

GOVERNMENT/INDUSTRY AERONAUTICAL CHARTING FORUM
Instrument Procedures Group
May 1, 2007
HISTORY RECORD

FAA Control # 07-01-270

Subject: Course Change Limitation Notes on SIAPs

Background/Discussion: For several years the NFPO has included procedural data notes at both feeder fixes and IAFs where course change in excess of 120 degrees could change arriving along an airway or pertinent approach segments. This is in accordance with the TERPs criteria contained in 8260.3B, Paragraphs 220b (feeders) and 232a.(1) (initial segments). Recently, AFS-420 advised the NFPO that 8260.19C policy permits such notes only at IAFs.

NBAA did an ad hoc search and found 40 SIAPs in the Western U.S. with the applicable note at feeder fixes. It is reasonable to extrapolate that some 200 SIAPs throughout the U.S. have such notes at a feeder fix.

The NFPO practice appears to be in accordance with the two above-mentioned TERPS criteria. The question becomes: should policy require charting such notes because the criteria have a design limitation for both feeder and initial approach segments? The statement in Paragraph 220b does not seem to be concerned with the airway case.

Nonetheless, the NFPO has promulgated a lot of charts with the note pertaining to airways. To change the practice now to chart only at IAFs will serve to further confuse the aviation community

Recommendations: NBAA believes one of two actions should be taken to provide consistency and resolve this issue:

1. Remove all such notes for both feeder fixes and IAFs, and advise the aviation community via the AIM of the issues involved with large course changes from airways to SIAPs.
2. Or, continue NFPO's practice of the past several years and amend policy accordingly to conform to practice.

If Option #1 is decided upon, all such notes should be removed by P-NOTAMS simultaneous so as to minimize having inconsistent charts in pilot manuals.

Comments: This recommendation affects policy set forth in 8260.19C, "Flight Procedures and Airspace".

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Initial Discussion Meeting 07-01: New Issue presented by Rich Boll, NBAA, expressing concern over procedural data notes at both feeder fixes and IAFs where course changes in excess of 120 degrees could alter arrival procedures along an airway or pertinent approach segments. The NFPO has included these notes for years and they are in consonance with the TERPs criteria contained in paragraphs 220b (feeder routes) and 232a(1) (initial segments). Recently, AFS-420 advised the NFPO that Order 8260.19C policy permits such notes only at IAFs. NBAA questions whether policy should require charting such notes because the criteria have a design limitation for both feeder and initial approach segments? The statement in Paragraph 220b does not seem to be concerned with the airway case. Wally Roberts, NBAA, questioned why we have these notes at all. Perhaps a better methodology would be to eliminate the notes and update the AIM and IPH. Brad Rush, AJW-321, echoed Wally's sentiments and also recommended doing away with these notes. Tom Schneider, AFS-420, stated that turns in the en route environment from one en route fix to another are TERPS protected; therefore, perhaps turns from feeder routes to IAFs are also protected. He took the IOU to present the issue to the AFS-420 TERPS criteria writers for resolution. **ACTION: AFS-420.**

MEETING 07-02: Tom Schneider, AFS-420, briefed that this issue is still under discussion within AFS-420. Feeder fix protection is still under review and en route criterion is being assessed to see whether it covers the issue. **ACTION: AFS-420.**

MEETING 08-01: Tom Schneider, AFS-420, briefed the following input as received from Jack Corman, the AFS-420 lead criteria specialist: "Current TERPS criteria has supported the conventional airway/feeder route connections in the past and Notes are not currently "required". This may change when reviewed for a future TERPS change. In the current work plans, this is low priority and the issue will be addressed through the USIFPP. AFS-420 will monitor progress through the USIFPP. **ACTION: AFS-420.**

MEETING 08-02: Tom Schneider, AFS-420, briefed that after the last meeting, he forwarded the issue to the USIFPP. The following update from Jack Corman, Executive Director of the US-IFPP, is provided: "The US-IFPP is currently working on TERPS Change 21, FAA Order 8260.52A, and AC 90-RNP. Current staffing levels and national program initiatives that are afforded priorities will probably place changes to TERPS Chapters 15 & 17 in the 2009/2010 time frame." AFS-420 will continue to monitor progress through the USIFPP. **ACTION: AFS-420.**

