

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: November 7, 1977

Forwarded to:

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

SAFETY RECOMMENDATION(S)

A-77-69

On January 22, 1977, N999MB, a Cessna 421A, crashed in mountainous terrain about 21 nmi north of Nogales, Arizona. The pilot had received an instrument flight rules (IFR) clearance to depart Nogales and proceed to Tucson, Arizona, before proceeding west toward his destination, Fresno, California. Although the pilot initially requested a routing via a navigational fix to the northwest of the airport, he accepted the direct clearance and proceeded to the north on a straight line course from Nogales to Tucson, with an assigned altitude which did not provide adequate terrain clearance.

The flight service station specialist who relayed the IFR clearance to N999MB stated that he had expected the pilot to "fly west" and he advised the pilot to expect radar vectors after takeoff. The departure controller at Davis-Monthan RAPCON indicated that he was generally aware of a published departure procedure at Nogales (which included a northwesterly climb from the airport). However, he did not know if the pilot would fly the published departure route and, based on the IFR flight plan, believed the pilot might possibly proceed on a direct route from Nogales to Tucson. An assistant chief at the RAPCON, who had formulated the IFR clearance, stated that he expected the pilot to comply with the published departure procedure even if it was not included in the clearance, and even though it diverged from the direct route by about 12 nmi.

The Safety Board believes that this difference in understanding among the controllers and the pilot is symptomatic of inadequacies in the official procedural guidance available to controllers and pilots concerning IFR departures. Informal discussion with other controllers and officials within the FAA indicate that misunderstandings in this area extend beyond the personnel involved in this accident. The Board concludes that phraseology used in the Airman's Information Manual (AIM) to describe the use of published IFR departure procedures is unclear as

to whether the pilot should inform air traffic control of his intent to use a published IFR departure procedure (other than a SID) or whether he can fly the procedure without specific air traffic control authorization.

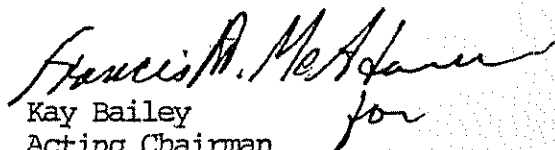
The danger inherent in this ambiguous procedural guidance has been demonstrated by this accident. The controller's belief that the pilot was flying the published IFR departure route, when in fact the pilot was following a direct course to Tucson, contributed to the controller's assignment of an altitude which did not provide the required obstacle clearance. The Safety Board believes operational procedures should build upon and be compatible with all relevant federal regulations.

In light of the foregoing, the Safety Board concludes that the ambiguities can be resolved by publication of clarifying information in an advisory circular, an exam-o-gram, revisions to the AIM and ATC Handbook 7110.65, or by some combination of these, and by inclusion of these in appropriate pilot and controller training programs.

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

Revise the Airman's Information Manual and issue or revise other official guidance materials to clarify pilots' and controllers' responsibilities in implementing an IFR departure from an airport which has a published IFR departure procedure. (Class II-Priority followup)
(A-77-69.)

BAILEY, Acting Chairman, McADAMS, HOGUE, and KING, Members, concurred in the above recommendation.

By: 
Kay Bailey
Acting Chairman