

Part 150: Records of Approval

Cleveland Hopkins International Airport, Cleveland, Ohio

Approved on 8/23/00

The Noise Compatibility Program (NCP), for Cleveland Hopkins International Airport (CLE) in Cleveland, Ohio, describes the current and future non-compatible land uses based upon the parameters established in FAR Part 150, Airport Noise Compatibility Planning. Federal Aviation Regulation (FAR) Part 150 requires that the plan apply to a period of no less than five years into the future, although it may apply to a longer period if the sponsor so desires. This NCP has been developed based on a long-range perspective involving full capacity use of the ultimate airport layout.

The City of Cleveland previously submitted an NCP in 1987 consisting of sixteen (16) measures. All sixteen (16) measures were approved in full by the FAA on August 18, 1987. Noise Exposure Maps (NEMs), as part of the 1987 NCP, were accepted by the FAA on July 3, 1984.

This document is a comprehensive update of the original Noise Compatibility Program approved by the Federal Aviation Administration (FAA) in 1987. The NCP lists 30 recommended measures, which continue or expand the intent of the approved 1987 NCP. The FAA groups these measures into three categories: noise abatement (15), land use (12), and program management (3). Of the 30 measures listed, (15) were not recommended by the sponsor and (1) has been completed so no further action is required. The City of Cleveland recommends fourteen (14) measures in its updated NCP to remedy existing noise problems and prevent future non-compatible land uses. Of the seven (7) noise abatement measures, one (1) continues as is in the 1987 NCP, without revisions, and six (6) measures are continued with revisions. Of the four land use measures, two (2) are continued as described in the 1987 NCP, one (1) is continued with modifications, and one (1) is new. Of the three (3) program management measures, one (1) continues as is in the 1987 NCP, one (1) is continued with revisions, and one (1) measure is new.

Each measure of the recommended NCP is identified below by type of measure, and includes a summary of the City of Cleveland's recommendations and a cross-reference to page numbers in the NCP where each program measure is discussed. The current Noise Exposure Map is found on Exhibit 1-1 of the document. The 1999 existing noise exposure map is based on 1997 data and is indicative of current conditions at Cleveland International Airport. The forecast Noise Exposure Map (2006) is found on Exhibit 1-3. This future NEM is based on reasonable forecasts and planning assumptions contained in the Airport Master Plan, the Environmental Impact Statement (EIS), the Part 150 Update, and incorporates the NCP's noise abatement measures. Appendix B of the report contains the analysis of the noise abatement and land use management alternatives that were considered. Chapters 1 and 3 contain the recommended noise program. Table 3-1, on pages 3-2 through 3-14, depicts the recommended program, implementation schedule, and an estimate of the program costs. The Federal Aviation Administration's (FAA's) share of the eligible cost will be the current program rate set by statute at the time of funding of approved program measures.

The approvals listed herein include approvals of actions that the City of Cleveland recommends be taken by the FAA. FAA approval of sponsor recommendations in the NCP indicate only that the actions would, if implemented, be consistent with the purposes of Part 150. Sponsor

recommendations for mitigation of forecast conditions at the airport may include measures based on reasonable planning assumptions at the airport, including planned airport development. FAA approval of a noise mitigation recommendation in this NCP is based solely on the measure's noise mitigation potential and does not constitute a decision by the FAA to undertake approval of planned development. Approval of a recommendation in this NCP does not constitute a decision by the FAA to implement the action. Later decisions concerning possible implementation of these actions may be subject to applicable environmental or other procedures or requirements.

The recommendations in the Record of Approval (ROA) summarize as closely as possible the airport operator's recommendations in the NCP. The statements contained within the summarized recommendations, and before the indicated FAA approval, disapproval, or other determination, do not represent the opinions or decisions of the FAA.

NOISE ABATEMENT MEASURES

All seven of the 1987 Operational Measures found in the 1987 NCP have been carried forward into this new NCP with modifications.

