

variance proceeding is inappropriate. (See Board Order in Illinois Environmental Protection Agency v. Rowe Foundry and Machine Company and Rowe Foundry and Machine Company v. Illinois Environmental Protection Agency, PCB 80-174 and PCB 81-40, Feb. 10, 1983 consolidated.) Further, in Olin Corporation v. Illinois Environmental Protection Agency, PCB 81-117, February 17, 1982, the Board stated that in a variance proceeding, findings concerning the issues of hardship and environmental harm are the prerogative of the trier of facts and are not an appropriate subject for stipulation between the parties. The Board also notes that the stipulation risks being in conflict with the Agency's responsibility to file a recommendation; i.e. the recommendation cannot be withdrawn from Board consideration because of the terms of an all or nothing stipulation. Thus, for purposes of this variance extension request, the Board will construe the stipulation and statement of fact as simply that -- an agreement as to the facts of the case.

Process Description

The stipulation recites the facts of this case as follows. Rowe operates a gray-iron foundry located in Martinsville, Clark County, Illinois. The foundry produces industrial and agricultural counterweights, formed from non-machinable hard iron casting. Apart from farming, Rowe is the only major source of employment in the town and is the largest single employer. Of the 1,300 people living in the Martinsville community, an estimated 50 are employed at Rowe.

The cupola identified by Rowe as the Whiting No. 9 cupola is central to Rowe's foundry operations. In the cupola, scrap iron is melted before it is poured into molds. Currently, the cupola is fired with about 3,300 pounds of foundry coke, 1,400 pounds of limestone, and 28,000 pounds of scrap iron per hour. A large volume of air is forced into the melting zone of the cupola to bring the temperature of the scrap iron to the melting point. After the load of iron is melted, it is drawn off and poured into prepared sand molds to form counterweights.

The source of Rowe's carbon monoxide emissions is its present cupola, which was constructed in 1969 at a cost of \$22,750. In 1970, the cupola was equipped with a Hydrofilter "below the charge takeoff" scrubber to control particulates at a cost of over \$80,000. The scrubber is attached to the cupola about six to eight feet below the charging door. The scrubber is constructed around the circumference of the stack and draws up the stack gases immediately above the melting zone during the melting process, so that the temperature of the stack gases is almost immediately reduced as the gases are exhausted through the scrubber. Unlike the typical cupola, the gases do not retain the heat from the melting zone. The scrubber unit was not designed to control carbon monoxide emissions. Because the combusting

gases are drawn off almost immediately above the melting zone, the oxidation temperature for carbon monoxide was impossible to achieve. There were no regulations for carbon monoxide emissions at the time that the equipment was installed.

Carbon monoxide emissions from Rowe's foundry operations are regulated by Section 216.381 of Subtitle B: Air Pollution (35 Ill. Adm. Code 216.381). Section 216.381 imposes a limitation on the emission of carbon monoxide gases into the atmosphere from any cupola with a manufacturer's rated melt rate in excess of five tons per hour. Section 216.381 requires that carbon monoxide gases be burned in a direct flame afterburner or controlled by some other pollution control device approved by the Agency so that the resulting concentration of carbon monoxide in such gases is less than or equal to 200 parts per million ("ppm") corrected to 50% excess air or such gas streams are controlled by other equivalent pollution control equipment approved by the Agency.

In June, 1981, an engineering firm under contract to the USEPA tested the carbon monoxide emissions from the Rowe cupola stack. The three carbon monoxide gas samples collected at Rowe's Whiting No. 9 cupola were found to have carbon monoxide concentrations, when corrected to 50% excess air, of 44,394 ppm, 75,591 ppm and 56,445 ppm.

Procedural History

Rowe's foundry operations have been the subject of earlier proceedings before the Board. On September 29, 1980, the Agency filed a Complaint docketed as PCB 80-174 against Rowe alleging certain violations of the Illinois Environmental Protection Act ("Act") and the Board's air pollution control regulations. Subsequently, on April 2, 1981, Rowe filed a petition for variance docketed as PCB 81-49 requesting relief from the Board's air pollution control regulations. Because of the similarity of the Agency's action in PCB 80-174 and Rowe's variance request in PCB 81-49, Rowe and the Agency requested that the Board consolidate the two dockets for purposes of decision. The Board granted this motion.

