

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

JOHN AND LINDA MARACIC,)	
)	
Complainant,)	
)	
v.)	PCB No. 05-212
)	(Enforcement – Noise)
TNT LOGISTICS NORTH AMERICA)	
INC.,)	
)	
Respondent.)	

NOTICE OF FILING

TO: Ms. Dorothy M. Gunn	Bradley P. Halloran, Esq.
Clerk of the Board	Hearing Officer
Illinois Pollution Control Board	Illinois Pollution Control Board
100 West Randolph Street	100 West Randolph Street
Suite 11-500	Suite 11-500
Chicago, Illinois 60601	Chicago, Illinois 60601
(VIA ELECTRONIC MAIL)	(VIA FIRST CLASS MAIL)

(PERSONS ON ATTACHED SERVICE LIST)

PLEASE TAKE NOTICE that I have today filed with the Office of the Clerk of the Illinois Pollution Control Board **RESPONDENT'S OPINION WITNESS DISCLOSURE**, a copy of which is herewith served upon you.

Respectfully submitted,

TNT LOGISTICS NORTH
AMERICA INC.,
Respondent,

By: /s/ Thomas G. Safley
One of Its Attorneys

Dated: July 20, 2006

Edward W. Dwyer
Thomas G. Safley
HODGE DWYER ZEMAN
3150 Roland Avenue
Post Office Box 5776
Springfield, Illinois 62705-5776
(217) 523-4900

CERTIFICATE OF SERVICE

I, Thomas G. Safley, the undersigned, hereby certifies that I have served the attached RESPONDENT'S OPINION WITNESS DISCLOSURE upon:

Ms. Dorothy M. Gunn
Clerk of the Board
Illinois Pollution Control Board
100 West Randolph Street
Suite 11-500
Chicago, Illinois 60601

via electronic mail on July 20, 2006; and upon:

Bradley P. Halloran, Esq.
Hearing Officer
Illinois Pollution Control Board
100 West Randolph Street
Suite 11-500
Chicago, Illinois 60601

Mr. John Maracic
Ms. Linda Maracic
6512 Lakeway Drive
Monee, Illinois 60449

by depositing said document in the United States Mail, postage prepaid, in Springfield, Illinois on July 20, 2006.

/s/ Thomas G. Safley
Edward W. Dwyer

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

JOHN AND LINDA MARACIC,)	
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Complainants,)	
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v.)	PCB No. 05-212
)	(Enforcement – Noise)
TNT LOGISTICS NORTH AMERICA)	
INC.,)	
)	
Respondent.)	

RESPONDENT'S OPINION WITNESS DISCLOSURE

NOW COMES Respondent, TNT LOGISTICS NORTH AMERICA INC.

("TNT"), by its attorneys, HODGE DWYER ZEMAN, and for its Opinion Witness

Disclosure, states as follows:

1. The January 30, 2006, Order of the Illinois Pollution Control Board

("Board") Hearing Officer set various deadlines in this matter, including the following:

April 15, 2006 Complainants' opinion witness(es) and their opinion(s) disclosed.

June 1, 2006 Respondent's opinion witness(es) and their opinion(s) disclosed.

2. On or about May 31, 2006, Complainants transmitted to the undersigned their "list of . . . opinion witnesses" ("Complainants' opinion witness list").

3. Complainants' opinion witness list states that the persons identified therein "can testify to the noise levels observed at" Complainant's property.

4. To the extent that Complainants' opinion witness list constitutes a disclosure of "opinion witness(es) and their opinion(s)" in compliance with the Hearing Officer's January 30, 2006, Order, TNT identifies the following opinion witness whom it might call at hearing to provide opinion witness testimony regarding the allegations made

in Complainants' Complaint, in response to any opinion witness testimony offered by Complainants, if Complainants are granted leave to present such opinion witness testimony:

Dr. Paul D. Schomer
Schomer & Associates
2117 Robert Drive
Champaign, Illinois 61821

5. A copy of Dr. Schomer's current résumé is attached hereto as Exhibit A and incorporated herein.

6. TNT cannot at this time identify any opinions of Dr. Schomer that TNT might offer at hearing, due to the vague nature of Complainants' opinion witness disclosure.

