1/27/70

Memorandum 70-15

Subject: Time Within Which Motion for New Trial Must Be Made

Henry F. Walker, Los Angeles attorney, has directed the Commission's attention to the recent decision of Desherow v. Rhodes (copy attached). His letter is reproduced as Exhibit I (pink) attached. He has called this decision to our attention because the statute involved in the Desherow case was enacted upon Commission recommendation. He believes that it is now uncertain as to the date upon which the trial court grants a new trial motion when the order is not signed by the judge.

The pertinent portion of Section 660 provides:

> 660. . . . .
>
> Except as otherwise provided in Section 12a of this code, the power of the court to rule on a motion for a new trial shall expire 60 days from and after the mailing of notice of entry of judgment by the clerk of the court pursuant to Section 664.5 or 60 days from and after service on the moving party by any party of written notice of the entry of the judgment, whichever is earlier, or if such notice has not theretofore been given, then 60 days after filing of the notice of intention to move for a new trial. If such motion is not determined within said period of 60 days, or within said period as thus extended, the effect shall be a denial of the motion without further order of the court. A motion for a new trial is not determined within the meaning of this section until an order ruling on the motion (1) is entered in the permanent minutes of the court or (2) is signed by the judge and filed with the clerk. The entry of a new trial order in the permanent minutes of the court shall constitute a determination of the motion even though such minute order as entered expressly directs that a written order be prepared, signed and filed. The minute entry shall in all cases show the date on which the order actually is entered in the permanent minutes, but failure to comply with this direction shall not impair the validity or effectiveness of the order. [Emphasis supplied.]

We suggest that you read the decision and Mr. Walker's letter and then determine whether you think a problem exists that merits study. The solution outlined below appears to be a simple one.

Mr. Walker suggests that the Commission consider revising Section 660 in the same way that Section 581d (dismissal of action ordered by court shall be "in the form of a written order signed by the court and filed in the action" rather than "entered upon the minutes thereof, or by a written order signed by the court and entered or filed in the action") was amended in 1963. If this suggestion were adopted, the pertinent portion of Section 660 would be revised to read substantially as follows:

> A motion for a new trial is not determined within the meaning of this section until an order ruling on the motion ~~(1) is entered in the permanent minutes of the court or (2)~~ is signed by the judge and filed with the clerk. . . .

It should be noted that the Commission has no authority to do anything about this problem since we are no longer authorized to study it. However, if our resolution giving us authority to study minor problems of civil practice and procedure is adopted, we could then work on this matter. We do not believe that the problem is one that would merit a separate request for authority to study it.

Respectfully submitted,

John H. DeMoully
Executive Secretary

Memo 70-15

EXHIBIT I

HENRY F. WALKER
ATTORNEY AT LAW
612 SOUTH FLOWER STREET-SUITE 606
LOS ANGELES, CALIFORNIA 90017
MADISON 8-4241

January 22, 1970

California Law Revision Commission
School of Law
Stanford University
Stanford, California, 94305

Gentlemen:

Your attention is called to the recent decision of Desherow v. Rhodes, 1 Cal.App.3d 733, in which the Supreme Court denied a petition for hearing on January 13th, 1970.

The decision, it is believed, renders it now impracticable to determine the date upon which a trial court has granted a new trial motion by minute order, i.e., the date upon which such a minute order was entered in the "permanent minutes" of the court.

In recommending needed legislation, which subsequently was adopted, it was stated (Recommendation and Study Relating to Effective Date of an Order Ruling on a Motion for a New Trial, 1 Cal. Law Revision Com. Rep., K-1, at K-25):

> "This statute would require for the granting of a new trial that one or the other of two easily identified actions actions take place within the 60-day period: actual entry of an order in the permanent minutes or the signing and filing of a written order. . ." (Emphasis added.)

In view of this decision by the Court in Desherow, it might be that the Commission may believe additional change is needed such as to make signing and filing of a written order the means of granting a new trial (so that the date will be certain), similar to that which was done by the 1963 amendment to section 581d, C.C.P.

