



**Twenty Second Meeting of the  
Informal South Pacific ATS Co-ordinating Group (ISPACG/22)**

Papeete, Tahiti, 10 March 2008

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Agenda Item 4: Review Progress on Open Action Items  
AI 20-2

**Planned Changes to ATS Routes in the  
Oakland Flight Information Region and Oceanic Control Area Boundaries**

(Presented by the Federal Aviation Administration)

**SUMMARY**

This working paper provides background on the Federal Aviation Administration (FAA) intent to realign Air Traffic Service (ATS) routes in the vicinity of Hawaii.

**1. Introduction**

- 1.1 In support of the International Civil Aviation Organization's (ICAO) efforts to reduce operator costs and ecological impacts due to aircraft engine emissions, the FAA has re-evaluated the current ATS route and airspace structure in the vicinity of Hawaii.
- 1.2 The ATS route structure in the Oakland Flight Information Region (FIR) was designed to provide the most efficient movement of air traffic through the airspace utilizing a 100 nautical mile (NM) lateral separation standard.
- 1.3 With the advent of Required Navigational Performance (RNP) operations and the Ocean21 air traffic control automation system, the evaluation indicated that the realignment of the airways around Hawaii will increase efficiency.
- 1.4 Initial discussion with adjacent South Pacific Air Navigation Service Providers (ANSPs) regarding changes to ATS routes south of Hawaii resulted in a request for Oakland Center to investigate the mileage savings if the routes were realigned with the existing FIR boundary points. A subsequent assessment revealed that most of the mileage savings could be realized by realigning the routes within the Oakland FIR. Additional savings may be realized from continuing the realignment through adjacent FIRs.
- 1.5 A review of the Honolulu Control Facility (HCF) airspace revealed that there was a significant amount of non-radar airspace within the current boundary. This non-radar airspace prevents the use of automatic dependent surveillance (ADS) distance-based separation between aircraft entering HCF airspace, further reducing efficiency. Therefore, as part of the Hawaiian ATS route revisions, the HCF boundary will be realigned to be completely within radar coverage. With this adjustment, there will no

longer be a need to discontinue ADS distance-based separation standards between aircraft entering HCF airspace and outbound flights will be more likely to receive initial requested altitudes.

- 1.6 An additional inefficiency was discovered northwest of Hawaii. When the westbound Pacific Oceanic Track System (PACOTS) routes (Tracks A & B) are generated with the Warning Area airspace active, the Fifteen Degree Divergence rule is used. To get fifteen degrees of divergence between PACOTS Tracks A and B the tracks start at a point inside HCF airspace and diverge to 170W. In order to maintain the 15 degrees divergence until 170W, the PACOTS routes are forced to be 180 NM or more apart at 170W. This causes the PACOTS routes to be in a less favorable location. Waypoints along the western portion of the new HCF boundary will allow for more efficient PACOTS generation.
- 1.7 Waypoints along the Central East Pacific (CEP) ATS routes are not equally spaced. This makes it more difficult to validate incorrect aircraft estimates. Additionally, the distances between some compulsory reporting points in the CEP are such that the time between reporting points routinely exceeds the 80 minute reporting requirement. Non-compulsory reporting points have also created confusion amongst pilots as to which waypoints should be reported. The CEP waypoints will be revised to improve the safety and efficiency of the routes. The Oceanic Control Boundary waypoints off the California coast will remain unchanged. The waypoints on the HCF/ZOA boundary will move west to coincide with the new boundary. The CEP ATS route locations will remain unchanged with one minor exception. The start point for R585 will move approximately 100 NM west.

## **2. ATS Route Changes**

- 2.1 The changes to ATS routes (moving clockwise around the HCF boundary) are proposed as follow:
  - A331 will have waypoints placed along the existing route.
  - A332 will be a great circle route beginning at the new HCF boundary waypoint AUNTI and terminating at the Seattle OCB waypoint HEMLO. This will provide a savings of 7 NM.
  - R463 through R465 will be defined by fewer waypoints, all of which are compulsory. The routes themselves have not been moved.
  - R585 will be realigned to begin at new waypoint CIVIT on R465 and terminate at AUDIA on the Los Angeles OCB. The change is relatively minor and will shorten the route by 0.843 NM.
  - R576 through R578 will be defined by fewer waypoints, all of which are compulsory. The routes themselves have not been moved.
  - B595 and B596 will have new waypoints positioned along the existing routes TENOR on the Tahiti FIR boundary and RAMIZ on the Auckland FIR boundary.
  - G457 will be straightened from within HCF airspace to ELLMS on the Auckland FIR boundary. This will provide a savings of 17 NM.

- G347 will be straightened from within HCF airspace to DUNEY on the Auckland FIR boundary. This will provide a savings of 26 NM.
- A579 will have new waypoints positioned along the existing route to CUFFY on the Nadi FIR boundary.
- B580 will be straightened from within HCF airspace to BOILS on the Nadi FIR boundary. This will provide a savings of 16NM.
- B474 will be straightened from within HCF airspace to ARTOP on the Nadi FIR boundary. This will provide a savings of 24NM.
- B326 will have new waypoints positioned along the existing route to NIXAM on the Nadi FIR boundary.
- R584 will have new waypoints positioned along the existing route to MAZZA.

2.2 The publication date for these changes is April 10, 2008

2.3 FAA will be responsible for completing the necessary ICAO coordination.

### **3. ACTION BY THE MEETING**

3.1 The meeting is invited to note and discuss the information presented in this paper.