STATEMENT
OF THE
MANUFACTURERS OF EMISSION CONTROLS ASSOCIATION
ON THE AIR RESOURCES BOARD'S
PROPOSED ADOPTION OF A DIESEL PARTICULATE MATTER CONTROL MEASURE FOR ON-ROAD HEAVY-DUTY DIESEL-FUELED VEHICLES OWNED OR OPERATED BY PUBLIC AGENCIES AND UTILITIES

December 8, 2005

The Manufacturers of Emission Controls Association (MECA) is pleased to provide testimony in support of the Air Resources Board's proposal to require reductions in particulate matter (PM) from existing on-road heavy-duty diesel public and utility fleet vehicles. We believe the proposal presents a balanced, fair, and flexible approach that will achieve significant PM emission reductions in a cost-effective manner. Further, we firmly believe that the emission control technologies that will be needed to help meet the requirements of the proposed program will be available. Indeed, the PM control technologies cited in the ARB staff report are being used today in California and elsewhere. The staff report also summarizes the diesel retrofit technologies that are currently verified using ARB's diesel retrofit verification protocols. The vast majority of these verified retrofit options come from MECA-member companies.

We commend the ARB for its leadership in developing this innovative and important regulatory initiative. ARB's proposed program will provide important and rapid PM emission reduction benefits and will provide an opportunity to demonstrate the effectiveness of a retrofit/rebuild/replacement strategy. This program can serve as a model for future efforts to reduce PM emissions from existing diesel engines not only in California, but also in other states and in other countries around the world.

MECA is a non-profit association of the world's leading manufacturers of emission control technology for motor vehicles. Our members have decades of experience and a proven track record in developing and manufacturing emission control technology for a wide variety of on-road and off-road vehicles and equipment. A number of our members have extensive experience in the development, manufacture, and application of PM control retrofit technologies.

Technologies to Reduce Diesel PM Emissions

The ARB Staff technical report provides a summary of the emission control technology options available to reduce PM emissions from existing on-road vehicles. MECA offers some additional comments in support of the Staff's conclusions regarding the technological feasibility of the proposed program.

Diesel Particulate Filters – Diesel particulate filters (DPFs) are commercially available today. Over 200,000 on-road heavy-duty vehicles worldwide have been equipped with DPFs – most in retrofit applications. In addition, over one million new

passenger cars have been equipped with DPFs in Europe, and starting in 2007 every new heavy-duty on-road engine sold in the U.S. and Canada will be equipped with a high-efficiency DPF. The operating and durability performance of DPFs has been very impressive. For example, a growing number of on-road DPF-equipped heavy-duty vehicles have been successfully operating for several 100,000 miles or more. In addition to the successful retrofit programs cited by the ARB staff, other examples of successful programs include urban transit agencies in many large U.S. and European cities, the New York City Department of Sanitation fleet, which has successfully retrofitted refuse trucks with filters, and thousands of school buses across the U.S.

High-efficiency DPF technology can reduce PM emissions by up to 90 percent or more, ultra-fine carbon particles by up to 99+ percent and, depending on the system design, toxic HC emissions by up to 80 percent or more. Development work is underway to further enhance the performance of filter system designs. For example, work continues on developing and implementing additional filter regeneration strategies that will expand the applications for retrofitting DPFs. Also, development work on filter materials and designs to further enhance filter system durability and to further reduce backpressure is underway. New, improved DPF systems continue to enter the diesel engine OE and retrofit market.

As mentioned in the Staff report, flow-through filter systems designs capable of reducing greater than 50 percent of the PM are emerging. A variety of different flow-through systems are being evaluated and MECA anticipates that additional flow-through filter systems will be an available option in the near future for public and utility fleet vehicles for which a high-efficiency DPF is not an available option.

MECA believes ARB's capital and operating costs estimates for DPFs in general are within a reasonable range. However, it is important to keep in mind that both capital and operating costs will vary among different engines, applications, and operating conditions. Individual MECA members have provided more detailed cost information directly to the ARB staff while staff developed the proposed rule.

Diesel Oxidation Catalysts – Diesel oxidation catalysts (DOCs) are capable of reducing PM emissions typically in the range of 20 to 40 percent and can reduce toxic HC emissions by up to 70 percent. DOCs have been used in retrofit applications for over 30 years. Over 100,000 on-road vehicles and 250,000 off-road vehicles and equipment have been retrofitted with DOCs. In addition, over 50 million light-duty vehicles in Europe and over 1.5 million trucks and buses in the U.S. have been equipped with DOCs as original equipment.

NOx Control Strategies – While NOx control is not being mandated by the proposed rule, it is worth noting that NOx control strategies exist or are emerging for diesel engines used in public and utility on-road fleet vehicles. The ARB retrofit requirement for PM reduction will create an opportunity for the fleets who elect to do so to incorporate NOx control strategies. These strategies include lean NOx catalysts, low pressure EGR, SCR, and fuel emulsions.

Conclusion

In closing, we commend the Air Resources Board for its continuing efforts to provide the people of California with healthy air quality and for demonstrating true leadership in proposing an innovative regulatory program that will significantly reduce PM emissions. Our industry is prepared to do its part to help meet the emission reduction goals of the public and utility on-road fleet rule. MECA and its members look forward to working with ARB, the fleet operators, and other interested stakeholders in implementing this important program.

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