On February 10, 1983, the Board granted a variance to Rowe until February 1, 1988 in Rowe Foundry and Machine Company v. Illinois Environmental Protection Agency (PCB 81-49). In its Order, the Board determined that it would be an arbitrary and unreasonable hardship to compel Rowe to comply immediately with 35 Ill. Adm. Code 216.381 for the control of carbon monoxide emissions from its foundry plant operations. The Board's findings were based on considerations involving interruption of the plant's activities at a time of high unemployment, the infeasibility of certain control options, the remaining life of the cupola, the excessive use of natural gas necessary to operate

emission control equipment and the de minimus potential impact on the environment from Rowe's carbon monoxide emissions.

The Board determined that the variance relief requested by Rowe was warranted. The Board also imposed conditions on Rowe as part of the Variance, many of which were identical to the compliance plan outlined in the stipulation between the parties. However, the Board did not commit to granting a renewal of the variance for up to five years should Rowe not expend the useful life of the cupola within the five year variance, stating that such request would be judged on its own merits.

At the time its variance expired on February 1, 1988, Rowe had only conducted 260 heat-ups of its cupola. Based on this fact and in reliance on the Agency's agreement to support an extension of Rowe's prior variance if Rowe had not used 500 heat-ups of the cupola, Rowe filed its petition on January 20, 1988 requesting a variance extension from Section 216.381 until February 1, 1990. In its variance extension petition, Rowe proposed a compliance plan for meeting the carbon monoxide emission limitation of Section 216.381 through the installation of a new cupola and scrubber system.

Subsequently, on May 13, 1988 the Agency filed its variance recommendation in this proceeding. The Agency recommended denial of Rowe's variance extension request. In the alternative, however, the Agency recommended that if the Board should grant a variance extension, that the variance extension period end on February 1, 1989, or when Rowe's plant has completed the 500 heat-ups of the cupola, whichever occurred first.

Variance Extensions

In the stipulation, the Agency argues that Section 36 of the Act allows the Board to grant an extension of a five year variance for a period not to exceed one year. Rowe disagrees with the Agency's position, and believes the Board does have the authority to grant variance extensions beyond a one year period and has done so on several occasions in the past. Rowe believes it is reasonable for the Board to exercise such authority in this case where Rowe is requesting an eighteen month extension. This eighteen month time period will allow Rowe to achieve compliance within the variance period requested and will avoid a second variance extension proceeding for a short six month extension.

The Board is not persuaded to adopt the Agency's position that the Board can grant an extension of a variance for only a one-year period. The Agency's position is apparently based on a literal reading of Section 36(b); no further support or authority for this position is advanced. The Board believes the provision should be construed liberally, consistent with Section 2(c) of the Act which states that "The terms and provisions of this Act

shall be liberally construed so as to effectuate the purposes of this Act as set forth in subsection (b) of this Section... " Cf. Reynolds Metals Company v. Illinois Pollution Control Board and Illinois Environmental Protection Agency, 108 Ill. App. 3d 161, 438 N.E.2d 1267, 63 Ill. Dec. 904 (1982) (for the proposition that

It is generally unnecessary to look beyond the language of the statute. Yet, where, as here, different interpretations are urged, the court must look to the reasons for enactment of the statute and the purposes to be gained thereby and construe the statute in a manner which is consistent with that purpose.).

Rowe is correct that the Board has in many prior cases granted variance extensions beyond the one year period. The Board granted those extensions without having formally addressed this issue. The Agency's has only recently raised it.

The Board does not believe, and never has, that it is constrained to granting a variance extension for only a one year period; rather the Board interprets the Act and its own longstanding regulations as giving it the authority to grant a variance extension for longer so long as satisfactory progress has been shown. The basis for the Board's belief is first found in the history of Section 36(b) of the Act. In 1970, Section 36(b) of the Act stated:

Any variance granted pursuant to the provisions of this section shall be granted for such period of time, not exceeding one year, as shall be specified by the Board at the time of the grant of such variance, and upon the condition that the person who receives such variance shall make such periodic progress reports as the Board shall specify. Such variance may be extended from year to year by affirmative action of the Board, but only if satisfactory progress has been shown. (Emphasis added.)

