ILLINOIS POLLUTION CONTROL BOARD
March 8, 1984

SOURS GRAIN COMPANY,	)	
	)	
Petitioner,	)	
	)	
v.	)	PCB 79-210
	)	
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,	)	
	)	
Respondent.	)	

MR. ROY M. HARSCH (MARTIN, CRAIG, CHESTER & SONNENSCHEIN) APPEARED ON BEHALF OF SOURS GRAIN COMPANY;

MR. JOHN VAN VRANKEN (ASSISTANT ATTORNEY GENERAL) APPEARED ON BEHALF OF THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY.

OPINION AND ORDER OF THE BOARD (by J. D. Dumelle):

This matter comes before the Board upon an October 4, 1979 petition for variance filed on behalf of the Sours Grain Company (Sours) requesting relief from Rules 203(d)(9)(B)(ii)(a) and 203(d)(9)(B)(iv) of old Chapter 2: Air Pollution, as they apply to its truck dump pit and watercraft loading spout. Those rules have now been renumbered under the codified rules as 35 Ill. Adm. Code 212.462(b)(1)(A) and (B) and 212.462(d)(3)(B). Relief from those rules was requested until December 31, 1982. The Illinois Environmental Protection Agency (Agency) filed its recommendation that variance be denied on November 14, 1979. On January 21, 1982, the Board dismissed this proceeding with prejudice, finding that Sours had abused the Board's procedural rules. That dismissal, however, was reversed on reconsideration.

On May 4, 1982 Sours filed an amended petition for variance from the same rules, this time requesting relief for a period of five years. The Agency did not file an amended recommendation. Hearing was held in Pekin on June 15, 1983 at which both parties appeared and eight witnesses testified.

Sours owns and operates a grain elevator in Pekin which handles an average annual grain throughput of approximately 10,000,000 bushels per year of corn and has a maximum potential

grain throughput of approximately 88,000,000 bushels per year. Ten people are directly employed at the elevator, and between 100 and 150 independent truck drivers transport grain to the elevator yearly. The elevator, which annually services approximately 450 customers, is located in Pekin Township in Tazewell County, which is within the Peoria major metropolitan area and which constitutes a major population area as defined in 35 Ill. Adm. Code 211.122.

Grain is received at the elevator in trucks which dump the grain into a major truck dump pit or two smaller pits. It is then conveyed either directly into storage or through totally enclosed non-vented gravity clay cleaners. As grain is sold, it is conveyed to a watercraft loading spout which is used to load barges for transportation via the Illinois River and Illinois waterway systems. The truck dump pits and watercraft loading spout are the subject of this amended variance petition.

Section 212.462(b)(1)(A) requires that:

> Induced draft shall be applied to major dump pits and their associated equipment (including but not limited to, boots, hoppers, and legs) to such an extent that a minimum face velocity is maintained, at the effective grate surface, sufficient to contain particulate emissions generated in unloading operations. The minimum face velocity at the effective grate surface shall be at least 200 fpm, which shall be determined by using the equation:
>
> $$V_f = \frac{Q}{A}$$
>
> where V_f = face velocity
> and Q = induced draft volume in scfm
> and A = effective grate area in ft^2

Section 212.462(b)(1)(B) requires that:

> The induced draft air stream for grain-handling facilities having a grain throughput exceeding 2 million bushels per year and located in a major population area shall be confined and conveyed through air pollution control equipment which has an overall rated and actual particulate collection efficiency of not less than 98% by weight.

Section 212.462(d)(3)(B) requires that:

> Particulate emissions generated during loading for grain-handling facilities having a grain throughput

exceeding two million bushels per year and located in a major population area shall be captured in an induced draft air stream, which shall be ducted through air pollution control equipment that has a rated and actual particulate removal efficiency of not less than 98% by weight prior to release into the atmosphere; except for the portion of grain loaded by trimming machines for which particulate matter emission reductions, at a minimum, shall equal the reduction achieved by compliance with subsection (d)(3)(a).

Sours alleges that it encountered substantial difficulty in attempting to achieve compliance with these rules. After preliminary discussions beginning in January, 1978, Sours retained R.S Fling and Partners, Inc., of Columbus, Ohio, on August 9, 1978, to prepare alternatives for developing a compliance program. On October 22, 1978, Mr. John Sours, president of Sours, was seriously injured in a fall, incapacitating him until March, 1979. While several informal proposals were submitted by the consulting engineers, work toward developing a compliance program was curtailed. In addition Sours alleges that until late 1978 or early 1979, there were no proven, permitted watercraft loading devices installed in Illinois on watercraft loading spouts similar to that found at Sours' elevator.

