

log 2495



# National Transportation Safety Board

Washington, D.C. 20594  
Safety Recommendation

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**Date:** April 21, 1994

**In reply refer to:** A-94-84 through -91

Honorable David R. Hinson  
Administrator  
Federal Aviation Administration  
Washington, D.C. 20591

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On October 26, 1993, about 1552,<sup>1</sup> N82, a Beech Super King Air 300/F (BE-300/F), owned by the Federal Aviation Administration (FAA) and operated by the Atlantic City (ACY), New Jersey, Flight Inspection Area Office (FIAO), was destroyed when it crashed into mountainous terrain near Front Royal, Virginia. The three flight crewmembers aboard received fatal injuries.<sup>2</sup>

The National Transportation Safety Board has determined that the probable causes of this accident were the failure of the pilot-in-command to ensure that the airplane remained in visual meteorological conditions over mountainous terrain, and the failure of FAA executives and managers responsible for the FAA flying program to: (1) establish effective and accountable leadership and oversight of flying operations; (2) establish minimum mission and operational performance standards; (3) recognize and address performance-related problems among the organization's pilots; and (4) remove from flight operations duty pilots who were not performing to standards.

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<sup>1</sup>Eastern daylight time, in accordance with the 24-hour clock.

<sup>2</sup>For more detailed information, read Aircraft Accident Report--"Controlled Flight Into Terrain, Federal Aviation Administration, Beech Super King Air 300/F, N82, Front Royal, Virginia, October 26, 1993" (NTSB/AAR-94/03)

During the investigation of this accident, Safety Board investigators found repeated instances of deficient management by Aviation System Standards (AVN), as well as insufficient oversight from the FAA's executive levels. For example, the organizational structure of AVN headquarters purported to provide management of the FAA flying program that was similar to management of air carrier operations. However, at the headquarters level, critical positions of check airman, training captain, fleet manager/chief standardization and flight safety officer were subordinate to nonflying managers. At the operating units, positions existed only as additional duties. As a result, these organizational deficiencies precluded the application of functional oversight of flight operations and viable inputs on flight safety-related matters.

In addition to the FIAOs, the Safety Board examined the oversight of other FAA flying operations and found inadequacies in oversight at all levels. Although AVN is charged to "manage the agency aircraft program," direct line authority from AVN could not be identified either to the flying units or to an organization or individual with the responsibility and authority to provide oversight of the operations.

The investigation also revealed that the FAA did not require standards for the type of operational experience needed by managers, directors, assistants, and senior executives who oversee flight operations. By contrast, FAA regulations governing the management of air carriers and regional airlines are specific in describing the positions and the minimum aviation experience of individuals with the responsibility and authority to oversee flight operations and maintenance. As a result, FAA flight operations, on occasion, have been overseen by personnel with no flight operations experience. Although these individuals were experienced in administrative matters and FAA practices, the Safety Board believes that their lack of flight operations experience detracted from their ability to provide adequate guidance and oversight.

Based on the evidence gathered during this investigation, the Safety Board believes that AVN's assessment of the quality of its operations was inadequate. For example, the most recent Standardization Visit and Compliance Review Evaluation Report on the ACY FIAO by AVN-520 and AVN-810, conducted only 2 months before the accident, gave no indication of the serious nature of deficiencies identified by ACY personnel in the course of this investigation. Given that the ACY FIAO met the requirements of the two offices that were responsible for maintaining the quality standards of AVN, the Safety Board questions both the scope and depth of AVN-520 and AVN-810 inspections and the interaction of the inspectors with

ACY personnel. The operational competence, the flightcrew scheduling, the work product, and the flight safety program at the ACY FIAO met the minimum AVN requirements. The Safety Board believes that as a result, the requirements of the oversight effort were not comprehensive enough to adequately evaluate the flying operation. Therefore, the Safety Board believes that AVN should establish inspection procedures of sufficient depth and scope that will reveal noncompliance with directives and the fundamental principles of flight safety.

