

102# 1996



National Transportation Safety Board

Washington, D.C. 20594
Safety Recommendation

Date: August 7, 1987

In reply refer to: A-87-90

Honorable T. Allan McArtor
Administrator
Federal Aviation Administration
Washington, D.C. 20591

On November 6, 1986, a Piper PA-23 Apache, N2185P, was cleared for an instrument landing system (ILS) approach to runway 36L at Tampa International Airport, Florida. The pilot was unable to land during his first approach. On the second approach, the Apache touched down on taxiway W, parallel to and about 406 feet to the right (east) of runway 36L. At the same time, a Pan American Boeing B-727 was proceeding southbound on taxiway W. When the captain of the B-727 saw the Apache emerge from the fog directly ahead of him, he turned to the right in an attempt to avoid the impending collision. About 2 seconds later, the Apache's left engine struck the B-727 in the radome. Two passengers and a flight attendant were injured after they evacuated the airplane. The Apache was almost destroyed and the pilot, the sole occupant of the airplane, was killed. 1/

The only information available concerning the Apache pilot's execution of the two ILS approaches is found in the radar data recorded by Tampa Approach Control. Although the airplane was equipped with a transponder, it did not have an altitude reporting capability or an encoding altimeter. Therefore, there is no data available to determine the altitudes flown during those approaches. The course data indicate that both approaches were flown with a high degree of precision. There was normal bracketing of the localizer centerline, but no significant deviations were evident. As the two approaches progressed toward the middle marker, located 0.5 nautical mile from the end of the runway, the slight deviations decreased. Just inside the middle marker, however, at a point where the airplane should have been arriving at decision height (DH), slight excursions from the localizer were noted. On the first approach, this deviation was to the left (west) of course, and on the second approach, the airplane moved to the right (east) and lined up with taxiway W. At this point, the pilot would probably have been looking for the visual references that would have allowed him to continue the approach below DH. If those references were not immediately recognized, he should have initiated a missed approach.

1/ For more detailed information, read Aircraft Accident Report—"Piper PA-23-150, N2185P, and Pan American World Airways Boeing 727-235, N4743, Tampa, Florida, November 6, 1986" (NTSB/AAR-87/06).

Title 14 CFR 91.116 requires that at least one of the specified visual references related to the landing runway is distinctly visible and identifiable at DH and that it remains visible for the remainder of the approach. The requirement is intended to provide protection against the pilot's disorientation during the most difficult portion of the approach--the transition from instrument references to visual references that are adequate to effect a landing. The required minimum visibility for an approach procedure is based on two factors: the accuracy of the available radio navigation aids and the lighting systems installed on a given runway. The combination of DH and minimum visibility, generally referred to as landing minimums, is designed to allow a pilot to descend on instruments to a point at which visual references will allow the pilot a normal descent to landing on the intended runway. The fact that the pilot of the Piper Apache landed on the parallel taxiway indicates that he descended below DH without having any of the required visual references related to runway 36L "distinctly visible and identifiable" as specified in 14 CFR 91.116(c)(3).

Therefore, the Safety Board concludes that during his second approach, the Apache pilot intentionally descended below DH in an attempt to visually identify the runway. He inadvertently flew to the right of the ILS localizer during the time when his attention was divided between the cockpit instruments and the search for outside visual references. Whether he realized before touchdown that he was aligned with the parallel taxiway or thought he was landing on the runway cannot be determined conclusively from the existing evidence. However, the differences in width, surface color, and lighting between the taxiway and the runway should have been apparent to the pilot at some point during the flare and before touchdown, particularly since the pilot was very familiar with the Tampa airport. Therefore, the possibility exists that the pilot may have recognized shortly before touchdown that he was over the taxiway rather than the runway and that he may have accepted the situation because of a strongly perceived need to report for duty on time. The possibility also exists that he recognized his mistake at the last minute and was initiating a missed approach when the accident occurred. Lastly, he may have thought he was actually landing on the runway. Unfortunately, the evidence is insufficient to draw a conclusion on this matter.

When 14 CFR Part 91 was amended in 1981, the criteria for continuing an instrument approach below DH were clarified. The revised rule specified the visual references which allow descent below DH, and it required that those visual references be "distinctly visible and identifiable." The Safety Board believes that this accident clearly illustrates the need to reconsider this "look-see" provision of 14 CFR Part 91. This accident would not have occurred if the pilot had observed the existing regulations which prohibit descent below DH without the required visual references. However, the fact that a pilot is allowed by 14 CFR Part 91 to conduct an instrument approach when the reported visibility is less than the required landing visibility provides the opportunity to continue descent below DH for a pilot who is highly motivated to complete a landing. In this accident, the pilot was probably motivated by his perception of the importance of reporting for work on time.

The Safety Board addressed this subject in 1969 in Safety Recommendation A-69-32 and again on April 6, 1982, when it urged the Federal Aviation Administration (FAA) to:

A-82-30

Take action to amend 14 CFR 91.116 to provide that takeoffs cannot be initiated or an approach continued past the final approach fix or into the final approach segment of an instrument approach procedure unless the

latest weather report for that airport issued by the U.S. National Weather Service, a source approved by that Service, or a source approved by the Administrator, reports the visibility to be equal to or more than the visibility minimums prescribed for that procedure.

The FAA did not concur with these recommendations, and both are classified as "Closed--Unacceptable Action."

In cases where there is no weather observing facility at the airport of intended landing or where weather observations may not accurately measure the visibility at the approach end of the active runway, the "look-see" concept probably should be retained. However, when runway visual range (RVR) equipment is installed and operating, it should be considered sufficiently accurate to be the criterion for initiating an approach. The fact that an experienced, well-trained professional pilot failed to effect a successful landing emphasizes the importance of all pilots adhering to published landing minimums.

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

Amend 14 CFR 91.116 to require that, for instrument approaches to runways with operating runway visual range (RVR) equipment at the approach end, no pilot may continue an approach past the final approach fix unless the RVR is equal to or more than the minimum visibility prescribed for that approach procedure. (Class II, Priority Action) (A-87-90)

BURNETT, Chairman, and LAUBER and KOLSTAD, Members, concurred in this recommendation. Nall, Member, did not concur. GOLDMAN, Vice Chairman, did not participate.

By: 
Chairman