ILLINOIS POLLUTION CONTROL BOARD
November 13, 1975

INTERLAKE, INC. Petitioner, v. ENVIRONMENTAL PROTECTION AGENCY, Respondent.	)	PCB 73-462

MR. W. GERALD THURSBY, appeared on behalf of Petitioner;
MR. MICHAEL A. BENEDETTO, JR., appeared on behalf of Respondent.

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

Petitioner filed a petition seeking a variance from Rules 104 and three provisions of Rule 203(d)(6)(B) of the Air Pollution Control Regulations (Air Rules) on November 1, 1973. The Environmental Protection Agency (Agency) filed a Motion to Dismiss on November 15, 1973. Petitioner filed an Answer to the Motion to Dismiss on November 27, 1973. On December 6, 1973 we denied the Motion to Dismiss. The Agency filed a Recommendation to grant a portion of the requested relief subject to certain conditions on February 25, 1974. A hearing was held on April 17, 1974. Petitioner filed a post-hearing brief on May 17, 1974. The Agency filed a reply brief on June 6, 1974. Petitioner has filed numerous waivers of the 90-day decision period.

Petitioner originally sought a variance from Rule 203(d)(6)(B)(i)(aa) of the Air Rules. This request was withdrawn by Petitioner at the hearing (R. 2). Petitioner seeks a variance from the requirement of filing a compliance program (Rule 104); the requirement of having an enclosed pushing and quenching system for its coke ovens (Rule 203(d)(6)(B)(i)(bb); and the emission limitation restricting emissions from coke oven doors (Rule 203(d)(6)(B)(iv)(aa). The Agency recommends that the latter two requests be granted and the former be denied.

Petitioner owns and operates a by-product coke plant located in Chicago where coal is converted into coke by destructive distillation of coal in coke ovens. The coke plant is located on 40-acres of land that includes two batteries of 50-coke ovens for a total of 100 coke ovens, by-product plants, coal storage piles and a materials handling system. Coke ovens are contained

in a row of 100 and each oven is approximately 3 feet wide, 40 feet deep and 30 feet high (R. 6-7). Petitioner annually produces 560,000 tons of coke (R. 8). Petitioner produces iron at a nearby blast furnace where it utilizes all of the coke produced at its coke plant (R. 8-9). Molten iron produced at the blast furnace is transported 11 miles to Petitioner's facility in Riverdale, Illinois where it is converted into steel in a basic oxygen furnace (R. 11). Steel produced at this facility is converted into numerous products. Petitioner contends that there is not an alternative source of coke available to use in its blast furnaces, and without the iron produced in the blast furnace it could not operate its steel-making facilities (R. 8, 9, 11 and 12).

In addition to coke, Petitioner's coke plant also produces coke oven gas which is used to supply heat during the coking cycle and steam which is utilized in the blast furnace plant, ammonium sulfate which is sold as a fertilizer, tar which is utilized in the manufacture of asphalt and other various products, light oils and napthalene (R. 13 and 14). Petitioner sold $153 million dollars worth of products in 1973 which were produced at the coke plant, blast furnace and steel manufacturing facilities (R. 14). Petitioner employs 230 persons at the coke plant and 3,900 in all of its interrelated facilities (R. 12 and 18).

The variance request from Rule 203(d)(6)(i)(bb) is sought for the period of time in which Interlake, Inc. proposed to further develop and install a modified larry car. The larry car is used to deposit or charge coal from the coal hopper on the larry car into the coke oven through charging holes which are located on the top of the oven. During the process of charging, covers on the charging holes are removed and replaced when coal has been deposited in the ovens. Mr. Fred Kirkau, Petitioner's director of environmental control, testified that emissions from the charging process do not comply with the Rule (R. 18). Mr. Kirkau stated that Petitioner could comply with the 15 second emission limitation period found in the Rule unless a malfunction occurred which would prevent workmen from replacing the lids on the charging holes (R. 24). However, he testified that Petitioner's coke oven facilities do not fulfill the requirement found in the Rule for an automated negative pressure charging system (R. 23). He testified that the steam aspiration system utilized by Petitioner is presently insufficient to prevent emissions from the charging holes during charging (R. 23-26). Mr. Kirkau further testified that any emission during the charging process would have an opacity of greater than 30 percent which is not allowed under the Rule (R. 22).

Petitioner has developed what it believes to be the best system to control emissions from the charging process (R. 28). This system consists of a sequential charging procedure whereby coal is deposited from the larry car into the ovens through one charging hole at a time, charging hole lids are automatically replaced by a mechanical device on the larry car, a cut-off mechanism is installed in the larry car to prevent emissions from the charging hole going up to the larry car hopper and into the atmosphere, the coal piles in the ovens are levelled to keep the gas passages open, and negative pressure is maintained on the ovens during the entire charging sequence (R. 28-30). At the time of the hearing Petitioner had installed the modifications on one larry car and was in the process of de-bugging the system (R. 30). Interlake proposed to have the second larry car modified by December 31, 1974 utilizing the experience gained in working on the first modified car (R. 31).