7. By making this disclosure, TNT does not waive its right to object to any opinion witness testimony that Complainants might attempt to offer at hearing on the grounds that Complainants failed to disclose such opinion witness testimony prior to hearing as required by the Hearing Officer's January 30, 2006 Order, or on any other grounds.

WHEREFORE, Respondent, TNT LOGISTICS NORTH AMERICA INC., makes its opinion witness disclosure as set forth above.

Respectfully submitted,

TNT LOGISTICS NORTH AMERICA INC.,
Respondent,

By: /s/Thomas G. Safley
One of Its Attorneys

Dated: July 20, 2006

Edward W. Dwyer
Thomas G. Safley
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TNTL:002/Fil/Maracic/Opinion Witness Disclosure

SCHOMER AND ASSOCIATES, INC.

Consultants in Acoustics and Noise Control

Paul D. Schomer, Ph.D., P.E.
Member; Board Certified
Institute of Noise Control Engineering

2117 ROBERT DRIVE
CHAMPAIGN, ILLINOIS 61821
PHONE: (217) 359-6602
FAX: (217) 359-3303

PAUL D. SCHOMER **Acoustical Engineer**

BS, Electrical Engineering, University of Illinois, 1965.
MS, Electrical Engineering-Acoustics, University of California, 1966.
Ph.D., Electrical Engineering-Acoustics, University of Illinois, 1971.

EXPERIENCE

Dr. Schomer has extensive experience, publications, and patents in the areas of environmental noise and its assessment, human and community response to noise, instrumentation and methodology for the measurement and monitoring of noise, architectural acoustics, and acoustical measurements of building parameters. He is a consultant to industry and government, an adjunct Professor of Electrical and Computer Engineering (Acoustics) and member of the graduate faculty of the University of Illinois, and a research leader in acoustics. His recognition by his peers as an international leader in the area of environmental noise is demonstrated by his chapters in reference books, his over 35 refereed publications, his leadership in Standards organizations and professional societies, and his awards and honors. Dr. Schomer is also standards Director for the Acoustical Society of America.

As an international leader in the area of environmental noise, Dr. Schomer is chairperson of the United States delegation to International Organization for Standardization (ISO) Acoustics and Noise committees, chairperson of the American National Standards Committee dealing with noise, chairperson of the ISO working groups which deal with environmental noise and with impulsive noise measurement, chairperson of the American National Standards Institute working group which deals with environmental noise, and he is the United States representative to the International Organization for Standardization in the areas of aircraft noise and impulsive sources. He is the Standards Director for the Acoustical Society of America, a member of the Society of Automotive Engineers Aircraft Noise Committee, a principle contributor to current efforts in the area of standardizing airport noise monitoring, and Executive Director, past vice-president for membership, and twice a past member of the board of the Institute of Noise Control Engineering.

Dr. Schomer has 35 years of experience dealing with noise measurement and the effects of noise on people and communities. This experience includes blast and mining noise, gunfire noise, airport, aircraft, helicopter, construction and traffic noise, and general industrial and urban noise. The citation for his selection as a Fellow of the Acoustical Society of America references his studies on community response to noise, and most of his work with the National Academy of Science has been concerned with noise assessment.

MEMBER FIRM, NATIONAL COUNCIL OF ACOUSTICAL CONSULTANTS

résumé

Paul D. Schomer

MEMBERSHIPS AND AWARDS

Fellow - Acoustical Society of America.

Member, Board Certified, Institute of Noise Control Engineering

Selected as Corps of Engineers Engineer of the Year and One of the Top 10 Federal Engineers of the Year (1990)—National Society of Professional Engineers

Several times a member of the board and/or officer; Institute of Noise Control Engineering.

Former Executive Director, Institute of Noise Control Engineering of the USA, Inc.

Standards Director, Acoustical Society of America

Chairman, Acoustical Society of America Committee on Standards

Head of U.S. Delegation, International Organization for Standardization, Technical Committee 43 (acoustics) and Subcommittee 1 (noise).

Convener (chairman), International Organization for Standardization, Working Group 45 dealing with environmental noise assessment.

Chairman, S.A.E. Construction Site Sound Level Subcommittee, S.A.E. ConAg Committee.

Member, S.A.E. Aircraft Noise Committee and the noise monitoring subcommittee.

Reviewer for *Applied Mechanics Review*, *Journal of the Acoustical Society of America*, and *Noise Control Engineering Journal*.

Fellowship, University of Illinois (1968-1971).