MEETING 09-01: Tom Schneider, AFS-420, briefed that he forwarded the issue to the US-IFPP Chair on August 22, 2008. As stated at meeting 08-02, changes to TERPS Volume 1, Chapters 15 & 17, will not occur until at least the 2010 time frame and possibly later. Jack Corman, AFS-420, Executive Director of the US-IFPP stated that workload and staffing levels prevent more timely accommodation of this request and suggested tabling this agenda item until late 2010. AFS-420 will address the issue when workload and resources permit. **ACTION: AFS-420.**

MEETING 09-02: Tom Schneider, AFS-420, briefed that there is no change in status for this issue. As noted at previous meetings, Jack Corman, AFS-420, Executive Director of the US-IFPP stated that due to workload and staffing levels, changes to TERPS Volume 1 Chapters 15 and 17 will not occur until at least the 2010 time frame. **ACTION: AFS-420.**

MEETING 10-01: Tom Schneider, AFS-420, briefed the following update as received from Jack Corman, AFS-420 and Executive Director of the US-IFPP: "Initial studies indicate that turns should be limited to an absolute maximum of 120 degrees, with a recommended maximum of 90 degrees. That said, it appears that simply adding a turn limitation may not be sufficient to address the entire problem. Inside turn protection may also need to be expanded. If that is the case, a notice may be necessary as an interim measure before the TERPS document can be updated. This is #2 or #3 in priority in the queue of changes behind current work in progress." **ACTION: AFS-420 (US-IFPP).**

MEETING 10-02: Tom Schneider, AFS-420, presented the following update from T.J. Nichols, AFS-420 conventional TERPS criteria specialist: "No immediate action is planned. Expect course change limitations to be addressed in an early change to Order 8260.3 "C" revision." **ACTION: AFS-420 (US-IFPP)**

MEETING 11-01: Tom Schneider, AFS-420, presented the following update from T.J. Nichols, the AFS-420 conventional TERPS criteria specialist: "The issue has been discussed at the US-IFPP and draft Order 8260.3C includes the following text: "The angle of intersection between a feeder route course and the enroute structure must not exceed 120 degrees. The angle of intersection between a feeder route course and the next segment (feeder/initial) course must not exceed 120 degrees except when connecting to a course reversal segment." A US-IFPP working group for 8260.3C will be convened in May/June 2011 to begin the directive change process." Brad Rush, AJV-3B, pointed out that the criteria for RNAV procedures is 90 degrees. Tom stated the criteria is not final and is still open through the US-IFPP. **ACTION: AFS-420 (US-IFPP)**

MEETING 11-02: Tom Schneider, AFS-420, presented the following update from T.J. Nichols, the AFS-420 conventional TERPS criteria specialist: "A US-IFPP working group for 8260.3C was convened in July 2011. Revisions to Draft 8260.3C to incorporate the working group recommendations is in progress. The Working Group discussion focused on differences between RNAV and conventional turn limitations and whether RNAV substitution on conventional routes needed to be considered. AJV-3 participants expressed strong reservations about imposing RNAV restrictions on conventional procedures. The AFS-420 participant acknowledged the concerns, but emphasized that criteria needs to distinguish between RNAV and conventional. The most current draft of the proposed criteria for what will become Volume 1, paragraph 2-20a now reads:

a. Alignment.

(1) General. When the feeder route or portion of the feeder route meets "no-procedure turn" (NoPT) initial segment descent/alignment standards and is suitable for terminal operations, consider developing as a NoPT initial segment instead (See paragraph 2-30).

When connecting to a course reversal segment, the area considered for obstacle evaluation is oriented along the feeder route at a width appropriate to the type of route; e.g., VOR, NDB, or RNAV. The area terminates at the course reversal fix, and is defined by a line perpendicular to the feeder course through the course reversal fix.

(2) Routes based on Conventional ground-based NAVAIDs. The angle of intersection between the feeder route course and the en route structure must not exceed 120 degrees. The angle of intersection between a feeder route course and the next segment (feeder/initial) course must not exceed 120 degrees except when connecting to a course reversal segment.

(3) RNAV routes. Apply current Performance-Based Navigation (PBN) standards.

Rick Dunham, AFS-420, briefed that the re-write of Order 8260.3C (TERPS) is approximately 80% complete. Brad Rush, AJV-3, re-stated the AeroNav Products concern over two standards; i.e., RNAV is restricted to 90 degrees, whereas conventional criterion allows 120 degrees. The issue will continue to be worked through the US-IFPP.

