

ILLINOIS POLLUTION CONTROL BOARD
September 30, 1971

ILLINOIS POWER CO.)
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)
 v.) ## 71-193, 71-195, 71-196
) 71-197, 71-198
)
 ENVIRONMENTAL PROTECTION AGENCY)

Mr. Sheldon A. Zabel of Schiff, Hardin, Waite, Dorschel & Britton,
for Illinois Power Co.

Mr. Delbert D. Haschemeyer of Springfield, for Environmental Protection
Agency.

Opinion of the Board (by Mr. Currie):

Illinois Power furnishes electricity to a substantial part of Illinois, from Danville in the east to Wood River in the west. Its program for bringing particulate emissions into compliance with regulations (Acerp) was approved by the Air Pollution Control Board in 1968. After our decision that such programs were in effect variances and therefore required annual reapproval (Environmental Protection Agency v. Commonwealth Edison Co., # 70-4, Feb, 17, 1971), Illinois Power filed the present petitions. The company does not concede that its Acerps require reapproval, but in the event such approval is necessary asks that we grant variances to permit continued operation during completion of its program.

We reaffirm our earlier holding that an Acerp is a variance whose duration is explicitly limited to one year by statute. The Acerp authorizes emissions in excess of regulation limits, and on the ground that immediate compliance would cause unreasonable hardship; this is the very essence of a variance. Moreover, any doubt on the issue is resolved by the specific statutory provision that all variance requirements apply to Acerps. This does not mean all programs must be completed in one year. Renewals are authorized on adequate proof. But a prudent re-examination of such dispensations is rightly required by statute.

Cases ## 71-195 and 71-196 concern the Wood River generating station, which consists of five units located quite near the City of Alton in Madison County, in the St. Louis metropolitan region. Unit #5, which is equipped with a 99% precipitator and allegedly meets the standard, is not subject to the variance request. Unit #4 (Case # 71-196) has a rated output of 103 megawatts, is presently equipped with a 90% mechanical collector, and emits 0.87 pounds of particulate per million btu, as contrasted with the applicable

standard of 0.6 (R. 19-21). The 1968 Acerp called for compliance by 1974 (R. 22) but the company has begun construction of a Monsanto catalytic oxidation (Cat-Ox) system, including a 99% precipitator, that will reduce the particulates well below standard (and reduce sulfur dioxide by 85%) by June of 1972 (R. 25-26). Taking today as a vantage point, this is an exemplary program. We see no way the schedule can now be accelerated; emissions in the meantime are not so extreme as to suggest the possibility of a shutdown; the end result will be control not only of particulates but of sulfur as well. On appropriate conditions the variance for Unit #4 is granted.

Units ## 1-3 present considerably more difficulty. They discharge through a common stack and have been treated as a unit by the parties. Together their capacity is 155 mw (R. 19). Their control equipment, although they were constructed as late as 1949-50, is practically nonexistent. The company estimates its efficiency at 15% and the consequent emission at 7.38 lb/mbtu, about 13 times the applicable regulation limit of 0.55 (R. 20-21). The emission is extreme, in terms not only of concentration but of volume as well; units 1-3 are estimated to emit 24,000 tons of particulates per year (R. 160), which is more than a third as much as all sources in the nearby area of the Interstate Study (St. Louis area) in 1963-64 (R. 176-78). A local pollution official testified flatly that this plant is "the major source of pollution in Madison County" (R. 202), which emission inventories show has considerable particulate sources (R. 163). An Agency witness testified without contradiction that ambient air concentrations due to emissions from units 1-3 alone could be expected to reach 325 micrograms per cubic meter for the worst 24-hour period (R. 181), and federal criteria based on epidemiological studies indicate that adverse health effects can occur when the 24-hour level is in the range of 200-300 (Air Quality Criteria for Particulate Air Pollutants, p. 188). Consequently, to leave none too large a safety margin, both our predecessor board and the federal government have set air-quality standards of 260. Ours is to be met by January, 1972. The proof is clear that emissions from units 1-3 will in themselves cause a violation of the air quality standard as well as of the emission regulations. It is abundantly clear that we here deal with one of the most significant contaminant sources in all Illinois. It is particularly important that abatement occur with all practicable expedition because this plant is located in a densely populated region that suffers badly from numerous other contaminant sources.

