

ILLINOIS POLLUTION CONTROL BOARD

June 6, 1974

MISSOURI PORTLAND CEMENT COMPANY,)
)
 Petitioner,)
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 vs.)
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)
ENVIRONMENTAL PROTECTION AGENCY,)
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 Respondent.)
)

PCB 73-480

Randall Robertson and Irvin Slate, Jr., Attorneys for Petitioner
Michael Ginsberg, Attorney for the EPA

OPINION AND ORDER OF THE BOARD (by Mr. Henss):

Petitioner, Missouri Portland Cement Company, owns and operates a portland cement manufacturing plant located on the Ohio River near Joppa, Illinois. The plant produces 600,000 tons of cement per year. Its particulate control consists of simple cyclones and an electrostatic precipitator which are calculated to have a normal operating efficiency of 99.72%.

The EPA granted an operating permit for the plant's single kiln on February 7, 1973. This permit was granted on the condition that a stack test be performed on the kiln within 90 days after issuance of the permit. For various reasons, which will be discussed, Petitioner did not perform the stack test and this eventually caused the Agency to deny the operating permit.

One week after denial of an operating permit, Missouri Portland filed its Petition for Variance in which it is requested that: "a) the Agency be directed to remove the special conditions attached to the permit now issued requiring the measurement of particulate matter concentrations in the effluent stream by an independent testing service; or, in the alternative, b) Petitioner be allowed to file an operating permit application for its kiln #1 at Joppa, Illinois at a time commensurate with its installation and operation of its new pollution control equipment on said kiln in January 1975; or, in the alternative, c) that Petitioner be granted a variance to operate its kiln #1 at the Joppa, Illinois plant with emissions possibly in excess of those permitted by applicable rules and regulations until the installation of its new control facilities in January 1975 on the assumption, for this purpose only, that its current emission from kiln #1 may be in violation of applicable rules and regulations."

Although not specifically stated, it would appear that Missouri Portland seeks relief from Section 9(a) of the Statute and Rules 203(b) and 203(d)(3) of the Air Pollution Control Regulations. The new standard applicable to portland cement manufacturers [Rule 203(b) of the Air Pollution Control Regulations] is identical to the old standard (Rule 3-3.222 of the Rules and Regulations Governing the Control of Air Pollution). For those companies which were not in compliance on the effective date of the new Regulations, April 14, 1972, the new Regulation was to be met by December 31, 1973. [See: Rule 203(i)(2) and (5)] It is apparent that Petitioner was not in compliance on April 14, 1972 and therefore, Rule 203(b) is now applicable.

A public hearing was held in this matter on February 21, 1974 in Metropolis, Illinois. Five witnesses appeared on behalf of Petitioner and six citizen witnesses presented their views.

As constructed in 1963, the plant consisted of conveying equipment, grinding mills, a rotary mill, klinker coolers, a fly ash handling system, cyclone separators and an electrostatic precipitator. Under a variance granted in PCB 71-5 Missouri Portland installed additional control devices in 1971 which were designed to increase kiln control efficiency to 99.72% (R. 58). Rule 3-3.222 required all new cement kilns to be equipped with gas cleaning devices to remove not less than 99.7% of the particulates. It was further mandated that discharges not exceed 0.1 grain per standard cubic foot regardless of the degree of efficiency required of the gas cleaning device.

Shortly after receiving the conditional operating permit in February 1973, Petitioner requested a company to perform the required stack test. However, the stack test was not attempted until September 1973 and was not completed because of unforeseen complications. Plans called for sampling to take place at the 100' level of the 150' plant stack where two 90° sample ports were located. The stack diameter at the sample port location measured about 15'.

When it became apparent that heat and the weight of the sample probe would cause the probe to sag, Agency representatives recommended the test be halted. It was the Agency's belief that 180° ports were needed to prevent sagging of the probe and produce representative data. Missouri Portland agreed and the test was halted. Some two months later the Agency for a second time denied Petitioner an operating permit.

Faced with an apparent impasse, Petitioner contacted a stack construction company to determine the requirements for a structural modification on the stack sufficient to allow the stack test to be performed. It was learned that modifications to the tile lined stack would cost about \$12,000 and take about six months to complete.

Petitioner has commenced a program to obtain better control of emissions from #1 kiln. Under a construction permit granted by the Agency on October 11, 1973 a new five-section ten-field electrostatic precipitator will be installed. Its cost is \$391,000. The efficiency of the new electrostatic precipitator on a 280,000 ACFM flow is guaranteed to be 99.956% with residual grain loadings at 0.002 gr/scf (R. 83). The Company states that this will be the most modern and efficient electrostatic precipitator in the nation. Construction of precipitator components has been accelerated so that a delivery date of June 1974 is anticipated. It is estimated that the electrostatic precipitator will be installed by January 1, 1975. Petitioner has agreed that #1 kiln will not be operated after January 1, 1975 until the new precipitator can be operated (R. 75).

When installed, the new precipitator will discharge to twin 70' stacks, and the existing 150' stack will not be used. Thus, Petitioner contends that the \$12,000 modification for the sole purpose of conducting a stack test would be an unreasonable expense on a stack which will be phased out of service at about the time the modifications are completed.

We agree that it was proper for the Agency to require a stack test as a condition of the operating permit. The control efficiency was in compliance with Rule 3-3.222 by a mere 0.02% on a calculated basis. If such calculations were high by only 0.01% or if the performance of the control system was off by a like amount, Petitioner's calculated emissions would be 0.12 gr/scf and Petitioner would not be in compliance with the Regulations. However, the situation has now changed. It would, in our opinion, be unreasonable to require the expenditure of approximately \$18,000 (\$12,000 for modifications and \$6,000 for the stack test) to determine what the emissions are from a stack that will no longer be used.

