Part 150: Records of Approval

Guam International Airport, Guam

Approved on 11/14/03

INTRODUCTION

The Guam International Airport, Tamuning, Guam, Noise Compatibility Program (NCP) describes the current and future noncompatible land uses based upon the parameters established in Federal Aviation Regulation (FAR) Part 150, *Airport Noise Compatibility Planning*. This is the first NCP prepared for the airport. The program recommends a total of twenty-eight measures to prevent the introduction of additional noncompatible land uses and to reduce the effect of the noise generated at the airport. The recommendations include seventeen noise abatement measures, and eleven land use measures (eight preventative and three remedial measures). The recommended program measures are listed summarized in Chapter 8 and described in more detail on Pages 6-1 through 7-5 of the NCP.

The measures are identified below by program element and referenced to the NCP by page number. Each element summarizes as closely as possible the airport operator's recommendations as found in the NCP. The statements contained within the summarized recommendations and before the indicated FAA approval, disapproval, or other determinations do not represent the opinions or decisions of the FAA.

The approvals listed herein include approvals of actions that the A.B. Won Pat Guam International Airport Authority (GIAA) recommends be taken by the Federal Aviation Administration (FAA). It should be noted that these approvals indicate only that the actions would, if implemented, be consistent with the purposes of the Part 150. These approvals do not constitute decisions to implement the actions. These approvals do not constitute a commitment by the FAA to provide federal financial assistance for these projects. Later decisions concerning possible implementation of the actions may be subject to applicable environmental or other procedures or requirements.

1 - NOISE ABATEMENT ELEMENT

1. Noise Abatement Flight Tracks. Establish new flight tracks or modify existing flight tracks to concentrate aircraft overflights over areas with relatively few noise sensitive land uses. (Page 6-2)

Description: This measure recommends the establishment of new flight tracks or modifying existing flight tracks to concentrate aircraft overflights over areas with relatively few noise sensitive land uses.

FAA Action: DISAPPROVED for the purposes of Part 150 pending submission of additional information. While the concept of flight tracks over non-noise sensitive areas intuitively would be noise beneficial, no specific tracks are presented in the NCP. Additional review by FAA also would be necessary to evaluate the operational safety and feasibility of new flight tracks. The measure also should provide data regarding its noise benefits. Benefits that

cannot be quantified by changes in the DNL noise contour should be quantified through the use of supplemental metrics and analysis.

2. Standard Instrument Departure Procedures. Establish procedure that requires aircraft to follow a Standard Instrument Departure (SID) in all weather conditions, including Visual Flight Rules (VFR) conditions. SID's normally include departure headings and altitudes to be followed. (Page 6-3)

Description: This measure recommends establishing procedures that would require aircraft to follow a Standard Instrument Departure (SID) in all weather conditions, including Visual Flight Rules (VFR) conditions. SID's normally include departure headings and altitudes to be followed. This procedure provides a means of implementing noise abatement flight tracks for departures.

FAA Action: DISAPPROVED for the purposes of Part 150 pending submission of additional information. While the concept of noise abatement SIDs intuitively would provide noise benefits, no specific procedures are presented in the NCP. Additional review by FAA also would be necessary to evaluate the measure's operational safety and feasibility. The measure also should provide data regarding its noise benefits. Benefits that cannot be quantified by changes in the DNL noise contour should be quantified through the use of supplemental metrics and analysis.

3. Delayed Flap and Gear Extension Approaches. Continue voluntary procedure that arriving aircraft delay lowering flaps and landing gear until closer to the airport. (Page 6-6)

Description: This measure recommends continuation of the voluntary procedure that arriving aircraft delay lowering flaps and landing gear until closer to the airport. The lower thrust settings used for the portion of the approach beyond three miles from the airport would reduce single-event noise levels by 2 – 4 dBA. Some operators, to reduce fuel consumption and noise, currently use this procedure.

FAA Action: DISAPPROVED for the purposes of Part 150 pending submission of additional information. The techniques used to determine the noise benefits of changes in approach settings are still under study in the U.S. Disapproval of this measure under Part 150, due to lack of information to determine the noise benefits, does not prevent aircraft operators from using alternate approach settings on a voluntary basis as described in the NCP.

4. Restriction on Visual Approaches. Restriction on the use of visual approaches during VFR conditions. (Page 6-8)

Description: This measure recommends Air Traffic restrict the use of visual approaches during VFR conditions. Limitations on visual approaches may reduce noise exposure by concentrating low altitude aircraft overflights in compatible land use corridors along the runway centerlines.

