



Dr. Jean Ospital
Health Effects Officer
South Coast Air Quality Management District
21865 Copely Drive
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April 4, 2008

Subject: Comments on the “Draft Multiple Air Toxics Exposure Study in the South Coast Air Basin – MATES III”

Dear Dr. Ospital:

The Pacific Merchant Shipping Association (PMSA) appreciates the opportunity to provide comments on the “Draft Multiple Air Toxics Exposure Study in the South Coast Air Basin – MATES III”. The PMSA represents ocean carriers and terminal operators that account for approximately ninety percent of all containerized cargo that moves through the West Coast of the United States. PMSA and our members are aware and concerned of the potential adverse public health impacts of the goods movement system. It is for that reason that our members have pro-actively pursued all available technologies to reduce those impacts in advance of any regulatory requirements. It is also why we have supported uniform regulatory requirements for the industry.

While the Draft Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES III) from the South Coast Air Quality Management District (District) helps to inform the public of the effects of air toxics there is the need for significant revisions in the final MATES III report. In general the different methodology used for the determination of diesel air toxics creates confusion on how to compare the results of this study with the previous MATES II and MATES studies. In our review of the emission inventories used for the MATES III study we discovered that the wrong inventory was used for ship and commercial boats . We further suggest that the more accurate inventory completed by the Ports of Los Angeles and Long Beach for 2005 should be used for the revised report. PMSA believes this is critical since the use of the improved inventories is likely to change the conclusion that off-road diesel toxic emissions have increased by one-percent from the MATES II Report to the conclusion that off-road diesel emission have decreased by several percent. Finally, PMSA believes that the report fails to address the important regulatory work and voluntary efforts that have already provided significant reduction in diesel emissions and will continue to provide emission reductions into the future.

General Comments on the Cold-Ironing Preliminary Draft

Comparison of Elemental Carbon between MATES II and MATES III Reports

More information on the accuracy and precision of the elemental carbon monitoring and analytical methods is needed as well as a description of the differences in equipment and laboratory methods from those used for the MATES II study in the revised report. The District should explain the reason for selecting the different analytical method for the elemental carbon measurement for MATES III. This is a key consideration since elemental carbon was used as the surrogate for diesel particulates in the MATES II report that were considered to be then, and now, the overwhelming contributor to air toxicity. By changing the analytical method the District created a situation that practically ensured that the results could not be directly compared. The revised report should clearly discuss the 10% difference to make it clear that either the MATES II study overestimated the air toxicity contribution of diesel or that the new analytical methods are 10% less accurate than those used for the MATES III study.

At the Technical Advisory Group meeting held on March 13, 2008, staff indicated that they were working on doing a direct comparison of elemental carbon between the MATES II and MATES III study. PMSA strongly supports the inclusion of that comparison in the revised report.

Finally, according to the study the Wilmington monitoring site was 2.5 miles east of the previous site. This creates difficulties on two levels. First a direct comparison between the two studies cannot be made due to the different location with potentially different source influences and meteorology. Second, since elemental carbon was not monitored at the Wilmington site for the MATES II study no comparison can be made even if the elemental carbon comparison is completed. The revised report should discuss alternative ways of directly comparing the Wilmington site.

Discrepancies in the Ship and Commercial Boats Emission Inventory Values.

According to Chapter 3 the off-road inventory is based on the 2007 AQMP. However, when we compare the 2005 table in the 2007 AQMP the value reported for ships and commercial craft is different from the reported TSP value from Appendix III, Table A-2 of the 2007 AQMP. In addition, we would suggest that the diesel PM values from the AQMP Appendix III, Table F-1 for Ships and Commercial Vessels would be more appropriate since that would exclude non-diesel sources in this category. Use of the AQMP Table F-1 values would also be more consistent with the stated method on page 2-6 "Using ambient EC and the ratio of PM2.5 and **diesel PM** emissions from the 2005 emission inventory" (emphasis added). The exact method of projection of the 2002 data to 2005 should also be disclosed but it is clear that the diesel PM value for ships and commercial boats would be substantially less than those currently used in the MATES III report resulting in an overestimate of the contribution of ship and commercial boat emissions.

