

# SCHOMER AND ASSOCIATES, INC.

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CLERK'S OFFICE

JAN 28 2003

STATE OF ILLINOIS  
Pollution Control Board

January 22, 2003

RE: NOISE RULE UPDATE: AMENDMENTS TO 35 ILL. ADM. CODE 900 and 903; R03-8

Dear Sirs:

I have the following comments:

## COMMENT 1.

Page 13. Section 900.103 Measurement Procedures

b) Procedures Applicable only to 35 Ill. Adm. Code 901

Comment: The one-hour LEQ is too short for some situations and far too long for continuous situations such as the fans at a grain elevator or on other pollution control devices.

Measurements should be made in accordance with American National Standards Institute Quantities and Procedures for Description and Measurement of Environmental Sound, Part 3: Short-term Measurements with an Observer Present. This Standard describes how to measure and correct for the background—the exact task required. The text should read:

- 1) All measurement and all measurement procedures to determine whether emissions of sound comply with 35 Ill. Adm. Code 901 shall with the exception of measurements to determine whether emissions of sound comply with 35 Ill. Adm. Code 901.109, be based on LEQ averaging, as defined in 35 Ill. Adm. Code 900.101 using a period of observation that is commensurate with the variability of the sound in question. If the sound is steady, then a 10-minute period of observation is sufficient; if the sound is non-steady, then a 1-hour period of observation is required; and if the sound is highly variable, a period of observation greater than 1 hour may be required. All such measurements and measurements procedures for LEQ must correct, or provide for the correction of such emissions, for the presence of ambient or background noise in accordance with the procedures in 35 Ill. Adm. Code 910.

(Add S12.9 Part 3 as item E in the list of Standards included with this clause and in 900.105)

MEMBER FIRM, NATIONAL COUNCIL OF ACOUSTICAL CONSULTANTS

## COMMENT 2.

Not discussed or offered as amendments are two issues that require change. First, the adjustment currently contained in the Rules for general impulsive sound is nominally 5 dB. ANSI S12.9 Part 1 (one of the added references) has a 12 dB adjustment for “highly impulsive” sounds (e.g., gunfire, metal hammering, wood hammering), 5 dB for “regular impulsive” sounds, and a separate procedure for “high energy impulsive” sounds (e.g., quarry, mining). Illinois Rules need to incorporate these types of adjustments and procedures but this is far beyond a simple comment. Incidentally, the same impulsive adjustments and procedures are in ISO 1996 Part 2, Amendment 1 and in the new ISO 1996 part 1 Final Draft International Standard.

The second issue is noise-induced building vibrations and rattles. Research has shown that noise-induced vibrations and rattles greatly increase noise annoyance over just the audibility of the sound. The increase in annoyance is at least equivalent to 10 dB and probably closer to 20 dB. This type of noise impact should be added to the Rules but again, such a change is beyond what can be conveyed in a simple letter.

Very Sincerely

A handwritten signature in cursive script that reads "Paul Schomer".

Paul Schomer, Ph.D., P.E.

Member Board Certified, Institute of Noise Control Engineering

cc. Mr. Howard Chinn