In 1989 Section 36(b) states:

Except as provided by Section 38 of this Act, any variance granted pursuant to the provisions of this Section shall be granted for such period of time, not exceeding five years, as shall be specified by the Board at the time of the grant of such variance, and upon the condition that the person who receives such variance shall make such

periodic progress reports as the Board shall specify. Such variance may be extended from year to year by affirmative action of the Board, but only if satisfactory progress has been shown. (Emphasis added.)

The 1970 Section 36(b) provided that any variances could be granted for a period of time "not exceeding one year." The second sentence stated "such variance may be extended from year to year by affirmative action of the Board, ..." What does "from year to year" add to Section 36(b)? To construe, as the Agency would have us, "from year to year" as a one year limitation on variance extensions seems redundant because the first sentence already limits "any variance" to one year. The Board believes that "from year to year" meant in 1970 (and still means now) that the Board was authorized to grant additional, successive variances upon a determination that satisfactory progress has been shown from one variance period to the next. Admittedly, this construction is not self evident from a plain reading of Section 36(b) as it exists in 1989. However, the Board does believe that that was the General Assembly's intent in using "from year to year" in 1970 when it adopted the language, and to now interpret "from year to year" as imposing a one year limitation on variance extensions is to misinterpret the intent of the General Assembly. Further, the amendment to 5-year variances occurred during the 1975-1976 fiscal year. The many variance extensions granted since that time, without objection, evidence a long history of Board interpretation along these lines.

The Board also believes that policy considerations support this interpretation. After all, the goal of the system of granting variances is to fashion the most effective program possible for achieving timely compliance. In amending the one year limitation to five years for variances, the General Assembly recognized the economy in permitting more flexible variance terms without distinguishing between initial and subsequent variances. For example, the Board has often granted a first variance for periods of time much shorter than five years because, for example, more data was needed to formulate or verify the do-ability of a compliance plan, or the compliance plan went awry; a subsequent variance might, of necessity, need to be of up to five years duration so as to assure that all steps of the full compliance plan are firmly articulated and enforceable. And in cases such as this, where the subsequent variance request is for eighteen months, and eighteen months is reasonable, it conserves the resources of the state to grant the variance in its entirety rather than to grant it for one year and require the process to be repeated again in a year. The Board also notes that its long-standing procedural rules regarding extensions of prior variances buttresses the view that first variances and subsequent variances are not distinguished in terms of time, hardship showings, or in

any other substantive respect. In other words, the "reasonable further progress" language in the Act is dealt with by the Board routinely, in terms of whether the asserted hardship is self imposed; while actions taken during a prior variance would of course be given special scrutiny, so would unacceptable delays in taking steps to come into compliance be considered with an initial variance petition. 35 Ill. Adm. Code 104.123(a) and (b), Extension of Prior Variance, makes quite clear that a "petition to extend a prior variance shall be a new petition for variance" and is subject to all informational requirements and justifications as would a prior variance, except only that a petitioner may request that information submitted in the prior variance be incorporated rather than resubmitted. For these reasons, the Board holds that the first sentence of Section 36(b) means that any variance, whether it be original or extension, may be granted for a period of time not exceeding five years, and that the second sentence simply authorizes the Board to grant successive extensions of an original variance, so long as satisfactory progress is shown.

Progress During Variance

The stipulation sets forth the compliance efforts undertake as follows.

June 1987 - Rowe purchased a scrubber system for the control of particulate and carbon monoxide emissions. This scrubber system will be compatible with the new cupola Rowe intends to purchase.

July 1987 - Modern Equipment submits the detailed specifications for the new cupola design. The design specifications were made to ensure compliance with Section 216.381.

After receiving the specifications from Modern Equipment, Rowe began searching for a cupola that met the exact specifications necessary for its operations and consistent with the recommendations of Modern Equipment.

Feb. 1988 - Rowe retained a consultant to prepare the design for a foundation to support the cupola.

- June 1988 - Rowe purchases a cupola which meets the design specifications necessary for operation at the foundry.
- July 1988 - Design of foundation initiated.
- Sept. 1988 - Rowe contracts for the construction of a stack system for the cupola and orders a blower for the cupola.
- Oct. 1988 - Cupola constructed and delivered to Rowe plant; installation of foundation complete.

