

ILLINOIS POLLUTION CONTROL BOARD  
April 10, 1986

IN THE MATTER OF: )  
 ) R77-4  
PUBLIC AIRPORT NOISE REGULATIONS )  
PART 904 )

PROPOSED RULE. FIRST NOTICE.

PROPOSED ORDER OF THE BOARD (by J. Marlin):

TITLE 35: ENVIRONMENTAL PROTECTION  
SUBTITLE H: NOISE  
CHAPTER I: POLLUTION CONTROL BOARD

PART 904

PUBLIC AIRPORT NOISE

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AUTHORITY: Implementing Sections 24 and 25 and authorized by Section 27 of the Environmental Protection Act (Ill. Rev. Stat. 1985, ch. 111 ½, pars. 1025 and 1027.

SOURCE: Adoption in R77-4, at 10 Ill. Reg. effective

## SUBPART A: GENERAL PROVISIONS

Section 904.100 Scope and Applicability

This Part applies to public airports.

Section 904.110 Definitions

A-Weighted Sound Level: A sound level measured as specified in Section 904.121(a).

Act: The Environmental Protection Act (Ill. Rev. Stat. 1985, ch. 111 ½, pars. 1001 et seq.).

Airport Expansion: The construction of a new runway at a public airport.

Airport Proprietor: The person to whom an airport operating certificate has been issued by the Federal Aviation Administration under 14 CFR 139 (1985).

Agency: The Illinois Environmental Protection Agency.

Board: The Illinois Pollution Control Board.

Equivalent Day-Night Sound Level (Ldn): The equivalent A-weighted sound level during a 24 hour time period with a 10 decibel weighting applied to the equivalent sound level during the nighttime hours of 10:00 p.m. to 7:00 a.m. Formulas for computing the Ldn are given in 14 CFR 150, Section A 150.205 (1985), incorporated by reference in Section 904.120.

Equivalent Sound Level (Leq): The constant sound level that, in a given situation and time period, conveys the same sound energy as the actual time-varying A-weighted sound, measured

in decibels. Formulas for computing the Leq are given in 14 CFR 150, Section A 150.205 (1985), incorporated by reference in Section 904.121.

Civil aircraft: Aircraft other than public aircraft.

Class A Land: All land uses as specified in the definition of Class A Land in 35 Ill. Adm. Code 901.101 with the exception of SCLUM Codes 762 and 921.

Large aircraft: Aircraft of more than 12,500 pounds maximum certificated takeoff weight.

Ldn: See "Equivalent Day-Night Sound Level".

Leq: See "Equivalent Sound Level".

Public aircraft: Aircraft used only in the service of a government or a political subdivision. Any government-owned aircraft engaged in carrying persons or property for commercial purposes is not included.

Public Airport: Any airport owned or operated by a unit of local government or public agency of the State.

Small aircraft: Aircraft of 12,500 pounds or less maximum certificated takeoff weight.

#### Section 904.120 Incorporations by Reference

- a) The Board incorporates the following materials by reference:
  - 1) 14 CFR 150, Appendix A (1985);
  - 2) "Methods for the Measurement of Sound Levels," American National Standards Institute publication ANSI S1.13-1971, revised 1976, available from the American National Standards Institute, Inc., 1430 Broadway, New York, NY 10018;
  - 3) "Specification for Sound Level Meters," American National Standards Institute publication ANSI S1.4-1983, available from the Standards Secretariat, Acoustical Society of America, 335 East 45th Street, New York, NY 10017;
- b) This incorporation includes no subsequent amendments or editions.

### Section 904.121 Measurement Methods

- a) Sound levels must be measured or analyzed with equipment having the "A" frequency weighting filter characteristics, and the "slow response" characteristics, as defined in ANSI S1.4-1983, incorporated by reference in Section 904.120. Tolerances allowed for general purpose, type 2 sound level meters are acceptable. Sound levels must be measured in decibels (dB) with respect to a reference pressure of 20 micropascals.
- b) Noise measurement and documentation must be in accordance with accepted acoustical measurement methodology, such as described in ANSI S1.13-1971, incorporated by reference in Section 904.120.
- c) Ldn's must be calculated according to the method outlined in 14 CFR 150, Appendix A (1985), incorporated by reference in Section 904.120(a)(1).

### Section 904.122 Proof of Violation

- a) Noise exposure maps modelled pursuant to Section 904.302 are presumed to be correct unless shown to be incorrect by actual measurement.
- b) Any person seeking to introduce an actual measurement pursuant to Section 904.121 shall demonstrate the statistical confidence level of the measurement. To be admissible, the measurement must be indicative of the annual average Ldn at the point in question, with 90 percent confidence that the measurement is within 1.5 dB of the actual Ldn.
- c) In any enforcement action, the complainant has the burden of establishing a violation. Correct modelling pursuant to subsection (a) is sufficient to prove a violation.

