

ILLINOIS POLLUTION CONTROL BOARD
December 14, 1978

SOUTHERN ILLINOIS POWER COOPERATIVE,)
))
 Petitioner,))
))
 v.)) PCB 78-255
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ENVIRONMENTAL PROTECTION AGENCY,))
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 Respondent.))

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

This matter comes before the Board upon a petition filed on September 18, 1978 by Southern Illinois Power Cooperative (SIPC) requesting a variance from Rule 204(a)(1) of the Chapter 2: Air Pollution Control Regulations (Chapter 2) until December 31, 1978. An amended petition was filed on October 19, 1978. The Environmental Protection Agency (Agency) filed its recommendation on November 6, 1978. No hearing was held.

SIPC is a public utility and operates three identical cyclone-fired boilers, rated at 33 megawatts each. These boilers exhaust through two stacks, each 210 feet tall. Units 1 and 2 exhaust through stack number 1 and Unit number 3 exhausts through stack number 2. Unit number 4 is a cyclone-fired boiler with a designed generating capacity of 175 megawatts which will exhaust through a stack 400 feet tall.

It is Unit number 4 for which a variance is sought. This unit has an SO₂ scrubber which will bring the emissions of the unit into compliance; however, the power wiring, control wiring and instrumentation are not yet completely installed and the scrubber is presently inoperable. These components were originally scheduled to be completed July 1, 1978 when the boiler commenced operations and are now expected to be installed and complete by December 1, 1978. The delay was because the contractor installed wiring with insufficient insulation and consequently had to reorder and rewire the unit. There was also a delay in obtaining rubber coated fiber pipes from the factory. The pipes leaked when pressure tested and had to be remanufactured.

Petitioner currently forecasts its peak winter power demands at 196 megawatts for 1978. Without the fourth generating unit the available capacity is 140 MW. Petitioner's Units 1, 2 and 3 can deliver 105 MW and 35 MW peaking power is available from South Eastern Power Association (SEPA). Petitioner also has a contract with Big Rivers Rural Electric Corporation for 100 MW from September 30, 1978 through September 15, 1979. Thus to meet its own needs and

its contract obligations Petitioner will need to obtain the extra megawatts from Unit number 4. Petitioner thus claims that compliance with Rule 204 will prevent the use of Unit number 4 and would impose an arbitrary and unreasonable hardship on Petitioner.

The SIPC facility is located on the Lake of Egypt, approximately eight miles south of Marion, Illinois. Marion has a population of approximately 12,000 and is the major population center of Williamson County. The nearest permanent residences near the facility are located at a distance from one-fourth to one-half mile from the plant.

The nearest ambient air quality reporting station monitoring sulfur dioxide levels is located at 2209 West Main Street in Marion, Illinois, approximately eight miles north of the facility. The 1977 Annual Air Quality Report indicates no violation of the primary or secondary standards for ambient air levels of SO₂. The highest 3-hour average was recorded as 0.201 ppm as compared to the secondary standard of 0.5 ppm. The annual arithmetic mean was indicated as 0.014 ppm as compared to the primary standard of 0.03 ppm, and no violations of the primary standard 24-hour average in excess of 0.14 ppm were recorded. At the time the recommendation was filed the Agency had received no objections to the grant of the variance. The Agency does believe that SO₂ emissions from Unit number 4 in combination with SIPC's three existing units could cause violations of the 24-hour SO₂ air quality standard of 0.14 ppm and the 3-hour secondary standard of 0.5 ppm. The possibility of such violations could be minimized through continuous monitoring of loads and resulting boiler operations.

The Petitioner's Unit number 4 is classified as a new source and the facility is located in an attainment area for SO₂. Modeling was done by the Agency's Air Resources Analysis Section for Unit number 4 and by Burns & McDonnell Engineering Company, Petitioner's consultant. The Agency's conclusion was that the modeling revealed no apparent future violations of the primary and secondary standards as long as the SO₂ scrubbers performed to design specifications. The Agency's study was conducted using maximum boiler operations and worst case fuel. If the scrubber is bypassed, the dispersion characteristics of emissions from Unit number 4 may be somewhat improved because of the increased temperature of the exhaust gases. Petitioner's study reinforces the Agency's conclusions.

