FEDERAL AVIATION ADMINISTRATION

RECORD OF APPROVAL

14 CFR PART 150 NOISE COMPATIBILITY PROGRAM

GENERAL MITCHELL INTERNATIONAL AIRPORT

MILWAUKEE, WISCONSIN

Minneapolis Airports District Office Acting Manager	6/2/09 Date	✓ Concur	_____ Nonconcur
Great Lakes Region Office of Regional Counsel Environmental Attorney	6/4/09 Date	✓ Concur	_____ Nonconcur
Great Lakes Region Airports Division Manager	6/4/09 Date	✓ Concur	_____ Nonconcur

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NOISE COMPATIBILITY PROGRAM

INTRODUCTION

The Noise Compatibility Program (NCP) for General Mitchell International Airport (MKE) includes measures to abate aircraft noise, control land development, mitigate the impact of noise on non-compatible land uses, implement and update the program. Title 14 Code of Federal Regulations (CFR) Part 150 requires that the Noise Exposure Maps (NEM) associated with the NCP apply to a period of no less than five years into the future, although the NCP may apply to a longer period if the sponsor so desires. The airport sponsor has requested that the program measures be applied to the 2004 NEM (Figure D-21), which represents existing conditions at the airport, because it covers a larger area for potential mitigation. At such time as the NEMs do not represent the airport's noise environment, title 14 CFR Part 150 requires the airport sponsor to update the NEMs when there is a significant increase or decrease in noise over incompatible land uses (§150.21(d)).

The objective of the noise compatibility planning process is to improve the compatibility between aircraft operations and noise-sensitive land uses in the area, while allowing the airport to continue to serve its role in the community, state, and nation. The approval actions listed herein include all those that the airport sponsor recommends be taken by the Federal Aviation Administration (FAA). It should be noted that the approvals indicate only that the actions would, if implemented, be consistent with the purposes of Part 150. These approvals do not constitute decisions to implement the actions. Subsequent decisions concerning possible implementation of these actions may be subject to applicable environmental procedures, aeronautical study, or other requirements.

The program elements below summarize as closely as possible the airport operator's recommendations in the noise compatibility program and are cross-referenced to the program. The statements contained within the summarized program elements and before the FAA indicated approval, disapproval, or other determination, do not represent the opinions or decisions of the FAA.

The sponsor has certified that the 2004 NEM and the future 2009 NEM were presented at the public hearing. The Airport sponsor has further certified that the conditions depicted for 2004 are representative of 2008, the year of this submittal.

In light of recent decreases in air travel nationally, a comparison was made with the Part 150 existing conditions (2004) operations and 5 year forecasts (2009), and the 2008 TAF. Based on the review, 2004 operations and the 5 year forecast (2009) operations are consistent with the 2008 TAF.

PROGRAM ELEMENTS A complete summary of the recommended program elements can be found in Section I of the Part 150 Update. Most of the program elements have been carried forth from the existing NCP, which was approved in March 1995. Where noted, the new recommendations are revisions or updates of existing measures. The complete 1995 Record of Approval (ROA) of the existing Part 150 referenced above is in the Appendix Two of the document.

NOISE ABATEMENT/AIRCRAFT OPERATIONAL RECOMMENDATIONS

Recommendation 1 – Develop FMS Departure Procedures for Runway 25L including the I-94 Corridor. This recommendation focuses on aircraft turning south after departing off of Runway 25L. To the extent possible, they would follow the I-94 corridor to avoid over flying residential land uses. FMS technology would be used to follow a narrow flight track defined along the Interstate. Aircraft would use the existing west departure and then turn southbound while using FMS technology to reduce dispersion over non-compatible land use areas west of I-94. Military aircraft, older hush-kit aircraft, turboprops, and general aviation aircraft are not equipped with the necessary instruments to fly FMS procedures; as such, these aircraft would fly a similar path, but it will be more dispersed than the FMS track. Other Runway 25L departures not turning south would continue to use existing departure procedures.

This recommendation is predicated on the development and successful implementation of satellite-based procedures. In the interim, conventional tracks have been identified in the body of the recommendation in an attempt to achieve the goals noted above. However, conventional tracks cannot be defined to represent the numerous course corrections that would be necessary to achieve the flight tracks shown in the graphic. Therefore, the conventional tracks would only be precise within about 5 miles of the airfield. Final definition of these tracks would need to be coordinated with the FMS-based tracks developed by FAA. Pages I.8-I.10 of the NCP provides more detail on this recommendation.

