ILLINOIS POLLUTION CONTROL BOARD
August 8, 1972

COMMONWEALTH EDISON CO.	)	
	)	
	)	
v.	)	## 72-91, 72-150
	)	
	)	
ENVIRONMENTAL PROTECTION AGENCY	)	

Richard E. Powell and Charles E. Whalen, for Commonwealth Edison Co.

Nicholas G. Dozoryst II, Assistant Attorney General, for the Environmental Protection Agency

Dr. William B. Martin, for Waukegan Citizens Action Program, Intervenor, in #72-150

Opinion of the Board (by Mr. Currie):

Commonwealth Edison Company, Illinois' largest electric utility, petitions for variances from current limits on particulate emissions for three of its generating stations, essentially on the ground that initial attempts to deal with the troublesome problem of sulfur dioxide have impaired or deferred the effective collection of particulates. The requests are partly granted and partly denied for reasons indicated below.

Regulations adopted by our predecessor the Air Pollution Control Board in 1967 and presently applicable (Rules and Regulations Governing the Control of Air Pollution, Rules 2-2.11, 3-3.112; see Environmental Protection Act, § 49(c); PCB Regs., Ch. 2, Rule 114) limit particulate emissions from individual stacks at plants such as Edison's to not over 0.6 pounds of particulate emission per million BTU of heat input, with more stringent limits based upon shorter stacks and upon the aggregation of several stacks at a single site. This Board's new regulations, adopted in April 1972 as a central part of the State's implementation plan for achieving compliance with federal air-quality standards, require that particulate emissions be reduced to 0.1 lb/mbtu (or up to 0.2 for units already meeting the latter standard) and sulfur dioxide emissions to 1.8 lb/mbtu in certain metropolitan areas by May 30, 1975. PCB Regs, Ch. 2, Rules 203(g), (i), 204(c).

The petitions before us concern three of Edison's generating stations. At the Will County station (#72-91) near Joliet Edison is now testing and debugging a full-scale (163 mw) limestone scrubber to reduce both sulfur dioxide and particualte emissions and asks

permission to use an old precipitator that does not meet the regulations while ironing out the scrubber's initial operating difficulties. At the Sabrooke (Rockford) and Waukegan stations (both #72-150) Edison contends that its recent switch to low-sulfur coal has impaired the performance of existing particulate collection equipment, asking to be allowed excessive particulate emissions while experimenting, for example with additives, to correct the problem at Waukegan and while converting to clean oil burning at Sabrooke.

Aware of the costs and uncertainties of sulfur dioxide control, we concluded in the rule-making proceeding recently concluded that the job can and must be done by 1975. See our detailed opinion explaining the new regulation in In the Matter of Emission Standards, #R71-23 (April 13, 1972). We applaud Commonwealth Edison for its efforts, illustrated by the present cases, some time in advance of the deadline to alleviate sulfur dioxide problems and to determine the most effective means of meeting the new regulation throughout the Edison system. Recognizing the importance of Edison's success to pollution control efforts all over Illinois and elsewhere, we heartily encourage Edison to continue both its scrubber and its low-sulfur coal programs, with particular emphasis on getting any remaining bugs out of the scrubber and perfecting the use of additives for improved particulate collection. In view of the statutory direction that we grant variances when a balancing of costs and benefits reveals that compliance would impose an arbitrary or unreasonable hardship (Environmental Protection Act, § 35; see Environmental Protection Agency v. Lindgren Foundry Co., #70-1, Sept. 25, 1970), and in view of the importance of Edison's program to sulfur dioxide control in general, we are persuaded that some temporary deterioration of particulate collection can be permitted, where truly necessary, in order to promote perfection of techniques for simultaneous control of sulfur dioxide and of particulates, so long as the public health is not seriously endangered.

