

LOW EMISSIONS POTENTIAL OF EGR-SCR-DPF AND ADVANCED FUEL FORMULATIONS: A PROGRESS REPORT

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One of the major projects of the Advanced Petroleum -Based Fuels – Diesel Emission Control (APBF-DEC) project is the demonstration of potential for selective catalytic reduction (SCR) and diesel particulate filters (DPF). This project is integrating several diesel emission control technologies for the purpose of demonstrating their capability in achieving the 2007 heavy-duty diesel engine (HDDE) standards. The project also includes the evaluation of several fuels with various sulfur contents.

The work is conducted on a Caterpillar C-12 HDDE. Two emission control systems will be calibrated to meet the 2007 HDDE standards. Each system consists of EGR, CB-DPF, and urea SCR. Once a satisfactory calibration is achieved, both systems will undergo 6,000 hours of durability with emission evaluations conducted at 2,000-hour intervals. Selected unregulated, toxic, and nitrogen compounds will also be sampled at regular intervals for both control systems. This presentation is a progress report on what the project has accomplished to date.