NA-1a Continue the restriction of runups and engine maintenance testing as specified in the 1987 NCP. Determine an interim runup area that would reduce the noise effects on sensitive areas. Continue the interim procedures until the construction of a runup facility/enclosure is completed. Pages 1-10, 3-2, 3-15; Appendix B, page B-1.

The City of Cleveland recommends continuation of a 1987 NCP-approved measure that implemented the restriction of engine runups of turbojet aircraft to designated areas allowing for exceptions to a nighttime runup restriction in special circumstances and with advance permission of the Airport. This NCP modifies the measure to designate an interim runup location for use until the construction of a runup facility at the airport. The intended effect of this measure is to limit ground engine runup operations that negatively impact the communities nearest the runup area.

APPROVED AS VOLUNTARY. Previously approved in the 1987 NCP, but now revised to determine an interim runup location.

NA-1b Construct a ground runup facility/enclosure as part of the future development program. Pages 1-10, 1-18, 1-20, 3-3, 3-16, Exhibit 3-1; Appendix B, page B-2, Exhibit B-1.

This permanent runup facility or enclosure will be constructed to further abate noise. After construction of the runup facility, significant reduction in single-event impacts from runup activity is expected to occur.

APPROVED. Previously approved in the 1987 NCP, but now revised to include the construction of a permanent runup facility or enclosure.

NA-2 Continue to encourage the use of Distant Noise Abatement Departure Procedures (NADPs) for the remaining noisiest aircraft expected to be operating at Cleveland Hopkins after January 1, 2000. Pages 1-10, 1-20, 3-4, 3-17; Appendix B, pages B-2, B-3.

The City of Cleveland recommends the continued use of approved measure NA-2 with modifications. The original approved measure recommended that distant noise abatement departures that utilized reduced thrust be flown from all runway ends. This measure was thought to benefit the areas near the ends of the departure runways of the airport. This updated measure is expected to reduce noise from the noisier aircraft that would operate from Cleveland Hopkins in the future. It is not expected that all aircraft would perform NADP takeoffs. Some newer aircraft

have such good climb performance and low noise generation characteristics that a cutback procedure is not warranted. NADP reminders could be published in the "Fly Quiet" program proposed in the Program Management measures.

APPROVED AS VOLUNTARY.

NA-3 Equitably turn jet departures from Runways 5L/5R, between 6:00 a.m. and 11:00 p.m., left to headings within a corridor between 360 and 035 or right to headings within a corridor between 065 and 095 , until reaching five miles from the Airport or an altitude of 5,000 feet above MSL. Pages 1-11, 1-20, 3-5, 3-18, Exhibit 3-2; Appendix B, pages B-5, B-6, Exhibit B-4.

The City of Cleveland proposes to continue use of the original measure approved in the 1987 NCP which implemented an equitable fan-out of departures to the northeast and southwest. The fan-out was intended to benefit persons residing near the ends of Runways 5L/23R and 5R/23L as well as those in outlying areas along the runway centerlines. This measure will be modified to assign new corridors for departures from the parallel runways to the northeast as well as specifying conditions to be met prior to initiating the aircraft's second turn. Once combined with a longer Runway 5R/23L, this procedure should increase their altitude between 150 and 300 feet over incompatible uses. It provides single-event noise mitigation north-east of the airport and may slightly reduce the DNL contour. This measure was designed to minimize the noise impacts on the surrounding communities and to ensure safe and efficient use of the airspace at Cleveland Hopkins International Airport.

APPROVED AS VOLUNTARY. The pilots and air traffic controllers retain the responsibility to deviate from these procedures as necessary to ensure safe, orderly and expeditious traffic flow.

NA-4 Equitably turn jet departures from Runways 23L/23R, between 6:00 a.m. and 11:00 p.m., left to headings within a corridor between 190 and 220 or right to headings within a corridor between 250 and 280, until reaching five miles from the Airport or an altitude of 5,000 feet above MSL. Pages 1-11, 1-20, 3-6, 3-19, Exhibit 3-3; Appendix B, Page B-6, Exhibit B-5.

