



Marine Vessels & Ports Sector Working Group
Conference Call Summary
Wednesday, April 2, 2008, 9:00am-10:00am PDT

Maersk Fuel Switching Initiative

Lee Kindberg, Environment Director at Maersk, briefed the group on the pilot fuel switching initiative that Maersk has undertaken in the last year. For questions or further information about the presentation and the initiative, contact Ms. Lee Kindberg or Mr. Jai Alimchandani; their contact information is available at the end of the presentation slides, located on the West Coast Collaborative Marine Vessels & Ports website: <http://www.westcoastcollaborative.org/wkgrp-marine.htm>.

Highlights from the Presentation

- Maersk has undertaken a voluntary program to reduce air emissions along the North American West Coast by switching engine fuel from bunker fuel to low sulfur diesel oil (LSDO), which contains less than 0.2% sulfur.
 - Along the California coast, marine vessels make the fuel switch in the auxiliary engines when the vessel is 24 nautical miles from shore and in the main engine when the vessel is 24 nautical miles from port.
 - In Vancouver, BC and Tacoma, WA, marine vessels make the switch to LSDO at dock.
- This fuel switch initiative was undertaken because it resulted in immediate emissions reductions at the Ports of Los Angeles and Oakland, it allowed for rapid implementation, and it did not require installation of shore infrastructure.
- The fuel switch creates reductions in sulfur dioxide emissions, as well as reductions in nitrous oxide (NO_x) and particulate matter (PM) emissions.
- As of December 2007, Maersk had made 577 fuel switches on 105 vessels.
- Fuel sourcing of LSDO has not been very difficult in the United States, but the fuel has been hard to source or very expensive in Asia and Europe. The differential in cost between bunker fuel and LSDO remains the largest challenge for implementing fuel switching.
- Maersk has not encountered any significant technical problems associated with the fuel switching. The biggest technical challenge so far has been timely data collection about the fuel switches.

Diesel Retrofit Technology Verification

Arman Tanman, EPA Office of Transportation and Air Quality (OTAQ), discussed technology verification issues and briefed the group on the Diesel Technology Verification Workshop that was held in December 2007.

Highlights from the Presentation

- In December 2007, EPA held a workshop for vendors on what would be required for Diesel Technology Verification. Under the new EPA DERA funding program announced last month, most grants will go to technologies that have been verified under the Verification Program.
- Approximately 100 vendors attended the workshop, from many different industry sectors. The workshop covered the EPA verification process, and the end-use criteria. The participants also heard about the verification processes in California, Texas, and some municipalities, as well as international verification programs.



- Currently, there are not many verified technologies for marine vessels; to date approximately a dozen technologies specific to marine vessel engines have been submitted for addition to the emerging technologies eligibility list.

For more information on EPA's Diesel Retrofit Technology Verification Program, see <http://epa.gov/otaq/retrofit/index.htm>.

CARB Regulatory Update

Paul Milkey and other staff from the California Air Resources Board (CARB) updated the group on proposed and final rule-making from CARB, including the main engine, auxiliary engine, commercial harbor craft and shore power rules.

Highlights from the Presentation

- CARB adopted the Ship Auxiliary Engine Regulation in 2005 and began initial implementation in 2006. It applies to auxiliary and diesel-electric engines. Currently, marine vessels must use 1.5% sulfur gas oil or diesel oil up to 0.5%, or equally effective technologies when within 24 nautical miles of shore. Beginning in 2010, ship operators will have a marine gas oil limit of 0.1% or lower, or will need to use equally effective emission reduction technologies.
- The Shore-side Power Rule was adopted in 2007, and requires fleets that make 25 visits or more to a California port to set up a shore-side power system for cold ironing of their container ships, cruise ships or reefers. Fleets can comply with the grid-based power system or some other technology-neutral emission reduction.
- The Commercial Harbor Craft Regulation was also adopted in 2007 and requires emissions reductions for commercial harbor craft, including tugboats and excursion vessels. A schedule is in place for replacing older engines throughout California, with an expedited schedule is in place for the South Coast region.
- The proposed Ship Main Engine Fuel Rule is similar to the Ship Auxiliary Engine Regulation by proposing that marine vessels switch to using LSDO in the main engine within 24 nautical miles of shore. A Board hearing on the rule is expected in June 2008.
- CARB is currently assessing whether to expand the voluntary vessel speed reduction program that has been piloted at the San Pedro Bay ports to more California ports and will present their findings to the Board in the near future.
- CARB is currently assessing a proposed rule for implementing shore-side regulations for the remaining classes of marine vessels not covered under the original Shore-side Power Rule, such as tankers and general cargo vessels.