We find, as more fully spelled out below, that Edison has encountered legitimate and expectable difficulties in the startup of its scrubber at Will County; that although the particular problems encountered have been readily solved, others can be expected; that nothing in the record suggests any essential flaw in the scrubber; and that it is reasonable to allow somewhat excessive emissions during further debugging, when necessary, during a further period of six months. Edison also asks that it be allowed to bypass the scrubber because it has not yet determined how to render the sludge it collects of suitable consistency for landfill disposal, but we conclude this request is premature because Edison has capacity to store the sludge it expects to produce for the next several months.

If it later appears the problem cannot be solved before storage capacity is exhausted, a further petition may be filed detailing progress toward a solution. Cf. Village of Wilmette v. EPA, #72-5 (Jan. 17, 1972).

In the cases of Sabrooke and Waukegan, the company's plans for improving control of particulate emissions should by all means be pursued, but we do not find in the present record that excessive particulate emissions have been or will be brought about by the low-sulfur coal program or by any other exculpatory cause. At Waukegan there is little evidence beyond an operator's subjective assessment that the plume is dirty and an unsubstantiated graph estimate to suggest what emissions may be when low-sulfur coal is used. At Sabrooke there are tests showing bad emissions when low-sulfur coal is used but insufficient evidence that the collection devices, three of which are mechanical collectors that Edison admits should not be affected by coal sulfur content, worked any better lately on high-sulfur coal. At neither plant is there adequate proof that additives cannot cure whatever problem may arise. The Waukegan and Sabrooke variances, therefore, must be denied without prejudice.

This decision in no way requires Edison to close down the boilers or to abandon its low-sulfur coal program, which we have endorsed. It merely means we cannot on this record grant what is in essence a declaratory judgment that no penalties would be imposed for particulate violations if a complaint were to be filed. See Flintkote Co. v. EPA, #71-68 (Nov. 11, 1971). We have indicated in this opinion our willingness to excuse a tolerable degree of particulate violation if and when that is proved necessary to the development or establishment of sulfur and particulate abatement technology. Such proof has not here been made; Edison is free to make it upon filing of another variance petition or by way of defense under § 31(c) of the statute if a complaint should be filed.

A detailed exposition of the facts follows.

I. Will County

Edison requests a variance for unit 1 of the Will County Station from particulate regulations 2-2.11, 3-3.112 and 3-3.122 of the Rules and Regulations Governing the Control of Air Pollution. A scrubber system was installed in early 1971 on this 163 mw unit to remove SO_2 and particulates. Since startup problems have existed, and are expected to exist in the future, which cause the scrubbing unit to be shutdown, Edison requests leave to bypass the SO_2 removal unit during these times and to utilize an existing electrostatic precipitator which admittedly will not meet the above particulate standards.

Edison also anticipates possible shutdown of the scrubber unit due to insufficient storage capacity for the solid wastes generated by the SO_2 removal process.

On the basis of 1970 tests on unit 2 (supposedly equivalent to unit 1), the existing electrostatic precipitator on unit 1 has an emission rate of 0.8 lb/mbtu at full load of 163 mw (Ex. L, p. 5). A fire also took place in this unit in 1971,but the precipitator, while not retested (R. 92), was allegedly returned to its original condition (R. 96). Since May 5, 1972, Edison has not been able to run the unitat full load because of temporary repairs to the air heater section; has consequently been restricted to 115 mw; and as the following table shows, has been meeting the emission limitation of 0.6 lb/mbtu (Ex. 7):

Load		Efficiency	Emissions
MW	% of full load	Particulate Control, %	lb/mBtu
163	100	62.5	0.8
122	75	73	0.6
115	71	74.5	0.57

Edison indicates permanent repair of the air heater will take place in November, 1972 (Ex. L, p. 7), which will again allow operation at full load. It is also maintained that unsuccessful attempts were made to upgrade the precipitator (R: 98-99), and that the only alternative to bring about compliance with the particulate regulation, with the scrubber out of operation, is to order a new precipitator. Based on experience with ordering a replacement for unit 2, this would require 28 months (R. 99). Although the Agency recommended that we require the precipitator to be upgraded as a condition of the variance, it introduced no evidence to dispute Edison's case that such a course was not feasible.

