



National Transportation Safety Board

Washington, D.C. 20594
Safety Recommendation

Log 2628

Date: November 26, 1997

In reply refer to: A-97-112 and -113

Honorable Jane F. Garvey
Administrator
Federal Aviation Administration
Washington, D.C. 20594

On February 5, 1997, at 1345 eastern standard time (EST), a U.S. Air National Guard F-16 operating in a warning area (W107)¹ over the Atlantic Ocean intercepted Nations Air flight 70 (NAE70), a Boeing 727 (B-727), that was traversing the area. The proximity of the F-16 to the B-727 activated its traffic alert and collision avoidance system (TCAS), which instructed the NAE70 flightcrew to execute a descent, followed by two separate instructions to climb. NAE70 was operating on an instrument flight rules (IFR) flight plan under 14 Code of Federal Regulations Part 121, as a chartered flight from San Juan, Puerto Rico, to the John F. Kennedy Airport, New York. There were no injuries to the 77 passengers and 7 crewmembers.

The Safety Board's investigation of this incident identified several areas of concern. Specifically, the ineffective communication and coordination by air traffic controllers were central safety concerns.

The Federal Aviation Administration (FAA), which is charged with administering the safe and efficient use of the U.S. National Airspace System, has classified warning areas as Special Use Airspace (SUA). The AIM defines the SUA as "airspace of defined dimensions identified by an area on the surface of the earth wherein activities must be confined because of their nature and/or wherein limitations may be imposed upon aircraft operations that are not a part of those activities." When activities are scheduled in special use areas, air traffic controllers must reroute air traffic around them. In the past, military users regularly reserved the warning areas for extended periods of time, and although missions may have been canceled, the intended users did not immediately release the airspace. As a result, the warning areas remained in an "active" status for the duration of the scheduled period and were not available to other transiting aircraft. In 1996, representatives from the FAA's Washington Air Route Traffic Control Center (ZDC) and

¹The Aeronautical Information Manual (AIM) defines a warning area as "airspace of defined dimensions extending from 3 nautical miles outward from the coast of the United States, that contains activity that may be hazardous to nonparticipating aircraft. The purpose of such warning areas is to warn nonparticipating pilots of the potential danger. A warning area may be located over domestic or international waters or both."

U.S. Navy's Fleet Area Control and Surveillance Facility (FACSFAC), which is responsible for monitoring military operations that are conducted within the mid-Atlantic region, including W107, developed a memorandum of understanding (MOU) that contained procedures for the use of SUA.

Civilian and military air traffic controllers are required to adhere to MOUs and FAA Order 7110.65, "Air Traffic Control." Because the controllers had reviewed the MOU just prior to their interview with Safety Board investigators, the extent of the controllers' knowledge about the MOU at the time of the incident could not be determined. However, a review of recorded voice communications between the ZDC and FACSFAC controllers clearly indicated that all of them had failed to adhere to procedures contained in the MOU. For example, the FACSFAC controller failed to coordinate the use of the warning area with the appropriate ZDC controller, failed to ascertain the location of pre-approved flights, and failed to advise the military flight of the existing traffic.

Additionally, the Safety Board discovered that procedures contained in the MOU, as they relate to coordination for transit approval and the responsibility for the separation of aircraft, are not clearly defined. For example, the coordination procedures (between FAA and Navy controllers) for identifying aircraft and the separation standards (either 1,000 feet vertical or 5 miles lateral separation) are not specifically addressed. In addition, there are no procedures for situations in which controllers have limited time to coordinate the activation of the warning area. Therefore, the Safety Board believes that the Department of Defense and the FAA should develop a formal document that clearly defines the roles and responsibilities of each agency regarding the activation of SUA, and that provides for the timely activation of SUA to accommodate the users; prior to implementation, these agencies also should ensure that air traffic control personnel in all facilities are provided adequate training and a formal briefing on the procedures and responsibilities.

The NAE70 captain stated that while he was traversing the SUA, he had been operating in instrument meteorological conditions (IMC) during the descent from 28,000 to 10,000 feet, including the time that he responded to the TCAS alert. FACSFAC operational procedures state, "[military] pilots who cannot operate their aircraft VFR [visual flight rules] while operating in the OPAREA [operations area] must immediately advise the controlling agency.... The exception to this rule is when the area has been scheduled for exclusive use...." The Safety Board found that Air National Guard and Air Force representatives believed that all of their scheduled missions were for exclusive use and that the existence of IMC flight conditions within the warning area would not require the cancellation of a scheduled mission. However, the circumstances of this incident clearly indicate that the military operation was not operating as an exclusive use mission, nor was it operating in VFR conditions. The Safety Board believes that the FAA should conduct, in cooperation with the Department of Defense, a formal review of SUA procedures to ensure that they are current, safe, understood, and adhered to by all those involved. Personnel involved in this review should include Air Force, Navy, and FAA representatives; pilots, controllers, and other persons deemed appropriate. Information generated by the review should be disseminated to every facility involved in the scheduling, control, and/or use of SUA.


Therefore, the National Transportation Safety Board recommends that the Federal Aviation Administration:

Develop, in cooperation with the Department of Defense, a formal document that clearly defines the roles and responsibilities of each agency regarding the activation of special use airspace (SUA) (warning areas), and that provides for the timely activation of SUA (warning areas) to accommodate the users; prior to implementation, these agencies also should ensure that air traffic control personnel in all facilities are provided adequate training and a formal briefing on the procedures and responsibilities. (A-97-112)

Conduct, in cooperation with the Department of Defense, a formal review of special use airspace (SUA) (warning area) procedures to ensure that they are current, safe, understood, and adhered to by all those involved. Personnel involved in this review should include Air Force, Navy, FAA representatives; pilots, controllers, and other persons deemed appropriate. Information generated by the review should be disseminated to every facility involved in the scheduling, control, and/or use of SUA (warning areas). (A-97-113)

Also as a result of its investigation of this incident, the Safety Board issued Safety Recommendations A-97-114 through -120 to the Department of Defense.

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

By  Jim Hall
Chairman