

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: November 15, 1979

Forwarded to:

Honorable Langhorne M. Bond
Administrator
Federal Aviation Administration
Washington, D.C. 20591

SAFETY RECOMMENDATION(S)

A-79-86 and -87

On March 3, 1979, a Beech Travel Air, N644SE, crashed into mountains east of Elko, Nevada, killing all four persons aboard. The flight was on an instrument flight rules (IFR) flight plan and was under the control of the Salt Lake City Air Route Traffic Control Center (ARTCC). Shortly after the pilot reported to the ARTCC that he was leaving 13,000 feet for 14,000 feet, the aircraft developed problems with its left engine. The highest altitude the aircraft reached was 13,200 feet, at which point the pilot initiated a descending turn to the left. When the aircraft reached 11,600 feet, the pilot declared an emergency to Salt Lake City ARTCC and turned toward Elko, Nevada.

When the aircraft was at 10,800 feet, the controller transmitted, "...suggest you make a left turn and proceed eastbound from your position. There is a mountain range 12 o'clock and about 2 miles, ten eight on the altitude." When the controller suggested the turn, however, based on a mental correlation of terrain information from an overhead map with the display on his radar scope, the aircraft was already past the highest terrain along its projected track and the elevation of the terrain immediately ahead was between 5,000 and 6,000 feet. Nevertheless, the pilot made the turn to the left and the aircraft crashed into the mountain at the 9,400 foot level. The Safety Board believes that the controller was faced with an extremely difficult task in making a mental correlation of the two sources of information.

The Safety Board also believes that if an Emergency Obstruction Video Map, which displays contour lines and terrain elevation information, had been installed in the Salt Lake City ARTCC, the controller would have known precisely where the mountain range was located in relation to the aircraft, and hence would not have issued the suggested heading. The pilot would then have continued descent to the aircraft's single-engine service ceiling of 7,900 feet and proceeded toward Elko, Nevada.

In view of the foregoing and other accidents that it has investigated, the Safety Board believes that the use of the Emergency Obstruction Video Map, as outlined in paragraph 1481 of the Facility Management Handbook, should be expanded to include every ATC facility controlling airspace over designated mountainous areas.

Currently, this type of map is being used at the terminal radar facilities in Seattle, Washington, and Tucson, Arizona, and other terminal facilities are equipped to accommodate the addition of this feature at small cost.

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

Require all terminal facilities located in designated mountainous areas to install and use emergency obstruction video radar maps. (Class II, Priority Action) (A-79-86)

Design future ARTCC NAS Stage-A radar systems to include the capability of incorporating emergency obstruction video maps and require those facilities servicing designated mountainous areas be provided with and use the feature as the new systems are installed. (Class II, Priority Action) (A-79-87)

KING, Chairman, DRIVER, Vice Chairman, McADAMS, GOLDMAN, and BURSLEY, Members, concurred in these recommendations.


By: James B. King
Chairman