

Log 2121A



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Date: September 30, 1992
In reply refer to: A-92-99

Admiral J. William Kime
Commandant
U.S. Coast Guard
Washington, D.C. 20593-0001

The National Transportation Safety Board has investigated several aircraft accidents involving considerable delays in search and rescue (SAR) response. The Safety Board believes that the problems identified as a result of these investigations should be corrected to prevent unnecessary loss of life in future SAR operations. This letter is directed to the U.S. Coast Guard because it has the coordinating responsibility for the incorporation of changes to the National Search and Rescue Manual. Copies of recommendation letters sent to the Federal Aviation Administration and the U.S. Air Force regarding this issue are enclosed to ensure a more comprehensive understanding of the problem.

On May 10, 1990, N6481N, a Cessna 210N crashed at Shady Grove Corner, Virginia. SAR efforts did not locate the aircraft until 7 days after the accident. N6481N was squawking code 1200, the most frequently used visual flight rules (VFR) transponder code. Mode C was being used for altitude reporting. Considering these circumstances, one would expect that the path of the aircraft would have been relatively easy to discern via the various radar tracking capabilities near Washington, D.C. However, on the night of the accident, the Washington Air Route Traffic Control Center (ARTCC) was using a particular recorded radar data reduction computer program that could not readily identify the mode C altitude information of the code 1200 transponder returns. Therefore, each 1200 track had to be scrutinized because of the inability to eliminate aircraft tracks by altitude.

Scott Air Force Base Rescue Coordination Center (AFRCC) had received information regarding radar data from Washington ARTCC. Scott AFRCC relayed this information to the Virginia Wing of the Civil Air Patrol (CAP) about 15 hours after the aircraft was reported missing. Scott AFRCC supplied the CAP with about five radar tracks, and the location of about the last five hits of each track. (Aircraft routinely go "into" and "out of" radar contact. As an aircraft in radar contact descends, it normally "goes out of" radar contact before reaching the surface). Early in the search, aircraft had flown over the position of the last recorded radar hit of one of these tracks but did not see the wreckage because of the thick forest. No ground search was conducted in this area until 7 days after the accident when the airplane was found less than 1 mile from that last radar hit.

The Safety Board staff attended a critique of the accident's SAR operations and concluded that the CAP had not placed enough credence in the flight track information supplied by Scott AFB. The CAP had responded mainly to reports about the location of the crash from the public. The CAP then conducted airborne searches in those areas, and the Appalachian Search and Rescue conducted ground searches. However, the main search efforts should have been centered at the last radar hit of each of the flight tracks, or at the projected end of those tracks. The Safety Board believes that the various ground tracks of the code 1200 targets represented "hard" factual data. The last radar hit of each of these ground tracks should have been considered very important information. Had this technique been a part of the National Search and Rescue Manual, the Safety Board believes that the wreckage might have been found sooner than 7 days after the accident.

Therefore, the National Transportation Safety Board recommends that the U. S. Coast Guard:

Collaborate with representatives of the Scott Air Force Base Rescue Coordination Center in revising the National Search and Rescue Manual to explain that various ground tracks may exist for an aircraft that is not on a discrete transponder code; that the Rescue Coordination Center may supply the location of each of these tracks to search and rescue personnel; that there is a high probability the accident aircraft may be located near the end of one of the ground tracks; and that the area near the end of the ground tracks should be thoroughly searched. (Class II, Priority Action)(A-92-99).

Chairman VOGT, Vice Chairman COUGHLIN, and Members LAUBER, HART and HAMMERSCHMIDT concurred in this recommendation.



By: Carl W. Vogt
Chairman