NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety

Washington, DC 20594

DCA01MA034

Air Traffic Group Factual Report of Investigation

Attachment 16 – Memos concerning TERPS 251b, 6 pages

U.S. Department of Transportation
Federal Aviation Administration

Memorandum

Subject: **INFORMATION**: NTSB Accident/Incident Request #01-050.2

Date: MAY 31 2001

From: Director, Flight Standards Service, AFS-1

Reply to Attn. of:

To: Director of Accident Investigation, AAI-1
ATTN: Manager, Recommendation and Analysis Division, AAI-200

In response to the Board's request in support of the accident involving N303GA on March 29, 2001, at the Aspen-Pitkin Airport in Aspen, Colorado, the following is provided:

1. "From AVN and/or AFS: Any waivers or other documentation of mitigating factors relating to application of TERPS paragraph 251b to Aspen VOR/DME-C procedure."

   Paragraph 251b was one of several paragraphs included in TERPS Change 17. This paragraph brought about new obstacle clearance standards for the nonprecision approach visual segment transition to landing. Included in paragraph 251b was a provision for denial of night minimums to the affected runway where penetrations of the 20:1 surface existed.

   AVN-100 began implementation of the revised TERPS criteria, and immediately had an operational setback in Alaska where total denial of a procedure at night occurred due to 24-hour darkness prevalent at the time. In response to this situation, AFS-420 then issued an action memo, subject: Denial of Night Minimums for 20:1 Penetrations dated October 26, 1998, which instructed AVN-100 to not apply the paragraph which denied night minimums. It also informed AVN-100 that instead AFS would develop a time-phase-in implementation plan for handling such penetrations.

   After considerable coordination between AFS and AAS to determine airport funding and budget limitations, on July 26, 1999, we issued an action memorandum providing implementation policy for Change 17 to TERPS. This memo canceled the October 26, 1998, memo and promulgated the time-phase-in implementation of Change 17 to include paragraph 251b(2)(c).

   Basically, implementation allowed for AVN-100 to review all existing procedures, on a stipulated priority basis, to determine the operational impact of paragraph 251 at each airport. AVN was to notify respective airport managers where implementation of

paragraph 251 would result in curtailment or loss of operational capability. It then allowed for a joint extension by AFS and Airport Safety and Standards in that each airport manager had 3 years from the date of notification to obtain adequate data for evaluation, and alleviate the conditions requiring operational restrictions. At the end of those 3 years, AVN-100 would fully implement paragraph 251 for that airport.

2. "From AVN or AFS: Any guidance (other than AIM 5-1-8) for procedure design or operation on approaches with high MDA."

No specific design criteria or policy has been developed addressing approaches with high MDA. Indirectly, however, high MDA procedures are accommodated by TERPS. Current criteria provides that, when high descent gradient requirements exist in the final segment, circling MDA must be set to a higher value in order to control the required final descent gradient to a value not to exceed 400 feet per nautical mile. This action then permits publication of circling landing minima where otherwise no approach could be authorized.

If we can be of further assistance, please let us know.

for [redacted]
Nicholas A. Sabatini

Subject: ACTION: Policy for Implementation of FAA Order 8260.3B, United States Standard for Terminal Instrument Procedures (TERPS), Change 17

Date: JUL 26 1999

Reply to Attn. of:

From: Director, Flight Standards Service, AFS-1

To: Director, Office of Airport Safety and Standards, AAS-1
Director, Airway Facilities Service, AAF-1

The Federal Aviation Administration and Flight Standards Service strategic goals emphasize increasing flight safety as a major objective. With Change 17 to FAA Order 8260.3, we have implemented new obstacle clearance standards for the nonprecision approach visual segment transition to landing. Based on discussions with representatives of your office, it is our understanding that these new standards will require a phase-in implementation to meet your requirements. To achieve this phase-in schedule, we are canceling the application of AFS-420 Action Memorandum of October 26, 1998, Denial of Night Minimums for 20:1 Penetrations, and providing the revised schedule for TERPS Change 17 implementation as an attachment to this letter.

Please address any questions to Norman LeFevre, Flight Procedure Standards Branch, AFS-420, at (405) 954-4164.

Original Signed By:
L. Nicholas Lacey

L. Nicholas Lacey

Attachment

cc: AVN-100
AAS-100
AFS-200/400/410/420/800
File: 1320-3
WP: S:\AFS-420\ImpCh17.do-

CONCURRENCES	
ROUTING SYMBOL	NLeFevre
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DATE	7/15/99
ROUTING SYMBOL	AFS-3
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DATE	7-23-99
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AFS-420:NLeFevre:dc:405-954-4164:6/29/99

Policy for Implementation of FAA Order 8260.3B, United States Standard for Terminal Instrument Procedures (TERPS), Change 17, Paragraphs 251 and 980

The new paragraph 251 requires a visual area evaluation for obstructions; penetrating obstructions may cause an increase in visibility minimums and loss of nighttime minimums.

a. The National Flight Procedures Office, AVN-100, shall review all existing procedures to determine the operational impact of paragraph 251 at each airport. The review is to be completed by June 30, 2002. The desired order of priority for review is:

(1) Title 14 CFR Part 139 airports.

(2) Airports with runways at least 5000 feet long.

(3) All other airports.

b. AVN-100 shall determine whether there is adequate data, such as an obstruction chart, Air Navigation Approach survey, or equivalent, to perform the evaluation. If any runway lacks sufficient data for the evaluation, the adverse assumption is that penetrations to the visual area evaluation surface exist.

c. As each airport is evaluated, AVN-100 shall formally notify the airport manager if the application of paragraph 251 will result in curtailment or loss of operational capability, or if insufficient data was available for proper evaluation and the result of adverse assumption.

d. Unless an extension is jointly granted by Flight Standards Service and the Office of Airport Safety and Standards, each airport manager notified will have three years from the date of notification to obtain adequate data for the evaluation, and alleviate the conditions requiring operational restrictions. At the end of three years, AVN-100 shall fully implement paragraph 251 for that airport.

Paragraph 980 now stipulates a maximum threshold crossing height (TCH) of 60 feet for Category I (CAT I) instrument landing system (ILS) approach procedures, this criteria must be held in abeyance until FAA's flight inspection fleet is fitted with updated software for measuring TCH.

a. AVN-200 is in the process of updating software for the automated flight inspection system. In conjunction with implementation of the software they will begin using achieved

reference datum height instead of reference datum height as the measure of TCH. This will change reported values of TCH. Therefore it would be imprudent to begin enforcing the 60-foot maximum TCH at this time.

b. Except for new procedures, hold in abeyance the 60-foot maximum TCH criteria found in paragraph 980 of TERPS until the AVN flight inspection fleet is fitted with the new software. At that time we will provide guidance to begin implementing the 60-foot maximum TCH criteria for CAT I ILS procedures.