The Board will grant Petitioner's requested variance subject to conditions in order to meet the requirements of Section 35 of the Environmental Protection Act and Section 113(d) of the Federal Clean Air Act. The Board finds that Petitioner is currently unable

to comply with the SO₂ standards and would suffer an arbitrary and unreasonable hardship if denied the variance. Environmental damage is unlikely while Petitioner would suffer financial hardship. Compliance will be met by December 31, 1978.

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

ORDER

It is the Order of the Pollution Control Board that Southern Illinois Power Cooperative is granted a variance from Rule 204 (a)(1) of the Chapter 2: Air Pollution Control Regulations for its steam electric generating Unit number 4 until December 31, 1978 subject to the following conditions:

1. That SIPCO utilizes its 175 megawatt unit (Unit number 4) to its capacity in conjunction with the maximum obtainable power from its 35 megawatt tie in line before commencing operation of any one of its existing 33 megawatt units. The remaining units will be operated only to the extent of supplying the system's specific power needs.
2. If at any time during the period of variance, the Marion air sampling station indicates a violation of the 24-hour sulfur dioxide air quality standard, or the 3-hour secondary sulfur dioxide air quality standard, the Petitioner shall restrict or reduce its total sulfur dioxide emission rate as soon as possible.
3. The Petitioner shall submit monthly reports to the Agency summarizing the operation of all power producing units at its Lake of Egypt facility and the amount of power received through the 35 megawatt tie in line for each day of operation. The report should also indicate the status of completion of construction of the SO₂ scrubber for Unit number 4.
4. Within thirty days of the granting of the variance, the Petitioner should make application for an Operating Permit from the Agency for the generating Unit number 4.

5. Within thirty days of commencement of scrubber operations, the particulate matter concentrations in the effluent stream should be measured by an approved independent testing service. The measurements to be conducted using the procedures described in the "Stack Sampling Manual Methods and Procedures," as filed by the Agency, pursuant to PCB Regulations, Chapter 2, Part I, Rule 106(b), with the Secretary of State's Office on June 16, 1975 and revised from time to time. The results of these tests, in triplicate, should be forwarded to the Agency's Regional Office immediately after the test results are compiled and finalized. The address of the Agency's Regional Office is: Illinois Environmental Protection Agency, Division of Air Pollution Control, 115A West Main Street, Collinsville, Illinois 62234.
6. The Agency should be allowed to witness the tests and should be notified a minimum of thirty days prior to the expected date of the tests, and further notification of a minimum of five working days prior to the test of the exact date, time and place that the test will be performed.
7. Within thirty days of commencement of scrubber operation, the sulfur dioxide concentration in the effluent stream shall be measured, using the procedures described in Rule 204(g)(1) of Chapter 2 of the Illinois Air Pollution Control Regulations, by an approved independent testing service. The results of these tests should be forwarded in triplicate to the Agency's Collinsville Office (see address above) immediately after the test results are compiled and finalized. The Agency should also be allowed to witness these tests and should be notified a minimum of thirty days prior to the expected date of these tests and further notified a minimum of five working days prior to the test of the exact date, time and place of the tests.
8. The Petitioner shall, within forty-five days of the date of this Order, execute and send to John D. Williams, Technical Advisor, Enforcement Programs, Illinois Environmental Protection Agency, 2200 Churchill Road, Springfield, Illinois 62706, a Certification of Acceptance of this variance by which it agrees to be bound by its terms and conditions. This forty-five day period shall be held in abeyance for any period in which this matter is appealed. The form of said Certification shall be as follows:

CERTIFICATION

I, (We), _____, having read and fully understanding the Order of the Illinois Pollution Control Board in PCB 78-255 hereby accept said Order and agree to be bound by all terms and conditions thereof.

TITLE

DATE

Final compliance must be achieved by December 31, 1978 or the Petitioner may be subject to noncompliance penalties under Section 120 of the Clean Air Act as amended August, 1977.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order were adopted on the 14th day of December, 1978 by a vote of 3-0.

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