Very truly yours

Henry F. Walker

HFW:mm

ROGERS, VIZZARD & TALLETT
A PROFESSIONAL CORPORATION
ATTORNEYS AT LAW
369 PINE STREET
SAN FRANCISCO, CALIFORNIA 94104

JOHN D. ROGERS
THOMAS P. VIZZARD
JOHN H. TALLETT

YUKON 1-8470

March 2, 1970

California Law Revision Commission
School of Law - Stanford University
Stanford, California 94305

Gentlemen:

Inverse Condemnation (aircraft noise damage)

I wish to thank you for the opportunity of expressing my views as an attorney representing a number of landowners affected by aircraft noise damage at the meeting last held by your Commission in San Francisco.

Permit me very briefly to comment concerning proposed legislation in this field of law. Preliminarily, I would like to reiterate my view that an attempt to frame legislation for aircraft noise damage which is premised upon noise measurements, in whatever context, will be extremely difficult, in terms not only of clarity but in satisfying constitutional limitations. I would rather propose that the Commission attempt to draft proposed legislation which provides for prima facie liability in terms of distance emanating from the threshhold of airport runways.

The Federal Aviation Agency has made an exhaustive study of runway length requirements for airport design, which is set forth in their advisory circular AC 150/5325-4, effective April 5, 1965, and reprinted May 26, 1966. The simple purpose of these requirements is to determine the number of linear feet of runway required for maximum landing or takeoff weights of different types of aircraft. Large turbofans and turbojets, which create the type of noise normally found objectionable, require runways in excess of 6,000 linear feet.

Secondly, the most authoritative published and acceptable technical reports on land use planning relating to aircraft noise, prepared by Bolt, Beranek & Newman, Inc., of which your Commission, I am sure, is fully aware, has determined perceived noise level contours for turbojet and turbofan aircraft, indicating the decibel readings for such aircraft at various distances from the threshhold of the runway.

Quite simply, I would propose that the draft of proposed legislation provide for prima facie liability for aircraft noise damage for a linear distance and width from the threshhold of the runways (in excess of 6,000 feet). The specific width and linear distance would be based upon the evidence given your Commission by noise experts, who would recommend whether noise level contours as indicated in the study of Bolt, Beranek & Newman, Inc., at decibel readings of 90, 95, 100, or any other figure, should be the basis for the adoption of the particular measurement. In other words, the legislation as drafted would provide for prima facie liability for airports operating aircraft on runways in excess of 6,000 feet in length, for a linear distance from the threshhold of said runway of X feet, for a width of Y feet. The prima facie liability set forth in the statute should not preclude the possible liability of aircraft creating noise outside of the established statutory noise zone, but such other claims would not be favored with the presumption of liability.

Attached is a copy of perceived noise level contours for civil and military landings of turbofan and turbojet aircraft, which is page 35 of the 1964 study of Bolt, Beranek & Newman, Inc.

For the sake of brevity, the comments contained herein involve certain obvious oversimplifications. This letter is intended only as a suggestion to the Commission that it change its direction from attempting to draft a statute involving noise measurements as its basis, and shift to the drafting of a statute which sets forth specific distances from runways of established or greater lengths.

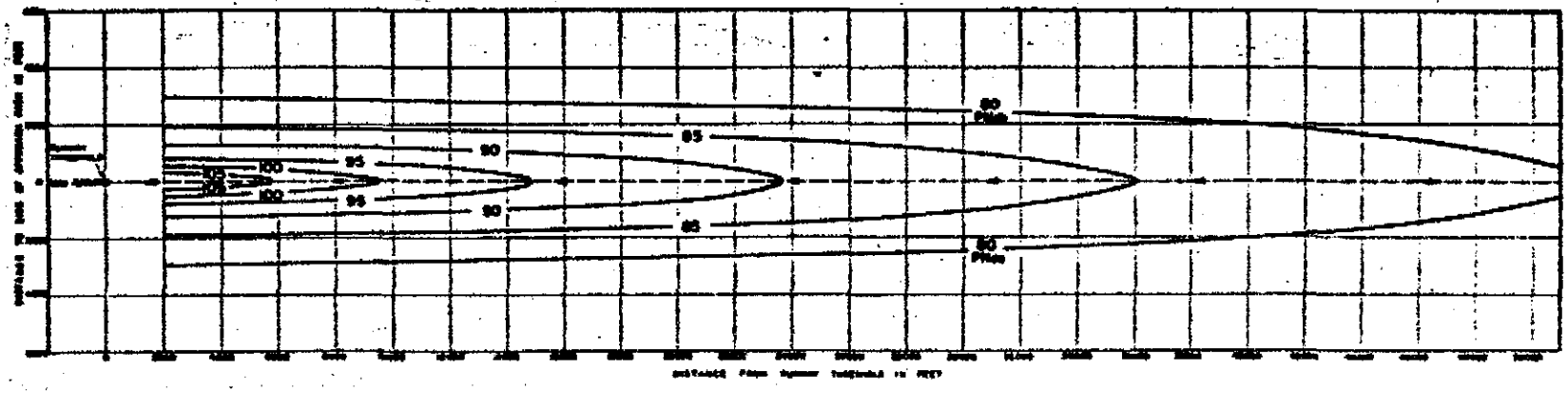
I shall attempt to be present on March 6, 1970, to elaborate briefly on these views, if permitted.