FAA Determination: Disapproved. The measure is disapproved because it impacts efficient movement of aircraft and management of the navigable airspace and would therefore not meet Part 150 approval criteria. Also, the turn would not be operationally feasible for many aircraft operators using the airport.

Recommendation 2 – Evaluate Altitude of Turbo-prop Departures: This recommendation is for the Airport to work with the FAA air traffic control to evaluate and develop a procedure to keep turbo-prop aircraft from turning on course below 500 feet above field elevation. While the majority of these aircraft are at, or above, 500 feet above field elevation when they start their turns, some slow-climbing aircraft turn before reaching this altitude. In addition, increasing the altitude at which these propeller aircraft turn would also reduce the number of early turns by defining a minimum altitude when the turn should occur.

Small propeller aircraft would fly runway heading until reaching at least 500 feet above field elevation, or until reaching a designated, easily recognizable landmark to pilots assigned through coordination with FAA air traffic control. Pages I.11-I.12 of the NCP provides more detail on this recommendation.

FAA Determination: Disapproved. The measure is disapproved because it impacts efficient movement of aircraft and management of the navigable airspace and would therefore not meet Part 150 approval criteria. Additionally, the fleet mix at the time the Part 150 process began has changed. Because the Beech 1900's no longer operate, this alternative may no longer be necessary.

Recommendation 3 – Develop Procedures to Reduce Early Turns on Approach for Turbo-prop Aircraft: The Airport will work with the FAA air traffic control to develop procedures to reduce early turns to the runway on approach for turbo-prop aircraft. Turbo-prop aircraft for this Recommendation include passenger and cargo aircraft. Aircraft would not begin a turn to the final approach unless they are beyond a designated location at, or above, 500 feet above field elevation. When these aircraft are approaching the

Airport, they would not descend early to 500 feet above field elevation and over-fly for long distances at level altitude. Instead, these aircraft would fly the three degree glide slope to descend at a constant rate. Pages I.13 – I.14 of the NCP provides more detail on this recommendation.

FAA Determination: Disapproved. The measure is disapproved because it impacts efficient movement of aircraft and management of the navigable airspace and would therefore not meet Part 150 approval criteria. Additionally, the fleet mix at the time the Part 150 process began is very different from today. Because the Beech 1900's no longer operate, this alternative may no longer be necessary.

Recommendation 4 -- Increase Altitude to 2,500 feet MSL for all Departing Jet Aircraft Prior to Turning (Modification of Brew Three Departure): This recommendation is for the Airport to work with the FAA air traffic control to develop departures procedures to raise the altitude before turning from 2,000 to 2,500 feet above mean sea level for jet aircraft. This procedure would use existing departure flight tracks, but raise the minimum altitude before turning to reduce early turns by aircraft before reaching 2,500 feet MSL and to concentrate the flight tracks along the runway centerlines. Aircraft would fly runway heading until reaching at least 2,500 feet MSL (approximately 1,800 feet above field elevation). The 500 feet of additional altitude is roughly the difference in climb rate between the new generation aircraft and the older generation aircraft. Pages I.15-I.16 of the NCP provides more detail on this recommendation.

FAA Determination: Disapproved. The measure is disapproved because it impacts efficient movement of aircraft and management of the navigable airspace and would therefore not meet Part 150 approval criteria.

Recommendation 5 – Develop Ground-based Noise Reduction Methods, including Noise Barriers, Parking Plans, Electrification of Ramps and Gates, and an Alternate, low-tech Run-up Enclosure: This recommendation consists of designing and construction a series of individual noise barriers, parking plans, run-up enclosure and electrification of parking ramps and gates.

(a) Three noise barrier locations are proposed: (1) North End noise barrier (height varies due to uneven topography) at the property line behind houses on East Armour Avenue across Layton Avenue, (2) an approximate 10-foot tall noise barrier on the Signature Ramp to break line of sight between the neighborhood located on the north side of Layton Avenue and the Airport, and (3) an approximate 12-foot tall barrier at the Skyways Ramp connecting to the hangar. Each of the noise barriers would result in a single event noise reduction benefit of at least 5 dBA over the unmitigated conditions.

(b) In addition, parking plans for specific ramps and specific aircraft types would be developed.