### Section 904.123 Severability

If any provision of this Part is adjudged invalid, or if its application to any person or in any circumstance is adjudged invalid, such invalidity shall not affect the validity of any subpart, section, subsection, sentence or clause not adjudged invalid.

## SUBPART B: PROHIBITIONS

### Section 904.201 Airport Expansion

No proprietor of any public airport shall cause or allow any airport expansion at such airport, if such airport expansion

would create an equivalent day-night sound level in excess of 65 Ldn, based on an annual average, on any receiving Class A land.

#### Section 904.202 Aircraft Operations

After the dates specified below, no proprietor of any public airport shall cause or allow activity at such airport to create an equivalent day-night sound level, based on an annual average, on any receiving Class A land in excess of the limits specified below:

- a) January 1, 1988, 80 Ldn;
- b) April 1, 1989, 75 Ldn;
- c) October 1, 1994, 65 Ldn.

#### Section 904.210 Violations

Any proprietor of a public airport which violates this Part shall be subject to the penalties specified in Section 42 of the Act.

### SUBPART C: DATA COLLECTION AND REPORTING

#### Section 904.301 Data Collection and Reporting

- a) Each airport proprietor subject to this regulation shall record on a quarterly basis, for all civil and public large aircraft and civil and public small aircraft powered by one or more jet engines, operating information necessary to code and run the FAA Integrated Noise Model described in 14 CFR 150, Appendix A (1985), incorporated by reference in Section 904.120.
- b) The records maintained pursuant to this Section shall be submitted quarterly to the Agency beginning October 1, 1987.
- c) Copies of all information submitted to the Agency pursuant to this Section shall be maintained by the proprietor at the airport and be available for public inspection.

#### Section 904.302 Noise Exposure Maps

Noise exposure maps must be developed according to the method outlined in 14 CFR 150, Appendix A, Sections A 150.103 and A 150.201, A 150.203 and A 150.205 (1985) incorporated by reference in Section 904.120. At a minimum the noise exposure maps must contain and identify:

- a) Runway locations.
- b) Flight tracks.

- c) Airport boundaries.
- d) Noise contours of 65, 70, 75, 80 and 90 Ldn resulting from airport operations.
- e) Depiction of the noise contours specified in subsection (d) over a land use map of sufficient scale and quality to discern streets and other identifiable geographic features.
- f) Class A land uses within one mile of the depicted noise contours.
- g) Location of noise sensitive public buildings (such as schools, hospitals and health care facilities).
- h) Estimates of the number of dwelling units and persons residing within the specified contours.

Section 904.303 Submission of Noise Exposure Maps

- a) The proprietor of each public airport shall submit to the Agency by January 1, 1988, a noise exposure map for all of its operations as specified in Section 904.302.
- b) In addition to the requirements of subsection (a) the proprietor also shall submit to the Agency at the same time a noise exposure map containing noise contours as in subsection (a), but without the effect of military aircraft, if any.
- c) The proprietor may submit a separate noise exposure map to the Agency and governmental entities listed in subsection (e) indicating the expected noise contours of any planned future expansion or other modification to the airport or its operations.
- d) Each map or revised map submitted to the Agency must be certified as true and complete under penalty of Section 42 of the Act.
- e) The proprietor shall provide copies of the maps submitted to the Agency pursuant to subsections (a), (b) and (c) to each municipality and county wholly or partially within any contour area of 65 Ldn or over.
- f) The proprietor shall update the maps required pursuant to this Section at least every five years, but may do so more frequently if the proprietor so desires.
- g) Copies of all information submitted to the Agency pursuant to this Section shall be maintained by the

proprietor at the airport and be available for public inspection.

- h) The proprietor shall publish, at least twice a year in a newspaper of general circulation within the area of the airport, notice of the availability for public inspection at the airport of such a noise exposure map.

#### SUBPART D: EXCEPTIONS

##### Section 904.401 Exemptions

- 1.) No airport proprietor shall be found to be in violation of this Part as a result of airport noise in excess of the limits of Section 904.202 on any Class A land which:
- 1) Was not a Class A land use at the time the noise exposure map for the airport as described in Section 904.302 was filed with the Agency and government agencies pursuant to Section 904.303; and
  - 2) Was shown in that noise exposure map to be subjected to noise levels in excess of the limits of this Part; and
  - 3) Was included in the efforts of the proprietor to induce the appropriate land use control authority to prevent a change in the use of such land to Class A uses.
- b) No airport proprietor shall be found to be in violation of this Part as a result of airport noise in excess of the limits of this Part on any Class A land for which the airport proprietor has obtained a noise easement or an equivalent interest subject to (c).
- c) No noise easement shall exempt the proprietor under this Section if the Class A land for which an easement is sought or obtained is subject to 75 Ldn or greater.

##### Section 904.402 Military Aircraft

Noise attributable to military aircraft shall not be considered when determining whether a proprietor is in compliance with this Part. Data on military operations, however, shall be collected and reported in accordance with Section 904.301.