FAA Action: DISAPPROVED for the purposes of Part 150 pending submission of additional information. Additional information is required by the FAA to determine the numbers of people or homes expected to receive the quantified noise reduction benefit from this measure. Limitations of visual approaches may, in some cases, increase noise rather than decrease noise, in noise sensitive areas.

5. Close-in Noise Abatement Departure Procedures. Departing aircraft reduce thrust after reaching a specified altitude. (Pages 6-9, 6-31 and Appendix B)

Description: This measure recommends departing aircraft climb under takeoff power to an altitude of at least 800 feet Above Ground Level (AGL). Thrust is then reduced to no less than that needed to maintain the required one engine climb out gradient to the initiation of flaps and slats retraction. Upon reaching 3,000 feet AGL, the aircraft resumes normal climb through the reapplication of thrust, acceleration, and the completion of flap retraction.

FAA Action: No action required at this time. This measure relates to flight procedures under 49 U.S.C., section 47504(b). Additional review by FAA is necessary to evaluate the operational safety and feasibility of this proposal. Where the close-in departure procedure is selected, it must be consistent with FAA Advisory Circular 91-53A. According to statements on page 6-31, this measure would provide measurable changes in the DNL contour, reducing population within the DNL 65 dB by about 426 people.

6. Distant Noise Abatement Departure Procedure. Departing aircraft decrease pitch of aircraft after reaching a specified altitude. (Page 6-10)

Description: This measure recommends departing aircraft climb to at least 800 feet AGL, the pitch of the aircraft is then decreased and the aircraft accelerates to a speed adequate to maintain flight with zero flaps (nominally 210 knots). Flaps are then retracted and thrust reduced to a level not less that that necessary to maintain required climb. Upon reaching 3,000 feet AGL (or the coastline is cleared), the aircraft resumes normal climb.

FAA Action: No action required at this time. This measure relates to flight procedures under section 104(b). Additional review by FAA is necessary to evaluate the operational safety and feasibility of this proposal. Where the distant departure procedure is selected, it must be consistent with FAA Advisory Circular 91-53A.

7. FMS/GPS Applications. Use of on-board equipment to navigate along predetermined flight track. (Page 6-13)

Description: This measure recommends the use of sophisticated on-board equipment that integrates signals from a variety of ground based and satellite systems to provide a visual course reference (vertical and horizontal information) for pilots to navigate along predetermined flight track.

FAA Action: DISAPPROVED for the purposes of Part 150 pending submission of additional information. No specific proposals are submitted regarding the proposed location of visual course references. Additional analysis is needed to determine the benefits based on the location of the flight tracks and number of aircraft that are likely to have the on-board equipment. Additional equipment would be required both on the ground and in the aircraft. Also, GIAA could not require airport users to install the necessary equipment.

8. Displaced Threshold. Establish displaced threshold to provide aircraft landings further down the runway. (Page 6-16)

Description: This measure recommends displacing Runway 6L. The existing Runway 6L/24R is 10,000 feet long and could be displaced enough to further reduce noise impacted areas. GIAA is currently preparing plans for the extension of Runway 6L that will include a displaced threshold, however, the landing threshold will remain at the same location. Runway 24R is also planned to be extended in the future.

FAA Action: DISAPPROVED for the purposes of Part 150 pending submission of additional information. The analysis in Appendix B concludes that benefits to the DNL contour are difficult to quantify. Submittal of any supplemental analysis of this measure should be

deferred until Runway 24R is extended to provide additional runway length lost from any runway displacement.

9. Noise Barriers. Construct acoustical barriers. (Page 6-16)

Description: This measure recommends the construction of acoustical barriers, such as noise walls, earth berms, or vegetative barriers to help attenuate noise caused by Airport operations.

FAA Action: DISAPPROVED for the purposes of Part 150 pending submission of additional information. Additional information is required by the FAA to make an informed decision regarding location of potential noise barriers, their expected noise benefits and numbers of people or homes expected to receive the quantified noise reduction benefit. Location of barriers on the airport must also comply with FAA's height/hazard requirements.

10. High-Speed Exit Taxiways. (Page 6-17)

Description: This measure recommends the construction of high-speed exit taxiways at strategic locations along the runway to decrease the need for reverse thrust to slow arriving aircraft, and/or eliminate the need to add power to exit a runway via perpendicular taxiways.

FAA Action: DISAPPROVED for the purposes of Part 150 pending submission of additional information. High-speed exit taxiways provide a benefit to the increased efficiency and capacity of the runway, but provides minor reductions in single-event noise levels. The NCP states that limits on reverse thrust, which would be the purpose of a high-speed exit taxiway for noise reduction, would provide minimal benefits (page 6-9), and recommends this measure for further consideration and further review with subsequent NCP update. Additional information is needed to quantify the reduction of noise this measure would provide and whether this type of airport construction has been proposed in other airport planning documents for purposes other than noise mitigation.