For more information on CARB's Commercial Marine Vessels Program, see <http://www.arb.ca.gov/ports/marinevess/marinevess.htm>.

Collaborative and Sector Updates

Sector members provided the following general updates of interest to all of those in the Marine Vessels & Ports Sector:

- Dennis McLerran, Puget Sound Clean Air Agency, updated the group on the status of HR 802, the United States implementing legislation for MARPOL Annex VI. Currently, the Senate and House are working to resolve differences between the two chamber bills. Dennis urged Workgroup members to contact their Congressional leaders and urge for quick reconciliation and passing of the bill.



- Brian Muehling, EPA Office of International Affairs (OI), briefed the workgroup on the Better Air Quality (BAQ) Clean Air Initiative for Asian Cities conference, being held November 12-14 in Bangkok, Thailand. EPA has been invited to this conference to help raise awareness about the need to address air quality problems. EPA OIA would like to work with sector members to showcase corporate and local leadership at this conference around air quality issues.
- Grace Cheng, Marine Vessels & Ports Sector Lead, provided general updates on Collaborative and sector activities.
 - Peter Murchie was the Program Lead for the West Coast Collaborative (WCC), and in February, he left the WCC to work on climate change issues. WCC will return to a co-lead system, with a lead each in EPA Regions 9 and 10; WCC is currently in the hiring process for these leads. Kristin Riha is the Interim Lead; however, she will be on maternity leave beginning in late April.
 - The DERA RFP will be released soon, with relevant information available on the WCC website (<http://www.westcoastcollaborative.org>). Information about DERA funding was presented during a webcast in February, and this presentation material is also available on the WCC website.

Upcoming Meetings and Conferences

- **April 18, 2008, San Francisco Bay Annual Decision-makers Conference, San Francisco, CA.** For more information: <http://www.bayplanningcoalition.org/>
- **April 21-22, 2008, Managing Environmental Law and Regulation in Shipping, London, UK.** For more information: <http://www.lloydsmaritimeacademy.com/lm1019>
- **April 22-24, 2008, Transplace Shipper-Carrier Symposium, Rogers, AR.** For more information: <http://symposium.transplace.com/>
- **May 15-16, 2008, Bunkering in the Baltic and North Sea, Hamburg, Germany.** For more information: <http://www.lloydslistevents.com/>
- **May 20-22, 2008, AAPA Harbors, Navigation and Environment Workshop, Panama City, Panama.** <http://www.aapa-ports.org/Programs/seminarschedule.cfm?itemnumber=3535>
- **May 29-30, 2008, Harbours, Air Quality and Climate Change, Rotterdam, the Netherlands.** For more information: <http://www.haqcc.org/>
- **June 19-20, Summer Ports, Waterways, Freight and International Trade Conference, Baltimore, MD.** For more information: <http://www.trb.org/conferences/2008/PW/announce.pdf>
- **July 8-9, 2008, Faster Freight Cleaner Air East Coast. New York City, NY.** For more information: <http://www.ffcaeastcoast.com/>
- **July 9-11, 2008, C40 World Ports Climate Change Conference, Rotterdam, the Netherlands.** For more information: <http://www.wpcrotterdam.com/>
- **September 17-18, 2008, Faster Freight Cleaner Air Puget Sound, Seattle, WA.** For more information: <http://www.ffcapugetsound.com/>