Registered Professional Engineer (DC).

Member, Institute of Noise Control Engineering, Acoustical Society of America, Institute of Electrical and Electronic Engineers, German Acoustical Society (DEGA), European Acoustical Association

résumé

Paul D. Schomer

BOOKS

Handbook of Acoustical Measurements and Noise Control, Chapter 50. Community Noise Measurements, 2nd edition, John Wiley and Sons, Inc., New York, 1991.

Reference Data for Radio Engineers, Chapter 40. Electroacoustics, 7th edition, ITT Press, a subsidiary of MacMillan, Inc., Indianapolis, 1985.

Reference Data for Radio Engineers, Chapter 40. Electroacoustics, 8th edition, Sams Publishing, Prentice-Hall Computer Publishing, Indianapolis, 1993.

MAJOR JOURNAL PUBLICATIONS

"Overview of the theoretical development and experimental validation of blast sound absorbers," *Noise Control Engineering Journal*, **51**(3), (May/June 2005).

"Basic results from full-scale tests at Ft. Drum," *Noise Control Engineering Journal*, **51**(3), (May/June 2005).

"Some Important Factors in Community Response to Sonic Booms," NOISECON 2004, *Institute of Noise Control Engineering*, Baltimore, MD, USA, 12-14 July 2004.

"The importance of proper integration of and emphasis on the low-frequency sound energies for environmental noise assessment," *Noise Control Engineering Journal*, **52**(1), 26-39, (January/February 2004).

"Noise Assessments: Interaction with the Public—Simplicity and Truth Will Help," INTERNOISE 2003, Paper N706, pp 1216-1220, Seogwipo, Korea, 25-28 August 2003.

"Does the Soundscape Concept Have Real Utility," INTERNOISE 2003, Paper N161, pp 2825-2826, Seogwipo, Korea, 25-28 August 2003.

"Noise Assessment Metrics and Criteria in a United States Department of Transportation Multi-Modal Noise Model," NOISECON 2003, Paper No. 023, *Institute of Noise Control Engineering*, Cleveland, OH, USA, 23-25 June 2003.

"A statistical description of ground-to-ground sound propagation," *Noise Control Engineering Journal*, **51**(2), 69-80, (March/April 2003).

"On Normalizing DNL to Provide Better Correlation with Response," *Sound & Vibration*, pp 14-23, December 2002.

"Further Results Using Loudness-Level Weighting to Assess Noise Annoyance," NTERNOISE 2002, Paper No. N489, *Institute of Noise Control Engineering International*, Dearborn, MI, USA, 19-21 August 2002.

"Alternative Methods to A-Weighting for Environmental Noise Assessment," NTERNOISE 2002, Paper No. N475, *Institute of Noise Control Engineering International*, Dearborn, MI, USA, 19-21 August 2002.

résumé

Paul D. Schomer

“Evaluation of loudness-level weightings for assessing the annoyance of environmental noise,” *Journal of the Acoustical Society of America*, **110**(5) Pt. 1, 2390-2397, (November 2001).

“Criteria for the Assessment of Noise Annoyance,” NOISECON 2001, Paper No. NC01_018, *Institute of Noise Control Engineering USA*, Portland, Maine, 29-31 October 2001.

“Use of the New ISO 226 Equal Loudness Contours as a Filter to Assess Noise Annoyance,” INTERNOISE 2001, Paper No. 197, *Institute of Noise Control Engineering International*, The Hague, Holland, 27-30 August 2001.

“A statistical description of blast sound propagation,” *Noise Control Engineering Journal*, **49**(2), 79-87, (March/April 2001).

“Using fuzzy logic to validate blast noise monitor data,” *Noise Control Engineering Journal*, **48**(6), 193-205, (November/December 2000).

“A comparison between the use of loudness level weighting and loudness measures to assess environmental noise from combined sources,” INTERNOISE 2000, Paper No. 101, *Institute of Noise Control Engineering International*, Nice, France, 27-30 August 2000.

“A test of proposed revisions to room noise criteria curves,” *Noise Control Engineering Journal*, **48**(4), 124-129, (July/August 2000).

“Proposed revisions to room noise criteria,” *Noise Control Engineering Journal*, **48**(3), 85-96, (May/June 2000).

“Loudness-Level Weighting for Environmental Noise Assessment,” *Acustica and Acta Acustica*, **86**(1), 49-61 (January/February 2000).