11. Operational Fees Based on Noise. (Page 6-20)

Description: This measure recommends implementing differential airport user fees based on aircraft noise levels and/or time of day of operation. Such a measure would mean higher rates for aircraft that make the largest contribution to the overall noise exposure or that operate during noise sensitive areas. The NCP recognizes that implementation would require renegotiation of use agreements with the airlines.

FAA Action: DISAPPROVED for the purposes of Part 150 pending submission of additional information. The NCP does not quantify the benefits of this measure. The minimal language in Appendix B draws an “intuitive” conclusion, but is not backed up by supporting analysis. The NCP recommends this measure for further consideration and review in a subsequent NCP update.

12. Voluntary Fleet Mix Goals. (Page 6-22)

Description: This measure recommends an agreement whereby the airport users voluntarily establish goals and a timetable/schedule for increasing the percentage of quieter aircraft in the airport fleet mix.

FAA Action: DISAPPROVED for the purpose of Part 150 pending submission of additional information. The NCP does not quantify the expected benefits of this measure.

13. Engine Run-Up Restrictions. (Page 6-25)

Description: This measure recommends restricting aircraft engine run-ups to certain hours, location of engine run-up, minimizing or prohibiting nighttime run-ups, restricting engine power settings to specific levels, and/or reducing the length of run-up times at various levels.

FAA Action: DISAPPROVED for the purposes of Part 150 pending submission of additional information. This measure would establish a location, power setting limits, and curfew for engine run-up. Consultation with the airlines must be initiated to set curfew hours, location, engine power settings and duration. Impacts on Stage 3 scheduled operations that would have the effect of reducing or limiting the total number or hours of aircraft operations could require an analysis under Part 161, Notice and Approval of Airport Noise and Access Restrictions.

2 – PREVENTATIVE LAND USE PLANNING ELEMENT

1. Amend Local Land Use Plans to Bring Them into conformance with GIAA's Noise Compatibility Guidelines. (Page 8-4)

Description: This measure recommends amending the land use plans in-line with GIAA's noise compatibility guidelines. This measure will inhibit non-compatible development.

FAA Action: APPROVED. This measure is within the jurisdiction of the Government of Guam. The local government has the authority to implement this measure.

2. Zone for Compatible Land Development. (Page 8-4)

Description: This measure recommends zoning lands near the airport for compatible uses consistent with the Airport Master Plan.

FAA Action: APPROVED. This measure is within the jurisdiction of the Government of Guam. The local government has the authority to implement this measure.

3. Apply Zoning Performance Standards. (Page 8-4)

Description: This measure recommends the local government adopt and enforce ordinances and controls to regulate building construction methods and material for the purpose of attenuating aircraft noise in habitable buildings in and around the Airport Noise Zone.

FAA Action: APPROVED. This measure is within the jurisdiction of the Government of Guam. The local government has the authority to implement this measure.

4. Establish a Public Information Program. (Page 8-4)

Description: This measure recommends establishing a program to develop and distribute informational materials concerning aircraft noise. Portions of this measure are also discussed in items 1 and 2 under Program Management Elements.

FAA Action: APPROVED.

5. Revise Building Codes. (Page 8-4)

Description: This measure recommends modifying the building code to require specified interior noise reduction for new construction in the Airport Noise Zones.

FAA Action: DISAPPROVED FOR PURPOSES OF PART 150. New construction within the DNL 65 dB noise contour is considered incompatible with normal airport operations and is inconsistent with the purposes of Part 150 to reduce or prevent incompatible land uses.

This measure is within the jurisdiction of the Government of Guam. FAA's disapproval for purposes of Part 150 is not intended to interfere with local land use decisions. The FAA recognizes that inclusion of appropriate sound attenuation in newly constructed or altered noise-sensitive structures will make the interior compatible with airport operations. However, the FAA will not participate in any future remedial mitigation measures for new noise-sensitive development that occurs after October 1, 1998.

6. Dedication of Avigation Easements. (Page 8-4)

Description: This measure recommends requiring the dedication of avigation easements as a condition of building permits in affected areas.

FAA Action: DISAPPROVED FOR PURPOSES OF PART 150. New construction within the DNL 65 dB noise contour is considered incompatible with normal airport operations and is inconsistent with the purposes of Part 150 to reduce or prevent incompatible land uses.

