



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Date: December 17, 2007

In reply refer to: A-07-110

Ms. Yvette A. Rose
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The National Transportation Safety Board is an independent Federal agency charged by Congress with investigating transportation accidents, determining their probable cause, and making recommendations to prevent similar accidents from occurring. We are providing the following information to urge your organization to take action on the safety recommendation in this letter. The Safety Board is vitally interested in this recommendation because it is designed to prevent accidents and save lives.

This recommendation, which addresses Emergency Response diagrams for aircraft rescue and firefighting (ARFF) personnel at airports that have cargo operations, is derived from the Safety Board's investigation of the February 6, 2006, aviation accident at Philadelphia International Airport, Philadelphia, Pennsylvania (PHL), and is consistent with the evidence we found and the analysis we performed. As a result of this investigation, the Board has issued 14 safety recommendations, one of which is addressed to the Cargo Airline Association. Information supporting the recommendation is discussed below. The Board would appreciate a response from you within 90 days addressing the actions you have taken or intend to take to implement our recommendation.

On February 7, 2006, about 2359 eastern standard time,¹ United Parcel Service Company (UPS) flight 1307, a McDonnell Douglas DC-8-71F,² N748UP, landed at its destination airport, PHL, after a cargo smoke indication in the cockpit. The captain, first officer, and flight engineer evacuated the airplane after landing. The flight crewmembers sustained minor injuries, and the airplane and most of the cargo were destroyed by fire after landing. The scheduled cargo flight

¹ Unless otherwise indicated, all times are eastern standard time based on a 24-hour clock.

² McDonnell Douglas is now owned by the Boeing Commercial Airplane Group.

was operating under the provisions of 14 *Code of Federal Regulations* Part 121 on an instrument flight rules flight plan. Night visual conditions prevailed at the time of the accident.³

The Safety Board determined that the probable cause of this accident was an in-flight cargo fire that initiated from an unknown source, which was most likely located within cargo container 12, 13, or 14. Contributing to the loss of the aircraft were the inadequate certification test requirements for smoke and fire detection systems and the lack of an on board fire suppression system.

Inadequate Emergency Response Diagrams

Although the flight crew safely evacuated the airplane and the emergency response was timely, several emergency response-related safety issues were identified during the investigation, including inadequate Emergency Response diagrams, which provide information on the locations and operation of exits and doors, including the cargo compartment doors.

A review of the DC-8 Emergency Response diagrams that UPS provided to PHL ARFF after the accident found that they included information on locating and opening exits and cargo doors; however, the diagrams were not accurate or complete. For example, no information was provided about the main cargo door's vent door, including the fact that the vent door had to be opened before the cargo door could be opened. Further, the diagrams incorrectly identified the aft overwing hatches as operational and incorrectly noted that the doors contained external contrasting colors to help ARFF personnel locate the doors.

The Safety Board concludes that the availability of accurate and complete airplane diagrams would improve ARFF personnel's knowledge and familiarity with fleet configurations and would facilitate emergency response operations.

Therefore, the National Transportation Safety Board makes the following recommendation to the Cargo Airline Association:

Work with your member airlines and other groups, such as the Air Transport Association, major aircraft manufacturers, and the Aircraft Rescue and Firefighting (ARFF) Working Group,⁴ to develop and disseminate accurate and complete airplane Emergency Response diagrams for ARFF personnel at airports with cargo operations. (A-07-110)

The Safety Board also issued recommendations to the Federal Aviation Administration and the Pipeline and Hazardous Materials Safety Administration. In your response to the recommendation in this letter, please refer to Safety Recommendation A-07-110. If you need additional information, you may call (202) 314-6649.

³ For more information, see *In-Flight Cargo Fire, United Parcel Service Company Flight 1307, McDonnell Douglas DC-8-71F, N748UP, Philadelphia, Pennsylvania, February 7, 2007*, Aircraft Accident Report NTSB/AAR-07/07 (Washington, DC: NTSB, 2007).

⁴ The ARFF Working Group is an association that promotes the improvement of the methods of aviation fire protection and prevention.

Chairman ROSENKER, Vice Chairman SUMWALT, and Members HERSMAN, HIGGINS, and CHEALANDER concurred with this recommendation.

[Original Signed]

By: Mark V. Rosenker
Chairman