Rowe has also undertaken additional steps consistent with the compliance plan contained in the stipulation filed December 14, 1982, between the Agency and Rowe. Rowe believes it has complied with every condition of the Board's order issued February 13, 1983. These conditions include the requirement that carbon monoxide emissions from the cupola shall not violate the ambient air quality standards for carbon monoxide and that the cupola operations shall not exceed a production rate of 14 tons of iron poured per hour. In addition, Rowe has submitted quarterly reports to the Agency documenting the number of heats of the cupola in the prior quarters and implemented a housekeeping and maintenance plan to control sand and dust on the foundry premises. This housekeeping plan was implemented at the time the variance was granted and Rowe agrees to accept it as condition to any future variance granted by the Board.

In its variance recommendation, the Agency alleged that Rowe did not fully comply with the housekeeping plan that was a condition to the prior variance. The Agency's allegation arose from an inspection of the plant by the Agency which noted the accumulation of sand in areas of the plant not used for iron pouring or cooling. Rowe contends that under the terms of the housekeeping plan, sand may accumulate in areas of the foundry providing it is swept up regularly or weekly, depending upon the particular area. The area inspected by the Agency where sand was observed is swept every other day, although weekly sweeping is all that is required for this area.

The Agency also contended that Rowe failed to timely submit the second quarter report for 1984. Although Rowe believes it did submit this report, Rowe submitted its 1984 second quarter data as part of its 1984 fourth quarter report to avoid any confusion over this matter. The Board believes that Rowe has demonstrated satisfactory progress during the course of the original variance.

Environmental Impact

In its opinion in PCB 81-49 granting Rowe a variance, the Board found that Rowe's carbon monoxide emissions did not pose a significant threat of adverse environmental impact. Further, in June 1981, the Agency modeled the ambient air quality in the Rowe foundry area based on stack tests conducted by the USEPA on Rowe's emissions. This modeling showed there would be no violation of the ambient air quality standards even under worst case conditions. Later analysis by the Agency, using a more realistic emission rate and average stack exit velocity, indicated a maximum concentration of 5.5 ppm -- well below the daily carbon monoxide air quality standard of 9 ppm. The Board notes that Agency's findings were based on a carbon monoxide emission level of 75,591 ppm corrected to 50% excess air which corresponded with a production rate of 14 tons of iron poured per hour in effect on the day of the stack test. Because Rowe will lower this production rate to 12.79 tons per hour under the terms of this Stipulation with the Agency, the conclusions made by the U.S.EPA and the Agency continue to support Rowe's position that its emissions will not cause a violation of an ambient air quality standard.

In May, 1982, the Economic Technical Advisory Committee ("ETAC") of the Illinois Department of Energy and Natural Resources issued a report with regard to Rowe's proposed site-specific regulations. The ETAC opinion supported the Agency's finding with respect to air quality standards for carbon monoxide. After reviewing this information, the Board concluded as follows: "It does appear the Rowe's carbon monoxide emissions have caused little or no adverse environmental effects."

Clark County is a designated attainment area for carbon monoxide. 40 C.F.R. Section 81.314. Rowe's operations are located in air quality control Region 66 which does not have an air monitor for carbon monoxide. The nearest Agency monitoring station for carbon monoxide is in downtown Springfield. For the year 1987, no exceedances of the daily or hourly carbon monoxide air quality standards were recorded at the Springfield monitoring station.

Rowe's annual emissions of carbon monoxide have decreased during the original variance period. Although Rowe was allowed to conduct 500 heats during the original variance period, Rowe has only conducted 260 heats since January 1, 1988. At the time of Rowe's initial variance request, Rowe operated the cupola every other work day. Currently, Rowe is operating the cupola on an average of twice weekly. Therefore, the continued operation of Rowe's foundry will not result in an increase of carbon monoxide emissions or have an adverse impact on air quality during the requested variance period.

Arbitrary and Unreasonable Hardship

The stipulation states that the arbitrary and unreasonable hardship that the Board found in PCB 81-49 continues to exist. First, Rowe's compliance options involving the use of a catalytic incinerator are still technically infeasible because the size of the incinerator makes installation infeasible. Another alternative investigated by Rowe, an afterburner system, would use excessive amounts of gas that could not be supplied by the City of Martinsville and that the Board concluded was an unjustified waste of a natural resource. Currently, these two alternatives are no longer considered viable options because Rowe has decided to replace the existing cupola with a new cupola and scrubber system. Rowe's proposed compliance alternative originally proved unreasonable because an estimated 500 heats of the cupola remained in 1981 when variance was granted.