Sincerely yours,

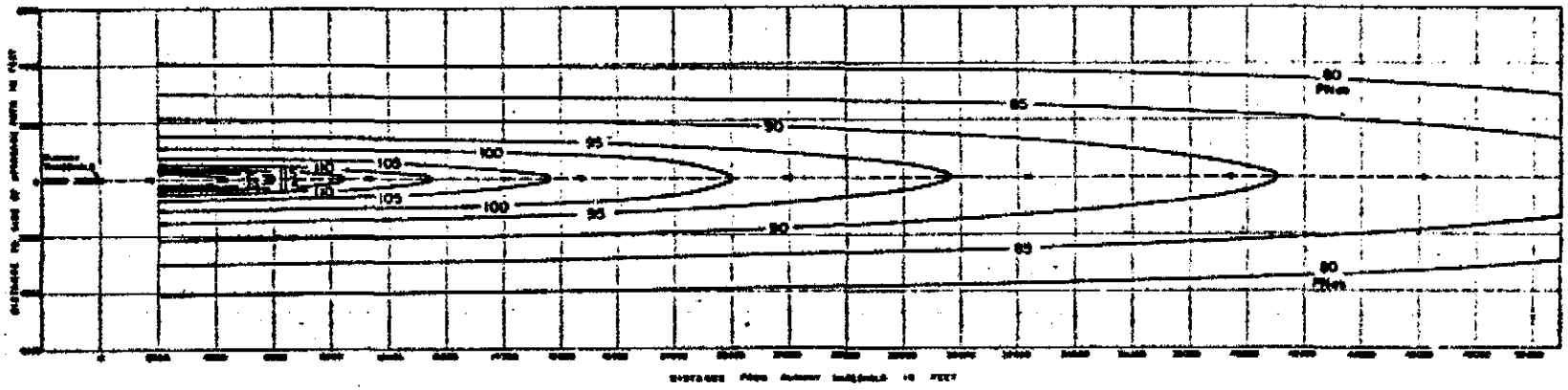
John D. Rogers

JDR:pb

Enc.



Ⓐ FOUR-ENGINE PISTON AND TURBOPROP AIRCRAFT.



Ⓑ TURBOJET AND TURBOFAN AIRCRAFT.

PERCEIVED NOISE LEVEL CONTOURS FOR CIVIL AND MILITARY LANDINGS.

CONTOUR SET 3

Attachment 2

(415) 421-8100
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Design · Research
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Maurice A. Garbell, Inc.
Consultants
Aeronautical Engineering
Aerophysics · Meteorology
1714 Lake Street
San Francisco, California 94121

March 4, 1970.

California Law Revision Commission,
School of Law - Stanford University,
Stanford, California 94305

Working Paper CLRC 70-1

A Threshold Quantum of Noise as a Basis for a Rebuttable Presumption Relative to a Claimed Diminution of Property Value Attributable to Aircraft Noise.

