillover effects of the emissions on nontribal land. If engines on tribal land are not in compliance with the ATCM, the engine owner should expect ARB or the District to request the tribe or EPA to apply the ATCM to the engine; if the tribe or EPA do not apply the ATCM, after an analysis as described above, ARB or the District may undertake to enforce the ATCM directly.

Even without regard to legal considerations, of course, the District encourages all owners or operators of engines on tribal land to comply with this regulation for the benefit of public health because of the health risk associated with diesel particulate matter emissions.

33. WORKSHOP COMMENT

When will the District implement this ATCM? Is there a specific implementation date?

DISTRICT RESPONSE

The ATCM became effective on December 8, 2004, and local air districts have 120 days to implement and enforce the ATCM requirements. The San Diego County Air Pollution Control District is currently implementing all aspects of the ATCM.

34. WORKSHOP COMMENT

Are dredge engines covered under the stationary engine ATCM?

DISTRICT RESPONSE

Dredge engines are exempt because they are considered auxiliary engines on a marine vessel and these are specifically exempt from the ATCM. However, these engines are covered in the portable diesel-fueled ATCM, which was effective on March 11, 2005. See also the response to Comment No. 14.