Rowe will discontinue the use of the existing cupola by August, 1989 and will install a scrubber system and new cupola by that date. As is evident from Rowe's compliance plan, Rowe cannot comply immediately with Section 216.381. Rowe must construct and install a cupola to its specifications, install the scrubber system and cupola and conduct the necessary tests and trial runs to ensure that the system achieves compliance with Section 216.381. Therefore, requiring immediate compliance with Section 216.381 would impose an arbitrary and unreasonable hardship upon Rowe since Rowe cannot possibly implement the above compliance schedule by the end of the original variance period - February 1, 1988. If immediate compliance with Section 216.381 were required, Rowe's only option would be to shut down the plant. The stipulation states that the continued operation of Rowe's foundry is essential to the Martinsville community because of the jobs and funds Rowe's business places in the local community. Therefore, requiring Rowe to shut down its operations would impose an arbitrary and unreasonable hardship upon Rowe, its employee and the Martinsville community.

Based on the facts set forth in the stipulation, the Board finds that compliance with 35 Ill. Adm. Code 216.381 would impose an arbitrary and unreasonable hardship on Rowe's Martinsville plant foundry operations. Therefore, the Board will grant the requested variance. However, the Board grants the variance subject to certain conditions, set forth in the Order below, which will ensure that Rowe conducts its operations consistent with the policies set forth in the Act.

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

ORDER

The Board, having considered the record in this proceeding, hereby grants extension of variance to Rowe Foundry Machine Company from 35 Ill. Adm. Code 216.381 until August 1, 1989, subject to the following conditions:

1. Rowe will continue to pursue the construction and installation of a new cupola with a carbon monoxide control system according to the compliance schedule outlined in paragraph 12 of the stipulation.
2. Rowe shall submit quarterly reports on the operation of the cupola.
3. Rowe shall implement and maintain the housekeeping and maintenance plan set forth below:
 - A. Insure that the size of the scrap iron pieces entering the cupola are small enough so as to prevent clogging of the cupola, thus necessitating the momentary shutdown of the pollution control equipment. At no time shall Rowe attempt to melt pieces of iron longer than 30 inches.
 - B. Insure that all of the necessary replacement parts, including fan blades and bearing sets, for the pollution control equipment is on hand.
 - C. Implement a detailed housekeeping program designed to keep the facility's roofs, interior working areas and adjacent outside areas clean of particular matter and those areas of the plant free of foundry sand where the use of the sand is not required for the molding in cooling of metal. The housekeeping program consists of sweeping all hard outside surface areas at least weekly. Foundry sand is regularly swept up on the inside of the foundry buildings and is scooped off the production floors. Accumulations of particulate matter are removed from the roof frequently, both as housekeeping measures and for protection of the roof coating.

Rowe shall inform all plant personnel of the housekeeping and maintenance plan and

that plan must be complied with at all times.

4. Rowe shall be limited to operation of the cupola twice weekly.
5. Rowe shall be limited to a production of 12.79 tons of iron poured per hour.
6. Rowe shall dismantle and remove the current cupola upon completion of construction of the proposed system.
7. Rowe shall verify with documentation to the satisfaction of the Agency's Division of Water Pollution Control that the existing wastewater treatment facility is adequate to handle the discharge from the proposed cupola and scrubber system.
8. Rowe shall not violate the National Ambient Air Quality Standards for carbon monoxide.
9. Within 45 days of the date of this Order, Rowe shall execute a Certificate of Acceptance and Agreement which shall be sent to Mark T. Books at the following address:

Mark T. Books
Illinois Environmental Protection Agency
Compliance Assurance Section
2200 Churchill Road
Box 19276
Springfield, Illinois 62794-9276

This variance shall be void if Petitioner fails to execute and forward the certificate within the forty-five day period. The forty-five day period shall be held in abeyance during any period that this matter is being appealed. The form of said Certification shall be as follows:

CERTIFICATION

I, (We), Rowe Foundry & Machine Co., having read the Order of the Illinois Pollution Control Board, in PCB 88-21, dated February 23, 1989, understand and accept the said Order, realizing that such acceptance renders all terms and conditions thereto binding and enforceable.

