ILLINOIS POLLUTION CONTROL BOARD
October 25, 1973

WIRCO CASTING, INC. PETITIONER	)	
v.	)	PCB 73-281
ENVIRONMENTAL PROTECTION AGENCY RESPONDENT	)	

EVERETT E. HART, GENERAL MANAGER, on behalf of WIRCO CASTING, INC.
DALE TURNER, ASSISTANT ATTORNEY GENERAL, on behalf of the ENVIRONMENTAL PROTECTION AGENCY

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

This action involves a request for a variance extension. A variance was previously granted under PCB 73-4 which will expire October 12, 1973. Relief is again sought to operate Petitioner's cupola type furnace in violation of the applicable Air Pollution Regulations.

An Agency recommendation was filed suggesting a one-year grant pending findings at a hearing. The hearing was held on September 24, 1973, in New Athens, Illinois.

Wirco Casting, Inc., located in New Athens, St. Clair County, Illinois, is engaged in the gray iron foundry industry. Petitioner produces, among other things, castings to be used in the automotive industry. Wirco owns a twenty-ton Ajax induction furnace along with the subject cupola and other equipment. Said induction furnace must by necessity be shut down for maintenance periodically, and it is during these shutdown periods that Petitioner wishes to operate its cupola.

The precise rule from which Wirco seeks relief is not mentioned in any documents in this action. Studying the "Air Pollution Regulations" indicates that the rule in question may be 203 (a) "Particulate Emission Standards and Limitations for New Process Emission Sources." This may be true because Petitioner has not seemed to avail itself of Rule 203 (c), and may have thereby fallen into a "New Source" class. This interpretation would then change the analysis presented in the Agency recommendation, Page (5).

The following is a table showing the extent of expected par-

ticulate emissions from Petitioner's cupola.

Estimated Melt Rate	Cupola Process Weight Rate	Emissions Particulates	Allowable 203 (a)	203 (b)
4 T/hr.	5 T/hr.	22.4 lbs/hr.	6 lbs/hr.	12 lbs/hr.
3 T/hr.	3.75 T/hr.	15.8 lbs/hr.	5.3 lbs/hr.	9.92 lbs/hr.

The difference in emissions between the cupola and induction furnace as calculated by the Agency using Compilation of Air Pollutant Emission Factors AP-42, pp. 7-13, is as follows:

Cupola Emissions	5.6 lb/T
Induction Furnace Emissions	1.5 lb/T
Increased Emissions from cupola	4.1 lb/T

The previous variance was granted subject to a number of conditions, and in the main the conditions were adhered to. The exceptions in reporting were very minor and can be excused as simple misunderstandings.

As mentioned the Agency recommended a grant pending findings. The findings referred to were:

1. That it is unfeasible for Wirco to inventory enough items to supply its needs during the down time to offset the use of the cupola.

2. That it is economically and technically unfeasible to install an additional shell on the induction furnace to eliminate the down time on the induction furnace.

As mentioned in the opinion on PCB 73-4, in addition to Point (1) above, more information would be required regarding Petitioner's financial status if an extension were to be granted.

At the hearing held on September 24, 1973, the above points were all addressed.

Ability to Stockpile: Mr. E. Hart testified at the hearing as to Wirco's ability to stockpile castings. The points made by Mr. Hart included the fact that stockpiling was unfeasible because the Petitioner is now working twenty-four hours a day to keep up, and that their lead times are such that shipment must be right off the line (R. 5, 8). Petitioner further claims that there is no

room on the property to store castings (R. 5) and that to store gray iron castings requires a heated and humidifed storage area to abate rusting (R. 6).

The use of an additional (spare) shell for the existing induction furnace was also discussed during the hearings. Mr. Hart testified that investigation into the use of a spare shell was undertaken. He pointed out that the shell would weigh forty-seven and a half tons (R. 10), and that installing it would require the use of a crane. Also removal of the roof of the building would be required (R. 11). The cost of this unit including installation would be in the area of $135,000 (R. 16). Perhaps the most important factor is that even if a spare shell were on hand, the down time for replacement would be about the same as a normal repair job (R. 11). It is clear from this testimony that the purchase of a spare shell would be unfeasible.

Included in Wirco's variance petition (Pg. 14-22) is a fairly detailed financial statement. This statement shows that while Wirco's position is improving, the expenditure required for compliance would impose a hardship on Wirco at this time. Profits for 1972 were $1,940.59 on sales of 1.8 million dollars, versus a loss of $74,000 in 1971.

