Twenty Fifth Meeting of the
Informal South Pacific ATS Co-ordinating Group (ISPACG/25)

Honolulu, Hawaii, USA, 24-25 March 2011

Agenda Item 4: Review Open Action Items (AI 17-12)

PACIFIC ISLAND DELAY MITIGATION

Presented by the Federal Aviation Administration

SUMMARY

This information paper provides information of the initial steps being taken to mitigate departure and arrival delays at various island airports.

1. INTRODUCTION

1.1. The popularity of several island airport destinations, such as PTRO, PKMJ, and PKWA has prompted the development of procedures that would reduce departure and arrival delays.

1.2. The infrastructure at these island airports is limited. Although most of the islands have a non-directional (radio) beacon (NDB) and Distance Measuring Equipment (DME) associated with the main airport, some are reported as unserviceable for extended periods, while others are slated for decommissioning. Additionally, most modern aircraft are not equipped with an automatic direction finder (ADF) receiver and therefore cannot utilize the NDB as a navigation aid.

2. DISCUSSION

2.1. Separation methods available to controllers for island airport departures and arrivals are limited to dead reckoning and basic area navigation (RNAV) operations.

2.2. Dead reckoning separation can require extensive work by the controller to establish the criteria necessary to utilize the procedure. Normally, conditions are such that the dead reckoning option is not feasible; e.g. aircraft are on opposite-direction courses.

2.3. RNAV operations also require controllers to establish conflicting aircraft on tracks that provide the basis for application of the procedure.

2.4. In March 2011, waypoints were published for use by controllers to clear aircraft onto tracks to/from various island airports that would help de-conflict opposite direction traffic scenarios. This allows for reduced departure delays when inbound traffic is a factor. In conjunction with the dead-reckoning separation method, delays may be

further reduced. This is still a labor intensive process, requiring multiple clearances to, and reports from, aircraft in order to provide for safe and efficient flow of departing/arriving aircraft.

2.5. The use of global navigation satellite systems (GNSS) in aircraft is becoming increasingly common. There is a reduced separation standard applicable to GNSS operations being developed; however, direct pilot/controller very high frequency (VHF) communications will be required. The installation of VHF transceivers for air traffic control (ATC) communications at select island locations is under review.

2.6. It is envisioned that ADS-B surveillance and separation procedures at the island airports would be a good alternative for reduction of ATC-initiated departure and arrival delays. An added benefit would be an increased level of safety by providing positive surveillance of controlled aircraft. In order to provide this level of service, both an ADS-B ground station and VHF transceiver would be required. A cost benefit analysis is being developed at this time to support the acquisition and installation of this equipment.

3. ACTION BY THE MEETING

3.1. The meeting is invited to:

a) Note the information in this paper.

b) Provide comments and suggestions for additional methods of increasing ATC efficiencies at the island airports.