



National Transportation Safety Board

Washington, D.C. 20594
Safety Recommendation

Log 2564

Date: November 30, 1995

In reply refer to: A-95-120

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

On January 29, 1995, a Beechcraft A36, N3086T, crashed after the pilot declared a missed approach at the Dekalb-Peachtree Airport, Chamblee, Georgia. The private instrument-rated pilot was killed, and the airplane was destroyed. The airplane was being operated under the provisions of Title 14 Code of Federal Regulations (CFR) Part 91. At the time of the accident, instrument meteorological conditions prevailed. An instrument flight rules flight plan had been filed for the personal flight, which had originated in Orlando, Florida.

The pilot had been receiving air traffic control (ATC) services from controllers at the Atlanta Terminal Radar Approach Control (TRACON) and the local controller at the Dekalb-Peachtree Airport. The Dekalb-Peachtree ATC tower is a Level I non-approach control facility, and as such, approach control services are provided by the controllers at the Atlanta TRACON. After being vectored for an instrument landing system (ILS) approach to runway 20L, the pilot declared a missed approach to the tower. During the missed approach, radar and radio communications were lost.

All of the controllers who provided ATC services to the pilot of N3086T were interviewed on February 7, 8, and 9, 1995. In addition, staff from both facilities were asked to provide data as a part of the Safety Board's continuing investigation of the accident.

Among the data that Safety Board investigators received from the Atlanta TRACON was a continuous data recording (CDR) editor listing, which disclosed that before the accident, four minimum safe altitude warning (MSAW) general terrain warning (GTW) alerts concerning the target of N3086T had been directed to the tower at Dekalb-Peachtree.

The MSAW system is designed so that it can provide both an aural and a visual alarm to alert a controller when an aircraft is at an altitude that may place it in unsafe proximity to another aircraft, obstruction, or terrain. The visual alert is the message "LOW ALT" displayed above the aircraft identification in a full data block for the duration of the alert condition. The aural alarm is a buzzer that sounds in the radar facility and/or tower. FAA Order 7110.65, "Air Traffic Control," directs that once a controller observes or hears an MSAW alarm and recognizes that an unsafe situation may exist, the controller's first priority is to issue a safety alert to the

pilot. Once the pilot informs the controller that action is being taken to resolve the situation, no further alerts need to be issued.

The Dekalb-Peachtree tower has a D-BRITE¹ radar display for use by the local controllers during the performance of their duties. As stated in FAA Order 7110.65, "Air Traffic Control," paragraph 3-9, "Use of Tower Radar Displays," 3-9a Note, "Unless otherwise authorized, tower radar displays are intended to be an aid to local controllers in meeting their responsibilities to the aircraft operating on the runways or within the surface area." It also notes, "...local controllers at nonapproach control towers must devote the majority of their time to visually scanning the runways and local area; an assurance of continued positive radar identification could place distracting and operationally inefficient requirements upon the local controller."

There is no MSAW speaker installed in the Dekalb-Peachtree tower, but rather the controller receives a visual MSAW alert that is displayed on the D-BRITE display. During an interview with Safety Board investigators, the local controller stated that he did not observe a visual MSAW alert for N3086T, because he had been involved with other duties before the accident that did not allow him to continually monitor the data block for the airplane.

On February 8, 1995, Safety Board investigators requested that the FAA provide, in writing, its policy concerning the installation of MSAW aural alarms (speakers) at low density ATC towers equipped with D-BRITE radar displays. In a June 27, 1995, written response to this question, the manager of the FAA's Air Traffic Investigations Staff, ATH-10, indicated that after coordination with three offices within the Air Traffic Service, "...it was determined that no policy exists for the operation of an aural alarm associated with MSAW in VFR towers that are not combined with full radar approach control facilities." The memorandum also stated that, "...controllers are required to comply with FAA Order [7110.65], Paragraph 2-6, Safety Alerts. Once a controller observes and recognizes such an unsafe situation, safety alerts become first duty priority."

The Safety Board believes that the responsibilities of local controllers in VFR terminal facilities are unique in that they do not provide radar services to aircraft, but rather visually scan the movement and traffic area. Because they focus on seeing the aircraft rather than scanning a radar display, they may not observe a visual alert displayed on the radar screen indicating an aircraft's unsafe condition that would elicit their intervention and action. However, the Safety Board believes that an aural MSAW alert would more likely attract a local controller's attention because of the reduced operating environment of the tower cab and the narrower traffic focus which would facilitate a quicker response should an unsafe situation arise.

The Safety Board believes that both MSAW aural and visual warnings should be generated at all VFR terminal facilities that receive radar information from a host radar control facility. While the Safety Board is aware that an unsafe condition must first be observed and

¹D-BRITE - digital bright radar indicator tower equipment

recognized before it can be acted upon, it also believes that the available lead time to react to an unsafe situation would be increased through the use of an aural warning system.

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

Within 90 days from the receipt of this letter, develop a policy that would require the installation of aural minimum safe altitude warning (MSAW) equipment in those visual flight rules terminal facilities that receive radar information from a host radar control facility and would otherwise receive only a visual MSAW alert (Class II, Priority Action) (A-95-120)

Chairman HALL, Vice Chairman FRANCIS, and Members HAMMERSCHMIDT and GOGLIA concurred in this recommendation.

By: 
Jim Hall
Chairman