(c) Electrification of the International Arrivals Building gates, Concourses D and E of the Passenger Terminal, the Signature Ramp and the West ramp are recommended to eliminate the need for APU use. Pre-conditioned air would also need to be provided at the terminal gates.

(d) A 'low-tech' noise enclosure for engine maintenance run-ups for the northeast hangar area is also recommended. Pages I.17 – I.20 provide more information on this recommendation.

FAA Determination:

(a) **Approved.** The three noise barriers are approved.

Although the North End noise barrier has a noise benefit of 5 dBA, it does not benefit non-compatible areas. Therefore it is not eligible for federal funding.

(b) **Approved.** The parking plans since they are within the jurisdiction of the Sponsor and not a federal action.

(c) **Disapproved.** The electrification of gates for the International Arrivals Building, Concourses D and E of the Passenger Terminal, the Signature and West ramps, and provision of pre-conditioned air are disapproved for purposes of Part 150 as they do not provide a significant noise reduction. Although disapproved under Part 150, the FAA encourages MKE to pursue emission reductions through the VALE Program.

(d) **Approved.** The low-tech run-up enclosure is approved.

Recommendation 6 – Provide High Speed Taxiways to Reduce use of Reverse Thrust on Landing: This recommendation is to take into consideration the design and placement of new high-speed taxiway exits in future airfield planning. The Airport currently has such taxiways in place and located appropriately, considering the existing landing threshold and aircraft types using the Airport. In planning for the future, additional high-speed taxiways should be considered and placed appropriately. Page I.21 of the NCP provides more detail on this recommendation.

FAA Determination: Disapproved. High speed taxiway exits are disapproved for purposes of Part 150 as they do not provide a significant noise reduction.

LAND USE MANAGEMENT RECOMMENDATIONS

Recommendation 7 – Noise Sensitive Uses Sound Insulation: This recommendation would provide soundproofing for noise sensitive uses at or above the 65 DNL contour, using the 2004 Noise Exposure Map. Sound proofing measure may include items such as new windows, solid core doors, and heating and cooling systems to allow windows to be kept closed. In exchange for receiving sound insulation, a homeowner would grant a noise easement to the County and Airport to be attached to the property and "run with the land". This recommendation continues and expands the previous measures LU-14, LU-15 and LU-16 approved in the 1995 ROA. Pages I.22-I.24 of the NCP provides more detail on this recommendation.

FAA Determination: Approved. The FAA's policy published in the Federal Register April 3, 1998 (Volume 63, Number 64), states that the FAA will not approve Federal funding to mitigate noise-sensitive land uses constructed after October 1, 1998. Beginning October 1, 1998, the FAA will approve under Part 150 only remedial noise mitigation measures for existing noncompatible development and only preventive noise mitigation measures in areas of potential new noncompatible development. As of the same date, the ability to use AIP grants to carry out such measures will be affected to the extent that such remedial measures may not be approved under Part 150.

Recommendation 8 – Voluntary Acquisition of Non-compatible Land or Undeveloped Non-compatible Land Zoned for Residential Use: The recommendation would allow the Airport to purchase, on a voluntary basis, those non-compatible parcels identified zoned for residential development, presently vacant, and those isolated residential parcels that are not part of a contiguous neighborhood. In addition, other properties may be eligible that are not presently identified but may be identified as the acquisition process is implemented. Pages I.25-I.27 of the NCP provides more detail on this recommendation.

FAA Determination: Approved. The FAA's policy published in the Federal Register April 3, 1998 (Volume 63, Number 64), states that the FAA will not approve Federal funding to mitigate noise-sensitive land uses constructed after October 1, 1998. Beginning October 1, 1998, the FAA will approve under Part 150 only remedial noise mitigation measures for existing non compatible development and only preventive noise mitigation measures in areas of potential new non compatible development. As of the same date, the ability to use AIP grants to carry out such measures will be affected to the extent that such remedial measures may not be approved under Part 150.

Recommendation 9 – Voluntary Acquisition of Noise Easements Over Non-Compatible Land Uses: This recommendation calls for the purchase noise easement from homeowners within the 65 DNL noise contour or above, using the 2004 Noise Exposure Map. This recommendation would apply to homeowners who do not wish to have soundproofing. Experience at other airports has shown that up to 10% of the eligible population may decline soundproofing. This recommendation provides another voluntary option for homeowners to receive some compensation in return for providing the County and Airport a noise easement. Pages I.28-I.29 of the NCP provides more detail on this recommendation.