The scrubber system which removes both particulates (with a venturi scrubber) and SO_2 (with an absorber) consists of two parallel processing trains of equal capacity (Ex. J, No. 2). When operating as designed the outlet particulate level should be 0.05 lb/mbtu (Ex. L, No. 8). To date 270 hours is the longest continuous operation for either of the processing trains, and from Feb. 23 to July 1, 1972, each of the processing trains had been in operation 25-30% of the total time unit 1 was in service (Ex. K. p. 7-8). Edison estimates that 3 months' storage of scrubber sludge is available if the SO_2 removal system operates 70% of the time (Ex. J. p. 11). Difficulties are also noted about the undesirable chemical consistency of the sludge, which may make it unfit for many uses (Ex. J, p. 9-11). However, it was admitted that

> It would not be prudent to design and install a sludge treatment system until operation of the scrubber has been stabilized and the system is producing sludge with relatively uniform characteristics (Ex. J., p. 11).

Until the scrubber unit operates for longer than 25% of the time, this stabilization is not likely. But with more unit downtime storage of sludge will be less of a problem.

We sympathize with Edison's attempts to start up an SO_2 removal unit for which it has no previous operating experience. We recognize that downtime has existed and is likely to exist in the future until all such problems as outlined in Ex. J are solved. On the other hand we wish to encourage Edison to diligently pursue startup of this unit and expedite solution of solid waste problems as well as operating upsets. As Edison's witness noted, solid waste control awaits steady state operation, and until such operation is reached, the sludge disposal problem does not appear to be immediate.

Edison asks a full year to permit additional debugging; we agree with the Agency that there is no basis in the record for believing that, with diligent efforts, debugging will take that long. We will allow six months from today, and Edison may apply later if necessary for more time on a showing of satisfactory progress.

II. Sabrooke

The Sabrooke station employs four boilers, three of which (##1, 2, and 3) are equipped with mechanical cyclone particulate collectors and the fourth with an electrostatic precipitator (R. 499-501). Edison states that the design efficiency of all four collectors, as modified to date, was 95%,and that emissions should have been 0.14 lb/mbtu for ##1-3 and 0.18 for #4 if the collectors worked up to design (ibid), but no acceptance test was run on any of the four units to determine whether they ever operated as intended (R. 518, 543). Emission tests were first run after Edison began using Eastern Kentucky low-sulfur coal along with some Illinois coal (R. 489; Ex. 29). Tests on units #1 and #3 in May and August of 1971, using coal varying from 2.2% to 0.8% sulfur, indicated serious violations of the emission standard of 0.6 lb/mbtu (0.97 to 1.94 and 1.52 to 1.97 lb/mbtu, respectively); unit #2 was said to be very similar in design and inferentially in emissions to #3; and "limited" testing with "inconsistent" results on #4 using 1.4%-sulfur coal suggested a truly

disturbing emission rate of about 4.3 lb/mbtu (R. 500-501).

Edison proposes to correct its particulate problems at Sabrooke by converting all four units to distillate oil with the following shutdown schedule:

UNIT	SHUTDOWN DATE
4	9/30/73
3	11/30/73
2	2/28/74
1	9/30/74

(R. 502-504). This conversion should bring the station into compliance not only with the current particulate regulation but with our new emission regulations for both sulfur dioxide and particulate as well. No proposal is made for improving particulate performance in the meantime.

