

ILLINOIS POLLUTION CONTROL BOARD
September 2, 1976

CERRO GORDO CO-OPERATIVE GRAIN CO.,)
))
 Petitioner,))
))
 v.) PCB 76-111
))
ENVIRONMENTAL PROTECTION AGENCY,))
))
 Respondent.))

Mr. Garry Davis appeared on behalf of the Petitioner.
Mr. James M. Bumgarner appeared on behalf of Respondent.

OPINION AND ORDER OF THE BOARD (by Dr. Satchell):

This matter comes before the Board on a Petition for Variance filed April 23, 1976 by Cerro Gordo Co-Operative Grain Co., an Illinois Corporation, organized under Ch. 32, Sec. 305 et seq., Co-Operative Grain Act, Ill. Rev. Stat., 1975. Participating farmers share in the profits by stock and patronage refunds and benefit in the close proximity of the elevator to the rural communities of Oakley, Macon County and Cerro Gordo, Piatt County. The elevator is located in the unincorporated Village of Oakley which has about 130 to 135 residents (R. 3). Petitioner states that its investment including equipment is about \$366,000 which includes substantial improvements made in 1975 at an approximate cost of \$300,000. From September 1, 1975 through March 18, 1976 the following number of bushels of grain was processed, handled and stored: corn - 774,640; soybeans - 177,742; wheat - 14,255; and oats - 3,202. At May quotes, this represents a value of \$2,977,415. On an annualized basis from these figures, the elevator would expect a throughput of 1,294,452 bushels (Pet. 4) which compares well with the production calculated using Macon County 1975 average yields (1,350,000 bushels) from the 21,120 acres farmed by the Co-Op's tenants and owners. The storage capacity of 298,800 bushels is from both flat and silo storage.

The elevator normally operates on a single daytime shift; however, during harvest season late hours are worked as demanded by the urgency of the farmers' needs (in 1975 this occurred three to five times) (Pet. 3).

The elevator is sited adjacent and south of the rail-road tracks with residential areas on both the north and south sides of the facility. Mrs. William Hall, who resides just south of the elevator, complained in a letter dated June 17, 1975 that the three elevator legs which rise 90, 110, and 120 feet above grade level were being constructed 50 to 60 feet from the street and that the street was 60' wide and that the homes are not more than 10' from the streets (Agency Rec. Ex. 5). Mr. Yantis testified that his bedroom window was 70' from the corn dryer (R. 24). It is assumed that "the dryer" is the nearer of the two Butler (Kan-Sun) dryers.

Petitioner has retained Beling Engineering Consultants to advise, direct and design efforts to attenuate noise levels. A sound-barrier wall has been constructed at an estimated cost of \$11,411.55 to shield transmission of noise from the dryers to residents south of the elevator (Pet. at 6 and Ex. G). In addition the drawing made by Agency personnel in connection with a sound survey shows most aeration fans with mufflers (Pet. Ex. F1, F2). In spite of the near proximity of Petitioner's facility to residences, except for the grain chutes and portable augers Petitioner believes and the Agency concurs that they should be within the numerical limits of Rule 202 of the Board's Noise Regulations.

Petitioner has two portable auger type conveyors which are powered by (1) a gasoline motor and (2) a tractor. The augers are normally used inside the flat storage buildings, but must be used outside to open up these storage units. Total use is stated by Petitioner (Pet. 5, 6, 12) to be about 9 hours on the exterior and 27 hours in the interior of the buildings per year. The exterior use would extend over about a 3-day period. Petitioner states that conversion to electrically driven augers would be expensive:

	Initial cost	Retrofit Cost
Gasoline motor driven	\$ 8,211.00	\$ 12,430.00*
Tractor driven	9,208.50	18,126.95*

*Estimates not bids (Pet. Ex. J)

In addition Petitioner understands from their consultants that such modifications would create unstable, dangerous units that would be difficult to maintain and that such units would require additional wiring estimated to cost \$9,200 (Pet. Ex. K). The Agency knows of no economically reasonable means of reducing the emissions except to impose conditions of use and require muffling of the gasoline engines (for a cost not exceeding \$200 per muffler) (Agency Rec. 4).

The Agency states that lagging the grain chutes would be a suitable solution to the noise violation so caused but the postponement of the application until after the harvest season is reasonable (Agency Rec. 7). The Agency does not agree with Petitioner that such attenuation is still highly experimental and cites the Mayr Grain facility in Beaver Dam, Wisconsin where such technique has been used for three years with about a 20 dB(A) reduction in noise emission (Agency Rec. at 4 and Ex. 17). The Agency recommends and the Board concurs that Petitioner should not be granted the requested variance for three years to permit monitoring of Atwood's (PCB 76-62) recently installed attenuated chutes. The additional cost of re-installing the chutes after attenuation is self-imposed; in that, Petitioner should have been aware of the necessity for noise abatement in 1975 when the elevator legs and chutes were first constructed. Additionally, Petitioner was aware, at least after September 30, 1975, that the grain chutes were a major contributor to a noise violation (Pet. Ex. F2, F3). Petitioner's estimate of cost of \$25,338.50 is believed excessive and the Agency estimates that \$16,000 would be closer (Agency Rec. at 4 and Ex. 17).