It is therefore with surprise and displeasure that we learn from this record that the former Air Pollution Control Board in 1968 allowed Illinois Power an additional six years--a total of seven years after adoption of the regulations--in which to bring these truly extreme emissions under control (R. 22). Pursuant to that extensive free pass, the company has not yet commenced

construction of facilities to give relief to its unfortunate neighbors, although the regulations are already four and one half years old. For a part of that time Illinois Power was assured that it would be able, when compliance time came, to purchase gas for full-time operation of these boilers (R. 61). The recent gas shortage has put holes in that plan (R. 62), and now the company expects-- although the final decision has not been made (R. 34)-- to convert Units 1-3 to oil burning and to utilize low-sulfur residual oil that would substantially reduce sulfur emissions as well as bring particulates down to 0.1 lb/mbtu (R. 27).

This program, too, is exemplary, apart from the question of time. It is a tragedy that over four years have gone by without getting the work even started. No penalties can, however, be imposed, since the delay had the inexplicable blessing of the Air Pollution Control Board. See EPA v. Commonwealth Edison Co., # 70-4 (Feb. 17, 1971); EPA v. M.S. Kaplan Co., # 71-50 (June 8, 1971). Today's questions therefore are how quickly the work can now be done, and whether or not the plant should be allowed to operate in the meantime.

The company in its petition asked that we reconfirm the 1974 date of the original acerp, but at the hearing reported, commendably, that its present schedule contemplated completion of the conversion, and therefore compliance, by June 1973 (R. 128). Re-examination of the program, as required by the statute and our Edison decision, has eliminated a year's pollution.

Illinois Power testified that because of tight space limitations at the Wood River site work cannot begin on the conversion of Units 1-3 until materials for the Cat-Ox system on Unit 4 are out of the way, that is, until the Cat-Ox is completed in June 1972 (R. 27, 31-33). The Agency attempted without much success to attack this testimony (R. 66-73, 77-78), but we are not convinced that the start of construction could be much accelerated even if the space difficulty were overcome. The company testified without contradiction that the lead time for obtaining the necessary equipment was from six to eight months (R. 74). Starting today, that period would run until April of 1972 at the earliest. The June date for starting construction seems the best that we can expect on the record. There was nothing to show, either, that the one-year estimated construction time could be improved upon. To assure the company's best efforts, however, we shall order, as in prior cases (GAF Corp. v. EPA, # 71-11S, Sept. 16, 1971), that overtime be employed whenever to do so will advance the ultimate compliance date.

There remains the alternative possibility of forbidding the use of Units 1-3 until they are brought under control. This is an attractive possibility because of the extreme emissions in question, and in a most inappropriate location. The company presented a good deal of evidence to the effect that these units constitute

about half of the 15% reserve it says is necessary to enable it to meet peak demands that may outstrip predictions, to assure continued supply in the event of a failure of other generating facilities, and to allow for the requisite maintenance of other units (R. 39-55, 138). The Agency attempted to minimize the need for coal burning in Units 1-3, pointing out that the largest demands come during summer months when gas is more likely to be available (R. 57, 99-120). All three units can burn gas (R. 19). The company counters by observing that, precisely because summer loads are greatest, maintenance down time is greatest at other times so that there is no guarantee coal burning may not be necessary.

We think there is sufficient danger on this record that the complete refusal to allow coal burning on Units 1-3 might result in an interruption of electric service that it would be improper for us to enter such an order. On the other hand, this does not mean we must allow unlimited use of coal. Our order makes it clear that coal may be burned in these units only as a last resort. All available gas must be used in units 1-3 in preference to other units in the system (R. 20), if those units are to be operated, since 1-3 are the most serious polluters. All other sources of available power must be exhausted, including all other operable units of this company not down for legitimate maintenance and including all purchases that can be made from other producers. These provisions will limit coal burning on Units 1-3 to the minimum necessary to avoid the extreme hardship of a power shortage. If the Agency is right that these units are never needed when gas is unavailable, these provisions will mean these units will never burn coal. On these and other appropriate conditions the variance will be granted in #71-195.