## SUBPART E: ADJUSTED STANDARDS PROCEDURES

## Section 904.501 Preamble

Pursuant to Section 28.1 of the Act, the Board may grant adjustments to provisions of this Part. Any adjusted standard granted to proprietors shall be based on the degree of impact of airport noise on surrounding Class A land as well as on economic considerations, including those of the proprietor and those affected by the noise. The following procedures shall be used for petitions for adjustments to the otherwise applicable provisions and standards of this Part.

## Section 904.502 Filing and Notification by Proprietor

The proprietor may initiate an adjusted standard proceeding by filing 10 copies of a petition for adjustment. Simultaneously with the filing of its petition with the Board, the proprietor shall serve a copy of the petition in accordance with 35 Ill. Adm. Code 103.123 on the Agency, Department of Energy and Natural Resources and any county or municipality wholly or partially within any contour area of 65 Ldn or over.

## Section 904.503 Contents of Petition

The Petition must include the following information:

- a) A written statement of justification signed by the Petitioner or its authorized representative, outlining the scope, the nature, the reasons, and the basis for the adjustment; and
- b) The nature of the proprietor's operations and noise control actions; and
- c) Any information required by this Part; and
- d) Citations to any final enforcement actions against, and any variances granted to, the proprietor where compliance has not been achieved.

## Section 904.504 Justification of Petition

The proprietor shall establish adjustment justification in the petition for exception as follows:

- a) An evaluation of methods for reducing the exposure of Class A land to airport noise which includes, but is not limited to, the following options:
  - 1) Limitations on the types of aircraft which may use the airport, based upon noise emission characteristics.



- 2) Noise abatement preferential runway systems for all aircraft.
  - 3) Shifting aircraft operations to neighboring airports.
  - 4) Changes in location or operation of ground run-up areas.
  - 5) Limitations on the hours of operation of the airport.
  - 6) Limitations on the total number of aircraft operations to be permitted at the airport during nighttime hours.
  - 7) Takeoff noise abatement procedures.
  - 8) Landing noise abatement procedures.
  - 9) Changes in take-off flight paths.
  - 10) Changes in approach flight paths.
  - 11) Restrictions on use of non-Class A land on which the noise levels of this Part are, or will be in the future, exceeded to uses other than Class A.
  - 12) Changes in use of Class A land on which the noise limits of this Part are exceeded to uses other than Class A.
  - 13) The use of acoustical barriers.
  - 14) Other measures.
- b) The evaluation of the options in (a) shall include a discussion of the following:
- 1) The practicality of each option.
  - 2) The extent to which the proprietor has pursued the options with other parties including aircraft owners, and relevant federal, state and local authorities.
  - 3) The reduction in land area and population presently impacted by airport noise in excess of the limits of this Part (or potentially impacted in the future) which could be achieved by implementing the options.

- 4) The costs of the options and their effects on the service provided by the airport.
  - 5) Options available to local and state authorities to preserve, or bring about, land use which is compatible with the airport.
  - 6) Other pertinent information.
- c) A noise abatement plan for reducing the airport's noise impact which shall include but not be limited to:
- 1) A presentation of options selected for implementation,
  - 2) A discussion of the expected effectiveness of the selected options over future five year intervals,
  - 3) A schedule for implementation of the proposed noise abatement plan.
- d) Where special circumstances may render any evaluation inapplicable, for reasons of irrelevancy or expense of data collection in relation to the relevancy of the data, the petition shall include a justification for such inapplicability.

#### Section 904.505 Notice and Hearing

Hearing shall be noticed and scheduled in accordance with 35 Ill. Adm. Code 102.122. The proceedings shall be conducted in accordance with 35 Ill. Adm. Code 102.140 through 102.164.

#### Section 904.506 Opinion and Order

- a) In considering the proposed petition for adjustment and the hearing record, the Board will take into account the factors contained in Section 27(a) of the Act. The Board will issue and enter a written opinion stating the facts and reasons leading to its decision on a petition for adjustment.
- b) The Board will issue and enter such orders concerning a petition for adjustment as are appropriate for the reasons stated in its written opinion. Such appropriate orders may include but are not limited to orders accepting or rejecting the petition, directing that further hearings be held to develop further information or to cure any procedural defects, or remanding the petition to the petitioner with

suggested revisions. Another hearing will be held on any revised petition for adjustment.

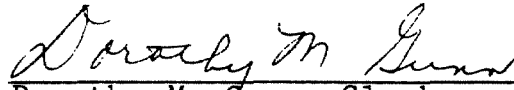
Section 904.507 Other Proceedings

Nothing in this Subpart shall impair any rights authorized in the Act or Board regulations that the proprietor or any other person may have to initiate or participate in any proceeding before the Board, including general or site-specific regulatory, variance and enforcement proceedings.

IT IS SO ORDERED.

B.S. Forcade dissented, W.J. Nega concurred and J.T. Meyer abstained.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Proposed Order was adopted on the 10<sup>th</sup> day of April, 1986, by a vote of 5-1.

  
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Dorothy M. Gunn, Clerk  
Illinois Pollution Control Board