

**AERONAUTICAL CHARTING FORUM**  
**Charting Group**  
**Instrument Procedures Group**

**ACF Meeting 11-01**

**RECOMMENDATION DOCUMENT**

**FAA CONTROL \_\_11-01-241\_\_\_\_\_**

**SUBJECT: Discontinuation of VOR Service and Associated Airways**

**BACKGROUND/DISCUSSION:** To meet needs for performance based navigation (PBN) and required navigation performance (RNP) for capacity, efficiency and safety area navigation (RNAV) is being implemented in the airspace of the United States. The FAA will transition to PBN based on area navigation RNAV everywhere and RNP where beneficial, enabled by Global Positioning System (GPS) as the primary means and DME/DME/IRU as an initial Alternate to ensure safety and continuous operations in the high altitudes and major terminal areas if GPS becomes unavailable.

VOR service can not meet the needs for RNAV and PBN in most situations. Therefore, the FAA is beginning to discontinue VOR service from facilities in CONUS and intends to have a minimum network in place in 2020. This discontinuation of VOR service will affect approximately half of all VORs in CONUS. Remaining facilities will be used for terminal and enroute functions and reviewed for discontinuation at a later date to move to a totally RNAV airspace system.

Existing Victor Airways and Jet Routes will be replaced by T routes (low altitude) and Q routes (high altitude) and terminal and approach procedures will be RNAV based.

**RECOMMENDATION:**

1. The proposed rulemaking action with associated collection and response to comments is sufficient for this discontinuation of service. No formal rulemaking action will be needed for the discontinuation of service from each VOR facility, each airway or airway segment or for each procedure. These will be handled through the informal process used for Part 71 and Part 73 or the non-rulemaking circularization for technical changes in accordance with JO 7400.2H.

2. The following questions in aeronautical charting and flight procedures should be answered:

- a. Should VORs be discontinued to remove whole Jet routes /Victor airways or should individual facilities be removed that will allow the airways to continue as

is, possibly with minor rerouting? If airways are to be kept as long as possible what would the impact be on airspace design/redesign and charting?

- b. Should Q and T routes be designed and implemented to replace Jet routes/ Victor airways before the VORs describing those routes are discontinued? Should the Q or T route replacing the Jet or Victor be overlaid on those airways/routes and as the VOR service is discontinued the route turns into a Q or T route?
- c. When VORs are discontinued such that Victor airways or Jet routes can not be maintained should aircraft not capable of RNAV operation be cleared directly from one VOR to another?
- d. For discontinuing VORs supporting terminal procedures (SIDs, STARs, SIAPs) what should the priority order be? Should service be discontinued such that arrivals, departures and approaches are maintained for each direction though not on all runways, then one direction removed and eventually all removed leaving only RNAV based procedures?

COMMENT:

SUBMITTED BY: Kenneth Ward

ORGANIZATION: AJW-911 Navigation Services System Engineering and Requirements Group

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**MEETING 11-01:** Mr. Kenneth Ward, FAA/AJW-911, submitted and briefed the issue. Mr. Ward gave an overall review of the FAA's intention to move from the current ground-based means of navigation to the FAA's NextGen, which is GPS/RNAV/RNP/PBN-based navigation. In meeting the goals of NextGen and future funding challenges, the FAA is in the early stages of planning the shut down of approximately half of all the VORs within CONUS. VORs within Alaska, Hawaii and Puerto Rico would remain. The FAA's goal is to have designated VORs shut down by 2020, with a minimum VOR network remaining in place.

Mr. John Moore, FAA/AJV-3B, stated that this was a subject that will generate a wide and varied level of interest from the aviation community and one that would have a future impact on charting, As such, he would like the ACF to be provided updates to the briefing given by Mr. Ward. Mr. Moore suggested that Mr. Ward

coordinate, as appropriate, with members of the ACF to establish a working group to address the development of the implementation plan.

It was proposed that this RD be closed and moved to an item for regular briefing at future ACFs as the implementation plan evolves.

**STATUS: CLOSED**

**ACTION:** Mr. Ken Ward, FAA/AJW-911, will chair a Working Group, established with the following members, to discuss the developing implementation plan and brief the ACF as appropriate:

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