Mr. Kirkau testified that even with the modifications, Interlake would not be in complete compliance with the Rule in that any emissions from the charging hole while connections were being made or broken would be 100 percent opaque and the Rule limits opacity to 30 percent (R. 34, 35). Petitioner states that they could meet the 30 percent opacity limitation if the opacity were measured some 30 feet above the top of the oven with the open sky as a background (R. 44).

The Agency recommends that the request for a variance from Rule 203(d)(6)(B)(i)(bb) be granted until December 31, 1974 subject to certain conditions which Petitioner has agreed to (R. 74-100).

Petitioner also seeks a variance from the Rule which limits emissions from coke oven doors for more than 10 minutes after commencement of the coking cycle and limits emissions during the initial start-up to less than 30 percent opacity (Rule 203(d)(6)(B)(iv)(aa) of the Air Rules). Petitioner admitted that its coke oven doors smoked for longer than the allowable ten minute period prescribed in the Rule and the opacity of that smoke is greater than 30 percent (p. 8 of Petitioner post hearing brief). The coke oven doors are self-sealing in that emissions are supposed to form a tar seal along the knife edge of the door and the door jamb itself. Petitioner's doors are approximately 18 inches wide and 13 feet high (R. 50). Petitioner maintains that under ideal conditions the doors will seal anywhere between 10 minutes and one hour after the door is closed and the oven is charged (R. 56). Petitioner defines ideal conditions as when the knife edge is clean and not warped or damaged, the door jamb is not warped and the diaphragm to which the knife edges are attached is not warped (R. 53 and 54).

Petitioner has proposed a compliance program to control coke oven door emissions. Petitioner has replaced the steel nuts on the adjusting mechanism with brass nuts which will allow Petitioner to make adjustments during the coking cycle (R. 62 and 63). Complete replacement is scheduled on May 1, 1974 (R. 64).

Petitioner has hired 4 additional workmen to clean knife edges and door jambs each time a door is removed for the pushing of coke and to adjust knife edges to minimize emissions (R. 62 and 63). Two additional workmen have been made available in the door repair facilities so the doors taken out of the service can be promptly repaired and four spare coke oven doors can be ready for installation at any time (R. 63).

Petitioner's program to minimize door emissions was begun in 1973 when materials were ordered and men were sought (R. 44). Actual work on the program was begun in January, 1974 (R. 145). By the end of 1974, Petitioner estimates that the program will be complete and workmen will be properly trained and educated and procedures worked out (R. 74).

Mr. Kirkau testified that he did not believe that the program outlined above would achieve compliance with the Rule in question in that some doors will leak longer than 10 minutes, that it is impossible to tell in advance how long a door will leak and once it leaks in excess of 10 minutes, and that there is no known method to stop it from smoking (R. 68, 69 and 71). Mr. Kirkau testified that any emissions from the door will exceed the 30 percent opacity limit (R. 69). Mr. Kirkau again testified that the 30 percent opacity limitation could be met if the opacity measurement was made at some 30 feet above the top of the battery with the open sky as background (R. 70).

Mr. Kirkau testified that Petitioner, as a member of the American Iron and Steel Institute, is engaged in research under a Federal grant to control or collect coke oven door emissions and that Petitioner is continuing to do its own research to control these emissions (R. 68-69).

The Agency recommends that the variance from the emission limitations applicable to coke oven doors be granted. The Agency contends that it is inappropriate for Petitioner to raise the issues of the lack of technical feasibility of control at variance hearing (Agency reply brief, p. 2). The Agency further objects to Petitioner's proposal that the opacity measurements be made some thirty feet above the top of the coke oven battery citing Rule 109 of the Air Rules. The Agency recommends that the variance be granted only until July 26, 1974 which coincides with the Order of the Board in International Harvester Company v. EPA,

PCB 72-321 and 73-176, which allowed Harvester until that date to comply with the same regulation (p. 6 of Agency reply brief). The Agency would also have the Board impose a Performance Bond.

In addition to the above two variance requests, Petitioner seeks a variance from Rule 104 of the Air Rules which requires Petitioner to have filed a compliance program. Petitioner states that it has not submitted a compliance program because it cannot currently comply with the Air Rules in question (R. 80). The Agency amended its Recommendation at the hearing to recommend that the Board grant a variance from Rule 104 with respect to requirement for submitting compliance plans showing dates meeting the two regulations in question (R. 158).