Sours, in its amended petition, requests a five-year variance from the truck dump pit and watercraft loading rules while it develops the financial ability to carry out a compliance program. In the interim, Sours proposes to limit emissions by keeping the loading spout as close as reasonably possible to the top of the barge while loading grain. Sours will also request that it be supplied with only lift top barges, and will to the extent possible only open one door when loading lift top barges to minimize entrainment.

In its recommendation the Agency alleges that Sours has failed to prove that denial of variance would result in an arbitrary or unreasonable hardship and that Sours has shown merely that compliance would be more expensive than non-compliance. It further alleges that Sours' primary concern is expansion without pollution control thereby avoiding legitimate business costs which are being borne by its competitors. The Agency also alleges that Sours has put forth little credible evidence that the granting of variance would not cause any adverse environmental impact.

APPLICABILITY OF GRAIN HANDLING RULES

The threshold question before the Board is whether "the existing Truck Dump Pit and Watercraft Loading Rules are technically infeasible or economically unreasonable as applied to Sours" so as to render them inapplicable (Sours Br., Oct. 20, 1983, p.3). In support of the propriety of its request that the Board hold the rules to be inapplicable, Sours cites Village of Cary v. PCB, 82 Ill. App. 3d 793, 801, 403 N.E. 2d 83, 91 (2nd Dist., 1980) which held that the validity of a Board rule as applied to a particular facility may be challenged in a variance proceeding. The Agency, however, contends that reliance on Cary is mistaken in that the Cary court also "affirmed the basic principle of legal and administrative procedure that new issues cannot be raised after trial that were not raised in the pleadings nor (sic) at trial itself" (Ag. Reply Br., Nov. 8, 1983, p.2).

In Cary the Court stated that "it is clear in this case that Cary based its petition for variance upon the contention that the barium regulation was arbitrary, capricious and unreasonable as being without a scientific or medical basis" and it concluded "that the issue of the validity of the barium regulation was raised, albeit unresolved, in the hearing" (403 N.E. 2d 86).

In this case the validity of the regulations from which variance was requested was not expressly raised in the variance petition or at hearing, but was clearly raised in the briefs. However, it appears that the Village of Cary also did not expressly raise that issue prior to the briefs. Therefore, since the Board agrees with the Agency that the issue is waived if it is not raised in the pleadings or at hearing, the question becomes whether the issue was raised implicitly at hearing and whether the petition for variance was based on the contention that the regulations from which variance is requested are "arbitrary, capricious and unreasonable."

The thrust of Sours' petition, as discussed below, is that Sours has not had the economic resources to bring its facility into compliance with the grain handling rules. Unlike Cary, Sours has not presented evidence that those rules are without a medical or scientific basis, or even that the technology required by those rules is ineffective. While there was some evidence presented indicating that particulate emissions from a grain stream are greater at some points during handling than at those points at which an induced draft is required, and that induced draft systems may not be more efficient than possible alternative controls, the presentation of such evidence is not sufficient to

give rise to the implication that the validity of the regulation is being attacked. As such, there was insufficient notice to the Agency that it should be prepared to defend the regulations, and in fact the Agency made no such attempt.

The Board, therefore, holds that the question of the validity of the application of those rules is not properly before it. Further, even if it were, the evidence presented is insufficient to support a determination that those rules cannot properly be applied to Sours.

HARDSHIP

The Agency argues that Sours has failed to prove an arbitrary or unreasonable hardship, contending that it has been operating its emission sources without controls because of its attitude toward protecting the environment. It points out that John Sours stated that "we at Sours Grain have always subscribed to the philosophy that it is better to build something to increase the productivity of the elevator than it is to make non-revenue generating capital expenditures" (R. 25). The Agency points out that Sours obtained one quotation in February, 1976 for a project with included controls on the truck dump pit (Sours Ex. 11), but that "for a variety of reasons, economic and lack of complete control we [Sours] did not go forward with this project" (R. 23-4). Not until almost two years later did Sours retain another consulting engineer, R. S. Fling, to examine air pollution controls (R. 27). R. S. Fling's preliminary report, which was finally completed in October of 1979, focused on major expansion and modernization of the facility, not compliance with the Board's regulations (Sours Ex. 12 and R. 85).

