

LOG-M-395B

NATIONAL TRANSPORTATION SAFETY BOARD

Washington, D.C. 20594

Safety Recommendation



Date: JAN 17 1995

In Reply Refer To: M-94-51

Mr. George Miller
President
National Fire Protection Association
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About 2000 on October 9, 1993, an explosion occurred on board the 660-foot-long U.S. tankship OMI CHARGER, which was anchored near Galveston, Texas. A welder, who was making repairs to stop a small leak in the bulkhead between the port ballast and No. 5 port cargo tanks, burned through the bulkhead, initiating an explosion in the No. 5 port cargo tank, which the ship's crew had not properly gas-freed. The welder and the firewatch, both of whom were inside the ballast tank, and the vessel's pumpman, who was working on deck near the No. 5 port cargo tank, were killed by the explosion. The vessel, valued at \$12 million, was declared a constructive total loss.¹

In its investigation of this accident, the National Transportation Safety Board determined that the ship's master and chief mate failed to ensure that one of the cargo tanks was safe before allowing welding operations in an adjacent tank. The chief mate neglected to ventilate or inert the tank and to test the tank's atmosphere effectively. The chief mate's critical omissions allowed an explosive atmosphere to exist and go undetected.

Title 46 Code of Federal Regulations (CFR) 35.01 mandates that tankship personnel use the *Standards for Control of Gas Hazards on Vessels to be Repaired* (NFPA Publication 306) when conducting inspections prior to making alterations, repairs, or other operations involving welding, burning, or similar fire-producing actions (hot work). A review of NFPA 306 reveals

¹For more detailed information, read Marine Accident Report—*Explosion and Fire On Board the U.S. Tankship OMI CHARGER at Galveston, Texas, October 9, 1993* (NTSB/MAR-94/04).

that while the publication lists effective methods for preparing spaces for hot work, it does not contain guidance about specific testing procedures to follow. It also advises that testing is at the discretion of the marine chemist.

The Safety Board believes that because NFPA 306 is widely used in the marine industry and is cited in Coast Guard regulations as the source of standards for tank vessel personnel, marine safety would be enhanced if the publication prescribed testing procedures for tank vessel operating personnel to follow when preparing for hot work.

Therefore, the National Transportation Safety Board recommends that the National Fire Protection Association:


Amend your publication NFPA 306 to include specific guidance about gas testing that is readily comprehensible by tank vessel operating personnel. (Class II, Priority Action) (M-94-51)

Also, the Safety Board issued Safety Recommendations M-94-46 through -48 to the U. S. Coast Guard; M-94-49 and -50 to the OMI Bulk Management Company; and M-94-52 to the Texas Department of Public Safety. If you need additional information, you may call (202) 382-6860.

The National Transportation Safety Board is an independent Federal agency with the statutory responsibility "to promote transportation safety by conducting independent accident investigations and by formulating safety improvement recommendations" (Public Law 93-633). The Safety Board is interested in any action taken as a result of its safety recommendations. Therefore, it would appreciate a response from you regarding action taken or contemplated with respect to the recommendation in this letter. Please refer to Safety Recommendation M-94-51 in your reply.

Chairman HALL and Members LAUBER and HAMMERSCHMIDT concurred in this recommendation.

By:



Jim Hall
Chairman