

**Statement of the
Manufacturers of Emission Controls Association
on the Proposed “Border 2020: U.S.-Mexico Environmental Program”**

November 30, 2011

The Manufacturers of Emission Controls Association (MECA) is pleased to provide comments on the proposed “Border 2020: U.S.-Mexico Environmental Program.” Regarding reducing air pollution in the U.S.-Mexico border region, MECA agrees with the policy objective stated in the draft framework that improved engine standards, improved fuels availability, and compliance with respective emissions standards are needed to effectively reduce vehicle emissions in the U.S.-Mexico border region.

MECA is a non-profit association of the world’s leading manufacturers of emission control technology for motor vehicles. Our members have over 35 years of experience and a proven track record in developing and manufacturing emission control technology for a wide variety of new and in-use, gasoline and diesel, on-road and off-road vehicles and equipment.

Introduction

As put forth in the draft framework, Border 2020 has identified six long-term goals (with specific objectives) to address the most serious environmental and environmentally-related public health challenges in the U.S.-Mexico border region over the next eight years. Of interest to MECA and its member companies, Goal 1 seeks to “reduce criteria air pollutant and greenhouse gas (GHG) emissions.” Economic and population growth in the U.S.-Mexico border region has had a significant impact on urban and rural air quality. Air pollution presents a substantial environmental risk in some border communities that are frequently exposed to elevated concentrations of particulate matter (PM) emissions, ozone-forming pollutants, and toxic air pollutants. Emissions from cars, buses, and trucks (including diesel trucks that idle for long periods of time at ports-of-entry), energy generation, industrial sources, and unpaved roads are significant contributors to poor air quality along the border. As such, effective strategies and solutions to address air pollution along the border need to be developed.

To help meet this clean air goal, MECA offers the following recommendations noted below.

Tighter Emission Standards for New On-Road Vehicles

Given the high volume of light- and heavy-duty on-road vehicles that cross the U.S.-Mexico border, MECA recommends that Mexico’s environment ministry, SEMARNAT, adopt tighter emission standards for light- and heavy-duty on-road vehicles that are fully harmonized with the current U.S. EPA emission standards. Mexico’s current emission requirements for new light-duty vehicles and engines are a mix of U.S. Tier 1/2 and Euro 3/4 standards. In the U.S., the current light-duty vehicle emission standards are EPA’s Tier 2 program and the California Air Resource Board’s (ARB) Low Emission Vehicle II (LEV II) program. (Both EPA and ARB are expected to propose even tighter standards (Tier 3/LEV III) by the end of 2011.) By

adopting these tighter emission standards, air pollution – primarily, oxides of nitrogen (NO_x), carbon monoxide (CO), and volatile organic compound (VOC) emissions – from light-duty vehicles in Mexico would be significantly reduced. Similarly, adopting tighter heavy-duty on-road emission standards would result in significant reductions in air pollution (PM, NO_x, hydrocarbon (HC), and CO emissions) from these vehicles. Canada has already taken the approach of harmonizing with the EPA emission standards as much as possible.

In order for light-duty vehicles to achieve the tighter emission standards, the Mexican government will need to lower sulfur levels in gasoline. Sulfur in gasoline fuel inhibits the emission control performance of various emission control technologies (e.g., catalytic converters for light-duty vehicles). Very low gasoline sulfur levels enable the use of the most advanced emission control technologies and will enable automobile manufacturers to further optimize vehicle fuel efficiency through the application of lean-burn gasoline engine technologies that utilize sulfur-sensitive emission control strategies (e.g., lean NO_x adsorber catalysts). Therefore, MECA further recommends that the Mexican government move as quickly as possible to harmonize their gasoline sulfur levels with the current EPA levels. The current average gasoline sulfur level in the U.S. is 30 parts per million (ppm). (EPA is expected to propose a gasoline sulfur standard of approximately 10 ppm under their Tier 3 proposal.)

Just as for light-duty gasoline vehicles, high sulfur levels in diesel fuel can inhibit the control efficiency of emission control technologies installed on heavy-duty diesel vehicles and equipment. High sulfur levels in diesel fuel (e.g., above 50 ppm sulfur) are a barrier to the commercial introduction of advanced PM and NO_x emission control technologies (e.g., diesel particulate filters for PM control and selective catalytic reduction for NO_x control) on new engines and the application of similar retrofit-based emission control technologies on existing diesel engines.

In 2006, SEMARNAT adopted a regulation that required PEMEX, Mexico's state-owned petroleum company, to sell ultra-low sulfur diesel (ULSD) fuel (15 ppm sulfur or less) nationwide for on-road diesel vehicles by the end of 2009. As of today, the ULSD program has only been implemented in a limited number of areas in the country (i.e., in Mexico City, Guadalajara, and parts of the border region). MECA recommends that the Mexican government move as quickly as possible to expand the use of ULSD for on-road diesel vehicles nationwide, including all of the U.S.-Mexico border region.

Reducing fuel sulfur levels in both gasoline and diesel fuels will result in immediate air quality and public health benefits for people living in the border region and will allow for the turnover of on-road vehicles to the newest and cleanest available.

Reducing Emissions from Existing Heavy-Duty Diesel Vehicles

MECA recommends that the Border 2020 program provide more funding opportunities for diesel retrofit programs in the U.S.-Mexico border region. Installing retrofit technology (e.g., diesel particulate filters, diesel oxidation catalysts, closed crankcase ventilation systems) on in-use heavy-duty diesel engines is one of the most cost-effective ways to achieve significant reductions in PM and NO_x emissions from the existing diesel fleet. Under the previous Border

2012 program, the Arizona Department of Environmental Quality (ADEQ) received funding for two diesel retrofit projects. ADEQ conducted a drayage truck retrofit program on the Arizona-Mexico border in Nogales, AZ. Started in November 2008, the program retrofitted 76 drayage trucks with diesel oxidation catalysts before ending earlier this year. ADEQ also received funding in the fall of 2008 to conduct a school bus retrofit initiative in two Arizona border counties. In all, 39 school buses were retrofitted. More retrofit projects similar to these Border 2012 projects should be implemented in the border region under the Border 2020 program.

Mexico has also previously conducted other diesel retrofit projects. In June 2004, EPA, working with the U.S. Agency for International Development (USAID) and EMBARQ (the World Resources Institute's Center for Sustainable Transport), initiated a diesel retrofit project in Mexico City. The project was designed to demonstrate how the combined use of ULSD fuel and diesel retrofit technologies (diesel particulate filters and diesel oxidation catalysts) on urban buses can improve air quality and reduce adverse effects on human health. Test results showed reductions of 86 to 92% in PM emissions from the newer vehicles using diesel particulate filters and ULSD fuel and 10 to 23% reduction from the older vehicles using diesel oxidation catalysts. The Mexico City diesel retrofit project was the first international retrofit project conducted by EPA outside of the U.S., and it has served as a model for EPA retrofit projects in other areas of the world.

As noted earlier, high sulfur levels in diesel fuel can inhibit the control efficiency of emission control technologies installed on heavy-duty diesel vehicles and equipment. Providing ULSD fuel in the border region would give existing diesel fleets access to the best available technology to reduce PM and NOx emissions should they decide to implement a diesel retrofit project.

Conclusion

In closing, MECA agrees that implementing the proposed Border 2020 program will help address the serious environmental problems in the U.S.-Mexico border region, in particular improving air quality. We commend the governments of the U.S. and Mexico for their continuing efforts to provide the people living in the border region with healthy air quality and for demonstrating leadership in developing this innovative environmental program. As the experience in the U.S. has shown, cleaner fuels and vehicles are an effective pathway to cleaner air.

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