

ILLINOIS POLLUTION CONTROL BOARD
August 20, 1981

IN THE MATTER OF:)
)
PROPOSED AMENDMENTS TO CHAPTER 2: AIR) R77-15
POLLUTION CONTROL RULES AND REGULATIONS)
(SULFUR DIOXIDE EMISSION LIMITATIONS).)

PROPOSED OPINION OF THE BOARD (by I. Goodman):

This Opinion supports the Order of July 23, 1981 entered in this matter, authorizing first notice publication of the proposed rule herein.

Ashland Chemical Company, now Sherex Chemical Company, Inc. (Sherex), on October 19, 1977 filed a proposal to relax sulfur dioxide emission limitations to 6.0 lbs./million Btu's for existing Peoria area solid fuel combustion sources having heat inputs not greater than 250 million Btu/hr. At the time of the proposal, Rule 204(c)(1)(A) of Chapter 2 limited such Peoria area sources' emissions, regardless of size or category, to 1.8 lbs./million Btu of heat input. On May 15, 1978, the hearing officer granted Bemis Company, Inc. (Bemis) status as regulatory proponent along with Sherex.

Hearings were held on January 24, 1979 in Springfield; on January 30, 1979 in Chicago; on February 7, 1979 in Peoria; and on April 17, 1979 in Chicago. Upon receipt of the economic impact study of the Illinois Institute For Natural Resources (Institute), economic impact hearings were held on January 29, 1980 in Chicago; on January 30, 1980 in Peoria; and on February 13, 1980 in Chicago. All hearings were for the purpose of receiving evidence on a number of related regulatory proposals which the Board had consolidated for purposes of hearing on December 14, 1978. These proposals were R78-14 and R78-16; Board proposals inquiring into the adequacy of existing sulfur dioxide and particulates regulations, respectively, in light of the 1977 amendments of the Clean Air Act (CAA), 42 U.S.C. §7401, et seq.; R78-15, a source-specific particulates emission limitation proposal of the City of Rochelle; and R78-17, a Board proposal to delete Rule 204(c)(1)(D), which referred to a sulfur dioxide emission standard which had become unnecessary under the 1977 CAA amendments for purposes of Illinois' State Implementation Plan (SIP). Board proposals R78-14 and R78-16 also incorporated court-mandated further proceedings in R71-23, the Board's original adoption of Chapter 2, the Board's air pollution control rules and regulations.¹

¹ Ashland Chemical Company v. IPCB, 64 Ill.App.3d 169, 381 N.E.2d 56 (3d Dist.1978); Illinois State Chamber of Commerce, et al. v. IPCB, 67 Ill.App.3d 389, 384 N.E.2d 922 (1st Dist.1978) and related cases, appeal dismissed 78 Ill.2d 1, _____ N.E.2d _____ (1979). The Board acknowledges the assistance of Ms. Terry E. Cox in acting as Hearing Officer herein.

On August 21, 1980 the Board dismissed proceeding R71-23 in light of Pub. L. 81-1444, adding §9.2 to the Illinois Environmental Protection Act (Act), Ill.Rev.Stat. ch. 111- $\frac{1}{2}$, §1009.2, which mandated Illinois Environmental Protection Agency (Agency) investigation of existing sulfur dioxide regulations. The Board also dismissed R78-16, the particulates limitations inquiry proceeding, having found that §9.2 regulations will affect existing record evidence as to the technological feasibility and economic reasonableness of simultaneous compliance with both sulfur dioxide and particulates emission limitations. The Board gave leave to reopen that proceeding subsequent to the filing of the Agency's §9.2 proposal on grounds of technological infeasibility or economic unreasonableness of simultaneous compliance. See Commonwealth Edison Company v. IPCB, 62 Ill.2d 494, 343 N.E.2d 459 (1976), reh denied. On January 8, 1981 the Board dismissed R78-14, its sulfur dioxide limitations inquiry, the Agency having on December 1, 1980 filed its §9.2 regulations (docketed R80-22). The record in proceeding R77-15 closed on May 15, 1981.

Post-hearing public comment was received from Sherex and the Agency. Sherex' comments were that its modeling studies, submitted to show compliance with Rule 204(e)(3), a source-specific-related provision, demonstrate that Sherex would not cause or contribute to violations of the Peoria major metropolitan area ambient air quality if it raised its stacks to good engineering practice (GEP) height and continued burning washed Illinois coal of 2.5-2.7% sulfur content. Sherex argues that less impact on ambient air quality would result from these practices than from its burning lower sulfur content coal, not extending its stacks, and complying with the 1.8-lb. limitation. Sherex estimates that at an emission rate of 5.28 lbs. and with stacks of 187 feet it would emit up to 24% of the 24-hr. primary ambient air quality standard, assuming existing background concentration levels and no increase in emissions from other affected sources. With GEP stacks and its present rate of 4.6 lbs., this percentage decreases to 21 (R. 678-9). Bemis' 1976 modeling shows emissions of up to 47% of the 24-hr. primary standard (R.796-7). The 24-hour maximum PSD increment (Class II) beyond the applicable baseline concentration is 91 ug/m³.

Sherex proposes an increased emission limitation given the condition that sources' stack heights are increased and that affected sources make specific showings of no adverse effects on ambient air quality. On this point, the Agency has testified that industrial sources generally have shorter stacks than power plants, so that regardless of their relative amounts of emissions, the relative areas of emissions of industrial sources are of short rather than long distances. No evidence at hearing was given as to whether any source but Sherex would raise its stack to GEP height (see R.925-6). The applicable SIP requirement is at 40 CRF, Part 51.24(h), given Peoria's designation as attainment on or before December 31, 1982 in Part 52.727 (see Part 81.314). Sherex further comments as to compliance by the use either of low sulfur

coal, citing cost and particulate matter compliance problems, or of scrubbers, citing its experience with a dry reaction removal system, including its supply and cost problems.