The Agency also contends that Sours' cost figures do not support a claim of arbitrary or unreasonable hardship, in that Sours has not provided sufficient evidence of the minimum costs necessary to comply with the Air Regulations in that Sours' cost figures are only in part attributable to the cost of complying with the Board's regulations, and most of the costs are properly attributable to Sours' philosophy of not spending money on "non-revenue generating capital expenditures" (R. 25). Finally, the Agency argues that Sours has not demonstrated that it could not have afforded the required controls prior to 1979, whereas compliance was required in 1977 (see Agency Br., October 17, 1983, pp. 5-6).

Sours, on the other hand rests its showing of arbitrary or unreasonable hardship on the fact that it simply has not had the

financial resources to come into compliance. Information regarding the financial condition of Sours was presented at the afternoon session of the June 15, 1983 hearing at which members of the public were excluded. This was done since Sours claimed that information to be "confidential business trade secrets."

Sours receives grain through one major truck dump pit and two smaller pits (R. 20). Even the larger pit is small and shallow compared to other elevators in the area and has no truck dump platform, thus limiting Sours' operation to the unloading of self-dumping or hopper bottom trucks or trailers (R. 24, 15, 83, 140). Grain is either transferred from the pit directly to the watercraft loading spout for loading into barges or conveyed to storage (R. 20). Sours has presented testimony indicating that due to the size of Sours' small truck dump pits, it is technically infeasible to add aspiration control equipment (R. 140), and that while it is theoretically possible to install aspiration on the major dump pit, it is not practical since the shallowness of the pit would cause a below grating draft system to become plugged with every load, greatly limiting throughput and resulting in unacceptable breakage and loss of grain (R. 141). Sours concedes that it is technically feasible to either reconstruct the existing major truck dump pit or replace it and install aspiration in conformance with the regulations, but contends that it is economically unreasonable to comply at this time (R. 140 to 143). The costs of modifying the truck dump pit to allow for aspiration or replacing it with a new aspirated truck dump pit range from $350,000 to $1,650,000 (R. 143).

With respect to the watercraft loading spout, Sours presented evidence indicating that it is technically infeasible to add aspiration to the existing spout given its age, structural support and cantilevered construction (R. 151, 152 and 152-165). Sours concedes that it is technically feasible to install aspiration on a completely rebuilt watercraft loading spout (R. 150), and that it is theoretically feasible to install effective aspiration systems on new vertical drop spouts (R. 50). Sours also concedes that it is technically feasible to install aspiration at the tip of the spout and duct the dust back to a bag house filter located on the shore (R. 153). However, Sours contends that it is economically unreasonable to either install aspiration at a cost of $100,000- 150,000 on the existing spout (R. 160) should it be technically feasible, or to install a new watercraft loading system at upwards of $2,000,000 - $3,000,000 in cost (R. 151).

Sours has presented sufficient, unrebutted evidence to demonstrate that the capital cost for installation of dust control has been beyond the capibilities of Sours since 1979 and that it

will be for the immediate future (RII. 29-36).* The minimum cost for attaining compliance is in excess of $100,000 and may be as high as $4 million (R. 23, 143, 160, 173 and Sours Exs. 11 and 12). The wide range in cost is based upon whether improvements which would enlarge and modernize the existing operations, which would clearly make the expenditures more economically reasonable, and which may be necessary to make the controls technically feasible, are included. Clearly, even ignoring operating costs, which are not quantified in the record, it would have been quite difficult, if not impossible, for Sours to afford the controls at anytime in the past. Further, the question of whether controls would have been affordable prior to 1979 would be relevant in an enforcement action, but is not relevant here.

However, the Environmental Protection Act imposes a duty upon the Board to protect and enhance the environment, and where the adverse environmental impact justifies it, the Board will uphold its regulations. Therefore, to determine whether the demonstrated hardship is arbitrary or unreasonable, the environmental impact must be examined.

ENVIRONMENTAL IMPACT

Sours' grain elevator is located on South River Street immediately across the street from the Pekin Sewage Treatment Plant on the east bank of the Illinois River, and apart from the treatment plant, it is remotely located (R. 62, 63 and 158 and Sours Ex. 2, 3 and 4). To the south and east is vacant land owned by the Pekin Energy Company. To the west across the Illinois River lies farmland. To the north of Sours' office is one small cabin. Pekin Township, which encompasses the City of Pekin, is presently classified as a primary attainment area with respect to total suspended particulate matter based upon monitoring results from the Court Street monitoring location located at 531 East Court Street, as well as computer dispersion modeling (R. 64 and 158 and Sours Ex. 15). There have been no complaints with respect to the operation of Sours Grain Elevator of which Sours is aware, and none were brought forth by the Agency at the hearing (R. 62). The operation of Sours' Elevator has remained essentially unchanged for the past 20 years.