The City of Cleveland proposes to continue use of the original measure approved in the 1987 NCP which implemented an equitable fan-out of departures to the northeast and southwest. The fan-out was intended to benefit persons residing near the ends of Runways 5L/23R and 5R/23L as well as those in outlying areas along the extended runway centerlines. This measure will be modified to assign new corridors for departures from the parallel runways to the southwest. The original restriction for the departing aircraft to cross the runway end before initiating their first turn would be eliminated by this measure. This measure was designed to minimize the noise impacts on the surrounding communities and to ensure safe and efficient use of the airspace at Cleveland Hopkins International Airport. It provides a slight reduction to residential impacts straight out from the runways and provides single-event reduction southwest of the airport by turning departures away from the areas sooner.

APPROVED AS VOLUNTARY. The pilots and air traffic controllers retain the responsibility to deviate from these procedures as necessary to ensure safe, orderly and expeditious traffic flow.

NA-5a Designate Runway 5R as the preferred late night (11:00 p.m. to 6:00 a.m.) departure runway. Pages 1-11, 1-20, 3-7, 3-20, Exhibit 3-4; Appendix B, page B-8.

The City of Cleveland proposes to designate Runway 5R as the primary late night departure runway, wind and weather permitting. This measure should result in a noise reduction benefit, particularly if that runway is extended to a length of 11,250 feet. The majority of the late night

departures over a year(+ 70%) would use Runway 5R and turn over the compatible corridor east of the Airport.

APPROVED AS VOLUNTARY. The pilots and air traffic controllers retain the responsibility to deviate from these procedures as necessary to ensure safe, orderly and expeditious traffic flow. This procedure is deemed feasible by the Air Traffic Controllers on the Airport Technical Committee.

NA-5b Wind and weather permitting, turn late night jet departures from Runway 5R to a course to overfly the industrial areas east of the airport until reaching an altitude of 5,000 feet MSL. The course approximates a heading of 090 to 100 after takeoff, dependent upon wind and weather conditions. The air traffic controllers could issue instructions on a case by case basis in an effort to have the aircraft fly over the industrial corridor along Brookpark Road. The procedure could also allow for the pilots to begin a turn at the end of the runway to a suitable heading to take them over this compatible corridor. This may ease the burden on the air traffic controllers during busy periods. Pages 1-11, 1-20, 3-7, 3-21, Exhibit 3-4; Appendix B, pages B-8, B-9, Exhibit B-6.

The City of Cleveland proposes that when combined with measure NA-5a, this measure will keep late night jet departures on an initial course over commercial and industrial land uses. This will help reduce the late night noise effects over the residential areas northeast and east of the airport.

APPROVED AS VOLUNTARY. The pilots and air traffic controllers retain the responsibility to deviate from these procedures as necessary to ensure safe, orderly and expeditious traffic flow. This procedure was deemed feasible by the Air Traffic Controllers on the Airport Technical Committee.

NA-6 Wind and weather permitting, turn late night (11:00 p.m. to 6:00 a.m.) jet departures from Runways 23L/23R to a corridor of 200 to 220, until reaching an altitude of 5,000 feet MSL. Pages 1-12, 1-20, 3-8, 3-22, Exhibit 3-5; Appendix B, page B-9, Exhibit B-7.

The City of Cleveland proposes to use this measure as the noise abatement departure procedure on those occasions when Runway 5R cannot be used. It provides a course for late night departing aircraft to overfly compatible corridors of land to the southwest, reducing single event noise impacts.

APPROVED AS VOLUNTARY. The pilots and air traffic controllers retain the responsibility to deviate from these procedures as necessary to ensure safe, orderly and expeditious traffic flow.

NA-7 Wind and weather permitting, instruct arriving aircraft at night (10:00 p.m. to 6:59 a.m.) to intercept the final approach course to all runways no closer than four miles. Pages 1-12, 1-20, 3-9, 3-23; Appendix B, pages B-10, B-11.

The City of Cleveland proposes this modification of the 1987 NCP measure to prevent aircraft from conducting close-in visual approaches to the airport at night. Aircraft on the downwind leg of their approach at night have been observed descending and turning a short final approach, which increases single-event noise exposure to the areas parallel to the airport.