A proposal for a rebuttable presumption of liability for possible incorporation in a California statute, contained in Memorandum 69-133 of the California Law Revision Commission (CLRC), includes a recommendation that the contemplated statute establish a standard for cases warranting compensation and that the standard be based on the quantum of noise impinging upon a property which is the subject of an inverse-condemnation action as a result of aircraft or aircraft power-plant operation.

The present working paper provides fundamental considerations and an analysis of noise concepts and proposals which, it is hoped, may be helpful in establishing a practicable standard fair to both sides of an aircraft-noise action in inverse condemnation.

I. FUNDAMENTAL TECHNICAL CONSIDERATIONS.

Existing turbojet and turbofan aircraft produce broad-frequency-band noise issuing from the engine mechanism, the compressor, the turbine, the by-pass fan (if any), and the exhaust jet, accompanied by narrow-band or "pure" tones issuing from some of these noise sources.

The intensity of noise or noise pressure level (NPL) is measured by objective instruments and is expressed in units of decibels (dB). An increase of 3 dB expresses the doubling of the noise pressure level.

The subjectively perceived noisiness level (PNL) of a given broad-band noise, derived from scrupulously conducted surveys of the expressed opinions of presumably typical individuals, is obtained by summing up appropriately weighted objectively measured noise levels of the various frequency bands involved in a given noise and is expressed in units of perceived-noise decibels (PNdB). An increase of 10 PNdB is generally perceived by presumably typical individuals as a doubling in the noisiness of a noise.

The effective perceived noise level (EPNL) of a broad-band noise accompanied by one or more "pure" or discrete-frequency tones, comprising noise events of various individual durations, is obtained by adding to the perceived noise level terms expressing the contribution of the discrete-frequency tones and a duration correction for each noise event that exceeds a specified threshold duration. The measure of the effective perceived noise level is another decibel-like unit, termed the effective perceived noise decibel (EPNdB).

Recently adopted regulations of the Federal Aviation Administration relative to the airworthiness certification of future aircraft designs are based on the EPNL. The numerical criteria underlying the FAA requirements are stated in terms of specified numerical values in units of EPNdB.

The inclusion by the Federal Aviation Administration, in its recently adopted regulations, of the discrete-frequency tones in the EPNL, helps to urge the aircraft industry to muffle the pure-tone emission of the aircraft powerplants.

It should be noted that several new types of airliners currently under development or in initial production are being certified or will be certified without having to satisfy these noise-abatement requirements, because the above-mentioned recently adopted FAA certification regulations apply to "future designs" only.

Aviation trade journals have also reported, recently, that some airlines are planning to rework some of their older jet-propelled aircraft to extend their useful life without installing available "hush kits" to reduce their noise appreciably.

It is important to bear in mind that the noise problem in a given geographic area depends substantially on specific local features, such as topography, meteorological conditions, prevailing modes of aircraft operation, air-traffic-control problems, and the nature of human reaction to the impingement of aircraft noise.

While some improvements in noise reduction are theoretically possible through changes in aircraft operation, the writer believes that practical limits are being reached and that the airlines and the airline pilots in general are endeavoring to co-operate within reason to do all that can be done without impairing the safety of flight. The writer is skeptical and senses a futility about the enactment of any measures, whether statutory or administrative, that might tend to inflict undesirable pressures on the airlines or their pilots to achieve noise abatement at a possible sacrifice in safety. The only improvements possible, in the writer's opinion, are those which go to the source of the noise, i.e., the aircraft powerplant.

II. PURPOSE OF THE PRESENT WORKING PAPER.

The present working paper is intended to serve as a first step toward the determination of a threshold value of "noise", the attainment of which can be fairly regarded as proof of "damagingly loud noise."

III. IS DISTANCE AN APPROPRIATE DAMAGE CRITERION?

The distance separating a source of noise (aircraft or aircraft powerplant) from the point of observation (aggrieved property) does not necessarily correlate with the intensity of the noise observed at the point of observation.

1. Even at close range (less than 2,000 feet), aircraft noise may not be truly intolerable or damaging. Two examples may illustrate the point:

   a. Properties so situated along the extended centerline of a runway used for departures exclusively lie in the relatively quiet zone of the cardioid noise-pressure-level pattern; the noise thereat may be approximately 20 dB less than at equally distant properties situated at a centerline azimuth of 30 to 60 degrees relative to the runway threshold.

   b. The existence of large obstacles, such as hangars or other large buildings, between a property and the source of noise, can effectively baffle the noise impingement, even if the distance is less than 2,000 feet.