Sours argues that its existing watercraft loading spout and loading practices result in substantially better or equal emission reduction as would be achieved by aspiration at the tip of the spout. The Board does not agree that the record supports such a

*References to the afternoon hearing transcript which begins with a new page 1 will be in the following form (RII pp.).

general finding. However, the testimony of Sours and Kobetz, as well as the photographs which were entered into evidence, show that permitted aspiration systems result in continued emissions of grain dust (R. 37-44 and 220 and Sours Ex. 10), and the testimony of Dr. Hall establishes the limited control by aspiration at the tip of the spout (R. 128).

The record also establishes that emissions which escape Sours' truck dump pit or barge tend to settle out in the immediate vicinity and do not result in significant impact on the ambient air quality (R. 146, 158-159 and Sours Exs. 9B and 9C). Further, Sours presented testimony indicating that emissions from its truck dump pit are presently limited by the fact that the truck dump pit is located within a truck dump shed which is enclosed on two sides and has a roof for which the Agency applies the 50%-70% emission reduction credit in terms of total emission reduction (R. 144). The emissions generated during truck unloading are also limited due to the fact that Sours may only handle self-dumping and hopper bottom trucks and trailers which, given the size of Sours' major truck dump pit, tend to unload in a choke-load condition (R. 146 and 147). Visual emissions observations taken by Mr. Dihu, an employee of the United States Environmental Protection Agency, confirm that for 5 out of 6 trucks which were observed, emissions were below 30% with a substantial number of readings from 0 to 10% opacity. In the one instance where an opacity above 30% was observed, the load consisted of the bottom sweepings of a large corn storage bin and were thus abnormally high (R. 13 and Sours Ex. 22).

Visual observations of emissions from the existing watercraft loading spout taken by United States Environmental Protection Agency confirmed that the Sours existing watercraft loading spout when loading lift top barges results in emissions with highest reading of 15% opacity (R. 13 and Sours Ex. 21).

Sours has directed that his employees keep the spout as close as possible to the opening of the barges and keep only one lid open to the maximum extent possible (R. 13, 94 and 95) in order to control the dust emissions from the grain stream spreads out after leaving the spout and the point of impact where the grain stream hits the bottom of the barge or grain piles in the barge (R. 45, 46, 128, 153, 178 and 222).

The elevator is surrounded by vegetation which acts as a screen to reduce particulate concentrations (R. 159), and notwithstanding Sours' existing mode of operation, the ambient air quality in the Pekin area has improved to the point where Pekin has been declared to be primary attainment with respect to particulate emissions (R. 158 and Sours Ex. 15 and 16). Finally, Sours is installing an enclosure around its dryer which will further reduce emissions (R. 21).

Based upon this unrebutted evidence, the Board finds that Sours' emissions are not causing or contributing to a violation of the ambient air quality standards and have not been proven to cause a nuisance. Therefore, any adverse environmental impact which may be caused by a granting of variance should be minimal.

COMPLIANCE ALTERNATIVES

The granting of variance is predicated upon eventual compliance with the Environmental Protection Act and Board rules. Where no such compliance is indicated, regulatory, rather than variance, relief is appropriate. The Agency argues that Sours has presented no compliance plan. Sours, on the other hand, argues that it has presented two alternative compliance plans.

One compliance alternative is to await possible regulatory amendments to the grain handling regulations under docket R82-20 which has been proposed by the Illinois Grain and Feed Association on behalf of its members, including Sours. Sours alleges that it would be in compliance if the Board adopted the rules as proposed in that control of grain handling emissions is equivalent to the required control and the proposal allows compliance to be demonstrated through such equivalency regardless of the nature of the control program. That compliance alternative, standing alone, is insufficient to support the granting of variance. The Agency correctly points out that if such a plan were held to be sufficient, anyone requesting variance could file for regulatory relief concurrently with filing for variance, thereby establishing a compliance program.