Case # 71-197 concerns the Vermilion station near the town of Oakwood in Vermilion County. This plant consists of two exclusively coal-burning units of 77 and 109 mw and equipped with mechanical collectors of 86 and 87% respectively discharging through a single stack (R. 7). Their emissions are calculated to be 1.06 lb/mbtu as opposed to the permissible 0.59 (R. 7). The Acerp approved in 1968 gave Illinois Power until 1973 to install a 99% precipitator on Unit #1 and until 1974 to do the same on #2; it is expected that emissions will be reduced to 0.08 lb/mbtu (R. 8). Consequently work has not yet begun; the company was given time not to do the work, as contemplated by the regulations, but to delay the start of construction. Bids have just been received for #1 and are soon to be received for #2 (R. 11).

The company has at the Agency's suggestion upgraded the projected precipitators to 99.5% (R. 30) but seeks to adhere to the original unhappy schedule. Unfortunately the only testimony in the record is that the schedule cannot be accelerated at all as to Unit #1 and may indeed not be met (R. 28, 30). If it is not, the company will have only itself to blame. We cannot on the present record find that #1 can be completed more quickly than the company says, but we do not find persuasive the evidence as to why, as Illinois Power

says, construction cannot even begin until December 1972 (R. 30), which is fifteen months away. Consequently, while we grant the variance to permit operation of Unit 1 during the coming year, we condition the grant on the company's prompt submission of an additional affidavit, subject to Agency response, detailing why this delay is necessary, especially in light of the company's evidence that a similar installation at Hennepin (see below) will take only 18 months from order to completion.

With regard to Unit 2 the company admits that the schedule can be accelerated by six months (R. 32) and we think it should be. If this places Illinois Power in an unfavorable bargaining position with respect to its supplier, as contended, that is the company's doing because it chose to put off the installation of controls on Unit 2. The same condition will apply to Unit 2 with respect to an affidavit showing why construction cannot be further accelerated.

With these qualifications, the variance for the Vermilion station must be granted. Illinois Power cannot do without this station. And it is certainly better that coal be burned at Vermilion, where emissions are only twice the limit, than at Wood River 1-3 with its virtually uncontrolled short stacks in a highly populated and highly polluted area.

In case # 71-198 the company seeks approval of a drastically revised and much improved program for its Havana station. Consisting of eight boilers driving five units totalling 260 mw (R. 31-32), Havana is admittedly a bad actor, "a real problem. The station puts out a great deal of contamination" (R. 123). It burns only coal; its controls are a paltry 15% effective; its emissions are estimated by the company at 6.3 and by EPA at 7.4 lb/mbtu, with an allowable of 0.33 (R. 32, 104). It is scarcely surprising that several citizens, brought forward by the City of Havana as well as by the Agency, found the plant a severe nuisance, depositing sticky soot on cars and window sills, requiring extra cleaning, and interfering with such outdoor activities as clothes drying and cookouts (R. 5-28). There was testimony that two families had moved their mobile homes out of the area, and three others had threatened soon to do so, because of pollution from the plant (R. 25-26). Petitions urging that something be done were presented to the City as early as 1965 (R. 21).

The regulations that were to give relief came in 1967, although action could have been taken under the statute itself long before. The Acerp, approved in 1968, incredibly provided for no controls at all, but merely for declining use of the old plant until 1976, when it was to be placed on cold standby for possible emergency use--still without meaningful controls--until 1985 (R. 33-34).

The company's own evidence is clear that the conditions of even this most accommodating variance were grossly violated. Loads around the time of APCB approval in 1968 averaged less than 26% of capacity (R. 36). In 1970, due to increased requests to sell power to neighboring electric companies, the load was increased to an average of 39.7% (ibid). In the first six months of 1971 the load further increased to 47% (ibid). In defense the company asserts that the APCB in accepting the promise to reduce the use of Havana "was well aware of the contingencies that could arise in the power industry" (R. 130-31)-- contingencies that created an allegedly unexpected shortage of power elsewhere-- and that the promise was not a promise at all: "Those submissions were projections. They were not guarantees." "We did not state anywhere in those ACERP documents that we would not operate above 'x' capacity" (R. 143-44, 130).