As mentioned above Petitioner by his own statement (R. 5) says: "We are working to capacity twenty-four hours a day." This would seem to indicate a healthy business outlook, and must be considered in any future extensions.

Petitioner makes his hardship case on the fact that a loss of production time would constitute a loss of accounts (R. 8).

> "Q. What I was getting at then there is a good probability a customer that needs it (parts) on this short-term basis would go elsewhere if you had to be closed down a week or a week and a half.
>
> A. Yes, that is true. That has happened to us. We had a breakdown or two when it was demonstrated."

In that this is a variance extension the other hardship variables are assumed to apply: e.g., the possible layoff of production personnel (90 employees). Wirco also states that the cost of compliance would be prohibitive in that the only two alternates are:

1. Purchase of a spare induction furnace - $200,000.

2. Purchase of controls for the cupola furnace - $100,000.

Petitioner suggests that the cupola "may" be replaced within five years as business conditions allow. During this time Petitioner requests operation of the cupola for a period of 56 days per year.

The effect on the environment by the use of Petitioner's cupola must now be explored. Wirco is located in a sparsely settled area one-half mile outside the city limits of New Athens, a town of 2,000 people. No complaints have been received by the Agency regarding the operation of Petitioner's cupola. The closest residence to Petitioner's foundry is 415 feet, and a total of six residences are within 2,062 feet of the foundry.

Agency's exhibit #1 contains a dispersion model, the last line stating (R. 30), "The chances of Wirco creating a general pollution problem are very minimal." The Air Quality Standards regarding particulates are:

Primary: 260 ug/m^3 and
Secondary: 150 ug/m^3 - max. 24 hr. conc.

The air quality as reported in the June 1973 "Air Monitoring Network Report" by the Illinois Environmental Protection Agency was 76 ug/m^3 max. 24 hrs. for the closest station.

The Agency recommends a 25-day/year variance. Testimony (R. 20) by Petitioner is that 40 days/year is a bare minimum. In its closing statement (R. 33) the Agency tends to agree that 40 days/year would be more appropriate. The Board agrees.

One further point,as in PCB 73-4 Petitioner is again put on notice that should it request an extension of this variance a detailed financial statement will be required to ascertain whether Petitioner can move up its five year program to purchase a new induction furnace. Proof will also be required as to whether Petitioner is working twenty-four hours per day, seven days a week, to produce enough parts via its induction furnace so as to make up for lost production time while said furnace is down for maintenance.

The Board will not continue to grant extensions without a firm commitment on Petitioner's part as to a definite compliance date, or a very strong financial hardship case.

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

ORDER

IT IS THE ORDER of the Pollution Control Board that a variance be granted to Wirco Casting, Inc., until October 12, 1974, subject to the following conditions:

I. Petitioner shall not operate its gray iron cupola furnace in excess of the following limitations:

A) The gray iron cupola furnace shall not be operated in excess of 40 days during the period of this variance.

B) During any one day of operation, the gray iron cupola shall not exceed thirty (30) tons of gray iron castings.

C) The operation of the gray iron cupola shall not have a melt rate that exceeds four (4) tons per hour.

II. Petitioner shall maintain and keep in good operating order and operate during all times when the gray iron cupola is operating its afterburners and wetcap control devices on the gray iron cupola.

III. Petitioner shall inform the Agency of the projected operation of the gray iron cupola furnace, in writing, at least forty-eight (48) hours prior to the use of the gray iron cupola.

IV. After each period of operation of Petitioner's gray iron cupola furnace, Petitioner shall supply to the Agency, in writing, forty-eight (48) hours after such period of operation the following information concerning its gray iron cupola:

A) The number of days during the period of operation that Petitioner operated its gray iron cupola.

B) The daily iron casting production for each day Petitioner operated its gray iron cupola.

V. Petitioner shall submit to the Agency, with any request for variance extension, information on the financial position of the company and any other data to substantiate Petitioner's claim that it is unable to purchase control equipment on its cupola or purchase an additional induction furnace.

VI. The gray iron cupola shall be operated only in accordance with Paragraph I of this Recommendation, and then only when it is absolutely necessary that the induction furnace be shut down for maintenance and repair. The cupola and induction furnaces shall never be operated concurrently.

IT IS SO ORDERED.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, certify that the above Opinion and Order was adopted by the Board on the 25th day of October, 1973, by a vote of 5 to 0.

Christan L. Moffett