

**STATEMENT  
OF THE  
MANUFACTURERS OF EMISSION CONTROLS ASSOCIATION  
ON THE AIR RESOURCES BOARD'S  
PROPOSED AIR TOXIC CONTROL MEASURE  
FOR IN-USE DIESEL-FUELED TRANSPORT REFRIGERATION UNITS  
(TRUs) AND TRU GENERATOR SETS, AND FACILITIES WHERE TRUs  
OPERATE**

*December 11, 2003*

The Manufacturers of Emission Controls Association (MECA) is pleased to provide testimony in support of the Air Resources Board's proposed air toxic control measure (ATCM) for in-use diesel-fueled transport refrigeration units (TRUs). We commend the Board for its continuing efforts to develop and implement effective control programs for major sources of air pollution such as this category of engines. We believe that the proposed requirements, as detailed in the Staff Report, are an important step forward in further reducing emissions from TRUs.

MECA is a non-profit association of the world's leading manufacturers of emission control technology for mobile sources. Our members have over 30 years 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/equipment, as well as stationary internal combustion engines.

**Discussion**

The ARB Staff Report provides a comprehensive analysis of the emission control technology options available to reduce PM emissions from transport refrigeration units. MECA supports the analysis performed by ARB and we offer some additional comments in support of the staff's conclusions regarding the technological feasibility of diesel particulate filters (DPFs) and diesel oxidation catalysts (DOCs) to reduce PM emissions from TRUs.

*Technologies to Reduce Diesel PM Emissions*

Diesel particulate filters (DPFs) are commercially available today and have been successfully used in many applications. 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. Over 100,000 on-road heavy-duty vehicles worldwide and in excess of 500,000 diesel passenger cars in Europe have been equipped with this technology. For nonroad engines, DPFs have been successfully installed and used on mining, construction, and materials handling equipment, as well as a smaller number of ferries and locomotives. DPF technology is also projected to be utilized on highway heavy-duty diesel engines sold in the U.S. beginning with the 2007 model year. Indeed, DPFs are currently available on

selected on-road diesel vehicles in the U.S., Europe, and Asia. Also, a growing number of different filter system designs and strategies – both passive and active – are emerging.

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 or more. DOCs have been used in retrofit applications for mobile sources 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 three million trucks and buses in the U.S. have been equipped with DOCs as original equipment.

### *Emission Standards and Implementation Schedule*

MECA believes the proposed PM standards for in-use diesel-fueled TRUs are reasonable and will help achieve the estimated 383,000 to 592,000 pounds per year diesel PM reduction over the life of the regulation (2008-2020) estimated by ARB in the Staff Report. Regarding the effective dates, MECA believes ARB's proposal sets out a reasonable timetable for implementation of the ATCM.

As stated in the Staff Report, there are currently no verified diesel emission control products available for TRUs. However, MECA fully expects there to be verified Level 2 products available by 2008 when the rulemaking takes effect. Also, MECA would recommend allowing Level 1 technologies ( $\geq 25\%$  PM reduction) be acceptable for low-emission TRUs, especially in cases where no Level 2 technologies are available.

### *Technology Review*

MECA agrees with ARB's scheduling of two technology reviews in 2007 and 2009 to evaluate technology readiness. These technology reviews will serve to provide ARB with more information on the status of new engine technologies and retrofit technology options for TRU applications. In addition, MECA is pleased to see that ARB staff is proposing to conduct the 2007 review in conjunction with the U.S. EPA's technology review for nonroad diesel engines <25 hp.

### *Incentives*

MECA supports the staff's proposal to provide operators with an early compliance incentive for 2002 and earlier model year TRUs. We would ask ARB to consider the inclusion of Level 1 verified emission control strategies as part of these early compliance incentives, especially in the cases where no Level 2 or Level 3 technologies are available for a given engine type. In this manner, the full range of technology options would be available to reduce PM emissions from in-use TRU engines as early as possible with the proposed incentives.

## Conclusion

In closing, we commend the Air Resources Board for its leadership in reducing emissions from transport refrigeration units. We support the proposed regulations and we are committed to do our part to ensure that the emission control technology is available to help meet these standards.

Thank you.

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