Prior to the hearing held in Decatur, Illinois on July 17, 1976, the Agency had outlined steps recommended to achieve compliance. Petitioner has styled this in the record as an "Understanding and agreement" (R. 8), "Summary of the settlement agreement" (R. 43) and entered a typed copy entitled "Agreement" as Petitioner's exhibit "M". At this time, Mr. Bumgarner, appearing for the Agency, properly points out ". . . that the agreement reached between the Environmental Protection Agency and the Petitioner of course is subject to approval by the Board" (R. 43). The aforementioned Document does contain a needed change in the Agency's Recommendation with respect to the use of the portable augers. The Agency recommends granting the Instant Petition under the following conditions: (as amended above) (1) that sounds emitted from Petitioner's facility, with the exception of the portable augers and grain chutes, shall not exceed the numerical limits of Rule 202; (2) the aforementioned barrier wall will be completed by July 15, 1976 (date extended because of material shortages and labor problems); (3) the portable augers will not be used outside more than 27 hours per year and only to be used adjacent to the door locations in the storage buildings; (4) acoustical mufflers to be installed to the auger power units by September 1, 1976 and that variance be granted for the augers to April 1, 1981; (5) that variance for grain chuting be granted up to July 31, 1977; and (6) that Petitioner execute a certificate of acceptance and agreement as set forth by the Agency (Agency Rec. 8, 9).

The Agency's Recommendation references the exterior use of the augers to Paragraph 9 of the Petition which states in pertinent part ". . . Their use to the exterior of the three respective buildings is minimal to the point of an approximate 9 hour operation over a three day period on a per annum basis to the exterior of the building." In addition, the "B" part of Paragraph 8 of the Petition states "The Petitioner uses two portable auger type conveyors on an infrequent basis (an exterior working time of 9 hours per year . . .)." (Emphasis added). The plain meaning of these references is that the total time needed for the augers to the exterior of the buildings per year is nine hours. Since there is no plan to bring the augers into compliance, the Board is compelled to keep their use to a minimum and shall therefore, modify the Agency's Recommendation from 27 hours to 9 hours allowed for exterior use of the augers. Several citizen complaints (Rec. Ex. 4, 5, 6, 7, 8) including a petition signed by 25 residents of Oakley were received by the Agency. The Agency states that the grain chute noise is sufficiently irksome as to be predictable by ISO standards to bring about, even in the daytime, a very strong public response in the form of vigorous community action. The L_{dn} is calculated at 71 dB; whereas, an L_{dn} of 55 dB or less is prescribed by the U. S. EPA for outdoors in residential areas to protect the public from adverse effects (Rec. at 6 and Ex. 18). During the times the grain chutes and portable augers are in operation, nearby residents will experience noise interference with normal activities both outside and inside their homes so that during these periods they will experience irritability and anxiety (Rec. at 7 and Ex. 18). Approximately nine residences will be within this impact zone.

It is unfortunate to have to ask these residents to bear the annoyance through another season, but to do otherwise would impose an arbitrary and unreasonable burden on the Petitioner. In mitigation, the construction of the barrier wall and installation of acoustical mufflers should make significant contributions to noise abatement compared to 1975. The Board shall grant the requested variance subject to all conditions set forth in the Order.

This Opinion constitutes the Board's findings of fact and conclusions of law.

ORDER

The Board grants Cerro Gordo Co-Operative Grain Co. a variance from Rule 202 of Ch. 8: Noise Pollution Control Regulations for the following components of its Oakley facility, the grain chutes up to and including July 31, 1977, and the portable auger-type conveyors (2) up to and including April 1, 1981--all upon the following conditions:

- (A) That except for sounds emitted by said grain chutes and said portable augers, sound emitted by Petitioner shall at no time exceed the numerical limits of Rule 202.
- (B) That Petitioner shall accomplish, not later than August 1, 1976, the installation of the sound barrier described in Paragraph 6 of the Petition.
- (C) That Petitioner shall restrict the outside use of the portable augers to the nine hours per year as outlined in Paragraph 9 of the Petition and shall limit said outside operations to the sides of the storage facilities having doors.
- (D) That Petitioner shall, on or before September 15, 1976, install on the gasoline engine driven portable augers, acoustical mufflers, equal to or better than those described in Exhibit 17 of the Agency's Recommendation.
- (E) That Petitioner shall execute and forward to the Environmental Protection Agency, Division of Noise Pollution Control, Enforcement Section, 2200 Churchill Road, Springfield, Illinois 62706, and to the Pollution Control Board within twenty-eight days after the date of the Board Order herein a Certificate of Acceptance and Agreement to be bound to all the terms and conditions of the Variance, the form of said Certificate to be as follows:

CERTIFICATION

CERRO GORDO CO-OPERATIVE GRAIN CO., an Illinois corporation, is aware of and understands the Order of the Illinois Pollution Control Board in PCB 76-111 and hereby accepts said Order and agrees to be bound by all of the terms and conditions thereof.

CERRO GORDO CO-OPERATIVE GRAIN CO.

By _____

Title or Company Position

IT IS SO ORDERED.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order were adopted on the 2nd day of September, 1976 by a vote of 5-0.

Christan L. Moffett c/s
Christan L. Moffett, Clerk
Illinois Pollution Control Board