

ILLINOIS POLLUTION CONTROL BOARD

April 3, 1980

CENTRAL ILLINOIS PUBLIC SERVICE COMPANY,)
(Meredosia Power Station),)
)
Petitioner,)
)
v.) PCB 80-25
)
ENVIRONMENTAL PROTECTION AGENCY,)
)
Respondent.)

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

This matter comes before the Board upon a variance petition filed February 1, 1980 by Central Illinois Public Service Company (CIPS). The petition requests for the Meredosia power station a variance from the effluent standards for copper (total), iron (total) and iron (dissolved) of Rule 408(a) of Chapter 3: Water Pollution for discharges of boiler and air heater rinse water into the ash pond. The petition also requests a variance from the Rule 408(a) effluent standard for total suspended solids (TSS) for cooling tower blowdown and cooling tower emergency overflow. On March 3, 1980 the Environmental Protection Agency (Agency) recommended that the variance be granted with conditions. No hearing was held and no public comment has been received. Many of the facts in this case are similar to those in PCB 80-16. The Board's Opinion of this date in that case is incorporated by reference.

The Meredosia power station is a 588 megawatt fossil fueled electric power plant which is situated in Morgan County. Boilers 5 and 6 are scheduled for cleaning during intervals from February 24 through September 13, 1980. Boiler 5 will require about 35,000 gallons (133,000 l) of EDTA solution and Boiler 6 about 36,000 gallons (137,000 l). Around 105,000 gallons (397,000 l) of rinse water will be required for each. CIPS estimates that 1500 pounds (675 kg) of iron and 300 to 500 pounds (135 to 225 kg) of copper will be removed from each boiler (Pet. 3). The Agency estimates that approximately 2000 pounds (900 kg) of iron and 200 pounds (90 kg) of copper will be removed from each boiler (Rec. 3).

Under the requested variance boiler cleaning and air heater rinse waters will be discharged into an ash pond which discharges to the Illinois River. On October 23, 1979 the Agency issued to

CIPS NPDES Permit IL 0000116 for the Meredosia power station. CIPS' appeal of permit conditions is before the Board in PCB 79-248.

The Board finds that requiring immediate pretreatment of rinse waters would impose an arbitrary and unreasonable hardship on CIPS for reasons similar to those outlined in the Board's Opinion of this date in PCB 80-16. The variance will be granted with conditions.

CIPS also requests a variance for the 15 mg/l effluent standard for TSS contained in Rule 408(a) of Chapter 3. The variance is requested only for cooling water blowdown and emergency overflow discharges to the Illinois River from Unit No. 4. CIPS has three coal-fired units which draw cooling water from and discharge directly to the river. These are not involved in the TSS variance. Unit No. 4 is an oil-fired boiler which has a closed-loop system utilizing a cooling tower. The TSS concentration would increase in a no-discharge system as a result of evaporation in the tower. To avoid this about ten percent of the cooling water is discharged and replaced with fresh river water on each cycle through the cooling system. Emergency overflows of the same water also occur. Together these will be referred to as "blowdown."

In PCB 79-248 CIPS seeks a finding that the TSS in the blowdown is background drawn from the river and subject to the exception of Rule 401(b) of Chapter 3. CIPS has little data on this discharge since the previous NPDES permit did not require its monitoring and since the oil-fired unit is seldom operated (Pet. 4, 8). It has a predicted blowdown rate of 1787 gallons per minute (gpm) (7000 l/min) and a maximum of 3469 gpm (13,000 l/min), exclusive of emergency overflows. December 1979 grab samples averaged 65 mg/l. The Agency recommends that the variance be conditioned on a study of discharge and background TSS levels (Rec. 4, 5).

CIPS currently proposes to route the blowdown to the ash pond for sedimentation prior to discharge, if compliance with the 15 mg/l standard is to be required. This would cost about \$300,000 and would involve piping changes which would take at least several months to complete. The Board has not at this time considered whether this is an acceptable control scheme.

The Board finds that requiring immediate treatment of blowdown to meet the Rule 408(a) standard of 15 mg/l TSS would impose an arbitrary and unreasonable hardship. The Agency recommends that this variance extend through December 31, 1980.

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

ORDER

Petitioner Central Illinois Public Service Company is granted for its Meredosia power station a variance for the effluent standards for copper (total), iron (total) and iron (dissolved) and total suspended solids (TSS) of Rule 408(a) of Chapter 3: Water Pollution, subject to the following conditions:

1. The variance for copper (total), iron (total) and iron (dissolved) will expire September 13, 1980 and will cover only boiler cleaning rinse water and air heater wash discharges into the ash pond.
2. The variance for TSS will expire December 31, 1980 and will cover only cooling tower blowdown and emergency overflows from Unit 4.
3. Petitioner shall not discharge EDTA boiler chemical cleaning solution into the ash pond.
4. Petitioner shall conduct a study to determine treatment capabilities of the ash pond. The study shall include as a minimum data on pH of the ash pond, the constituents in the metal cleaning waste rinses, the concentration of the constituents and the volume of the metal cleaning waste rinses discharged to the ash pond. A summary of results shall be sent to the Agency by November 29, 1980.
5. Petitioner shall conduct a study of background TSS concentration and Unit 4 discharges TSS concentrations. This study shall be submitted to the Agency prior to December 31, 1980.
6. The Agency, pursuant to Rule 914 of Chapter 3: Water Pollution shall modify the NPDES Permit IL 0000116 consistent with the conditions set forth in this Order.
7. Within forty-five days of the date of this Order, Petitioner shall execute and forward to the Illinois Environmental Protection Agency, Variance Section, 2200 Churchill

Road, Springfield, Illinois 62706, a Certificate of Acceptance and Agreement to be bound to all terms and conditions of this variance. This forty-five day period shall be held in abeyance for any period this matter is being appealed. The form of the Certificate shall be as follows:

CERTIFICATION

I, (We), _____, having read and fully understanding the Order in PCB 80-25, hereby accept that Order and agree to be bound by all of its terms and conditions.

SIGNED _____

TITLE _____

DATE _____

IT IS SO ORDERED.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order were adopted on the 3RD day of April, 1980 by a vote of 5-0.

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