APPROVED AS VOLUNTARY. It is expected to reduce single-event noise impacts in areas where visual approaches now occur during nighttime hours. The pilots and air traffic controllers retain the responsibility to deviate from these procedures as necessary to ensure safe, orderly and expeditious traffic flow.

LAND USE MEASURES

Two of the 2000 Land Use Measures, LU-1, Adopt land use development controls and standards in the local communities surrounding the airport, and LU-3, Sound insulate residences within the higher levels of the noise exposure, 65+ DNL are essentially as described in the 1987 NCP.

One other 1987 Land Use Measure is also continued in this new NCP, with modifications. It is Land Use Measure LU-2, Adopt real estate disclosure policies regarding airport noise exposure in the local communities surrounding the airport.

Finally, one new land use measure, LU-4, Sound insulate residences within or contiguous to the 60 DNL band of the NCP noise contours has been added to the new NCP.

LU-1 Adopt land use development controls and construction standards in the local communities surrounding the airport, to include those within the 60 DNL contour. Pages 1-12, 1-18, 1-20, 3-10, 3-24; Appendix B, page B-11.

This is a continuation of a land use measure approved in the 1987 NCP which was never implemented. The original measure was intended to establish a link between the airport and the local communities for the control of development and setting of construction standards. It was not implemented because of the complexity of having multiple jurisdictions which needed to agree to the measure.

Land use and development controls are usually within the jurisdictional authority of local municipal or county governments rather than an airport proprietor. The relationship between CLE and the environs communities is much the same. Even when an airport is operated by the same governmental body that exercises these controls, it is often difficult to convey airport needs and requirements to comprehensive and mutually acceptable development controls and standards. If implemented, this measure would establish mutual compatibility between the Airport and the environs communities--the City of Cleveland, Olmsted Falls, Olmsted Township, Brooklyn, Berea, and Brook Park.

This measure recommends encouraging jurisdictions surrounding the Airport to be conscious of the Airport and its noise impacts when reviewing rezoning, exceptions, variances, conditional uses, and special uses that introduce noise-sensitive development into areas impacted by noise. In addition, they may use the orientation, design, height, and landscaping of noise-compatible uses to screen residences from ground noise generated at the airport.

Furthermore, the local building codes could be amended to authorize the City of Cleveland and other airport environs communities to raise minimum building standards (noise level reduction requirements to achieve reductions of 25, 30, or 35 decibels depending on impacts and structures) by incorporating noise attenuation requirements for new residential construction within an airport noise impact district.

APPROVED. Previously approved in the 1987 NCP. The City of Cleveland desires to continue this measure as a local government action. Local government has authority to implement this measure. All surrounding communities were represented on the Planning Advisory Committee (Appendix C).

LU-2 Adopt real estate disclosure policies regarding airport noise exposure in the local communities surrounding the airport, to include those within the 60 DNL noise contour. As a recommendation of this NCP update, the City of Cleveland proposes to designate areas exposed to noise levels in excess of 60 DNL as non-compatible for noise-sensitive land uses. Pages 1-13, 1-18, 1-20, 3-10, 3-25; Appendix B, pages B-11, B-12.

The City of Cleveland proposes the continuation and modification of a land use measure approved in the 1987 NCP which required changes to the local real estate disclosure policies to forewarn potential buyers of incompatible properties near the airport. It also forewarns potential developers of the presence of the airport's noise exposure areas. This measure was not implemented because it required multi-jurisdictional and state coordination which was not feasible at the time.

The local communities would adopt a fair disclosure requirement for the sale or lease of homes or other noise sensitive real property within the airport's noise zones. Whenever such property is offered for the prospective buyer or lessee, it would be disclosed that the property is located in an area subject to potentially high levels of aircraft noise. It would be intended to advise prospective buyers where the property is located in relation to current noise exposure contours; and alternatively, allow the prospective buyer to make an informed decision with respect to the acquisition of a property. In addition, it would advise potential developers of the airport and its ramifications.

