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National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Date: MAY 18 1994

In reply refer to: A-94-108 through -109

Mr. Connie Kalitta, President
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On August 18, 1993, at 1656 eastern daylight time (EDT), a Douglas DC-8-61 freighter, N814CK, registered to American International Airways (AIA), Inc., d/b/a Connie Kalitta Services, Inc., and operating as AIA flight 808, collided with level terrain approximately 1/4 mile from the approach end of runway 10, after the captain lost control of the airplane while approaching the Leeward Point Airfield at the U.S. Naval Air Station (NAS), Guantanamo Bay, Cuba. The airplane was destroyed by impact forces and a postaccident fire, and the three flight crewmembers sustained serious injuries. Visual meteorological conditions prevailed, and an instrument flight rules (IFR) flight plan had been filed. The flight was conducted under 14 Code of Federal Regulations (CFR), Part 121, Supplemental Air Carriers, as an international, nonscheduled, military contract flight.¹

The National Transportation Safety Board determines that the probable causes of this accident were the impaired judgment, decision-making, and flying abilities of the captain and flightcrew due to the effects of fatigue; the captain's

¹For more detailed information, read Aircraft Accident Report--"Uncontrolled Collision with Terrain, American International Airways Flight 808, Douglas DC-8-61, N814CK, U.S. Naval Air Station, Guantanamo Bay, Cuba, August 18, 1993" (NTSB/AAR-94/04)

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failure to properly assess the conditions for landing and maintaining vigilant situational awareness of the airplane while maneuvering onto final approach; his failure to prevent the loss of airspeed and avoid a stall while in the steep bank turn; and his failure to execute immediate action to recover from a stall.

Additional factors contributing to the cause were the inadequacy of the flight and duty time regulations applied to 14 CFR, Part 121, Supplemental Air Carrier, international operations, and the circumstances that resulted in the extended flight/duty hours and fatigue of the flightcrew members. Also contributing were the inadequate crew resource management training and the inadequate training and guidance by American International Airways, Inc., to the flightcrew for operations at special airports, such as Guantanamo Bay; and the Navy's failure to provide a system that would assure that the local tower controller was aware of the inoperative strobe light so as to provide the flightcrew with such information.

In this accident, the Safety Board examined crew coordination issues because of the events that occurred in the final minutes of the flight. The Safety Board found that a lack of crew coordination, was probably due, in part, to fatigue, rather than to the more conventional crew coordination problems attributed to personal interactions. The breakdown in crew coordination was illustrated by the fact that the captain did not include the remainder of the crew in the initial decision-making process to land on runway 10. Moreover, he did not solicit the assistance of the first officer during the latter portion of the approach when he was unable to maintain visual contact with the runway. The Safety Board believes that even though the captain followed his decision by inviting the crewmembers to express their concerns if they felt uncomfortable with any aspect of the approach, coordination continued to deteriorate when both the first officer and flight engineer expressed concerns that they did not believe they were "going to make it." The captain failed to comprehend and act on the information from the crewmembers, as subtle as it might have been, to initiate a go-around. The Safety Board believes that if the crewmembers had, as a group, discussed the difficulties of the approach to runway 10 before the execution, they would have been aware of the criteria necessary not only to complete the approach, but to abandon it. This would probably have assisted them in recognizing the trouble signs before the approach deteriorated to the extent that safety was irreparably compromised.

The lack of crew coordination is further illustrated by the fact that the captain failed to recognize and take corrective action to regain the lost airspeed despite the flight engineer's repeated warnings and the activation of the stick shaker. In

addition, while it is believed the captain's attention was drawn to finding the strobe light, the first officer failed to assist the captain by providing critical information concerning their proximity to the runway and their steep angle of bank, or by strongly supporting the flight engineer's warnings regarding the slow airspeed. The Safety Board believes that if the first officer and flight engineer had been more assertive in volunteering vital information or in redirecting the captain's attention to take the appropriate corrective action, the accident might not have occurred.

The Safety Board has advocated training in crew resource management (CRM) as a means of enhancing the use of all crewmembers as a coordinated team to improve flight safety. The Federal Aviation Administration (FAA) has provided guidelines on CRM training in FAA advisory circular (AC) 120-51A. This AC describes a CRM program in three phases: The first phase is definition and discussion of basic CRM concepts in initial class work; the second is practice and feedback through line-oriented flight training (LOFT); and the third includes continuous reinforcement as part of an airline's operational philosophy.