While the English language has its ambiguities, we see no possibility of reading the Acerp as Illinois Power suggests. The company's own schedule, submitted as part of its Acerp and appended to the Agency's recommendation here, provided that "from 1968 to 1976 the station will be operated for peaking purposes on a cycling basis at progressively lower load factors." If the company did not promise to reduce its use of Havana it promised nothing at all. Its violation is plain. If conditions changed to make that promise no longer suitable, it was the company's duty to request an amended variance; that would have enabled the Board to order a new compliance program. The company chose instead simply to violate its commitment, which thereupon ceased to be a shield against prosecution for exceeding the emission limits. We therefore condition the grant of a further variance for Havana upon payment of a \$5000 penalty for failure to adhere to its earlier program.

Our authority to impose penalty conditions has been challenged here; it is supported by the statutory direction to impose conditions that will further statutory policy, for example to deter violations. We could of course deny the variance in order to leave the company open to a complaint on which the same penalty could be directly imposed; to do so would merely cause duplication of litigation with attendant loss of time and money. In making the variance contingent on payment of the penalty, we make it clear that the variance falls if the penalty is defaulted or set aside, so that a complaint can be filed. See, e.g., Marquette Cement Co. v. EPA, # 70-23 (Jan. 6, 1971); City of Springfield v. EPA, # 70-55 (March 31, 1971).

Nor is there, as the company says, any inconsistency in holding that the Acerp has expired and that it was not adhered to. As we have made clear before (EPA v. M.S. Kaplan # 71-50, July 8, 1971), while an Acerp must be renewed yearly we will not impose money penalties on one who has followed such a program in the good faith belief it is still valid. The reason is not that there has been no violation; it is that good faith reliance makes penalties

inappropriate. However, that defense disappears when, as here, the program was itself not followed.

The company's present program is a decided improvement. Conversion of the boilers to oil has begun and is to be completed in either May or July 1972 (R. 37). The contractor says May (R. 62-63); the company asks until July to leave room for unexpected possible delays (ibid). We will set the May date. If justifiable delays occur, a petition for extension may be submitted-- in time that we can pass on it before the present grant expires. The new program is happily short, and we think the need for these units in the meantime greatly outweighs even the substantial harm they cause. Havana shall in the interim be used as little as possible, making it a last resort save only Wood River Units 1-3, which are equally uncontrolled and in a more densely populated area. When conversion of one or more boilers is completed, the company will be required to use the converted boiler or boilers in preference to those yet unconverted (R. 76-77). Overtime shall be employed whenever it will accelerate completion.

The Hennepin station (# 71-193) consists of Units 1 and 2 of 76 and 235 mw respectively (R. 5). Equipped with mechanical collectors of alleged 83.8% and 85% efficiency, the units discharge through a common stack at an estimated rate of 1.49 lb/mbtu, contrasted with an allowable 0.42 (R. 5-6). The company's acerp, approved in 1968, called for installation of a 99% precipitator on Unit 2 by sometime in 1972, relying on mixing with the precipitator effluent to bring Unit 1's emissions within the standard (R. 6-7). The petition left doubts as to the availability of the low-ash coal needed for this stratagy, but the record shows the supply has been contracted for (R. 9). The precipitator is under construction, and completion is scheduled for June 1972 (R. 9). The company asks that we confirm the program.

We do so. Again the need for reliable power, and to minimize use of Wood River 1-3, dictate against an interim shutdown. Again--given today's vantage point--we see no way to accelerate the construction schedule. That the company can meet the standard by controlling only one of its two units once more demonstrates the laxity of the existing standard, which we may well tighten in the near future. But under the present regulation our concern is with the quality of the emission, not with how it is achieved. While dilution with outside air to reduce contaminant concentration without reducing the quantities discharges would violate the anti-circumvention provision of the regulations, that is not what is occurring here. For the quantities of fly ash removed and those emitted, as well as the concentrations, will be the same as if both units were equipped with precipitators of somewhat lower efficiency.

Moreover, the company's plan leaves it in a better position to conform to more stringent regulations that may be adopted in the future.

