



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Date: March 18, 1993

In reply refer to: A-93-34

Dr. Billy Jones
 President
 Health and Hospital Corporation
 City of New York
 125 Worth Street
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On Sunday, March 22, 1992, about 2135 eastern standard time, a Fokker 28-4000 (F-28), N485US, operating as USAir flight 405, crashed during an attempted takeoff from runway 13 at LaGuardia Airport, Flushing, New York. The airplane was operating under Title 14, Code of Federal Regulations, Part 121, as a scheduled passenger flight from Jacksonville, Florida, to Cleveland, Ohio, with a stopover at LaGuardia Airport. There were 47 passengers, 2 flightcrew members and 2 cabincrew members on board. The captain, one of the cabincrew members, and 25 passengers received fatal injuries. Impact forces and the subsequent fire destroyed the airplane. Instrument meteorological conditions prevailed at the time of the accident, and a thin layer of wet snow covered the runway.¹

The National Transportation Safety Board determines that the probable causes of this accident were the failure of the airline industry² and the Federal

¹For more detailed information, read Aircraft Accident Report--"Uncontrolled Collision with Terrain, USAir Flight 405, Fokker F-28, N485US, LaGuardia Airport, Flushing, New York, March 22, 1992" (NTSB/AAR-93/02)

²For the purposes of this report, "airline industry" includes government and industry organizations responsible for and capable of studying the problems associated with aircraft icing hazards, and disseminating information to flightcrews about these problems, and for developing technology and requirements to minimize such hazards.

Aviation Administration to provide flightcrews with procedures, requirements, and criteria compatible with departure delays in conditions conducive to airframe icing and the decision by the flightcrew to take off without positive assurance that the airplane's wings were free of ice accumulation after 35 minutes of exposure to precipitation following deicing. The ice contamination on the wings resulted in an aerodynamic stall and loss of control after liftoff. Contributing to the cause of the accident were the inappropriate procedures used by, and inadequate coordination between, the flightcrew that led to a takeoff rotation at a lower than prescribed air speed.

The overall emergency response was effective and contributed to the survivability of the airplane's occupants; however, the response by the emergency medical services (EMS) personnel was inadequately coordinated, and the ambulance response times to the hospitals were excessive. The Safety Board believes that factors contributing to the delay in transporting the eight passengers and one cabin crewmember who sustained serious injuries included the following: poor weather/road conditions; confusion in locating and treating a number of victims who had been transported by airline personnel to various locations around the airport; and the EMS failure to maintain continuous and close communication with the Incident Commander at the command post during triage operations.

At 2146, the first New York City EMS unit, which was an automobile with an EMS lieutenant on board, arrived at the airport's Guard Post 3 staging area. The unit was held there until it was escorted by some New York City Fire Department fire trucks to the crash site at 2151. The EMS lieutenant stated that the first EMS ambulance units, which included two advanced life support ambulances, two basic life support ambulances, and one mobile emergency room, arrived at the crash site at 2155. The EMS lieutenant stated that he established a triage area on the paved surface of runway 13/31 opposite the crash site. The lieutenant also stated that he placed 12 survivors into response vehicles and a pickup truck for transport to hospitals. He assigned triage functions to paramedics/emergency medical technicians and implemented triage tagging. An additional triage area was established at the Trump Terminal.

Six injured passengers were transported by a van from the Trump Terminal to the EMS staging area at the intersection of the Grand Central Expressway and Ditmar Boulevard for subsequent transportation to hospitals. The lieutenant stated that buses to shelter and transport the uninjured survivors arrived

about 2 hours after these activities took place. He transferred the command of triage activities to an assistant chief of EMS. The lieutenant said that all of the injured passengers were removed from triage areas within 1 hour and 10 minutes from the time he was notified. A total of 52 people, including rescuers and the deceased, were transported to hospitals, and 50 persons were handled at the runway 13/31 triage area. Three passengers refused treatment. The EMS lieutenant reported that no attempts were made to resuscitate victims who appeared drowned and/or lacked vital signs because he believed that such victims could not be revived after succumbing in cold salt water.

The lieutenant estimated that 15 ambulances responded to the accident site, all of which were used to transport the injured to hospitals, and that 40 additional ambulances were available at the staging area but were not needed.

The Safety Board understands that during mass casualty incidents, the on-site treatment of victims by EMS personnel places first priority on medically stabilizing the injured prior to transporting them. However, seriously injured passengers were still arriving at area hospitals at 0015. Following the accident, sufficient resources were available to have stabilized and transported the injured more expeditiously.


As a result of this accident, the National Transportation Safety Board recommends that the New York City Health and Hospitals Corporation:

Review and evaluate, in concert with other New York City emergency response agencies, the emergency medical response to the crash of USAir flight 405 in order to improve agency coordination efforts and to reduce transportation times of injured persons from LaGuardia Airport to area hospitals. (Class II, Priority Action) (A-93-34)

Also, the Safety Board issued Safety Recommendations A-93-19 through 30 to the Federal Aviation Administration, A-31-93 and A-32-93 to the Port Authority of New York and New Jersey, and A-93-33 to the Department of Transportation.

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 Recommendation A-93-34 in your reply.

Chairman VOGT, Vice Chairman COUGHLIN, and Members LAUBER, HAMMERSCHMIDT and HART concurred in this recommendation.

By: 
Carl W. Vogt
Chairman