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EXTENSIVE EMISSIONS TESTS OF NEWEST DIESEL TRUCK AND BUS ENGINES FINDS DRAMATICALLY LOWER EMISSIONS OF KEY POLLUTANTS

(Boston, MA June 18, 2009) The most rigorous emissions testing ever done for new heavy-duty diesel engines – which power virtually every large truck and bus sold in the United States – has demonstrated a greater than 90% reduction in most of the pollutants emitted, according to a study released today by the Coordinating Research Council (CRC¹) at www.crcac.org. For a number of the most important pollutants, these reductions exceeded substantially even those levels required by law. These new engines were developed in response to the US Environmental Protection Agency Heavy-Duty On-Highway Diesel Emissions Rule of 2001 and have been required to be sold in the US since January 2007.

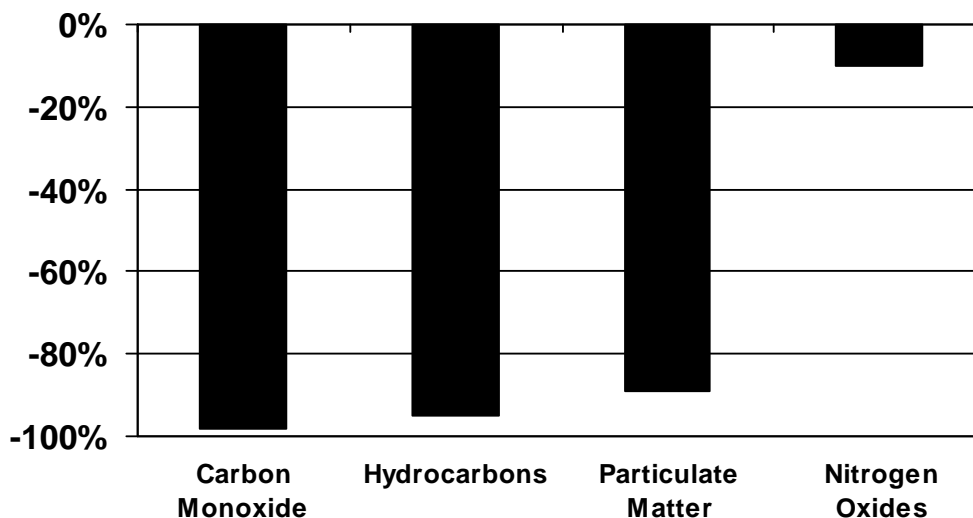
The study, the *Phase 1 Report* of the comprehensive Advanced Collaborative Emissions Study (ACES), found that emissions of fine particulate matter (PM) – a pollutant of significant public health concern – were approximately 99% lower than the PM emission levels allowed from 2004 technology heavy-duty diesel vehicles and engines and nearly 90% lower than even the new 2007 national emissions standards for heavy-duty diesel vehicles (See Figure 1 below). Emissions of carbon monoxide, hydrocarbons, and a number of unregulated, so-called air toxics were also more than 90% lower than the 2004 levels and substantially below required levels. In addition, emissions of nitrogen oxides – which can have direct effects and contribute to the formation of smog – were approximately 70% lower than in the past and 10% below required levels. Another approximately 80% reduction in those emissions is required for engines sold after January 1, 2010.

The Phase 1 ACES study was conducted by the Southwest Research Institute in San Antonio, Texas under the oversight of the CRC. Investigators tested heavy duty diesel engines from the four major manufacturers of these engines, and subjected them to well-established federal test procedures, and to a much more rigorous 16 hour operation cycle designed especially for ACES. The engines were tested on multiple iterations of these cycles, and measurements of over 300 regulated and unregulated air pollutants were made in accordance with the highest laboratory standards

¹ The Coordinating Research Council (CRC) is a non-profit organization that directs - through committee action - engineering and environmental studies on the interaction between automotive/other mobility equipment and petroleum products. Through CRC, personnel in the automotive equipment industry, other related mobility industries, and the energy industry can join together with government agencies to work on issues of mutual interest by gathering data and achieving technical consensus.

Figure 1. Percent Below Required 2007 Levels

(Source: Table ES-2 below)



ACES is a multi-party five year study to test the emissions and health effects of new technology diesel engines to document the improvements that have been made and to ensure that there are no unintended emissions from this new technology. The study is being undertaken by the Health Effects Institute (HEI)² and the CRC with support from a wide range of government and private sector sponsors, including the US Department of Energy, US Environmental Protection Agency, California Air Resources Board, Engine Manufacturers Association, American Petroleum Institute, and manufacturers of emission control equipment.

Overall design and management of ACES – and all laboratory testing of health effects – is being undertaken under the aegis of HEI. All emissions characterization for ACES is being overseen by CRC. The report issued today summarizes the results of Phase 1 – the emissions characterization of representative 2007 model year heavy-duty diesel engines. A second phase to test the 2010 engines is in planning. As this report issues, detailed short and long term laboratory health testing of emission from one of the four representative engines tested in Phase 1 is getting underway at the Lovelace Respiratory Research Institute in Albuquerque, New Mexico, with initial results expected in 2010.

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² The Health Effects Institute is an independent, non-profit research institute funded jointly by government and industry to provide credible, high quality science on air pollution and health for air quality decisions. HEI sponsors do not participate in the selection, oversight or review of HEI science, and HEI's reports do not necessarily represent their views.

TABLE ES-2. SUMMARY OF AVERAGE REGULATED EMISSIONS BASED ON THE FTP CYCLE WITH BLOW-BY

	2007 EPA Standard (g/hp-hr)	Average ACES Engine Emissions (g/hp-hr)	ACES Emissions % Reduction Relative to the 2007 Certification Standard
CO	15.5	0.33	98
NMHC	0.14	0.0064	95
PM	0.01	0.0011	89
NO _x	1.2 ^a	1.075	10
^a Average value between 2007 and 2009, with full enforcement in 2010 at 0.20 g/hp-hr			