This measure is within the jurisdiction of the Government of Guam. The FAA recognizes that acquiring avigation easements will provide the airport operator an interest in the land for which an avigation easement was purchased. However, the FAA will not participate in future remedial mitigation measures for new noise-sensitive development that occurs after October 1, 1998.

7. Fair Property Disclosure Policy. (Page 8-4)

Description: This measure recommends requiring the disclosure of aircraft noise levels by property owners and their agents.

FAA Action: APPROVED. This measure is within the jurisdiction of the Government of Guam. The local government has the authority to implement this measure.

8. Land Banking. (Page 8-4)

Description: This measure recommends acquisition of fee-simple privately owned, private land to prevent non-compatible land use.

FAA Action: DISAPPROVED for the purposes of Part 150 pending submission of additional information. Additional information is required by the FAA to make an informed decision regarding this measure's effectiveness in meeting the goals of FAR Part 150 to reduce incompatible land use and prevent the introduction of new noncompatible land uses. Additional information should include the location of the property, the noise levels associated with the property, and the likelihood that it will be developed incompatibly and must therefore be acquired.

3 – PROGRAM MANAGEMENT ELEMENTS

1. Noise Compatibility Staff. (Page 6-26, 8-7)

Description: This measure recommends establishing a professional staff responsible for noise compatibility and abatement measures. The staff would provide a conduit for better community participation in noise abatement decisions and better dissemination of information.

FAA Action: APPROVED. This would be a single position within the GIAA's new environmental division.

2. Noise Advisory Committee. (Page 6-27)

Description: This measure recommends establishing a community advisory committee that meet regularly to address noise concerns. The committee would enhance the operator's understanding of community noise concerns and increase community understanding of constraints on airport users and operators.

FAA Action: APPROVED. The Noise Advisory Committee would provide information to both aircraft operators and the community.

3. Noise Monitoring Equipment. (Page 6-27)

Description: This measure recommends installation of equipment to monitor and record aircraft noise levels. The equipment could be used to enhance conformance to adopt noise abatement measure.

FAA Action: APPROVED. This measure could provide data to the airport on existing flight procedures and flight track adherence and implementation of new flight procedures that may be approved by the FAA in the future. It also will be useful in providing data for updating the Part 150 study in the future. For the purposes of aviation safety, this approval does not extend to the use of monitoring equipment for enforcement purposes by in-situ measurement of any pre-set noise thresholds.

4. Flight Track Systems. (Page 6-26)

Description: This measure recommends installation of equipment that monitors aircraft operations and correlates data with FAA ARTS radar data. The system will be used to establish a regular program of monitoring and reporting conformance with recommended noise abatement procedures.

FAA Action: APPROVED. This measure could provide data to the airport on existing flight procedures and flight track adherence and implementation of new flight procedures that may be approved by the FAA in the future. It also will be useful in providing data for updating the Part 150 study in the future. For the purposes of aviation safety, this approval does not extend to the use of monitoring equipment for enforcement purposes by in-situ measurement of any pre-set noise thresholds.

4 – REMEDIAL LAND USE ELEMENT (NOISE MITIGATION)

1. Acquire Developed Property in Non-Compatible Uses. (Page 8-4)

Description: This measure recommends the acquisition of developed properties to alleviate aircraft noise effects in areas on non-compatible residential land use within the 65 DNL contour.

FAA Action: APPROVED. The airport authority may acquire non-compatible residential properties within the 65 DNL contour for either NEM for conversion to compatible non-residential

use. The FAA will use the 2003 DNL 65 dB noise contour as accepted by the FAA on May 19, 2003, to make funding priority decisions. Contiguous areas, to ensure neighborhood equity, may also be included.

2. Property Purchase Guarantee. (Page 8-4)

Description: This measure recommends offering homeowners a purchase guarantee to assure that their property would be acquired at fair market value and returned to residential use with appropriate sound insulation measures, releases, and restrictions if the owner had made a "bona fide effort" to sell the property within the 65 DNL contour based on the 2003 NEM. Measure 3, sound mitigation, would also be included with this measure. The property would be sold at fair market value after sound mitigation.

FAA Action: APPROVED.

3. Part 150 Sound Mitigation Program (Residential, School, and Other Public Buildings). (Page 8-5)

Description: This measure recommends the acoustical treatment of residential, schools and other public buildings within the 65 DNL contour. In lieu of acoustical treatment, a residential homeowner would have the options to sell their residential property as described in measures 1 or 2 above.

FAA Action: APPROVED. The FAA will use the 2003 DNL 65 dB noise contour as accepted by the FAA on May 19, 2003, to make funding priority decisions. Contiguous areas, to ensure neighborhood equity, may also be included.