Edison has shown that all four Sabrooke units are seriously in violation of the particulate standard. Needless to say, this is not enough to justify a variance; proof of a violation does not excuse it. See Decatur Sanitary District v. EPA, #71-37 (March 22, 1971). Edison further argues that Sabrooke's generating capacity is needed to assure uninterrupted service to its customers and to permit orderly shutdown of other units for maintenance and repair. For present purposes we can assume, without deciding, that Edison's evidence on this point is sufficient that we would not order Sabrooke shut down in light of the harm it may cause to persons in the vicinity according to this record. But even on this assumption we would not be required to go further and give Edison a shield against possible money penalties for excessive emissions while continuing to operate, which is what a variance (unless very narrowly worded) would do. In one of our earliest decisions we stressed that, as in zoning cases where the statutory standard is similar, a self-inflicted hardship is no justification for a variance. EPA v. Lindgren Foundry Co., #70-1 (Sept. 25, 1970). Even in cases involving the treatment of municipal sewage, where a shutdown would be inconceivable, we have refused variances when there were inadequate allegations or proof of justification for past delays in complying with the regulations. E.g., Decatur Sanitary District v. EPA, #71-37 (March 22, 1971); Metropolitan Sanitary District v.EPA, #71-183 (Nov. 11, 1971). At times we have granted variances in such cases conditioned upon the payment of money penalties, e.g., Marquette Cement Mfg. Co. v. EPA, #71-23 (Jan. 6, 1971); but we have consistently declined to give the complete shield of a variance without penalties in the absence of proof justifying or excusing the present emissions.

Edison appears to recognize this point, since its case for a variance at Sabrooke is based upon the assertion that particulate violations there are excusable due to Edison's good-faith efforts to reduce sulfur dioxide emissions. We do not think this assertion has been proved. We have no test data to indicate that the mechanical or electrostatic collectors at Sabrooke ever worked properly, and we surely cannot presume that they did in the absence of proof. As an Edison witness testified,

> We assume that the precipitator was in fair quality, had never been tested. We don't have a bench mark on which to compare it, beyond the comment from the Western Precipitation which was a claim of 95 percent efficient. For all we know it was only 80 percent to begin with.

(R. 543). Moreover, in the case of the three mechanical collectors, Edison's own witness testified that there is no reason to expect that the use of low-sulfur coal would in any way reduce collection efficiency; electrostatic collection is allegedly affected because low sulfur means high particle resistivity, but resistivity is irrelevant when particles are collected by centrifugal force: "The sulfur comes into the picture not at all in the mechanical collector, because it has no effect whatsoever" (R. 535-36). Apart from a graph discussed in connection with Waukegan, the only evidence even suggesting that low-sulfur coal has made a difference consists of rather subjective observations of increased wear on fan blades, said to indicate the passage of more particulates; a shorter time required to clean flyash from the precipitator hoppers, suggesting that less flyash is being collected; and a deterioration of plume appearance (R. 475-77); plus the conclusion, uncorroborated by coal analyses, that the new coal has a higher ash content and lower heating value than the old, producing about 1.06 pounds of ash per therm as compared with 0.60 (R. 475). We find the observations too subjective to carry the weight of proving the new coal was the cause of serious deterioration in performance; and the ash data, even if it were supported by analyses, would not prove that coal with low sulfur and low ash per therm could not reasonably have been obtained, as it was at Waukegan according to the evidence in the same case (R. 146). Nor has Edison proved that Sabrooke's particulate problems, to whatever extent they are caused by low-sulfur coal, cannot be alleviated by the use of additives as will be attempted at Waukegan.

In short Edison failed to establish that its present particulate problems at Sabrooke are the necessary result of its commendable effort to reduce emissions of sulfur dioxide. For all we know, as Edison's witness testified (R. 543), Sabrooke has been in violation of the particulate standards all

along. If it has been, the recent use of low-sulfur coal cannot excuse earlier violations. While we think Edison would be well advised to proceed posthaste with its plan of conversion to oil, which on this record affords the best and quickest assurance of long-term reduction of both sulfur and particulates (R. 520), we are not convinced from this record that Edison has been doing all it could to keep particulates down in the meantime, or that its present emissions are excusable. The variance request for Sabrooke must be denied without prejudice.