The Agency's comments centered around the environmental necessity of retaining the 1.8-lb. limitation for Peoria area industrial boiler sources under 250 million Btu of actual heat input. This limitation was originally promulgated in R71-23 to apply to stationary solid fuel combustion sources of every variety in the three major metropolitan areas in the state regardless of heat input rate. The Agency's testimony at hearing established that the 1.8-lb. limitation is necessary to maintain the Peoria area's "marginal" primary attainment designation, particularly with regard to the 24-hour primary standard of 365 ug/m³. However, the Board notes that the Agency's recent proposal in R80-22 for these sources is for a limitation which could reach as high as 6.8 lbs.

At hearings, all of which were well attended by various industry and environmental group representatives as well as the Agency, a multitude of evidence, particularly with regard to available controls and Peoria ambient air quality, was admitted. Sherex, Bemis Company, Inc., and Celotex Corporation comprise the sources most affected by this regulation. Sherex operates two coal-fired boilers with a combined heat input of 147,000 Btu/hr.; Bemis operates an 80,000-lbs./hr. boiler plus a standby 70,000-lbs./hr. boiler; and Celotex operates two 83,000-lbs./hr. boilers. Although on September 29, 1975 the Board granted Sherex a variance (PCB 75-174) in order to install and use desulfurization equipment on emissions caused by the use of high sulfur coal, studies indicated that compliance with a limitation of 1.8 lbs. with this equipment was not technologically feasible. Bemis and Celotex representatives both testified regarding the economic unreasonability of purchasing low sulfur coal, scrubbers, and a substitute source of electricity. Finally, Sherex pointed out that the bulk of the sulfur dioxide pollution present in the Peoria area is caused by larger facilities, including power plants, which generally are equipped with tall stacks. The Board notes that power plants exist in Bartonville, Pekin and Peoria, all of which contribute to sulfur dioxide emissions in the Peoria major metropolitan area (see R.47-9, 53-4, 182-3, 461-3, 822-3).

The instant proposal would allow smaller industrial boiler sources to emit more sulfur dioxide into the atmosphere than larger industrial boiler sources. One apparent justification for allowing this differential in emission rates is the relatively higher economic burden the smaller sources would have to bear were they to install scrubbers or other controls (R.284, 288, 328, 336-7, 838), even though there is little clear evidence that compliance with the SIP's 1.8-lb. limitation is technologically infeasible. The problem is that where low sulfur coal, scrubbers, fluidized bed combustion systems, or even the burning of oil or gas is technologically feasible, the costs may be economically burdensome. When these costs are passed on to consumers, product pricing may affect competition with other companies which do not pass on such costs.

The increased emissions consume available PSD increment in those areas within the Peoria region which have reached attainment status (R.617-8, 661-4). The increased emissions will affect a demonstration of reasonable further progress and limit the availability of offsets to all major stationary sources of sulfur dioxide seeking to modify equipment or locate operations in those areas within the Peoria region which have not reached attainment status (see §§9.1(e) and (f) of the Act).

The environmental impact of allowing an increase in the sulfur dioxide emissions from these smaller industrial sources is not insignificant. The primary attainment status under the CAA may be jeopardized (R.24, 32-4, 59-4, 103-4, 149-3, 499-5, 571-3, 612-8, 664-3; cf 468), and the increased emissions are likely to cause some degree of crop, livestock and material damage. The crop damage which will occur consists of reduced yield in soybean plants (R.198-202); the material damage (excluded from consideration in the economic impact study of the Illinois Institute of Natural Resources, R.827(E)¹) consists of deterioration of structures and vehicles.

The Institute's Doc. No. 79/22, October, 1979, a macroeconomic study, predicts a net benefit to the adoption of this regulation, in comparison with costs, although further environmental damage was predicted to be as high as \$3.5 million (page 36). Costs are defined to include reduced source expenditures (savings) from not having to comply with the SIP's 1.8-lb. limitation.

Although having carefully considered the evidence in this record, the Board is swayed by additional considerations stemming from the February 21, 1980 issue of the Federal Register (Vol.45, p.11481). Sherex and other sources have received notices of violation of the SIP from the USEPA. Such notices can ripen into the nondiscretionary imposition of sanctions, including the cessation of operations. It for this reason that, upon motion made in the §9.2-initiated sulfur dioxide regulatory proceeding R80-22, the Board on July 9, 1981 adopted as an emergency regulation a limitation of 5.5 lbs. for these sources. In weighing the repercussions of possible shutdowns with the environmental damage and the legal ramifications, and specifically considering the existence of a pending regulatory proceeding covering the same issues, the Board finds compliance with a 1.8-lb. limitation at this time to be economically unreasonable for these sources. The Board has ordered nonemergency rulemaking begun in order to impose an applicable emission limitation upon expiration of the emergency rule and prior to the adoption of rulemaking in R80-22.

The Board notes several concerns under §39(d) of the Act which are relevant to the Agency's issuance of construction and operating permits: the effect on air quality of stack height; the strength of commitments to operate both process and control

¹"(E)" refers to economic hearing record.

equipment properly (see R.301); and the technological feasibility of specific control equipment's capacities to enable sources to simultaneously comply with applicable particulate matter regulations.

Mr. Werner abstained.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion was adopted on the 26th day of August, 1981 by a vote of 4-0.



Christan L. Moffett, Clerk
Illinois Pollution Control Board