

# SCAQMD Compliance Updates for Emergency Generator Operators

## **Latest Information on the SCAQMD Amendment to Diesel Engine Emissions Control Rule After the May 4, 2012 Public Hearing**

### *Executive Summary*

In October 2010, the California Air Resources Board (CARB) amended the new diesel emergency standby engine regulations to eliminate after-treatment based Tier 4 emission standards for NOx and particulate matter (PM) effective January 1, 2011. The SCAQMD apparently followed suit and continued issuing permits for non-Tier 4 engines until May 2011, when the district rule making staff made a surprised announcement of its intentions to retroactively enforce the PM emission standards of Tier 4 for all applications filed after the beginning of the year. The announcement startled and angered the engine user, contractors and suppliers. Since then, the SCAQMD rule making staff was forced to make several concessions, and the Governing Board bared its divisions amongst its members to the general public.

The amendments were controversial because of repeated questions such as reliability of the diesel particulate filter (DPF), cost-effectiveness and the operating hours of these standby engines. To keep the engine operators current on the protracted, stalemate of rule making process, ProActive has released three *Compliance Updates* after the announcement of the proposed rule amendments.

The delayed rule making process—which lasted almost one full year and essentially plunged contractors, engine operators, and developers in a state of confusion — finally came to a conclusion on May 4, 2012. Through behind the scene give-and-take negotiation with stakeholders and rigorous lobbying efforts, the rule making staff was finally able to secure the overwhelming approval from the Governing Board members. Unlike the October 2011 governing board meeting which resulted in an impasse, in this most recent meeting the board almost unanimously approved the rule (9 to 1.)

Amended Rule 1470 has put into effect some of the most stringent limits on engines ever passed and must be looked at carefully.

### **Highlights of the Amended Rule 1470**

While Rule 1470 and the reports prepared by the rule making staff are lengthy and filled with technical jargons, following are the highlights of the more important amendments:

- The bulk of amended Rule 1470 applies to new emergency standby diesel engines with a horsepower rating of 175 or greater and within 50 meters of a sensitive receptor.
- Sensitive receptors include private homes, condominiums, apartments, and living quarters, schools, preschools, daycare centers, health facilities, hospitals, retirement homes, nursing homes, long term care hospitals, hospices, prisons, dormitories, and similar live-in housing.
- An engine that fits these specifications will be required to meet the Tier 4 PM standards unless it is installed or its application is “deemed complete” by December 31, 2012. To meet these stringent limits, the engines will usually need a Diesel Particulate Filter (DPF).
- If the application has all of the necessary technical information and supportive documentations, the “deemed complete” date will be the date of receipt. However, if the SCAQMD engineering staff determines the application is not complete and the applicant fails to provide the information before December 31<sup>st</sup>, the engine will be subject to the new PM requirements.
- The SCAQMD stipulated provisions to prevent facilities from installing multiple small engines to circumvent the PM requirements for larger sized engines. DPF will still be required if: (1) the combined horsepower rating of these smaller engines exceed 175 bhp; (2) the applications are submitted within 18 months of each other; and (3) the engines are located within 50 meters of the same sensitive receptor.
- The amendment will delay implementation of after-treatment based Tier 4 PM emission limits for large engines rated greater than 750 bhp to July 1, 2015, which is six months later than specified in the Off-Road Standards.
- Fire pump engines and flood control pump engines generally would not require add-on emission control due to their unique operating nature.
- Essential public services will need to meet the new requirements but will be allowed to use an engine exhaust back-pressure relief device. This will allow the exhaust to bypass the DPF and flow straight to the air in the event that the DPF becomes clogged (defined as the engine exhaust back-pressure exceeds the engine manufacturer’s recommended limit.) This addresses the topic of essential public services being hindered in an emergency due to failure of an emergency standby engine, which came up many times in the public hearing.
- Essential public services include hospitals, publicly owned or operated sewage treatment facilities, prisons, police stations, fire departments, schools, construction and operation of a landfill gas control or processing facility, water delivery operations, and public transit.
- The rule making staff announced in the public hearing that it has secured a one time 2.5 million dollar grant for essential public services providers. However, considering

the number of new engines operated at these facilities and the cost of the filters on larger engines, it remains to be seen how soon the grant money will be used up.

- It is noteworthy that the SCAQMD also allows existing emergency generators at hospitals and other essential service providers to have the option of installing back-pressure relief valves.
- The SCAQMD amended the emission standards that essentially prohibit operation of any diesel-fueled engines for prime use.
- The amended Rule 1470 imposed more stringent record-keeping requirements. The engine operators are now required to compile a summary of fuel purchases on a monthly basis.
- The SCAQMD made minor concession regarding replacement engines – with caveat - after facility operators repeatedly complained the new requirements would discourage management to replace the dirty engines. DPF requirement would not apply to a new engine if the project meets all of the following conditions: (1) the new engine is used for the same purpose; (2) the unit will be installed at the same physical location; (3) there is insufficient space to accommodate the particulate filter, i.e. it requires the removal of one or more load-bearing wall.

### **Final Thoughts**

The SCAQMD essentially put the engine operator, supplier and contractor in a limbo for the past one year. With the adoption of the proposed amended rule, the stakeholders at last can budget and plan their generator projects. Following are some final thoughts concerning this amended rule:

- For those facilities that already have plans of installing new generator(s) greater than 175 bhp and within 50 meters of the so called “sensitive receptor”, they may want to expedite the projects to be grandfathered to the current standards.
- A particulate filter will still be required if the District engineer does not accept the application as “complete” before January 1, 2013. Therefore, to help avoid costly mistakes, the applicant should make every effort to ensure the initial application submittal package is complete and has all of the supportive technical information.
- For the generators installed after 2013, the SCAQMD estimated the filter and installation costs of the particulate filter will be 20% to 50% of the total cost of the new generator set. The filter costs vary from \$15,000 to almost \$150,000, depending on the engine size, particulate emission rate and installation requirements, etc. The engine operator should anticipate recurring maintenance cost such as external load bank test and filter cleaning.

- Amended Rule 1470 has significantly changed how standby engines are regulated. The amendments are very specific and if not looked at carefully can easily be overlooked. Knowing whether the new engine is within the specified distance of a sensitive receptor will take close examination as previously all that needed to be looked at were schools. Identifying a school is relatively easy because it usually comes with open fields such as playgrounds basket ball courts or running tracks. It is much more difficult to confirm the distance of the engine stack to the outer-boundary of a pre-school, daycare center, nursing home or retirement home. Many engines themselves are located at sensitive receptors and automatically fall into amended Rule 1470's requirements.
- To avoid source testing, the maximum pre-controlled PM emission rate of the new engine should be equal to or less than 0.15 g/bhp-hr. The DPF has to be CARB-Verified Level 3 with a minimum 85% collection efficiency.
- Most of the applications submitted after May 2011 – if not installed with particulate filters - needed to participate in the stipulated Group Order of Abatement process. They were subsequently issued a Permit to Construct, not a Permit to Operate. The District has yet announced how and when it plans to address these pending permits.
- It is worth mentioning that the Certified Equipment Program, which has been in question since the introduction of the rule amendments, has still not been addressed.

Even with the official approval from the Governing Board, there are still issues that need to be resolved. For example, it is still unclear how the SCAQMD intends to implement the Certified Equipment Program in light of these amendments. Therefore, this update only reflects our present understanding of this matter and is current as of May 4, 2012.

Please contact our office at (714) 893-7900 if you have any specific questions or need more information on this rule change.