“Revision to the ISO 1996 series--Description, measurement and assessment of environmental sound,” INTERNOISE 98, Paper No. 190, *Institute of Noise Control Engineering International*, Christchurch, New Zealand, November 1998.

“On spectral weightings to assess human response, indoors, to blast noise and sonic booms,” *Noise Control Engineering Journal*, **46**(2), 57-71, (March/April 1998).

“Evaluation of a re-analysis of the relationship between the results obtained in laboratory and field studies on the annoyance caused by high-energy impulsive sounds,” *Noise Control Engineering Journal*, **45**(6), 251-255 (November/December 1997).

“A comparative study of human response, indoors, to blast noise and sonic booms,” *Noise Control Engineering Journal*, **45**(4), 169-182 (July/August 1997).

“The new ANSI method for assessing combined noise environments; comparison with other methods,” INTERNOISE 97, 1047-1052, *Institute of Noise Control Engineering International*, Budapest, Hungary, August 1997.

“On the contribution of noticeability of environmental sounds to noise annoyance,” *Noise Control Engineering Journal*, **44**(6), 294--305 (November/December 1996).

résumé

Paul D. Schomer

“Penalties for assessing helicopter noise annoyance—There is none?” NOISE-CON 96, 581-584, *Institute of Noise Control Engineering*, Seattle, WA, September 1996.

“A Comparative Study of Human Response to Blast Noise and Sonic Booms,” INTERNOISE 96, *Institute of Noise Control Engineering International*, Liverpool, UK, July 1996.

“Development of a New ANSI Standard for Assessment of Combined Noise Environments,” INTERNOISE 96, 3265-3270, *Institute of Noise Control Engineering International*, Liverpool, UK, July 1996.

“25 Years of progress in noise standardization,” *Noise Control Engineering Journal*, **44**(3), 141-148 (May/June 1996).

“Human and community response to military sounds: Results from field-laboratory tests of small arms, 25 mm cannon, helicopter and blast sounds,” *Noise Control Engineering Journal*, **43**(1), 1-13 (January/February 1995).

“Amendments to ISO Part 2: The Impulse Noise Penalty,” INTERNOISE 95, *Institute of Noise Control Engineering International*, 851-856, Newport Beach, CA, USA, 1995.

“New descriptor for high-energy impulsive sounds,” *Noise Control Engineering Journal*, **42**(5), 179-191 (September/October 1994).

“SoundProp Fast, accurate prediction of sound propagation under varying weather conditions and over hard or soft surfaces,” INTERNOISE 94, 555-558, *Institute of Noise Control Engineering International*, Yokohama Japan, August 1994.

“A revised statistical analysis of blast sound propagation,” *Noise Control Engineering Journal*, **42**(3), 95-100 (May/June 1994).

“Human and community response to military sounds: Results from field-laboratory tests of small arms, tracked vehicles, and blast sounds,” *Noise Control Engineering Journal*, **42**(2), 71-84 (March/April 1994).

“Activity and sleep interference; A new measurement technique,” INTERNOISE 93, *Institute of Noise Control Engineering International*, Leuven, Belgium, July 1993.

“Time-average aircraft noise descriptors; Confusion with no benefit,” INTERNOISE 92, **2**, 987-992, *Institute of Noise Control Engineering International*, Toronto, Canada, July 1992.

“On Using the Generalized Concept of Loudness to Predict Annoyance,” INTERNOISE 91, *Institute of Noise Control Engineering International*, Australia, December 1991.

“Decibel annoyance reduction of low-frequency blast attenuating windows,” *Journal of the Acoustical Society of America*, **89**(4), April 1991.

“Descriptors for Community Noise Assessment; logical Extensions to DNL,” NOISECON 90, *Institute of Noise Control Engineering*, Austin TX, October 15-17 1990.

“Reduction of Wind Noise for Unattended Blast Noise Monitoring,” *Noise Control Engineering*

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Paul D. Schomer

Journal, **34**(2), March/April 1990.

“Indoor human response to blast sounds that generate rattles,” *Journal of the Acoustical Society of America*, **86**(2), August 1989.

“On a theoretical interpretation of the prevalence rate of noise-induced annoyance in residential populations: High-amplitude impulse noise environments,” *Journal of the Acoustical Society of America*, **86**(2), April 1989.

