

ILLINOIS POLLUTION CONTROL BOARD  
September 20, 1973

CPC INTERNATIONAL, INC. )  
 )  
 v. ) PCB 73-212  
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 ENVIRONMENTAL PROTECTION AGENCY )  
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JAMES W. GLADDEN, JR., appeared for CPC  
MICHAEL A. BENEDETTO, JR., ASSISTANT ATTORNEY GENERAL,  
appeared for ENVIRONMENTAL PROTECTION AGENCY

OPINION AND ORDER OF THE BOARD (by Mr. Dumelle)

A petition for variance was filed by CPC International (CPC) on May 22, 1973, which sought permission to deviate for a period of one year from the compliance schedule CPC filed with the Environmental Protection Agency (Agency) pursuant to Rule 104 of the Air Pollution Regulations of the Pollution Control Board (Air Rules). Petitioner requested this time extension to study the feasibility of burning the solid waste from the Chicago area in its existing coal-fired boilers and the use of a baghouse to control particulate emissions from boilers operated with coal and with refuse in combination with coal. The Agency recommended granting the variance.

CPC operates a wet corn milling plant located in Bedford Park, Illinois. Five boilers produce steam for process and electric power generation. Two boilers are gas fired and three are pulverized dry bottom coal fired boilers. Each of the three coal fired boilers has a capacity of 325,000,000 BTU input per hour and is equipped with multicyclone dust collectors. Particulate emissions from the three boilers are 0.484 lb/10<sup>6</sup> BTU (assuming a collection efficiency of 90.2% on the multicyclones). Rule 3-3.112 of the Rules and Regulations governing the control of Air Pollution allows particulate emissions of 0.48 lb./10<sup>6</sup> BTU. Petitioner is required by Air Rule 203 (g) (3) to reduce its particulate emissions to 0.1 lb/10<sup>6</sup> BTU. In order to meet this requirement, Petitioner has filed a compliance schedule which anticipates purchase and installation of electrostatic precipitations at a total cost of \$3,000,000.00. If the variance is not granted, Petitioner can have its boilers in compliance by May 30, 1975.

Particulate monitoring, by the Agency in the Bedford Park area, has shown levels consistently above the primary standard of  $75 \mu\text{g}/\text{m}^3$  annual geometric mean concentration Rule 307 (a) (1). These levels have been generally improving since 1968. An Agency air quality display model showed that the Petitioner contributes  $1.0 \mu\text{g}/\text{m}^3$  yearly and  $2.0 \mu\text{g}/\text{m}^3$  for 24 hours to the air surrounding Bedford Park. Testimony by the Donald C. Douglas, Chemist for the Bedford Park Environmental Quality Control Board, showed that  $\text{SO}_2$  levels in the area have been below federal standard for a long time (R73-212, page 149). Thus the synergistic effect of high particulate and  $\text{SO}_2$  levels should be absent in Bedford Park.

S.O.R.E., a citizens' group representing Bedford Park and surrounding areas, appeared at the hearing and opposed the granting of the variance. While S.O.R.E. was not permitted to intervene as a party, it was given every opportunity to examine witnesses, present testimony, and appear at a second hearing which was held solely to accommodate S.O.R.E. Their basic objection was that CPC can meet the 1975 particulate standard by installing ESP and they should not be allowed a year delay to "experiment" in an area where the existing air quality is bad. S.O.R.E. points out that CPC has not elaborated upon the local environmental effects of CPC testing. The Board feels that CPC has presented sufficient evidence of the lack of the availability of such data due to the special nature of the proposed concept of burning solid waste in conjunction with coal in a pulverized suspension firing system. While the Board feels that S.O.R.E. has presented serious considerations, we are of the belief that the variance should be granted with conditions for the reasons to be set out below.

The one year delay that CPC seeks is to construct a baghouse and firing equipment to burn classified-shredded refuse alone or in conjunction with coal in one boiler. CPC proposes to divert 40 to 50% of the flue gas from one boiler through the baghouse then back to the stack. Remaining flue gas will pass through the existing multicyclone emission control system. Feasibility tests would be run for approximately four months on a baghouse system designed to control particulate emissions from their boilers. Tests will show the effects of startup, shutdown, condensation and maintenance problems on the bag filter system. Additional testing will be done to develop emissions data on the use of classified-shredded municipal waste as a fuel supplement for an existing coal boiler, while burning refuse and coal in various combinations from 10 to 100%. These tests will be carried out on the boiler operating at various stages up to 100% capacity.

CPC will buy the shredded refuse from Disposal, Inc. which is currently constructing facilities to handle and process refuse into an industrial fuel. CPC will buy and test up to 250 tons/day

of shredded refuse which will enable it to operate one boiler with 100% refuse fuel when operating at full capacity. The Board feels that the data to be developed would be extremely helpful in aiding to solve such State and National environmental problems as solid waste disposal, use of low sulfur fuel, and energy conservation.

