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National Transportation Safety Board
Washington, D. C. 20594

Safety Recommendation

Date: NOV 24 1995

In Reply Refer To: M-95-45 through -53

Mr. Ward H. Proescher
President
Commodore Dining Cruises, Inc.
3266 Elvia Street
Lafayette, California 94549

About 8:35 p.m. on December 3, 1994, an engineroom fire occurred aboard the U.S. small passenger vessel *ARGO COMMODORE* while on a dinner cruise in San Francisco Bay. All passengers were safely evacuated by a U.S. Coast Guard vessel and a passing yacht; there were no deaths or injuries among the 41 passengers and 4 crew members.¹

The National Transportation Safety Board determined that the probable cause of the accident was a short circuit in the electrical starting system for the starboard propulsion engine caused by a failed insulator separating a solenoid terminal from the solenoid case. A contributing cause was the failure of Commodore Dining Cruises, Inc., to diagnose and correct recurring problems in the starboard engine starting system. Contributing to the severity of the fire was the master's failure to follow standard firefighting procedures.

As early as 1992, when a similar fire broke out on board this same vessel, Commodore Dining Cruises, Inc., was aware of problems in the vessel's electrical starting system. But the subsequent pattern of frequent failures and replacements of starter motors and/or solenoids, including as many as "two to three" in the 10 months prior to this accident, shows that underlying problems with the electrical starting system had remained unresolved. The Safety Board concluded that the company management responsible for vessel repairs and maintenance did not diagnose and correct the underlying deficiencies that had been a repetitive source of problems in the vessel's electrical starting system. The Safety Board believes that Commodore Dining Cruises, Inc., should conduct a thorough examination and repair of the starting system aboard the *ARGO*

¹ For more detailed information, read Marine Accident Report—*Fire Aboard U. S. Small Passenger Vessel ARGO COMMODORE in San Francisco Bay, California, December 3, 1994* (NTSB/MAR-95/03).

COMMODORE and take steps to ensure adequate management oversight of maintenance and repairs for all its vessels.

The Safety Board found the master's reasons for not manually activating the CO₂ system to be contradictory and concluded that he was probably unaware that the ARGO COMMODORE was equipped with a CO₂ firefighting system.

Although the senior deckhand had worked on the ARGO COMMODORE 5 to 8 times before, he stated that he did not know that there was a fire pump and hose in the engine room. He said that he was not trained in firefighting, and his responses to questions from Safety Board investigators revealed that he did not know which types of fire extinguishers to use with different classes of fires. He had not been asked by the company to participate in emergency drills during his employment with the company.

The deckhand was not familiar with the lifesaving and firefighting equipment on board the ARGO COMMODORE and had gone to the bow of the vessel to look for life preservers, which, in fact, were stowed inside the bench seats on which the passengers were seated. The crew's inadequate knowledge of safety systems aboard the vessel prevented them from assuming a leadership role during the emergency.

The master in this case was one of the company personnel responsible for training the crew. Yet, by his own assessment, the company's crews were inexperienced; they lacked knowledge of firefighting and emergency procedures; and they were unsure of their duties in an emergency. He mentioned that the crew's catering duties left little or no opportunity for meaningful on-the-job safety training. The Safety Board concluded that the safety training provided by the company to crewmembers was unstructured and inadequate and that it proved to be ineffective in this accident.

Although the cook was tasked only with catering duties and Coast Guard regulations did not classify her as a deckhand, the passengers did not consider her to be different from the other crewmembers. They expected her to provide them with guidance during the emergency, but because she was unfamiliar with emergency procedures and had not been included in the company's safety meetings or other company safety training, she was unprepared to do so. The Safety Board believes that all crewmembers on small passenger vessels, to include all company employees assigned shipboard duties, should be proficient in the use of emergency equipment and should be trained to deal with emergencies on board.

Because the crew on board the ARGO COMMODORE had not participated in firefighting or evacuation drills and their on-the-job training was ineffective, their performance during the emergency proved to be inadequate. The Safety Board believes that crewmembers should demonstrate, through periodic drills, their proficiency in using safety equipment.

The Safety Board concluded that the safety placard aboard the ARGO COMMODORE was illegible, inaccurate, and incomplete, and it failed to fulfill its intended purpose of familiarizing the passengers with the availability and proper use of safety equipment on board the vessel. The Safety Board therefore believes that Commodore Dining Cruises, Inc., should periodically review the

safety placards aboard all the vessels in its fleet and ensure that they are legible and that they contain accurate and complete information.

A safety orientation given at the beginning of this cruise would have made the passengers aware of the location and proper donning procedures for the life preservers and would have familiarized them with the emergency procedures and safety equipment they might have had to use during the evacuation. Further, it would have made the passengers aware of the roles of individual crewmembers and would have prepared them to react more effectively in the emergency. The Safety Board emphasizes that the issue of safety briefings also relates to training, in that proper crew training is essential if the crew is to give an accurate and effective safety orientation.

Because the life preservers aboard the ARGO COMMODORE were tightly wrapped and fastened with clips, many passengers had difficulty unfastening the clips and putting the life preservers on, with the result that some passengers wore their life preservers improperly. The Safety Board believes that life preservers should be stowed so that they can be easily retrieved and donned in an emergency.

Therefore, the National Transportation Safety Board recommends that Commodore Dining Cruises, Inc.:

Conduct a thorough evaluation and repair of the electrical starting system of the ARGO COMMODORE and implement a management oversight program to ensure adequate maintenance for all vessels in your fleet. (Class II, Priority Action) (M-95-45)

Familiarize all masters and crewmembers with the layout, function, and operation of all firefighting and emergency equipment on each company vessel on which they are to serve. (Class II, Priority Action) (M-95-46)

Develop and implement a training program to ensure that deckhands are trained in accordance with the recommendations of U.S. Coast Guard Navigation and Vessel Inspection Circular (NVIC) No. 1-91. (Class II, Priority Action) (M-95-47)

Include in safety training and drill programs those cooks and other catering staff who may be called upon to serve aboard the vessels, whether or not they are classified as deckhands by the Coast Guard. (Class II, Priority Action) (M-95-48)

Require crewmembers to demonstrate their knowledge of emergency procedures through periodic drills that simulate their roles in emergencies. (Class II, Priority Action) (M-95-49)

Develop company operating procedures and safety checklists that are complete and accurate, and ensure that masters and crews are familiar with their contents. (Class II, Priority Action) (M-95-50)

Review the safety placards aboard all vessels in your fleet and ensure that they are legible and that they contain accurate and complete information. (Class II, Priority Action) (M-95-51)

Provide passengers, at departure, with safety orientations that include the procedures to be followed during an emergency. (Class II, Priority Action) (M-95-52)

Stow life preservers so that they can be easily retrieved and donned in an emergency. (Class II, Priority Action) (M-95-53)

Also, the Safety Board issued Safety Recommendations M-95-36 to the U.S. Department of Transportation; M-95-37 through -42 to the U. S. Coast Guard; and M-95-43 and -44 to the Passenger Vessel Association.

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 vitally 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 recommendations in this letter. Please refer to Safety Recommendations M-95-45 through -53 in your reply. If you need additional information, you may call (202) 382-6860.

Chairman HALL, Vice Chairman FRANCIS, Member HAMMERSCHMIDT, and Member GOGLIA concurred in these recommendations.

By:


Jim Hall
Chairman