“The role of Helicopter noise-induced vibration and rattle in human response,” *Journal of the Acoustical Society of America*, **81**(4), April 1987.

“High-energy impulsive noise assessment,” *Journal of the Acoustical Society of America*, **79**(1), January 1986.

“Assessment of community response to impulsive noise,” *Journal of the Acoustical Society of America*, **77**(2), February 1985.

“Descriptor for rotary-wing aircraft noise,” American Institute of Aeronautics and Astronautics, October 1984.

“A survey of community attitudes towards noise near a general aviation airport,” *Journal of the Acoustical Society of America*, **74**(6), December 1983.

“Noise monitoring in the vicinity of a general aviation airport,” *Journal of the Acoustical Society of America*, **74**(4), April 1983.

“Sampling strategies for monitoring noise in the vicinity of airports,” *Journal of the Acoustical Society of America*, **73**(6), June 1983.

“An analysis of community complaints to noise,” *Journal of the Acoustical Society of America*, **73**(4), April 1983.

“Time of day noise adjustments or ‘penalties’,” *Journal of the Acoustical Society of America*, **73**(2), February 1983.

“A model to describe community response to impulse noise,” *Noise Control Engineering Journal*, **18**(1), January/February 1982.

“The growth of community annoyance with loudness and frequency of occurrence of events,” *Noise Control Engineering Journal*, **17**(1), July/August 1981.

“Temporal sampling requirements for estimation of long-term average sound levels in the vicinity of aircraft,” *Journal of the Acoustical Society of America*, **69**(3), March 1981.

“Development of temporal sampling strategies for monitoring noise,” *Journal of the Acoustical Society of America*, **66**(3), September 1979.

“High-amplitude/low-frequency impulse calibration of microphones; a new method,” *Journal of the Acoustical Society of America*, **65**(2), February 1979.

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Paul D. Schomer

“Growth function for human response to large-amplitude impulse noise,” *Journal of the Acoustical Society of America*, **64**(6), December 1978.

“Human response to house vibrations caused by sonic booms or air blasts,” *Journal of the Acoustical Society of America*, **64**(1), July 1978.

“Statistics of amplitude and spectrum of blasts propagated in the atmosphere,” *Journal of the Acoustical Society of America*, **63**(5), May 1978.

“Evaluation of C-weighted L_{dn} for assessment of impulse noise,” *Journal of the Acoustical Society of America*, **62**(2), August 1977.

“Correlation techniques applied to acoustical measurements in reverberant rooms,” *Journal of the Acoustical Society of America*, **56**(5), 1974.

“Measurement and characterization of off-road construction vehicle noise,” *Noise Con73*, 247-249, 1974.

STATE OF ILLINOIS REPORTS

Proposed Revisions to Property-Line-Noise-Source Measurement Procedures, ENR Report No. REEA91/10, Illinois Department of Energy and Natural Resources, 1991.

Impulse Noise Study, ENR Report No. REEA90/16, Illinois Department of Energy and Natural Resources, November 1990.

A Demonstration of Airport Noise Impact Mitigation, ENR Report No. 83/25, Illinois Department of Energy and Natural Resources, June 1983.

The Economic Impact Study of Proposed Airport Noise Regulations, R774 Volume 1: Technical Study of Public Airports in Chicago, ENR Report No. 81/38, Illinois Department of Energy and Natural Resources, November 1981.

The Economic Impact Study of Proposed Airport Noise Regulations, R774 Volume 1: Technical Study of Public Airports Outside Chicago, ENR Report No. 81/02, Illinois Department of Energy and Natural Resources, January 1981.

Human and Community Response to Impulse Noise: A Literature Review, IIEQ Report No. 78/07, Illinois Institute for Environmental Quality, March 1978.

Motorcycle Noise Levels: A Report on Field Tests, Report of the Illinois Task Force on Noise, June 1975.

Control of Noise from Motor Vehicles Part III: Technical Study in Support of Proposed Motor Vehicle Noise Regulations, Report of the Illinois Task Force on Noise, June 1974.

Sound Transmission Loss Between Spaces Connected by Multiple Paths: A New Measurement Technique, Ph. D. Thesis, University of Illinois, August 1971.

résumé

Paul D. Schomer

PATENTS

Logarithmic Statistical Distribution Analyzer, Patent No. 3995500.