   In instances such as these, a distance-only criterion might be unfair to a potential defendant and encourage the introduction of non-meritorious claims at a great and futile litigation expense to plaintiff and defendant alike.

2. Even at a distance greater than 2,000 feet, aircraft in flight beneath a temperature inversion, between towering hills, or above concave surface depressions can inflict objectionable noise on the ground.

In such instances, the inclusion of a restrictive distance clause – such as, "and the mean distance .... averaged less than 2,000 feet"– could place an unfair burden on the owners of properties who, aside from the "and .... distance" requirement, would be fully able to prove the existence of substantial noise by objective instrumental measurements and precise numerical calculations.

IV. ARE COMMUNITY-PLANNING CRITERIA BASED ON STANDARDIZED NUMERICAL VALUES AN APPROPRIATE DAMAGE CRITERION?

A previous study, performed by the writer in 1968 and 1969, in connection with the establishment of an objective definition of the noise-intensity bounds of the noise easement sought by the Port of Oakland in Civil Action No. 343860 in the Superior Court of the State of California in and for the County of Alameda, has led the writer to the conclusion that community planning criteria based on standard noise values of "typical aircraft" and "typical modes of aircraft operation" are not suitable as prima-facie evidence of actually prevailing noise in a given location.

Fundamentally the difficulty resides in the application of average noise-level values produced by average operators of average airplanes along nominal flight paths in flat terrain, and in wind-free weather with a close-to-standard atmospheric temperature distribution.

From the plaintiff's point of view, this may be inadequate, because a number of special circumstances may actually increase the noise exposure

of his property substantially above the nominal or average values, and rebuttal by the defendant is unfairly facilitated by the protection afforded him by the nominal or average noise values on which the standard charts are based, regardless of how much more intense the real noise situation measured by the plaintiff might be.

From the defendant's point of view, there may be instances in which the nominal or standard values of noise have not been actually attained at the site of the subject property; in such instance, the defendant could be made liable for "textbook" values of noise, even though the act of presumably damaging noise has not been committed in fact.

Additionally, since the outcome of an inverse-condemnation proceeding might result in the establishment of a noise easement, it is suggested that noise bounds must be established for said noise easement in such a manner that evidence can be adduced in subsequent litigation on whether or not, when (if so), and to what extent the easement so created may have been overburdened in a given locality as a result of the subsequent introduction of new-type aircraft, new powerplants, and/or new operating techniques. If officially-sponsored and certified test results are not yet available for the new noise environment, a complete set of measurements in standardized conditions (NOT necessarily at the aggrieved site) over a large ground area would be necessary in order to plot the average noise contour lines on which the community-planning criteria depend.

More specifically, the time-honored composite noise ratio (CNR) set forth in Ref. 1 has been found to be unsuitable because its step-like system of additive and multiplicative factors can lead to an occasional decrease in CNR values when actual noise values are increased. This was established in

court in the above-cited Port of Oakland condemnation action and a motion to establish the CNR criterion defined in Ref. 1 as a measure of the noise bounds of a noise easement was denied by the court after hearing uncontradicted testimony to that effect.

The more recently FAA-approved noise-exposure-forecast criterion (NEF) is free of the perplexities introduced by the stepwise increments in the CNR, but the NEF remains a community-planning criterion and cannot serve as a measure of actually prevailing noise intrusions and, hence, as a measure of the noise bounds of a noise easement, for the reasons stated hereinabove.

V. THE TOTAL-NOISE-EXPOSURE (TNE) CONCEPT.

A. History

The total noise-exposure concept was developed during December, 1968, and early January, 1969, prior to and during the trial of Civil Action No. 343860, City of Oakland v. Utah Construction and Mining Co., et al., in the Superior Court of the State of California for the County of Alameda. The basic concepts were drafted and laid out by Maurice A. Garbell and Dariel Fitzroy, consultants to defendant Utah Construction and Mining Co.; final details were consolidated in several meetings between Messrs. Garbell and Fitzroy and Mr. Dwight E. Bishop, the latter an Acoustical Engineer with Bolt Beranek & Newman, consultants to the Port of Oakland.