In all these cases the Agency asked not only that security be posted to assure performance--as the statute requires--but also that we condition any variance on the submission of a program for controlling sulfur dioxide and for developing technology to control various other pollutants. On adequate proof we have found air pollution by virtue of contaminants for which there are no emission standards; that is one of the chief purposes of the statutory prohibition. E. g., EPA v. City of Springfield, # 70-9 (May 12, 1971). Here, however, there was no proof of such pollution, except possibly for the Havana station, whose sulfur problems will be greatly reduced by the program we approve today. We cannot order correction of pollution without proof that a problem exists.

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

ORDER

Upon examination of the record, Illinois Power Co. is hereby granted variances to emit particulate matter in excess of regulation limits as follows:

1. (#71-196) From Unit #4 at the Wood River Station until June 30, 1972;
2. (#71-195) From Units ## 1-3 at Wood River until September 30, 1972, subject to extension to June 30, 1973, provided that:
 - a. Overtime shall be employed on these units and on Unit #4 whenever to do so will advance the date of compliance;
 - b. Coal burning on Units ##1-3 shall be a last resort, only if the company has exhausted all other means of satisfying its demands including the following:
 - i) Maximum use of all other available units operated by the company; and
 - ii) Maximum purchases of power from other producers; and
 - iii) Preferential allocation of available gas supplies to Units ##1-3; Provided, that this paragraph shall not prevent the company from burning minimum quantities of coal if needed to maintain the readiness of the units in question;

- c. The company shall within 35 days after receipt of this order file with the Agency and with the Board a firm schedule for bringing Units ## 1-3 into compliance as follows:
 - i) Equipment to be ordered by January 1, 1972;
 - ii) Equipment to be delivered and construction to begin by July 1, 1972;
 - iii) Compliance by June 30, 1973;
- 3. (# 71-197) From Units # 1 at the Vermilion station until September 30, 1972 subject to extension to June 30, 1973 and from Unit #2 at Vermilion until September 30, 1972, subject to extension to December 31, 1973, provided that:
 - a. The company shall submit to the Agency and to the Board, within 35 days after receipt of this order, an affidavit, subject to Agency response, detailing why this schedule cannot be accelerated;
 - b. After completion of the control equipment on Unit #1, that unit shall be used in preference to Unit #2;
- 4. (#71-198) From Units ## 1-8 at the Havana station until May 31, 1972, provided that:
 - a. Overtime shall be employed whenever to do so will advance the date of compliance;
 - b. Use of Units ## 1-8 shall be resorted to only if the company has exhausted all other means of satisfying its demands, including the following:
 - i) Maximum use of all other available units (except Wood River ## 1-3) operated by the company; and
 - ii) Maximum purchases of power from other producers; Provided, that this paragraph shall not prevent the company from burning minimum quantities of coal if needed to maintain the readiness of the units in question;
 - c. After conversion of one or more of these units, preferential use shall be made of those units converted;
 - d. A penalty shall be paid to the State of Illinois in the sum of \$5000 within 35 days after receipt of this order;

5. (#71-193) From Units ## 1 and 2 at the Hennepin station until June 30, 1972;

all on condition that the following requirements are met:

6. Illinois Power Co. shall make maximum use of available gas to minimize the necessity for burning coal in units not meeting standards when coal is used;
7. All existing emission control equipment shall be maintained and fully utilized;
8. The company shall within 35 days after receipt of this order post with the Agency a bond or other security in the amount of \$500,000, in a form satisfactory to the Agency, which sum shall be forfeited to the State of Illinois in the event that the conditions of this order are not complied with or the facilities in question are operated after expiration of these variances in violation of regulation limits;
9. The company shall file quarterly reports, commencing December 31, 1971, with the Agency and with the Board detailing its progress toward completion of its program; provided, that such reports in cases ## 71-195 and 71-198 shall detail any occasions on which coal was burned at Wood River Units 1-3 or Havana Units 1-8, together with reasons why such burning was necessary;
10. These cases remain open for further proceedings on the basis of the submissions required by this order;
11. Failure to adhere to the programs as presented or to the conditions of this order shall be grounds for revocation of these variances;
12. The company shall apply for any desired extensions of these variances to complete the programs approved today not later than 90 days before expiration of these variances.

I, Regina E. Ryan, Clerk of the Pollution Control Board, certify that the Board adopted the above Opinion of the Board this 30 day of September, 1971.