APPROVED. Local government has authority to implement this measure. All surrounding communities were represented on the Planning Advisory Committee (Appendix C).

LU-3 Sound insulate residences within the higher levels of the noise exposure, 65+ DNL. Pages 1-13, 1-18, 1-20, Exhibits 1-4 and 1-5; pages 3-11, 3-26, Exhibit 3-6; Appendix B, pages B-13, B-14, Exhibit B-8.

The City of Cleveland proposes the continuance of a previous land use alternative from the 1987 NCP. Sound insulating consists of increasing the exterior-to-interior noise attenuation characteristics of a structure, i.e., reducing the level of noise intrusion from aircraft overflights and ground operations. The airport should reevaluate its priority system and begin sound insulation on a most impacted basis in the future program. Additionally, the aviation easements attached to the sound insulated properties should be updated to reflect current legal requirements. The standards and quality control measures to guide this new program should be developed prior to implementation.

APPROVED. There are over 2,500 homes within the 65 DNL contour.

LU-4 Sound insulate residences within or contiguous to the 60 DNL band of the NCP noise contours. As a recommendation of this NCP update, the City of Cleveland proposes to designate areas exposed to noise levels in excess of 60 DNL as non-compatible for noise-sensitive land uses. Pages 1-13, 1-18, 1-20, Exhibits 1-6, 1-7, and 1-8; pages 3-12, 3-27, Exhibit 3-7; Appendix B, page B-15, Exhibit B-10.

This is a new measure which includes residences within and contiguous to the 60+ DNL band of the NCP noise contours of this study, and may have been within the sound insulation boundaries of the previous program. The boundary of this program would be within the outer limits of the 60 DNL band of the NCP noise contours as well as those areas determined to be contiguous to the 60 DNL band. There are an additional 5,000-plus homes within the DNL 60 dB contour (page 2-5). Under this revised measure the airport would have the flexibility to provide equitable solutions to the owners of those structures which are not up to the standards of the building code. If the property is valued at less than the cost of sound insulation, the property should be acquired. The standards and quality control measures to guide this new program should be developed prior to implementation.

APPROVED. The airport operator has adopted the DNL 60 dB noise contour as the designation of noncompatible land use (see Exhibits 1-1 and 1-3). This measure is designed to incorporate those homeowners who may have previously been eligible for sound insulation but would not be

eligible under the new program. Acquisition of any homes must be in accordance with applicable requirements of the Uniform Relocation Assistance and Real Property Acquisition Policies Act to be eligible for Federal funding. Federal funding eligibility for contiguous areas is defined in FAA Order 5100.38A.

PROGRAM MANAGEMENT MEASURES

PM-1 Provide system enhancements to the aircraft/airport noise monitoring system. Pages 1-14, 3-13, 3-28.

It is recommended that the airport's noise monitoring system be enhanced with an operations monitoring system to provide more data on aircraft noise events.

APPROVED. For reasons of aviation safety, this approval does not extend to use of the monitoring equipment for enforcement purposes by in situ measurement of any present noise thresholds.

PM-2 Implement a "Fly Quiet" communication program. Pages 1-14, 1-18, 1-20, 3-13, 3-29.

In general, a "Fly-Quiet" communication program would include information on noise abatement procedures for airport users such as noise abatement departure procedures, noise abatement flight corridors for fixed wing aircraft, the late night runway use program, restrictions on maintenance engine runups, and suggestions for noise reduction. In addition, the program would help ensure that the pilots, airlines, and the communities remain informed of noise abatement initiatives and issues.

APPROVED. Specific language should receive FAA approval prior to publication.

PM-3 Continue periodic updates of the NCP and reviews of the NEMs. Pages 1-14, 1-20, 3-14, 3-30.

This measure should help formalize the continuing process of determining noise and land use compatibility at the airport. Part 150 guidelines call for the periodic reevaluation and submission of the noise conditions at the airport. Therefore, conditions of the NCP should be reevaluated periodically and the NEMs should be reassessed internally as needed. When appropriate, an update of the Part 150 Study should be conducted.

APPROVED.