The present proposal is not wholly identical with the TNE specification but has been updated by the writer in the light of a recent draft resolution by the International Standards Organization and a proposed resolution currently being circulated among the member governments of the International Civil Aviation Organization (ICAO) for early ratification and promulgation.

B. Introduction

The purpose of the TNE concept is to define the actual noise exposure at any point of a land parcel and to describe the bounds of a noise easement in such a manner that an excess or overburdening of such bounds can be established objectively by instrumental measurements and subsequent simple computation either by hand or by electronic computer.

C. Definitions

1. The sum total of the noise intrusions caused by noise events at any point of a specified land parcel resulting from a specified activity (e.g., aircraft activities), is expressed in terms of "total noise exposure," hereinafter abbreviated "TNE". The total noise exposure, TNE, incorporates the following elements:

(1) The highest perceived noise level of each noise event;

(2) The number of noise events during a given daytime or nighttime period;

(3) The time duration of each noise event;

and is calculated according to the procedure set forth in Section D hereof.

The term TNE constitutes a development of the earlier concepts designated as the "Composite Noise Rating" or "CNR" described in Ref. 1, and the "Noise Exposure Forecast" or "NEF" described in Ref. 2.

TNE can be calculated from actual noise measurements and is not limited to the use of the average data presented in Refs. 1 and 2, or the particular aircraft types and presumable stage lengths adduced therein. The TNE is essentially more refined than the CNR described in Ref. 1 and does not suffer from the numerical inconsistencies which impair the practical

usefulness of the CNR. Yet, the TNE is simpler in computation than the NEF through the grouping of noise events into noise-level classes (instead of individual summation) and through the omission of "pure tone" noise-level components which the authors regarded as too difficult and costly for an individual landowner to measure and which may be expected to become less significant as FAA certification limitations incorporating the pure-tone intensities will oblige powerplant designers and manufacturers to suppress high-pitched pure tones substantially.

For a given combination of noise-producing aircraft and a given number of aircraft operations at a given airport, the numerical value of the TNE correlates with those of the CNR and NEF. TNE differs basically from CNR (Ref.1) and NEF (Ref.2) through the ability of an observer to ascertain the TNE at a given time and at a given location, whereas CNR and NEF can be computed only from standardized and officially sanctioned average values. TNE describes the noise exposure as it actually exists at a given location and at a specified time; CNR and NEF provide a forecast of what the noise exposure is likely to be at a given location, assuming certain standardized values of noise levels and frequency and durations of anticipated noise events.

2. Perceived noise levels are defined and calculated in accordance with Ref. 3. The noise-measurement technique must meet the requirements of Ref. 4. Perceived noise levels are quantitatively expressed in perceived noise decibels (PNdB).

It is recognized that certain simplified noise measurements may be considered as satisfactory estimators of the calculated perceived noise level for the specific purpose of the TNE as a measure of the bounds of a noise easement. Therefore, the use of the N-weighted sound level (Refs. 5 and 6)

with the addition of 7 decibel-like units is considered as an acceptable measure of the perceived noise levels of turbojet, turbofan, and propeller-driven aircraft and their powerplants in current and anticipated operation on California airports.

However, the TNE values stated in the present specification are based on the perceived noise levels calculated in accordance with Ref. 3, except that the quantity:

> "decibels measured by an N-weighted sound-level meter (dBN or dBD) plus 7"

may be substituted therefor at the election of the moving party.

3. "Daytime" and "Nighttime", as these terms appear in the calculations of TNE set forth in Section IV hereof, are defined as follows:

> Daytime: The time period from 07:00:01 through 22:00:00 local time;
>
> Nighttime: The time period from 22:00:01 through 07:00:00 local time;
>
> where the reference time is the time of the occurrence of the highest perceived noise level (or the highest dBN reading).

4. The number of operations per daytime (0700–2200) and nighttime (2200–0700) shall be substantiated by evidence of direct observation and may be supported by published schedules of airline operations, air traffic records maintained by the airport, or the Federal Aviation Administration (FAA).

