



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUL 10 2008

OFFICE OF
AIR AND RADIATION

Mr. Michael Readey
General Manager
Caterpillar Emissions Solutions
Caterpillar, Inc.
Bldg AC 6146, PO Box 610
Route 29 & Rensch Road
Mossville, IL 61552-0610

Dear Mr. Readey:

The U.S. Environmental Protection Agency (EPA) has reviewed your request for placement of the 3500 Marine Emissions Upgrade Group (EUG) on the National Clean Diesel Campaign's Emerging Technologies List. Based on our evaluation of the application and the test plan, EPA has determined the 3500 Marine EUG meets the requirements of the Diesel Emission Reduction Program Provisions under the Energy Policy Act of 2005 to qualify as an emerging technology. Effective from the date of this letter, the 3500 Marine EUG will qualify as an emerging technology for one year with a possible extension of an additional year. For more information on the general requirements of an emerging technology, please see Attachment A.

Based on EPA's review of the information and data provided, your technology is approved for use in Emerging Technology applications on the following categories of engines and/or vehicles provided all of the required operating criteria are met as described below:

All Caterpillar 3500 Mechanical Unit Injector (MUI) marine engines that have power greater than 750 horsepower from model years 1984 to 2008.

The projected emission reduction levels for this technology based on the information and data provided by the manufacturer are listed in the table below. The assigned emission levels may be adjusted based on the results of verification testing.

Technology	Particulate Matter (PM) %	Carbon Monoxide (CO) %	Hydrocarbons (HC) %	Oxide of Nitrogen (NOx) %
3500 Marine EUG	25	N/A	N/A	N/A

The following operating criteria must be met in order for appropriately retrofitted engines to achieve the aforementioned emissions reductions:

1. The Caterpillar 3500 Marine EUG includes the components necessary to upgrade Caterpillar 3500 marine MUI diesel engines with model years from 1984 to 2008 to Electronic Unit Injector (EUI) engines. The 3500 Marine EUG consists of Tier 1 configurations of the turbocharger, fuel pump/governor, nozzles, cylinder packs, jacket water aftercooler, and installation parts.
2. The servicing dealer must follow specific installation instructions approved by Caterpillar and validate that the upgraded engine has the necessary EUI components installed and has been tested to ensure the proper fuel delivery, power, torque and speed. The dealer must submit a validation form to Caterpillar in order to receive a label for the upgraded engine.
3. The engine must be operated with fuel that contains no more than 500 ppm sulfur.

The primary goal of the Emerging Technology program is to support early deployment of new technologies that will reduce diesel emissions from the existing fleet. This program provides an opportunity for manufacturers to obtain feedback from fleet partners on their technology while it is in-use. In addition, manufacturers are expected to pursue full EPA verification during the time frame their technology is on the Emerging Technology List.

Thank you for participating in EPA's National Clean Diesel Campaign. If you have any questions or comments, please contact Kuang Wei, of my staff, at (202) 343-9329.

Sincerely,



Jim Blubaugh, Manager
Innovative Strategies Group
Office of Transportation and Air Quality

Attachment A

The following criterion outlines the general requirements for technologies included on EPA's National Clean Diesel Campaign's Emerging Technologies List:

- The amount of time a technology may remain on the Emerging Technology List is 1 year.
- If a technology is fully verified within the first year, the technology will be added to the EPA Verified Technology List.
- A manufacturer may request an extension of up to one year to remain on the Emerging Technology List provided that the manufacturer has demonstrated to EPA it is pursuing full verification.
- If after the first year the technology has not been verified, EPA will review the status of the technology and determine if the technology qualifies for a second year. (Note: If it appears that the manufacturer has not made a significant attempt to complete verification and testing, the technology may NOT qualify for the second year).
- Once a technology is selected for use in an Emerging Technology project, that technology may be used for the entire project period even if the technology has been fully verified by EPA.
- Because an Emerging Technology is in the verification process, EPA may continue to evaluate the product, operation, and its impacts on emissions.
- Should EPA determine an Emerging Technology was misrepresented in the application, performance was not fully described, or because of concerns for safety and/or public health, at EPA's discretion, EPA may remove a technology from the Emerging Technology List, revise operating criteria, or impose other restrictions for use in Emerging Technology grant programs.
- Should a technology be removed from the Emerging Technology List without receiving verification status, that technology is no longer eligible for use on any Clean Diesel grant programs.
- The manufacturer or an authorized representative must install the technology as described to EPA and in accordance with the criteria described in the approval letter.
- Upon request, manufacturers must provide information to EPA on the installation, operation, and performance of Emerging Technologies used in Clean Diesel Grant programs.

Posting on the Emerging Technology List does not relieve the manufacturer from providing additional technical information and data to EPA. The manufacturer is expected to provide technical information upon request and to continue working with EPA and/or the California Air Resources Board (ARB) to complete the verification process.