It is also important to note that the recent emissions inventories by the Ports of Los Angeles and Long Beach that were developed in coordination with the South Coast Air Quality Management District, the California Air Resources Board, and the U.S. Environmental Protection Agency, show diesel emissions from ship and commercial boats to be thirty seven percent less than the value reported in the Mates III report. Since it has been argued that ships contribute over 10 percent of the region's diesel particulates a 37 percent overestimation in the model would, by itself, change the conclusion that off-road emissions have increased by 1 percent as reported on Figure 3-3. It also raises questions about the

accuracy of the inputs to the computer model for the other source categories that cannot be directly compared, as can be done for the ship and commercial boats category.

An important factor to consider in the use of particulate emissions from ships is the predominance of sulfate. For their rulemaking CARB estimates suggest that over 80 percent of the PM from ships is sulfate. This is important because there are no studies that cite sulfates as an air toxic compound. We fully agree that the non-cancer impacts of PM exposure should be assigned to all ship PM but also believe that a correction factor that takes into consideration the predominance of non-toxic sulfates in ship exhaust should be applied when calculating toxicity from this source category.

Risk Communication of the Future Improvements in Diesel Emissions

Probably the most significant omission from the MATES III study is all of the excellent work that has been completed and the additional efforts underway to reduce diesel emissions and their impact on public health. We believe that the study period of 2005/2006 represents the high point just before significant emission reductions will occur as a result of the full implementation of regulations and voluntary programs in California. A partial list of some of the items that should be brought to the public's attention in the revised draft includes but is not limited to.

- Ultra-low sulfur diesel fuel requirements for all on-road and most off-road applications in California beginning in 2006.
- The new engine emission standards for on-road diesel engines in 2007 and 2010 that will result in an additional 90% reduction from the 2006 standards for diesel particulates when fully implemented.
- The recently approved drayage truck regulation by the Air Resources Board and will greatly accelerate the incorporation of the new engines standards for trucks involved in the local goods movement sector in the region.
- The recently approved construction equipment regulation by the Air Resources Board that will also greatly reduce diesel emission from off-road sources.
- The cargo handling equipment regulation for ports and railyards approved by the air resources board in 2005.
- The recently approved locomotive and marine engine standards passed by the U.S. EPA.
- The advancements of low-sulfur fuel standards for international ocean-going vessels at the International Maritime Organization that will go into effect beginning in 2010.

In addition there have been significant voluntary efforts to reduce diesel emissions undertaken at the Ports of Los Angeles and Long Beach including:

- Voluntary Vessel Speed reduction at the Ports of Los Angeles and Long Beach since 2001
- Voluntary use of low sulfur fuels in main and auxiliary engines beginning in 2002
- Retrofit vessel engine technologies (slide-valve injectors)
- Demonstration projects with selective catalytic reduction (SCR) technologies on a vessel
- Demonstration project of a vessel on-board fuel emulsification system
- Proposed demonstration project of scrubber technologies for vessels
- A diesel-hybrid tugboat demonstration project
- Retrofits of cargo handling equipment with oxidation catalysts beginning in 2002

- Demonstration project of hybrid diesel-electric yard tractors
- Improved operations to reduce time of vessels at berth
- Replacement of the entire Pacific Harbor Line Locomotive Fleet that serves the ports

These efforts should be acknowledged in the revised report and some effort should be taken to determine the amount of emission reductions capable of being achieved and the resulting public health benefits.

Thank you for the opportunity to comment on the preliminary report. We hope these comments will provide useful guidance to the South Coast Air Quality Management District in revision of the MATES III Report. If you have any questions or wish to discuss our comments further, please feel free to contact me by phone at (562) 377-5677 or via e-mail at tgarrett@pmsaship.com.

Sincerely,

/s/ TL Garrett

T.L. Garrett
Vice President