The observations shall be performed on two separate days, seven days apart (on the same day of the week). This provision is intended to eliminate the possibility that an emergency or abnormal operations occurring at a greater-than-weekly interval be employed to raise the apparent level of noise intrusion to the disadvantage of the defendant; yet it is designed to

take into account the regular peak levels of aircraft operations on certain days of the week (usually Friday and Sunday).

5. The time duration of each noise event, in seconds, begins when a noise signal first exceeds a level of 10 PNdB below its maximum perceived noise level and ends when the same noise signal last falls below a level of 10 PNdB below the maximum perceived noise level.*

When the time duration of a noise event exceeds 15 seconds, the TNE shall be adjusted therefor as shown in Section D hereof.

6. The value of TNE used as a substantiation of a claimed quantum of noise shall be the average of the two observation periods.

D. Calculation Procedure

The total noise exposure, TNE, at any point of the subject property shall be determined separately for a daytime period and separately for a nighttime period, as follows:

1. The perceived noise levels shall be calculated from measurements as specified in Ref. 3, or by the addition of seven units to the sound-pressure-level reading on an N-weighted sound meter (in terms of dBN or dBD), at the election of the moving party. The greatest value of the perceived noise level at any one moment of time during a given noise event shall be employed in all further calculations herein.

2. For each noise event having a time duration t in excess of fifteen (15) seconds, the quantity 10 log (t/15) shall be added to the calculated

* The signal should be smoothed with an indicating device having an averaging time of 0.3 seconds or greater, or corresponding to the "FAST" setting of a standard sound level meter.

perceived noise level, where the term "log" signifies the five-place logarithm to base ten. The resulting sum shall be termed the "duration-corrected perceived noise level" and shall be designated PNL(d).

3. The noise events of the respective observation period shall be grouped in the following i classes according to their PNL(d) values, as follows:

(i-1) 83 through 87 PNdB; mean PNL(d): 85 PNdB;

(i-2) 88 through 92 PNdB; mean PNL(d): 90 PNdB;

etc.

4. The number of noise events comprised in each class "i" is entered in column (a) of Table I for daytime events (N_{di}) and in column (f) of Table I for nighttime events (N_{ni}), respectively.

The quantity 10 log N_{di} is entered in column (b) for daytime events and the quantity 10 log N_{ni} is entered in column (g) for nighttime events, where the "log" function shall be the five-place logarithm to base ten.

For each class "i" of noise events, the sum of the mean duration-corrected perceived noise level for that class "i", namely $PNL(d)_i$, and the quantity 10 log N_{di} from column (b) is entered in column (c), and the sum of the mean duration-corrected perceived noise level for that same class "i", namely $PNL(d)_i$, and the quantity 10 log N_{ni} from column (g) is entered in column (h).

5. The total noise exposure, TNE, is determined from the following equation:

$$TNE = 10 \log \sum_i \text{antilog} \frac{(PNL(d)_i + 10 \log N_{d_i})}{10} \quad \text{for daytime}$$

and

$$TNE = 10 \log \sum_i \text{antilog} \frac{(PNL(d)_i + 10 \log N_{ni})}{10} \quad \text{for nighttime}$$

where the antilog function is the antilogarithm to base ten. The step-by-step determination of the total noise exposure, TNE, is made as follows:

5-a. For each class "i", divide the entry in column (c) of Table I by ten and enter the result in column (d) for daytime; divide each entry in column (h) by ten and enter the result in column (i) for nighttime.

5-b. Obtain the antilogarithm of each entry in column (d) and enter the result in column (e) for daytime; obtain the antilogarithm of each entry in column (i) and enter the result in column (j) for nighttime.

5-c. Add the entries in column (e) for daytime; add the entries in column (j) for nighttime.

5-d. Obtain the logarithm of the sum obtained in column (e) and multiply it by ten; the number thus obtained is the magnitude of the total daytime noise exposure, TNE_{day}.

5-e. Obtain the logarithm of the sum obtained in column (j) and multiply it by ten; the number thus obtained is the magnitude of the total nighttime noise exposure, TNE_{night}.