ACTION: AFS-420 (US-IFPP)

MEETING 12-01: Tom Schneider, AFS-420, briefed that the issue was discussed at the US-IFPP meeting on April 12, 2012. Rather than waiting for 8260.3C, the change as briefed at the last ACF-IPG will be included in Change 26 to Order 8260.3B. AFS-420 will continue to track the issue until published. **ACTION: AFS-420.**

MEETING 12-02: Tom Schneider, AFS-420, briefed that the US-IFPP stated that it no longer needed to track the progress on this topic since a resolution has been established and revised criteria have been incorporated into draft Change 26 to Order 8260.3B (TERPS). Therefore, it will be dropped from future US-IFPP tracking. Rick Dunham, Manager, AFS-420, briefed that Change 26 is in internal FAA coordination and should be released for formal external coordination next week. AFS-420 will monitor the issue until Change 26 has been published and keep the ACF apprised of progress.

ACTION: AFS-420.

MEETING 13-01: Tom Schneider, AFS-420, briefed the following update as received from John Bordy, the AFS-420 conventional TERPS criteria specialist: "Updated feeder route criteria have been included in Change 26 to Order 8260.3 (TERPS). Change 26 has been sent out for formal coordination with publication targeted for September, 2013." AFS-420 will continue to track TERPS Change 26. **ACTION: AFS-420.**

MEETING 13-02: Tom Schneider, AFS-420, briefed that John Bordy, the AFS-420 conventional TERPS criteria specialist, provided an update stating TERPS Change 26 has been delayed due to AeroNav Products request to incorporate additional policy memorandums which will drive re-coordination. Expected publication is now August 2014. . Brad Rush, AJV-3B, asked when

Change 26 would be circulated for comment. Tom Schneider, AFS-420, responded "soon" and then provided a target tracking synopsis of all Flight Standards publications that are currently under revision. Bob Lamond, NBAA, asked whether a copy of the synopsis could be posted and maintained on-line. Bruce DeCleene, AFS-400, responded yes, and added that Flight Standards is in the process of updating all of its schedules internally, and one initiative is to increase public visibility of AFS orders. AFS-420 to track TERPS Change 26. **ACTION: AFS-420.**

MEETING 14-01: Tom Schneider, AFS-420, advised TERPs criteria portion has been revised in Change 26, which has been published. The only item remaining now is the Order 8260.19 guidance change needed to incorporate feeder routes. This will be incorporated into the next revision.

Status: AFS-420 to track Order 8260.19 update. **Item Open (AFS-420).**

MEETING 14-02: Tom Schneider, AFS-420, briefed updates are in the draft FAA Order 8260.19G, which is out soon for coordination, and planned for March 5, 2015 publication. The paragraph 8-2-5e will read as follows: (P) John Collins, GA pilot, asked whether RNAV approach procedure feeders within 30NM are RNAV 1 or 2. Brad Rush, AJV-344, advised RNAV 1 & 2 standards are used in the development of procedures, but as a pilot your operating standard for Nav specifications is RNAV 1. John said when operating on feeder routes the system scales from 2 to 1 at 30NM. Valerie Watson, AJV-344, inquired if this is not always en route criteria. John agreed and will research the issue and write up a formal RD for the next ACF if necessary.

Status: AFS-420 to track Order 8260.19G update. John Collins will research the issue and address at next ACF as need be. **Item Open: AFS-420 and John Collins.**

MEETING 15-01: Tom Schneider, AFS-420, provided a slide (P) showing language in draft Order 8260.19G (same as last ACF); all formal coordination comments relating to the order have been received and are being mitigated. John Collins stated his concern is not with vertical ROC, rather his concern is with lateral ROC on RNAV segments at more than 30 NM from the airport (P) since there is a difference from en route sensitivity. He questions if en route obstacle clearance applies to feeder routes for RNAV (as it does for ground based). Tom advised the system used on the approach (conventional vs. RNAV) will evaluate accordingly. John questioned the scaling at 30nm.

Status: Tom took IOU to bring issue back to AFS-420. **Item Open: AFS-420**

MEETING 15-02: Tom Schneider, AFS-420, advised that a change will be made to FAA Order 8260.19H, removing the sentence in para 8-2-5.e regarding enroute obstacle clearance criteria applied to feeder routes. John Collins, GA pilot, agreed to close issue.

Status: Item Closed.