

National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Date: In reply refer to: M-98-125 and -126

To Cruise Vessel Owners and Operators (address list attached)

On July 20, 1998, a fire occurred on board the Liberian-registered passenger vessel *Ecstasy*, operated by Carnival Cruise Lines. The vessel had just departed Port of Miami, Florida, bound for Key West, Florida, with 2,557 passengers and 920 crewmembers aboard. At 1710, the ship's fire alarm system on the bridge sounded, indicating that a manual alarm had been activated in the laundry room. Fire spread through the laundry ventilation system, and flames and large volumes of smoke were seen issuing from the stern of the vessel. The vessel lost propulsion and steering as a result of the fire, which was brought under control and extinguished about 2109. The ship was returned to its berth at Port of Miami at 0220 on July 21. All passengers safely disembarked before 0600. No fatalities occurred; the injured included 14 crewmembers and 6 passengers.

The fire investigated by the National Transportation Safety Board aboard the *Ecstasy* occurred within the ship's laundry ventilation system. The investigation continues, and the Safety Board expects to issue its final report next year. Within the last 2 years, the Safety Board has investigated two other fires aboard foreign-registered passenger ships operating from U.S. ports.¹ The fires on board the Panamanian *Universe Explorer* and the Bahamian *Vistafjord* were in the vicinity of the ships' laundry and involved minor damage; however, the smoke from the fires caused multiple injuries and deaths. The fire aboard the *Ecstasy* resulted in only minor injuries but caused major damage to the vessel. Preliminary property damage is estimated at \$30 million.

During the current investigation of the *Ecstasy* fire, it was determined that lint, which accumulated in the vessel's exhaust ducting and plenums from the laundry, was a fuel source that enabled the fire to spread in the ducting. As a result of the fire, the aft mooring station deck received extensive structural damage. Based on observations of similar vessels, lint from the

¹ Marine Accident Report—*Fire On Board the Panamanian Passenger Ship* Universe Explorer *in the Lynn Canal Near Juneau, Alaska, July 27, 1996* (NTSB/MAR-98/02); and Marine Accident Brief—*Fire On Board the Bahamian Passenger Ship* Vistafjord *in the Atlantic Ocean Near Grand Bahama Island, Bahamas, April 6, 1997* (DCA97MM028).

exhaust ducting likely had also accumulated on the aft mooring deck, which was the exit point of the exhaust plenum.

Safety Board investigators arranged with Carnival Cruise Lines to examine the ventilation system, the laundry room, and the aft mooring deck of two of its vessels, the *Imagination* and the *Fantasy*, which are similar to the *Ecstasy*. The *Imagination* was fitted with a different exhaust filter arrangement on the laundry dryers; its main ship ventilation in the laundry was the same as found on the *Ecstasy*. The dryers on the *Imagination* had been fitted with a "centrifugal" filter. The air from the dryers is vented through the lint traps into this filter and then sent out the exhaust vent. The filter removes a large amount of lint; however, it does not completely remove lint from the laundry exhaust, and lint accumulation was evident on the aft mooring deck. After the removal of the louvers on the exhaust plenum on the mooring deck, lint accumulation was noted in the plenum chamber. The filters on the intake ventilation system for the thruster room, located on the mooring deck and on the spooled line on the winches. When Safety Board investigators inspected the laundry room on board the *Fantasy*, which has the same mainship ventilation in the laundry as that on the *Ecstasy*, they found several inches of lint in the dryer ventilation ducts and in the plenum chamber.

Since the *Ecstasy* fire and after the Safety Board inspections on the other similar ships, Carnival Cruise Lines has voluntarily instituted an inspection of the laundry ventilation duct and the plenum system on all its vessels.

The Safety Board believes that cruise vessel owners and operators should immediately inspect, within their fleet of ships, the laundry ventilation systems, including ducts, plenums, and exhaust terminuses, for any combustible material, such as lint, and clean the systems, as necessary, to reduce the risk of fire. The Safety Board also believes these owners and operators should institute a program to verify on a continuing basis that the laundry ventilation systems, including ducts and plenums, remain clean and clear of any combustible material that poses a fire hazard on their vessels.

Therefore, the National Transportation Safety Board recommends that the (cruise vessel owner and operator):

Immediately inspect, within your fleet of ships, the laundry ventilation systems, including ducts, plenums, and exhaust terminuses, for any combustible material, such as lint, and clean the systems, as necessary, to reduce the risk of fire. (Urgent) (M-98-125)

Institute a program to verify on a continuing basis that the laundry ventilation systems, including ducts and plenums, remain clean and clear of any combustible material that poses a fire hazard on your vessels. (M-98-126)

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 actions taken as a result of its safety recommendations and 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-98-125 and -126 in your reply. If you need additional information, you may call (202) 314-6450.

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

By: Jim Hall Chairman

FIRE ABOARD THE LIBERIAN PASSENGER SHIP *ECSTASY,* MIAMI, FLORIDA, JULY 20,1998.

List of Cruise Vessel Owners and Operators

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