Second, Sours has indicated that it will install the necessary control equipment when it has the financial ability to proceed with a comprehensive plan to modernize and expand its facility. The record, however, is silent as to when such financial ability will arise, except that it cannot be expected "in the immediate future without extraordinary returns being predicted" (RII. 35).

Sours does, however, indicate that it is willing to install an alternative watercraft loading control system "tomorrow" which controls grain dust emissions by spraying the grain with water, thereby adding 0.2% moisture (R. 24). The watercraft loading control system that Sours has proposed to install is new and currently unavailable, (R. 126). The Andersons, who developed the system, have entered into a marketing agreement with the Rhino Hyde Division of Cargill to market the spray system once the necessary approval for use has been obtained from the Federal Grain Inspection Service which is necessary to avoid the possibility of "treating" grain with moisture, only to find that

Sours or other users are unable to market it (R. 126 and 132). Such approval is anticipated in the near future. The record establishes that the Andersons' spray system has an effectiveness in controlling emissions generated during watercraft loading of about 90% (R. 127 and 157). The capital costs of the system would be approximately $10,000 (R. 157), and it would require 4 to 5 weeks to install (R. 178).

It is readily apparent that Sours' compliance plan is fraught with uncertainty. The grain handling proceeding (R82-20) has languished for sixteen months due to the proponent's reluctance to proceed, and the Board is currently awaiting an amended proposal. The final adoption of any amendment is at least a year away. Installation of the water-spray system does not meet the requirements of the existing grain handling rules, may not be ultimately marketable or permittable*, and does not remedy the problems of the truck dump pits. Finally, Sours may or may not be able to modernize and expand its facility and install pollution control equipment in the foreseeable future.

Thus, while the Board does not require a guarantee that compliance will in fact be achieved during the term of variance, Sours' compliance plan has serious shortcomings.

CONCLUSION

Based upon its findings that present compliance with the grain handling regulations would impose serious financial hardship upon Sours and that the adverse environmental impact which would result from the granting of variance is minimal, the Board concludes that Sours has presented adequate proof that present compliance with the grain handling requlations would impose an arbitrary or unreasonable hardship. Given the uncertainties upon which its compliance plan is based, however, the Board cannot conclude that a five year variance has been justified. The Board will, therefore, grant variance for twenty months, subject to certain conditions, by which time Sours' ability to attain compliance should be much clearer.

The conditions which the Board will impose are designed to insure that Sours will minimize its emissions during the period of variance and will achieve compliance as expeditiously as possible. For the most part they are based upon actions which Sours has stated it will take.

*The Board notes that even though the Anderson's system does not comport with the grain handling rules, it is possible that a permit could be issued for it under Section 39.1(a) of the Environmental Protection Act upon a showing of equivalency.

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

ORDER

Sours Grain Company is hereby granted variance from 35 Ill. Adm. Code 212.462(b)(1)(A) and (B) and 212.462(d)(3)(B), subject to the following conditions:

1. This variance shall terminate November 8, 1985;

2. Sours shall keep its grain loading spout as close as possible to the opening of any barge it is loading and shall keep only one lid open to the maximum extent possible;

3. Sours shall continue to investigate compliance alternatives as they develop and shall submit a written report to the Illinois Environmental Protection Agency on or before July 8, 1984 and every four months thereafter as to the availability of grain handling pollution control equipment, the ability of Sours to afford such equipment, and Sours' plan for achieving compliance. These reports shall be directed to the Air Pollution Division of the Illinois Environmental Protection Agency at 2200 Churchill Road, Springfield, IL 62706;

4. Sours shall, as soon as it identifies an affordable control system which would bring its facility into compliance, expeditiously pursue installation of the system;

5. Sours shall, within 90 days of the date of this Order, install an enclosure around its dryer; and

6. Within forty-five days of the date of this Order, Sours Grain Company shall execute a Certificate of Acceptance and Agreement to be bound to all terms and conditions of the variance. Said Certification shall be submitted to the Agency at 2200 Churchill Road, Springfield, Illinois 62706. The forty-five day period shall be held in abeyance during any period that this matter is being appealed. The form of the certificate shall be as follows:

CERTIFICATE

I, (We), _____, having read the Order of the Illinois Pollution Control Board in PCB 79-210, dated March 8, 1984, understand and accept said Order, realizing that such acceptance renders all terms and conditions thereto binding and enforceable.

_____
Petitioner

_____
Authorized Agent

_____
Title

_____
Date

IT IS SO ORDERED.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 8th day of March, 1984 by a vote of 6-0.

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