Missouri Portland plans to increase the capacity of its Joppa plant by mid-1975 from the present 600,000 ton/year to about 1,350,000 tons/year. A new kiln, controlled by electrostatic precipitator, will be added to the plant. A baghouse control device will also be installed to control cement emissions from other parts of the operation. The company claims that this expansion depends upon funds generated by the continued operation of #1 kiln (R. 32). Petitioner estimates that the increased capacity will bring an increase in employment of about 50% (R. 32). Control equipment for the new kiln will be designed to meet both the Illinois standards and the U.S. EPA standard (R. 31).

Testimony by Petitioner's neighbors indicates that existing control equipment has not performed as it should. The neighbors said dust frequently covered their porches (R. 112, 125) and automobiles (R. 114, 123, 129). They testified that dust settled

on the roofs of their homes thereby contaminating their cistern water (R. 114, 135). Dust from the cement plant has allegedly damaged the paint on their automobiles and homes, damaged carpeting inside the homes, and pitted aluminum window frames. The neighbors were concerned about the health consequences to themselves and to the cattle grazing on dust covered pastures. They unanimously agreed that the almost daily scraping of dust from automobile windshields was an unreasonable nuisance. They felt that the blurred vision experienced while driving their automobiles during rainy periods placed them in danger.

The Agency recommends that variance be denied or in the alternative that variance only be allowed from the Regulations subject to certain conditions. In its Recommendation the Agency states that its investigators have observed a plume of 100% opacity from #1 kiln on various occasions. Petitioner admits that certain operational conditions would cause excessive emissions in violation of the Regulations (R. 81).

Petitioner has submitted a program designed to reduce the violations during the period of this variance. Among the items agreed to: 1) the installation and continual operation of a recording device that measures current flow to each field of the electrostatic precipitators and kiln drive; 2) a process weight rate average of 250,000 lbs./hr. \pm 5% until stack test results are available on the new electrostatic precipitator; 3) #1 kiln will be shut down within 4 hours of a malfunction or breakdown of the kiln or related pollution control equipment and not restarted until the problem has been corrected; 4) scheduled periods of routine preventive maintenance designed to insure that no malfunction is apparent or about to occur. All maintenance records of work performed pursuant to the program and all records produced by the current flow recording device will be made available for Agency inspection. Petitioner will annually submit a report of malfunction and breakdown. The report will be submitted to the Agency by January 31 of each calendar year.

We shall grant variance from Rule 203(b) and Rule 203(d)(3). Improvements are well underway for the control of emissions from the plant and these improvements should be in operation in about six months. Petitioner has agreed to a set of operating rules that should provide for better control than has been the case in the past. We believe that the specific limitations of Rule 203(b) can be temporarily suspended while Petitioner improves the control program. However, Missouri Portland remains subject to the general mandate against "air pollution" which is found in Section 9(a) of the Environmental Protection Act.

The Statute provides "No person shall cause or allow the discharge or emission of any contaminant into the environment... so as to cause or tend to cause air pollution in Illinois..." This language will remain applicable to Petitioner's operation so that the neighbors cannot be ignored in this interim period. Their health and their enjoyment of life or property are to be protected even during this variance.

ORDER

It is the Order of the Pollution Control Board that Petitioner's Joppa plant be granted variance from Rule 203(b) and Rule 203(d)(3) of the Air Pollution Control Regulations until January 1, 1975 for the purpose of installing and testing an electrostatic precipitator on #1 kiln. The plant shall not operate after January 1, 1975 without an electrostatic precipitator. This variance is subject to the following conditions:

1. Petitioner shall adhere to the operation and maintenance work rules as described in Petitioner's Exhibit #3 including the limitation of average process weight rate to 250,000 lbs./hr. \pm 5%.
2. Petitioner shall submit quarterly progress reports to the Agency beginning July 1, 1974. Said progress reports shall include details of Petitioner's progress towards completion of the electrostatic precipitator on #1 kiln. The first progress report shall contain a schedule for installation of the electrostatic precipitator.
3. Petitioner shall, by July 1, 1974 post a bond in the amount of \$75,000 in a form acceptable to the Environmental Protection Agency, such bond to be forfeited in the event Petitioner fails to install and operate the electrostatic precipitator. Bond shall be mailed to: Fiscal Services Division, Illinois EPA, 2200 Churchill Road, Springfield, Illinois 62706.
4. Petitioner shall apply for and obtain all necessary construction and operating permits.
5. Within 60 days after the installation of the electrostatic precipitator, Petitioner shall perform a stack test. Said stack test shall be performed by an independent testing service approved by the Agency. Petitioner shall give notice to: Illinois EPA Division of Air Pollution Control, Region V office,

2209 West Main Street, Marion, Illinois 62959,
Telephone 618/997-4371 at least five days prior to
the stack test indicating the time and place of
said test and shall allow Agency personnel to
observe said test if they so desire. Petitioner
shall submit results of said stack test to the
Agency as soon as they are available.

6. By July 1, 1974 Petitioner shall submit to the Environmental Protection Agency a program designed to reduce the environmental impact of its emissions upon its neighbors during the period of this variance. Within 10 days of receipt of Petitioner's proposed program the Agency shall submit to the Board its comments and recommendations on said program.
7. The Board retains jurisdiction of this matter for any further orders as may be necessary pursuant to Part 6 of this Order.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order was adopted this 6th day of June, 1974 by a vote of 4 to 0.

Christan L. Moffett