Microphone Droop and Sensitivity Measurement Device, Patent No. 4347410.

résumé

Paul D. Schomer

TYPICAL PROJECT EXPERIENCE**AIRPORT NOISE ASSESSMENT AND PART 150 STUDIES**

Conducting the acoustical analysis and measurements contained within airport Part 150 studies including (1) the generation of present and future, predicted noise contours, (2) the execution of noise monitoring, the comparison of monitoring results with noise contours, and the analysis of monitoring results by aircraft type, operation, and runway, and (3) the development and analysis of noise mitigation strategies.

HELIPORT DESIGN AND ASSESSMENT

Assessment of the heliport noise. Establishing the need for mitigation. Assessing mitigation alternatives.

ENTERTAINMENT NOISE

Evaluated measurements for a large, outdoor music venue. Evaluated band and DJ noise from a club as it affected the neighborhood. Suggested mitigation methods. Evaluated measurement and monitoring plans for an outdoor music performance arena.

EXPERT WITNESS REGARDING NOISE PREDICTION AND ITS EFFECTS ON PEOPLE

For the defense: Class action suit of homeowners against ARCO Oil.

For the plaintiff: Class action suit of homeowners against Peabody Coal Company.

Performed analysis of the physical noise and its predicted levels in the community. Performed assessment of the received noise and its effect on individuals and the community.

For the defense: Analyzed the audibility of gun shot sound.

For the defense/plaintiff: Predicted, measured and analyzed noise from parked outdoor refrigerator trucks in a special situation.

For the plaintiff: Predicted and analyzed the effect of strip-mining explosions on a distant factory structure.

Analyzed the audibility of off-road truck noise in a quarry delivery plant. Analyzed the audibility of a backup alarm in the presence of lawnmower noise. Analyzed the audibility of siren noise.

Analyzed the audibility of truck noise in the presence of other neighborhood noise.

For the community: Class action suits against airport noise.

GUN CLUBS/POLICE FIRING RANGES

Performed noise assessment and mitigation at several civilian and police small arms firing ranges including siting, layout, operations, and noise mitigating structures and fixtures.

INDUSTRIAL NOISE CONTROL--OUTDOORS

Performed noise assessment and mitigation at a variety of outdoor industrial operations such as an asphalt plant, a kitty-litter plant (similar drum to asphalt plant for drying clay), an ammunition disposal plant (again a heated drum), and grain elevators.

MOTOR RACEWAY NOISE

Performed assessment, evaluated existing and planned mitigation and developed alternatives.

Evaluated management and operational plans and developed alternative strategies.

résumé**Paul D. Schomer****PRODUCT DEVELOPMENT**

Design, testing and evaluation of outdoor warning sirens.

VEHICLE/HIGHWAY NOISE

Assessment of highway noise. Monitoring highway noise. Establishing the need for mitigation. Assessing mitigation alternatives.

ILLINOIS NOISE REGULATIONS

Examination of the adequacy of existing noise regulations contained in Subtitle H, 35 Illinois Administrative Code. Analysis of the existing rules and whether they appropriately encompass the various types of discontinuous noise and specifically, impulse noise. Recommendations for changes to sections of the Code dealing with definitions and regulatory levels.

REVISIONS TO ILLINOIS PROPERTY-LINE NOISE MEASUREMENT PROCEDURES

Examination of existing measurement procedures as related to American National Standards. Recommendation of measurement procedures for determination of octave-band 1-hour equivalent levels corrected for background ambient. (No American National or International Standards exist for this type of measurement, but these are the type required by the Illinois Pollution Control Board.)

HUMAN AND COMMUNITY RESPONSE TO NOISE

Conducting and supervising international research experiments designed to explain, qualify and quantify human and community response to noise of varying character, spectra and temporal patterns. This research concentrates on comparing and contrasting special noises such as small arms, rotary-wing aircraft, or large explosions to more common noise such as road vehicles or artificially generated noise. A key to this work is conducting these experiments in real houses with real sources of sound.

TEMPORAL SAMPLING STRATEGIES FOR MONITORING AIRPORT NOISE

Analysis of daily monitoring results from many of the nation's airports. Modeling of the results by auto-regressive moving average (ARMA) models, and analysis of the results by "Monte Carlo" methods. Recommendation of airport noise sampling strategies for obtaining the required degrees of precision.