Further, the lack of any centralized training records, proficiency reviews, or standardized check flight records and evaluations appeared to have negated efforts by AVN-520 and AVN-810 to standardize flying operations between FIAOs or within the FAA flying program. Therefore, the Safety Board believes that the FAA should establish standardized flight checks with Certificate Management Office (CMO)-approved pilot performance standards, overseen from the AVN Director's level. Such a system should require a central pilot record repository and a central check airmen pool. In addition, AVN should provide methodology and implement a plan to retrain, reassign or dismiss pilots who cannot meet the performance standards.

The Senior Flight Safety Officer (SFSO) position was created in 1990 as a result of a recommendation made in the 1989 System Safety Survey that recommended establishing a position for the safety program at the AVN Director's level. In this position, the SFSO oversees a safety program that spans the authority of two executive directors for the FAA Administrator, three associate administrators, nine regional division managers, numerous office/branch managers, and includes over 100 FSOs.

During postaccident interviews, the SFSO stated that all incidents in FIAOs that occur in the field should be reported to her office. She also said that anything presented as a potential safety hazard must be reported. During the past 12 months, there were about 20 incident reports submitted by FIAOs, many of which related to the King Air landing gear struts. The investigation revealed that many incidents and safety hazards were not reported and further that the SFSO was not informed, involved, or consulted in the incident report process. Therefore, the Safety Board believes that criteria should be improved to specify the operational and maintenance-related incidents that are required to be reported to a central AVN authority, and that procedures should be implemented for verifying that all incidents meeting this criteria are, in fact, being reported.

The January/February 1994 issue of AVN's *FOCUS* stated that the "Gateway to Quality" program "received about 30 suggestions in 1993." In that program, the Director "determines what is required on each recommendation and forwards it to the appropriate organization for action. The name of recommending employee is removed first." Nonetheless, to safeguard against those unique cases in which reprisals are possible involving a recommending employee who brings safety-related concerns to the attention of managers, the Safety Board believes that a program should be developed and implemented that guarantees freedom from retribution and ensures that employee concerns will be thoroughly and impartially considered.

The Safety Board was disappointed to learn that the accident airplane was one of 19 Beech 300/F airplanes in the FAA's fleet that was procured without flight recorders or a ground proximity warning system (GPWS). Flight recorders, both flight data recorders (FDRs) and cockpit voice recorders (CVRs), have provided invaluable flight safety information in accident and incident investigations. The missions of these airplanes exposes them to high traffic density, low altitude environments for extended periods. The absence of a CVR deprived this investigation of insight into the crew actions and the crew decision-making that took place within the cockpit.

Further, the absence of a GPWS, while not substituting for the fundamental principles of safe flight planning, deprived the flightcrew of an opportunity to avoid collision with terrain. A new FAA regulation, effective April 20, 1994, requires a GPWS on all airplanes operated under the provisions of Title 14 Code of Federal Regulations, Part 135. The FAA's failure to install this equipment communicated that it was neither as attentive to flight safety as it could have been nor did it require its own operations to adhere to the same standards expected of commercial operators of passenger-carrying aircraft. The comment by the FIAO manager to a newspaper reporter after the accident that GPWS equipment was inappropriate and would produce "nuisance warnings" was not justified under the circumstances of the accident. Safety Board analysis of the radar track and witness observations of N82 indicate that the terrain features overflowed several minutes prior to the crash would have provided a GPWS warning<sup>3</sup> if such a system had been installed.

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<sup>3</sup>Modern GPWS equipment presents a variety of situational warnings. In the context of this accident, the warning pertains to unsafe absolute altitude in flight (proximity to terrain, gear up). The altitude specified by Technical Standard Order-C92b is 500 feet.

Although AVN officials informed Safety Board investigators of their decision to incorporate CVRs on future AVN aircraft, the Safety Board believes that the FAA should install appropriate flight recorders and the GPWS on all FAA-owned aircraft.

