

ILLINOIS POLLUTION CONTROL BOARD

July 18, 1974

GREENLEE BROTHERS & COMPANY,)
)
) Petitioner,)
)
) vs.) PCB 74-118
)
ENVIRONMENTAL PROTECTION AGENCY,)
)
) Respondent.)

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

Greenlee Brothers operates a gray and ductile iron foundry in Rockford, Illinois for the production of castings used in the manufacture of machinery and tools. Petitioner seeks a variance from Rule 206(e) of the Illinois Air Pollution Control Regulations for a period of one year in order to continue operating its "B" cupola pending completion of studies and equipment corrections for the control of excessive carbon monoxide emissions. Rule 206(e) limits Petitioner's carbon monoxide emissions to 200 ppm corrected to 50% excess air.

The cupola processes between 70 and 90 tons of raw material per day. Raw materials consist of return castings, steel and iron scrap, coke, fluxing compounds, air and certain additives. Particulate emissions from the cupola are adequately controlled by a wet scrubber. The facility housing the cupola is in an industrial area with the nearest residence being some 500 ft. distant.

Petitioner's cupola is equipped with an afterburner which has failed to efficiently control the carbon monoxide discharges. Several reasons are given for the inefficiency of the afterburner:

1. The afterburner is occasionally snuffed out. This is to be corrected by vendor.
2. The size of the charging opening allows a retention time of only 0.01 second, which is too low. This will probably be corrected by modifying the charging mechanism, and

3. The afterburner is causing the firebrick lining of the cupola stack to erode. This is to be corrected, but we have not been told details of the correction program.

In 1972 Petitioner filed its application for an operating permit. The application was timely but the permit was denied due to excessive carbon monoxide emissions. Thereafter, Petitioner attempted to prove compliance by conducting a series of stack tests in January, August, October and November, 1973. These tests, which indicated emissions ranging from 11 ppm to 1296 ppm, failed to show compliance.

In February 1974 Petitioner completed its "Statement of Problem". In the event corrective action on the afterburner fails to bring the operation into compliance, Petitioner proposes to investigate several alternatives by July 1, 1974 and implement the alternative which provides the "most effective least cost" method of control. The refractory problem will be solved by creating adequate temperatures for the conversion of carbon monoxide to carbon dioxide, either by obtaining additional supplies of natural gas or by obtaining a "firm" supply of an alternate fuel. There will be an investigation into the cost and effectiveness of: a catalytic method of carbon monoxide conversion, increasing the residence time at high temperatures for carbon monoxide conversion, and changing the solution in the scrubber for absorption of carbon monoxide. In addition, there will be studies on: 1) eliminating the "B" Foundry and purchasing castings from outside suppliers; 2) expanding the "A" Foundry with a controlled electric furnace to produce castings.

As the Agency noted, the Petitioner failed to discuss the arbitrary or unreasonable hardship which might be incurred if variance is denied. However, Petitioner's statement that production is divided into 37% for internal use and 63% for outside customers does provide the Board with some insight along these lines. The most obvious impact of a variance denial would be that Petitioner would have to operate in violation of the law or reduce or cease operations. Petitioner claims that part of its problem is caused by insufficient quantities of natural gas to operate its afterburner efficiently. Petitioner has no control over the natural gas supplies it receives. Therefore, in addition to attendant internal losses, Petitioner's customers would also suffer for lack of goods and services now supplied by Petitioner.

There are a number of factors in Petitioner's favor. The Agency believes that the carbon monoxide emissions will not pose a health hazard to Petitioners' neighbors. Substantial good faith has been shown by Petitioner through the years as evidenced by many efforts to control emissions. Two coal fired boilers have been converted to dual fuel boilers (oil and gas). A wet scrubber was installed on the cupola to control particulate emissions. Even the troublesome afterburner indicates Petitioner's good faith efforts to control its carbon monoxide emissions.

The Agency claims that Petitioner's plight is self-imposed because Petitioner failed to investigate its "alternatives" during 1973 and that a request for variance should have been submitted no later than January 1974. Perhaps Petitioner could have proceeded more rapidly, but this is too speculative to justify a denial of the variance. The Agency recommends denial or in the alternative the granting of a short variance only until June 30, 1974.

The Agency asserts that the strategy to be selected by the Petitioner is unknown now and it would be unreasonable to arbitrarily set the variance for one year since different control strategies require different time periods. However, we believe that Petitioner should have the rest of this year in which to select its control program and attempt to place the control program into operation. Therefore, we shall grant a one year variance commencing with January 1, 1974.

This Opinion constitutes the findings of fact and conclusions of law of the Pollution Control Board.

ORDER

It is the Order of the Pollution Control Board that Greenlee Brothers and Company of Rockford, Illinois be granted a variance from Rule 206(e) of the Air Pollution Control Regulations from January 1, 1974 to December 31, 1974 for the purpose of correcting cupola afterburner deficiencies and evaluating and selecting an alternative control strategy designed to achieve compliance with Rule 206(e). This variance is subject to the following conditions:

1. Petitioner shall file monthly reports with the Environmental Protection Agency commencing September 1, 1974 advising the Agency of its progress in achieving compliance.
2. Petitioner shall continue to operate its afterburner at the rate of 2.4 MBTU/hr. except during such time as action pursuant to the deficiency correction program described in this Opinion shall prohibit such

operation. Petitioner shall advise the Agency in writing of said inoperable periods and of any change in current natural gas deliveries.

3. Petitioner shall secure appropriate construction permits prior to the construction or installation of any air pollution control equipment.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order was adopted this 18th day of July, 1974 by a vote of 5 to 0.

Christan L. Moffett