FAA Determination: Approved. The FAA's policy published in the Federal Register April 3, 1998 (Volume 63, Number 64), states that the FAA will not approve Federal funding to mitigate noise-sensitive land uses constructed after October 1, 1998. Beginning October 1, 1998, the FAA will approve under Part 150 only remedial noise mitigation measures for existing noncompatible development and only preventive noise mitigation measures in areas of potential new noncompatible development. As of the same date, the ability to use AIP grants to carry out such measures will be affected to the extent that such remedial measures may not be approved under part 150.

Recommendation 10 – Voluntary Sale Assistance for Non-Compatible Land Uses: This recommendation would offer Sales Assistance to home owners wishing to sell their homes but who are concerned that they are not able to do so due to proximity to the Airport. This would be a voluntary measure available to home owners who are eligible for sound attenuation. Participation in this type of measure is historically about 3 percent of eligible home owners. Pages I.30 – I.31 of the NCP provides more detail on this recommendation.

FAA Determination: Approved. The FAA's policy published in the Federal Register April 3, 1998 (Volume 63, Number 64), states that the FAA will not approve Federal funding to mitigate noise-sensitive land uses constructed after October 1, 1998. Beginning October 1, 1998, the FAA will approve under Part 150 only remedial noise mitigation measures for existing non-compatible development and only preventive noise mitigation measures in areas of potential new non-compatible development. As of the same date, the ability to use AIP grants to carry out such measures will be affected to the extent that such remedial measures may not be approved under Part 150.

PROGRAM MANAGEMENT AND ADMINISTRATIVE RECOMMENDATIONS

Recommendation 11 – Upgraded Aircraft Flight Track/Noise Monitoring System with Multilateration: This recommendation would install an upgraded Aircraft Flight Track/Noise Monitoring System with Multilateration to improve the ability to monitor flights, respond to the public in a timely manner and identify specific citizen concerns. The current system uses very dated technology and does not provide the necessary automation to develop regular reports or monitor aircraft compliance with noise abatement procedures. A key component of the upgrade will be the ability for the public to view flight tracks via the Internet. Page I.32 – I.33 of the NCP provide more detail on this recommendation. This is a continuation of approved Measure CP-5 of the 1995 ROA.

FAA Determination: Approved. For purposes of aviation safety, this approval does not extend to the use of monitoring equipment for enforcement purposes by in-situ measurement of any preset noise thresholds and shall not be used for mandatory enforcement of any voluntary measure.

Recommendation 12 – Install Remote Cameras to Monitor Ground Activity, Engine Run-ups and Use of APU: The apron locations and run-up/parking plans presented in Recommendation 5 all occur at locations remote from Airport personnel offices, and there is no other method available to monitor compliance with success of those measures. The cameras would be placed in locations that are capable of observing the entire area and could correlate noise events with run-ups to determine if the run-ups were

conducted consistently, as required. Citizen complaints can be correlated with actual activity to determine the success of the recommended placement of specific aircraft, with adjustments made accordingly. Pages I.34 – I.35 of the NCP provide more detailed information on this recommendation.

FAA Determination: Approved. For purposes of aviation safety, this approval does not extend to the use of monitoring equipment for enforcement purposes by in-situ measurement of any preset noise thresholds and shall not be used for mandatory enforcement of any voluntary measure. A determination of AIP eligibility for remote cameras installation will require further evaluation by the FAA.

Recommendation 13 – Subsequent Part 150 Updates: This recommendation calls for the review and update the Part 150 Study as needed to reflect changes in the noise environment. A Part 150 study is a "snapshot" in time to look at the noise conditions generated by the current fleet mix and level of operations and the five-year forecasted levels. Federal regulations require a new study be completed if there is a significant increase or decrease in noise levels resulting from changes at the airport. Pages I.36 – I.37 of the NCP provide more detail on this recommendation.

If made necessary by NEM changes, an update to the NCP would address requirements of 150.23(e) (9). Section 150.21(d), as amended, states that the NEM should be updated if there is either a substantial new noncompatible use within the DNL 65 dB contour or if there is a significant reduction in noise over existing noncompatible land uses [69 FR 57622, dated 9/24/04].

FAA Determination: Approved.