During this investigation, Safety Board investigators interviewed more than half of the FIAO employees. They learned that there was no requirement for complete mission briefings or debriefings for the FAA flying program. They added that ACY management emphasis was on the "mission priority." The Safety Board believes that all pilots must recognize that regardless of the perceived importance of completing a mission, each and every mission must be accomplished safely and efficiently. Therefore, for the purpose of mission management, the Safety Board believes that formal mission briefing and debriefing requirements should be established for FAA flying operations that involve an operations supervisor, as well as the PIC and all crewmembers.

The Safety Board was pleased to learn that the FAA Civil Aviation Medical Institute (CAMI) required the PIC to submit a formal evaluation of his drinking habits by a substance abuse specialist. The PIC consulted a specialist who possessed recognized qualifications. The specialist's evaluation concluded that the PIC did not have an alcohol abuse problem, and, as a result, the FAA approved the issuance of a first class medical certificate. However, the Safety Board learned that the FAA neither stipulates training or certification requirements required of a substance abuse specialist nor specifies the nature of the procedures to be performed in the specialist's examination. A cursory history taking, for example, with no further physical examination, would be acceptable to CAMI. Further, with no training or certification requirement, an individual having no specific training in substance abuse recognition could perform an evaluation and have it accepted by the FAA.

Although there was no evidence that alcohol or drug use played a part in this accident, the Safety Board is concerned that an alcohol or drug abuser could continue receiving airman medical certification based on an incomplete examination by an unqualified specialist. As a result, the Safety Board believes that the FAA should stipulate training and certification standards required of a substance abuse specialist, and that it should specify the nature of the examination procedures required by such a specialist, similar to training and certification standards and examinations used by air carriers, before the specialist's evaluation will be accepted by the FAA to issue airman medical certification.

Therefore, as a result of its investigation of this accident, the National Transportation Safety Board recommends that the Federal Aviation Administration:

Provide direct line authority to the executives and managers responsible for the management and oversight of the FAA flying program to ensure safety oversight and accountability of the program equal to that required of the air carrier industry by the FAA. (Class II, Priority Action) (A-94-84)

Establish minimum standards of operational experience for managers and executives who are identified as responsible for the management or oversight of the FAA flying program. (Class II, Priority Action) (A-94-85)

Establish inspection procedures of sufficient depth and scope that will reveal noncompliance with directives and the fundamental principles of flight safety. The procedures should include CMO-approved pilot flight check standards for the FAA flying program, overseen from the AVN Director's level. Such a system should include a central pilot record repository and a central check airmen pool. Provide methodology and implement a plan to retrain, reassign or dismiss pilots who cannot meet the performance standards. Class II, Priority Action) (A-94-86)

Improve criteria to specify the operational and maintenance-related incidents that are required to be reported to a central AVN authority; and implement procedures to verify that all incidents meeting such criteria are being reported as required. (Class II, Priority Action) (A-94-87)

Develop and implement a program guaranteeing that personnel who bring safety-related concerns to the attention of management can do so without fear of retribution, and with the assurance that such concerns will be addressed thoroughly and impartially. (Class II, Priority Action) (A-94-88)


Equip FAA-owned aircraft with state-of-the-art flight recorders and ground proximity warning systems at the earliest practicable opportunity. (Class II, Priority Action) (A-94-89)

For the purpose of mission management, establish formal mission briefing and debriefing requirements for FAA flying operations that involve an operations supervisor, the PIC, and all crewmembers. (Class II, Priority Action) (A-94-90)

Stipulate specific training and certification standards required of a substance abuse specialist, and specify the nature of the procedures required for the examination by such a specialist, similar to training and certification standards and examinations used in the air carrier industry, before his/her evaluation will be accepted by the FAA in its decision to issue an airman medical certificate. (Class II, Priority Action) (A-94-91)

Also as a result of its investigation of this accident, on November 24, 1993, the Safety Board issued Urgent Action Safety Recommendation A-93-161 and Priority Action Safety Recommendations A-93-162 through A-93-168 to the FAA. The FAA Administrator responded to these recommendations in a letter dated January 31, 1994. The Safety Board's actions to classify the status of these recommendations are contained in section I.17.7 of the report on this accident.

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

  
By: Carl W. Vogt  
Chairman