

particular from the vertical discharge of air over the fans located on the top of the unit (R.12). Yerges' recommendations one month later were to remove the tubular silencers on the top of the unit, replacing them with a lined, acoustic plenum and low pressure drop duct mufflers, and to screen the intakes to the unit (R.15). Yerges further recommended constructing an 8-foot barrier between the unit and the residential property, installing three-foot-long mufflers on the top of the unit (R.15-16), installing further screening, and adding absorptive material to the library wall behind the unit (R.29).

The system designer, Migdal, testified that the air conditioner could not be relocated much further away without sacrificing loss of refrigeration capacity (R.62-63); that two of the six fans could not be shut off without harming the system, especially for two hours during the estimated 30 days of peak demand annually (R.64-65), although this was possible after 7:00 p.m. (R.73-74); that the system, installed at the end of 1975 and having a 12-year life (R.74), was not designed with consideration of the noise levels in Rule 204 (R.66-67); and that the manufacturer, Trane Co., advised him that extending the present 8-foot barrier by six feet or canting it would cause shortcycling when wind velocity was "low" (R.69-70).

The library building architect, Pigozzi, testified that to move the 4,000-pound air conditioner would require roof modifications at a cost of \$10,000 plus labor (R.88-90). The Librarian, Stahl, testified that the library never opens before 10:00 a.m. and is closed on Sundays (R.92) (Neighbor Jasinski testified that the noise is heard on Sundays, R.110); that users have complained "vehemently" in the summer that the library is too warm (R.96); and that there has been an increased number of maintenance problems since the installation of screening over a year ago (R.94).

The neighbor, Ms. Jaskinski, testified that the noise interferes with her family's and friends' being outside in the yard (R.105, 109), with both of her children's falling asleep at night (R.106-107), and with dinnertime conversations (R.105). It sounds to her, especially in the evening hours, like a continual noise; when the system stops the quiet is noticeable (R.107-108). She did not complain directly to Algonquin because her builder informed her that the Agency was handling the problem (R.105-106).

The Agency testified that it observed that Petitioner had taken the noise abatement steps of adding an exhaust plenum with silencers and constructing a barrier, but that the barrier was insufficient because it was too low (R.124-126). The Agency testified that even after the control methods were put into practice the noise level was too loud and interfered with living (R.147). The 60-dB sound level in the Jasinskis' back yard indicates that people must not stand more than 8-10 feet

from each other in order to converse normally (Recommendation, Ex.5). The Agency could not pursuant to Rule 405(a)(4) state what costs of compliance would be because Algonquin had not established a compliance plan (Recommendation, p.2).

Exhibit 5 of the Recommendation, an interoffice Agency memorandum, indicates that removing or relocating the unit will substantially reduce noise levels, as could barrier expansion. The current problem is the exhaust at the top of the silencers; the Agency found this to be a major factor in the barrier's ineffectiveness (Recommendation, Ex.5). However, the barrier was one of the first steps which Yerges had advised Algonquin to take; if compliance wasn't thereafter achievable Yerges advised various modifications to the barrier be made (Recommendation, App.IV). The Agency found that these second step recommendations are what Algonquin must take, as a minimum, to reach compliance (Recommendation, Ex.5).

Yerges and Migdal both testified that within five years, the period for which Algonquin seeks a variance possible improvements or modifications can cause compliance -- but neither says much more except that compliance will be due to new methods of improvement (R.58) or to unspecified modifications (R.65-66). Algonquin's attorney admits that the state of the art has since changed and offers to modify or replace the unit accordingly, meanwhile running it on four of the six fans after 7:00 p.m. to ensure no operation at maximum load (R.77-78).

Although no evidence was introduced regarding how the state of the art has changed, let alone the extent of costs involved, the Board will grant a limited variance for the purpose of allowing Algonquin to further investigate methods of complying with the Board's Rules. The Board will grant Algonquin variance from Rules 102 and 202 until March 1, 1981 under certain conditions. These conditions will be those generally suggested by Algonquin at the hearing and to which the Agency refers in their closing argument. Although the Agency refers to a document dated December 27, 1979 supposedly submitted by Algonquin entitled "Statement of Interim Remedial Measures During Variance", the Board can find neither the document nor any record of its having been filed before the Board.

This Opinion constitutes the findings of fact and conclusions of law of the Board in this matter.

ORDER

It is the Order of the Board that variance from Rules 102 and 202 of the Board's Noise Regulations be granted to Algonquin

Area Public Library District until March 1, 1981 under certain conditions:

1. Algonquin Area Public Library District shall investigate and evaluate available methods which will allow its air conditioning equipment to meet limits imposed by the Board's Rules, including but not limited to extension of the noise barrier, modification of the exhaust and intake mufflers and/or compressor exhaust fans and the use of auxiliary air conditioners in remote locations.
2. During the period of this variance Algonquin Area Public Library District shall modify its equipment operation in the following manner:
 - (A) Algonquin shall maintain the temperature in the Library at the Federally mandated level of 78°F during the cooling system.
 - (B) Algonquin shall schedule the air conditioning equipment so that no more than two compressors and no more than four condenser fans are in operation after 7:00 p.m. Monday through Saturday and all day on Sunday.
- (3) Within 45 days of the adoption of this Order, the Algonquin Area Public Library District shall execute and forward to the Illinois Environmental Protection Agency, 2200 Churchill Road, Springfield, Illinois 62706 a Certification of Acceptance and Agreement to be bound to all terms and conditions of this Order. The 45 day period shall be held in abeyance during any period this matter is being appealed. The form of said certification shall be as follows:

CERTIFICATION

I (We), _____ having read and fully understanding the Order of the Illinois Pollution Control Board in PCB 79-159, hereby accept said Order and agree to be bound by all of the terms and conditions thereof.

SIGNED _____

TITLE _____

DATE _____

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order were adopted on the 21st day of February, 1980 by a vote of 4-0.

Christan L. Moffett
Christan L. Moffett, Clerk
Illinois Pollution Control Board