III. Waukegan

The initial petition alleged that there were seven turbine generating units at Waukegan, all controlled to some degree by electrostatic precipitators; that the precipitators serving units 1-3 and 5, while designed for 95% collection efficiency, "never met this rated efficiency after installation" but achieved emissions of about 0.6 lb/mbtu; and that the precipitator on unit 7, designed for 98% efficiency, was found when tested in August, 1971 to remove as little as 84% of the particulates, emitting up to 0.82 lb/mbtu. On these facts the testimony indicates not only that unit 7 was in violation of the individual stack limit of 0.6 but also that the plant as a whole, because of the failure of the precipitators on units 1-3, 5, and 7 to meet design standards, failed to meet the applicable site standard, which Edison computed to be 0.21 lb/mbtu (R. 270; Ex. 24).

A variance was sought to permit continued emissions at the level described while pursuing a corrective program. As later refined by the date of hearing, the plan was as follows: Units 1-3 are to be retired in October, 1972, when this summer's peak electric demand is past; the two precipitators now serving Units 1-3 and 5 will be attached in parallel to the remaining Unit 5, which will be taken out of service to make this connection in March 1973. Increasing the precipitator capacity for the single unit, Edison predicted, would reduce its emissions to about 0.2 lb/mbtu, assuming, as the petition did, continued use of high-sulfur coal (see petition; R. 272-75). Minor modifications already made to the Unit 7 collector have increased its efficiency when using Illinois coal to an "average" of 95% and an "average" emission of 0.40 lb/mbtu, and further modifications to allow the application of "more high voltage power" are expected to provide further improvement by May 1973 (R. 278). At that time, given tested emission rates for the remaining Units 6 and 8 of 0.13 lb/mbtu (R. 275, 278) and a revised site emission limit of 0.23 (R. 249), the plant and each of its stacks would be in full compliance with the 1967 regulation if high-sulfur Illinois coal were still to be used (R. 270).

The initial petition said nothing about additional problems that might result from the increasing use of low-sulfur coal at Waukegan; the posture of the case was significantly altered on the day of the hearing when Edison revealed, apparently without prior notice to the Agency, that it wished to amend its petition to seek additional relief based upon alleged problems with low-sulfur coal (R. 6). Reserving the right to recall witnesses and to amend its recommendation (which had not in any event been filed), the Agency did not object to proceeding with evidence on the amended petition, nor did the intervening Waukegan Citizens Action Program (R. 7-8).

The low-sulfur question will be discussed at length, but the amendment by no means moots the initial request for a variance to allow increased emissions resulting from the inadequacy of the precipitators; the revised petition plainly asks not only general relief to accommodate low-sulfur fuel (paragraphs (a) and (d)), but an additional allowance until the precipitator improvements are completed (paragraphs (b) and (c)). We therefore pause to consider, apart from the low-sulfur coal question, whether or not we can grant a variance excusing such excessive emissions as will occur between now and May 1973 as a result of the inadequacy of the precipitators themselves.

As we said in connection with Sabrooke, nothing that is done with respect to low-sulfur coal can excuse violations that would occur even if such coal were not used. We find no satisfactory explanation of why Edison waited until this late date to come up with a program to bring its plant into compliance with regulations adopted in 1967. It is said that "acceptance" tests on the 1-3 and 5 precipitators revealed they "never" were up to design efficiency, and that a July 1971 test revealed deficiencies in unit 7 (R. 272, 277). It is and has been Edison's obligation both to find out whether its precipitators operate properly and to fix them if they do not. If the acceptance tests were performed shortly after construction in 1955 (R. 272), as seems to be the logical inference, there is no evidence to justify waiting until now to correct the known problem. If the tests were delayed until recently, there is no evidence to justify such a delay in ascertaining the facts. As for Unit 7, which was installed in 1958 (R. 277), there is nc evidence that any tests were made prior to 1971 (see R. 312) or that the precipitator itself was so new that there was no opportunity for earlier testing. We do not say Edison cannot make such proof in some future proceeding; but it has not on this record given any justification for its failure to correct these violations sooner, and we cannot therefore give Edison a shield against possible money penalties relating to the inadequacies of its Waukegan precipitators. The proposed improvements, of course, should be pursued with dispatch to terminate the violations and hence the risk of penalties as soon as possible.