VI. SUGGESTED THRESHOLD VALUES FOR TNE AND PNL.

It appears desirable to provide a threshold value each for the total noise exposure (TNE) during an entire daytime or nighttime period and for the perceived noise level (PNL) of any one noise event during such a period.

The writer suggests the following values as an initial order-of-magnitude estimate of a desirable set of values of the total noise exposure (TNE) and of the perceived noise level (PNL) of any one noise event, to serve as prima-facie evidence of litigable taking:

1. A TNE, during daytime, equal to or exceeding ONE HUNDRED AND TWENTY (120) TNE UNITS at any point of the subject property.

2. The occurrence of any one noise event, during a daytime period, equal to or exceeding a perceived noise level of ONE HUNDRED AND FIVE (105) PNdB, at any point of the subject property.

3. A TNE, during nighttime, equal to or exceeding ONE HUNDRED AND TEN (110) TNE UNITS at any point of the subject property.

4. The occurrence of any one noise event, during a nighttime period, equal to or exceeding a perceived noise level of NINETY-FIVE (95) PNdB.

These numerical values are intended as a tentative basis of discussion and require verification against recent noise-damage decisions and prevailing current practices at major airports having effective noise-control procedures.

The writer is keenly aware of the difficulty of avoiding excessively low values which could encourage a flood of not-so-meritorious suits, while the selection of an excessively high set of values could frustrate the intent of

the contemplated presumption and serve to perpetuate the present double-trial system – first before the judge, then, if prevailing before the judge, before the jury.

By way of comparison, the current maximum perceived noise level permitted in the residential areas nearest the London International Airport is 110 PNdB, and the current PNL value beyond which the Port of New York Authority has taken action, including legal action, against an offending aircraft operator is a "composite maximum PNL" of 112 PNdB. The two values are virtually identical, since London uses the highest value of the PNL at any given point in time, whereas the Port of New York Authority prescribes the use of the individual peak value of the sound pressure level of each respective frequency-octave band, and then composes the individual peaks into a single composite PNL value, even though the individual peaks may be fractions of a second or even seconds apart, under the assumption that the human ear contracts such rapidly following frequency-band-octave peaks into a single peak of annoyance.

(References follow on Page 16)

(Table I on Page 17)

Respectfully submitted,

Maurice A. Garbell

Maurice A. Garbell
President
MAURICE A. GARBELL, INC.

REFERENCES

1. Bolt Beranek and Newman, Inc., Technical Report, published by the FAA, "Land Use Planning Relating to Aircraft Noise," October 1964. Appendix "A" to "Land Use Planning Relating to Aircraft Noise," published by the FAA, May 1965.

2. Society of Automotive Engineers (SAE), "Technique for Developing Noise Exposure Forecasts." August 1967.

3. SAE Aerospace Recommended Practice (ARP) 865, "Definitions and Procedures for Computing the Perceived Noise Level of Aircraft Noise." 15 October 1964.

4. SAE Aerospace Recommended Practice (ARP) 796, "Measurements of Aircraft Exterior Noise in the Field." 15 June 1965.

5. I. E. C. Recommendation Publication 123, "Recommendations for Sound Level Meters." 1961.

6. ISO Draft Resolution No. 1761, "Monitoring of Aircraft Noise Around Airports." International Standards Organization, New York, N. Y. 1969.

TABLE 1

CALCULATION SHEET FOR DETERMINING THE TOTAL NOISE EXPOSURE

	PNL(d) Interval, PNdB	Mean PNL(d) of the Interval, PNdB	No. of noise events, N_{di} (day) (a)	10 log Ndi (b)	Mean PNL(d) plus Column (b) (c)	Column (c)/10 (d)	Antilog Column (d) (e)
	83-87	85					
	88-92	90					
	93-97	95					
	98-102	100					
	103-107	105					
	108-112	110					
	etc.						
Sum of (e)							

	No. of noise events, N_{ni} (night) (f)	10 log Nni (g)	Mean PNL(d) plus Column (g) (h)	Column (h)/10 (i)	Antilog Column (i) (j)
Sum of (j)					

Enter above sums in the equations given on page 13