The Board finds that Petitioner has presented a program which will greatly reduce the particulate emissions from its coke plant during the charging cycle and from the coke oven doors. The Board agrees with the Agency that the diligent attempt on the part of Petitioner to control all emissions from its coke operations, as proposed in Petitioner's petition for variance, will minimize the affect of the air emissions on the environment. We find that Petitioner has established a sufficient hardship that warrants the grant of the requested relief in that a variance should be granted from December 31, 1973 until December 31, 1974 as requested. We reject the Agency's Recommendation to limit the variance until July 26, 1974 for emissions from the coke oven doors.

Given the retroactive nature of this variance petition, we find no need to require it to be conditioned upon the submittal of a Performance Bond but rather we will condition it upon the requirements set out in the Agency's Recommendation as amended during the hearing process and accepted by Petitioner.

During the pendency of this variance request a regulatory proposal was filed by Granite City Steel that would have amended Rules 203(d)(6)(B)(ii), 203(d)(6)(B)(iv)(aa) of the *Air Rules*. *This proposal was filed on* November 30, 1973 and designated as R73-16. On July 24, 1975 the Board found that no change was warranted to the pushing and quenching rule and that Granite City had failed to provide the Board with an adequate record to adopt the suggested change to the coke oven door regulation (In the Matter of Proposed Amendments to Air Pollution Control Regulations, R73-16 (July 24, 1975)). In that Opinion we suggested that representatives from Granite City, Interlake, Republic Steel, the Agency and other interested, meet and develop a mutually agreeable proposal and submit it to the Board. We again repeat the invitation for Petitioner as one of the major coke producers in Illinois to present the Board with any proposed regulation it feels warranted after consultation if it desires with other coke producers and the Agency.

If Petitioner requests a subsequent extension of this variance beyond December 31, 1974, Petitioner should provide the Board with the results of any research it is undertaking or that of the American Iron and Steel Institute. Petitioner should further provide the Board with information in response to the Board's interpretation of the Supreme Court decision in Train v. NRDC, 43 LW 4467 (April 15, 1975). Information should also be provided as to the environmental impact of Petitioner's emissions including a calculated emission rate after Petitioner's program for controlling coke oven door emissions and charging emissions is placed in operation.

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

ORDER

a. Petitioner's request for a variance from

Rule 203(d)(6)(B)(i)(aa) of the Air Pollution Control Regulations is dismissed as moot.

b. Petitioner's request for a variance from

Rule 203(d)(6)(b)(i)(bb) of the Air Pollution Control Regulations is granted from December 31, 1973 until December 31, 1974,

Petitioner shall also include the following in its compliance program to be completed by December 31, 1974 if necessary to control emissions:

1) increase steam aspiration pressure and flow as required to impose sufficient negative gas pressure on the ovens to prevent smoke emissions through the charging ports.

2) increase the size of the aspirator nozzles and steam supply lines if such is also needed to obtain sufficient negative oven pressure.

3) repair leaks in ascension pipes, goosenecks, and caps, and any other areas which would permit air seepage into the oven and offtake piping.

c. Petitioner's request for a variance from

Rule 203(d)(6)(B)(iv)(aa) of the Air Pollution Control Regulations is granted from December 31, 1973 until December 31, 1974 subject to the following conditions:

1) Petitioner submit a door program which is acceptable to the Agency. Said program shall be submitted to:

Environmental Protection Agency
Division of Air Pollution Control
Control Program Coordinator
2200 Churchill Road
Springfield, Illinois 62706

c. Petitioner's request for a variance from Rule 104:

Petitioner's request for a variance from Rule 104 of the Air Pollution Regulation is granted from December 31, 1973 to December 31, 1974 only with respect to the above two rules for which variance is granted.

In addition to the foregoing, the following general conditions shall be required as a condition to the grant of this variance.

1) Petitioner shall implement a maintenance program which shall include:

(a) an alternate procedure preventing large accumulations of coal discharges on top of the battery.

(b) replacement of steam aspirator, liquor flushing nozzles, and ascension pipe sections as soon as needed.

(c) purchase of additional spare doors and jambs as necessary to assure an adequate supply to properly control door leakage.

(d) record keeping on all oven, machinery, and auxilliary equipment repairs and replacements which may affect emissions of contaminants to the atmosphere as well as the coking times and oven temperatures.

2) Petitioner shall obtain a construction permit from the Agency for modifications of the spare larry car.

3) Petitioner shall apply for and obtain all necessary operating permits from the Agency for its by-product coke plant.

4) Petitioner shall submit to the Agency revised Operating and Maintenance Work Rules for the coke plant.

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 13th day of November, 1975 by a vote of 4 - 0.

Christan L. Moffett, Clerk
Illinois Pollution Control Board