Both pilots in this accident had completed a 2-day CRM class at Eastern Airlines, and the first officer indicated that he had received some additional informal CRM training at AIA. These classes appear to correspond with the first phase described in the FAA guidelines, and suggest that AIA made an informal attempt to address CRM issues in the company training. The Safety Board believes that further development of this program along the guidelines of this AC could assist future flight crewmembers by preventing some of the crew coordination deficiencies evident in this accident. In addition, if the flightcrew in this accident had been thoroughly indoctrinated in and practiced the principles advocated by AC-120-51A, the Safety Board believes that this knowledge might have offset the debilitating effects of fatigue and helped them sustain team performance sufficiently to avoid or recover from the hazardous situation. Thus, this accident illustrates one more example of the potential safety benefits of CRM and further supports the need to require CRM for all crews in Part 121 operations.

The Safety Board was concerned over the lack of available printed information on the Guantanamo Bay, Leeward Point Airport, and the limited crewmember knowledge about the airport. This airport is one of 11 such airports described in the "special airports" qualification video tape used by AIA crewmembers during either initial or recurrent training. The Safety Board found that this training was self-monitored and that no additional or supporting information was provided either by AIA or the Department of Defense, which produced the

tape, during these training sessions. The investigation revealed that AIA flight crewmembers had also been disadvantaged when they operated at special airports because of the randomness of their schedules and the time that may have elapsed between the viewing of the videotape and the actual flight into the airport.

The Safety Board believes that the video tape used for training does not adequately convey the difficulty and potential hazards involved in the approach to runway 10 at Guantanamo Bay. The tape is a pictorial of the airport, including the coastline and Cuban boundary, as viewed from the cockpit of an airplane during the turn from downwind and base leg on to final. The tape accurately shows that the final alignment with the runway occurs at low altitude and nearly over the runway threshold. However, there is no discussion about the factors that make the approach particularly challenging to the pilots of airplanes with high approach speeds. These factors include steep bank angles and increased approach speeds necessary to compensate for the load factors associated with the bank angle, the adverse effect of a southerly wind, and the criticality of the turn initiation point in achieving proper runway alignment without excessive maneuvering. The Safety Board believes that the video tape should be revised to emphasize these factors.

Although, AIA's policy did not require flight engineers to view the tape about special airports, the evidence in this accident showed that the flight engineer was more knowledgeable and aware of flight 808's position during the approach to Guantanamo Bay than the other two crewmembers. The Safety Board believes that the absence of a requirement for flight engineers to receive this type of training limits their knowledge about special airports. It further eliminates a critical element of safety when such an element is needed the most. It is vital that all members of a crew be fully aware of the possible dangers associated with airports that are considered special.

The Safety Board believes that video presentation alone does not ensure flightcrew retention of all the information necessary to conduct safe approaches or departures from special airports. The Safety Board conducted a survey of other air carriers operating into Guantanamo Bay, and it revealed that nearly all of them use a video tape supplemented by a special airports manual, and require a company briefing before departure, and/or access to the information in a Leeward Point Airport briefing package. Additionally, several air carriers also require a check airman to accompany an unqualified crew or captain into a special airport. Unlike AIA, several airlines that had dispatch operations kept records of special airports qualifications and currency for crewmembers.

In this accident, the captain and first officer had viewed the special airports tape approximately 5 months and 5 days, respectively, before the accident flight, and confusion was still apparent among the crew while they were preparing for the approach. The Safety Board believes that in addition to the video presentation, it is incumbent upon AIA to provide crewmembers with up-to-date printed training and reference material for use at Guantanamo Bay.

Therefore, as a result of its investigation of this accident, the National Transportation Safety Board recommends that American International Airways, Inc.:

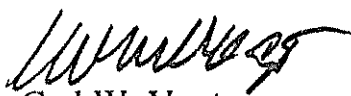
Revise the AIA training program to ensure that all pilots receive crew resource management (CRM) training that conforms to the guidelines set forth in FAA Advisory Circular 120-51A. (Class II, Priority Action) (A-94-108)

Review and revise the AIA special airports training program to require, in addition to flightcrew members, flight engineers to participate in the AIA special airports training program. The revised program should ensure that all flightcrew members who operate airplanes with high approach speeds are aware and understand the effects of high bank angles and increased load factors, adverse wind conditions, and required flightpath profiles necessary to perform the approach. (Class II, Priority Action) (A-94-109)

Also, the Safety Board issued Safety Recommendations A-94-105 through -107 to the Federal Aviation Administration and A-94-110 to the Department of Defense.

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 A-94-108 and A-94-109 in your reply.

Chairman VOGT, Vice Chairman HALL, and Members LAUBER and HAMMERSCHMIDT concurred in these recommendations.

By: 
Carl W. Vogt
Chairman