Of greater long-term significance is Edison's further contention, first raised the day of the hearing, that its progressive shift to lower-sulfur coal at Waukegan is causing and will cause further deterioration of particulate collection. Edison predicts that, even after the above precipitator improvements are completed in 1973, total plant emissions would reach 0.35 lb/mbtu (compared with the then standard of 0.24) if 1.8%-sulfur coal were burned and 0.76 if, as Edison has promised the intervening citizens' group and the City of Waukegan, sulfur content is reduced to 1.0% (Ex. 24; R. 270).[1] Moreover, Edison says, only one of the four units then in service will under the latter assumption meet the single stack limit of 0.6 lb/mbtu (Ex. 24). The theory behind these predictions is that low sulfur means high resistivity and consequently poor attraction of particles to the precipitator electrodes (R. 535-36). Edison acknowledges that it is possible to design a larger precipitator to handle low-sulfur coal efficiently, as its own limited tests tend to confirm, and that the company is doing just that at one of its Will County units not involved in this case (R. 318, 275). To avoid backfitting costs and delays and to make use of existing precipitators, however, Edison plans to attempt to resolve the alleged problem by injecting additives such as sulfur trioxide or the proprietary chemical Koppers-K into the flue gases to reduce resistivity. Preliminary tests with relatively small concentrations of sulfur trioxide ("about 25 ppm," of which all but "less than one part per million" adhered to the dust and was not discharged from the precipitator) have encouraged Edison by resulting in visibly cleaner stacks, and the use of additives is to be further pursued at Waukegan (R. 279-80, 318-21). A variance is sought to permit the predicted emissions due to using low-sulfur coal until the additive process or some alternative is fully perfected.

As stated in the introduction to this opinion, we encourage Edison to continue its work with additives to improve electrostatic collection of particulates from low-sulfur coal,

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1. Edison has referred repeatedly in the testimony and pleadings to what is termed a "public commitment" made at a previous time by Edison to the City of Waukegan and the Waukegan Citizens Action Program to reduce the sulfur content of the coal burned at the Waukegan Station to 1.8% by March, 1972, and to 1.0% by early 1973. At the time that the commitment was made Edison apparently suspected that a particulate emission problem might arise as a result of the use of low sulfur coal (R. 257-258, 372-373) but had no actual test data as to the extent or magnitude of the problem (R. 114, 367). This commitment may help explain the circumstances which led to the present particulate emission problem. We do not view this commitment, however, as in any way excusing or mitigating the effects of the problem.

and upon adequate proof of necessity we would look favorably upon a limited variance request to shield the activity from possible penalties. However, we do not find satisfactory proof of that necessity in the present record. The predicted emissions from units 6, 7, and 8 are not based upon tests of those or comparable units burning low-sulfur coal (R. 383). They are illustrated by, or based upon, what an Edison witness described as a "typical curve attempting to predict the behavior of precipitator efficiency with changing sulfur levels," which he characterized as showing a very rapid deterioration in efficiency when sulfur content falls below 1.5% (R. 133-34; Ex. 23). No attempt was made to substantiate this curve, but it was reportedly based on "data" supplied by Research Cottrell in 1962 (R. 162-163). We have no way of knowing what these "data" are, or when, where, and how they were obtained. Indeed Edison's witness specifically denied that he had any firm information as to the effect of low-sulfur coal upon precipitator efficiency:

> Q . . . Have you available data which indicates the relative rate of degradation relative to reduction in sulfur content among the coals with which you have had experience?
>
> A No, I don't have good data. . . . I am going by observations of station personnel as to when they felt that they could see a distinct change or when they could see a fairly consistent change in the appearance of the emissions . . . .