After the refuse has been shredded and the ferrous, non-ferrous, and other heavy components removed it consists primarily of paper which has a BTU value of about 50% of coal and is almost equal in ash content. On an equal BTU basis the refuse fuel would produce slightly less than twice the ash and about 40% the sulfur compared to low sulfur coal. (low sulfur coal is 1.0% while refuse has a 0.2% sulfur content).

The Board feels that the one year delay in CPC compliance with Rule 203(g) (3) and the four month testing program is far outweighed by the information that will be obtained by Petitioner's experiment. Petitioner's testing program will be carried out during the summer months of 1974 which is at a time when particulates from other combustion sources such as heating are at their lowest point. Since bag filters are normally more efficient than multicyclones (99% v. 90%), Petitioner's testing of bag filters on coal alone should improve its emissions from one boiler.

The Board is satisfied that the short testing program will not significantly effect the air quality in the Bedford Park area. The Board finds that Petitioner would suffer an undue economic hardship if the variance were denied since Petitioner would have to spend \$3,000,000.00 to abate a problem that might be capable of solution by the use of less expensive bag filters if control data were available. In addition Petitioner would be faced with not being able to develop a new fuel source which could have substantial economic and environmental benefits.

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

#### ORDER

The Illinois Pollution Control Board hereby grants to CPC International, Inc., a variance from Rule 104 of the Air Pollution Rules and Regulations until September 20, 1974, provided the following conditions are met:

1. Within thirty (30) days of the date of an order by the Pollution Control Board in this case, Petitioner shall submit a new compliance program to the Agency indicating alternatives it will choose to meet the May 1975 particulate standard contained in Rule 203(g) and indicating compliance with said Rule by May 30, 1976;

2. Petitioner shall submit progress reports to the Agency at bi-monthly intervals beginning the month after an order by the Pollution Control Board in this case. Said reports shall be submitted to:

Variance Section  
Division of Air Pollution Control  
Environmental Protection Agency  
2200 Churchill Road  
Springfield, Illinois 62706

and shall contain at a minimum:

- a. all reports and studies developed by CPC or its agents concerning the feasibility of burning solid waste in its coal-fired boilers;
- b. all reports or studies prepared by CPC or its agents concerning the methods of controlling particulate emissions from coal-fired boilers when burning solid waste and refuse;
- c. a complete description of progress towards the installation and development of a solid waste processing plant;
- d. a complete description of progress made toward the decision of whether or not to burn solid waste in its boilers;
- e. all tests developed by CPC or used by CPC in deciding what type of control would be feasible for burning coal and solid waste.

3. Petitioner shall institute a pilot program using a baghouse as a control device on its coal fired boilers. During the period of study, Petitioner shall supply the Agency with all studies and reports concerning this project. Petitioner shall perform a stack test on the fabric filter project and shall notify the Agency at least five (5) days in advance of any test. Notice of any test shall be given to:

Environmental Protection Agency  
Division of Air Pollution Control  
Illinois Naval Armory  
East Randolph and The Lake  
Chicago, Illinois 60602

Petitioner shall submit a complete report of any tests to the Agency as soon as the results are available to Petitioner.

4. Petitioner shall allow access to Agency personnel during the period of the study to its boilerhouse facility and shall make available all reasonable information requested pertinent to this Variance request.

5. Regardless of the decisions Petitioner makes during the one year program, Petitioner shall be in compliance with Rule 203(g) by May 30, 1976. Petitioner shall perform a stack test on its boiler facility to determine compliance with Rule 203(g). The Agency shall be notified of any test. Notice shall be given to:

Environmental Protection Agency  
Division of Air Pollution Control  
Illinois Naval Armory  
East Randolph and The Lake  
Chicago, Illinois 60602

Petitioner shall allow Agency observations if desired and shall make available to the Agency results of said tests as soon as they are available to Petitioner;

6. Petitioner shall apply for and receive from the Agency any necessary permits that pertain to this program;

7. Within thirty-five (35) days of the date of an order by the Pollution Control Board, Petitioner shall submit a performance bond in a form approved by the Agency and in the amount of \$500,000.00. Said bond shall ensure completion of the following items and shall be reduced in an appropriate amount as the state is completed:

a. completion of the test fabric filter program at the Bedford Park plant, \$150,000 reduction;

b. obtaining of construction permits on a control device chosen by Petitioner to meet the standard set forth in Rule 203(g) \$150,000 reduction;

c. completion of the program and stack test showing compliance with Rule 203(g), \$200,000 reduction.

8. If at any time during the one year test period Petitioner makes a decision to scrap the proposed refuse burning project, the Agency and the Board shall be immediately notified, and Petitioner shall immediately order a control device to meet the standard contained in Rule 203(g). Petitioner shall make an immediate application to the Board for a new Variance and submit a revised compliance program to the Agency.

9. At all times during the variance, the existing control equipment shall be maintained and operated at existing efficiencies.

10. The emissions from the plant shall not cause a violation of the Federal 24 hour particulate standard.

IT IS SO ORDERED.

I, Christan Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Order was adopted on the 20<sup>th</sup> day of September, 1973 by a vote of 5 to 0.

Christan L. Moffett