(R. 161). Given the conceded availability of standard methods of testing actual emissions, we think a mere eyeballing of the plume at varying sulfur contents wholly inadequate to demonstrate that low-sulfur fuel has or will have the effect Edison claims upon particulate emissions. Before-and-after tests were run on unit 5, and the results with low-sulfur coal were markedly worse (65% efficiency after vs. 88-93% before) (R. 272-74). However, the high-sulfur test was an "acceptance" test presumably conducted shortly after installation of 1955; the low-sulfur test was conducted in April 1972 (ibid). The apparent 17-year gap between tests raises a serious question whether the results can be fairly compared and leaves us even as to this unit with insufficient evidence that low-sulfur coal is the cause of worsened emissions. Significantly, there is no attempt to show that normal precipitator performance cannot be obtained, as Edison intends to attempt, by the use of additives. Until such proof is made, we cannot grant the variance requested. We can neither give an insurance policy against possible violations that may never materialize nor give blanket approval to excessive emissions that have not been shown to have an excusable cause; to do either would encourage less than diligent efforts to prevent avoidable violations. Edison should do all it can to assure, with or without low-sulfur coal, that emissions do not exceed the standards, and should be prepared to make proof that it has done so in any subsequent proceeding.

Section 37 of the Act places a heavy responsiblity upon the Environmental Protection Agency, which is represented in these proceedings by the Attorney General, to see to it that anything in opposition to a variance petition is put into the record before this Board. Absent such participation, the Board would have to decide most variance cases entirely on the basis of evidence selected by the petitioner, as we lack authority or resources to make an independent investigation. In the Will County case the Agency's recommendation was not filed by the Attorney General until two days before the hearing, and in the Waukegan-Sabrooke case not until the hearing was over. In each case the recommendation came too late to serve its purpose of informing the petitioner of the Agency's position so it could intelligently respond. In both cases the recommendation contained factual allegations respecting such matters as the condition of control equipment or the adverse effect of emissions on those nearby, yet no proof was offered in either hearing to support these allegations. The recommendation is a pleading, not evidence; we must disregard unproved allegations. The State's participation in both cases was limited to cross-examination, which did not substantially affect the Edison's case. No evidence was introduced to demonstrate that, as the new regulations contemplate, it is indeed feasible to control sulfur dioxide and particulates simultaneously. Finally, a briefing schedule was set, and we received timely briefs from Edison; in the Waukegan-Sabrooke case we received from the State not a brief but the tardy recommendation, which still did not address itself to the central issue of simultaneous control of sulfur and particulate emissions. We point all this out because we think it important to stress that only diligent and full participation by the Agency and the Attorney General can assure that the public interest is protected against the dangers of our having to decide cases upon one-sided records.

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

ORDER

1.(#72-91)Commonwealth Edison Co. is hereby granted a variance until February 8, 1973, to permit particulate and smoke emissions in excess of emission limits from Will County Unit #1, provided the following conditions are met.

a) Such emissions shall occur only as a result of legitimate debugging of operating problems respecting the limestone scrubber; and

b) All reasonable efforts shall be made to eliminate such problems, and to perfect a program of sludge disposal, in the shortest practicable time; and

c) The precipitator on Unit #1 shall be utilized whenever the scrubber is out of service, and emissions at such times shall not exceed 0.8 lb/mbtu; and

d) Unit #1 shall be operated at less than capacity levels to assure that emissions do not exceed applicable standards when the scrubber is out of service, except when system demands cannot be met without using units whose emissions exceed the standards; and

e) Edison shall file monthly reports with the Agency on its progress in debugging the scrubber and in solving the sludge disposal problem, commencing September 1, 1972; and

f) Edison shall specify in such monthly reports the percentage of total operating time that Unit #1 is expected to be at full load; and

g) Edison shall post with the Agency within 35 days after receipt of this order, a bond or other adequate security in the amount of $30,000 to assure compliance with the terms of this order.

2. (#72-150) The petition for variances for the Sabrooke and Waukegan stations is hereby denied without prejudice.

I, Christan Moffett, Clerk of the Pollution Control Board, certify that the Board adopted the above Opinion this 8th day of August, 1972, by a vote of 4-0.

Christan L. Moffett