

ILLINOIS POLLUTION CONTROL BOARD
April 30, 1987

ACME BARREL COMPANY,)
)
Petitioner,)
)
v.) PCB 86-31
)
ILLINOIS ENVIRONMENTAL)
PROTECTION AGENCY,)
)
Respondent.)

LAURENCE A. MCHUGH AND JERYL DEZELICK, ROOKS, PITTS AND POUST,
APPEARED ON BEHALF OF PETITIONER;

LISA MORENO AND JOSEPH R. PODLEWSKI, JR., APPEARED ON BEHALF OF
RESPONDENT.

OPINION AND ORDER OF THE BOARD (by R. C. Flemal):

This matter comes before the Board upon a Petition for Variance filed March 4, 1986, by Acme Barrel Company ("Acme"). Acme seeks variance from the requirements of 35 Ill. Adm. Code 215.204(j), 215.211, and 215.212 with respect to volatile organic material ("VOM") emissions from its steel drum reconditioning operations for a period extending until December 31, 1987.

Acme contends that compliance with the existing standards would impose an arbitrary and unreasonable hardship. Reasons Acme cites in support of this contention include unavailability of compliant coatings, prohibitive cost of add-on control technology, expected success of its proposed compliance program, and a de minimis effect of Acme's VOM emissions on the State of Illinois' attainment and maintenance of the National Ambient Air Quality Standard for Ozone.

Hearings were held on February 11 and March 6, 1987, both in Chicago, Illinois. At the March 6, 1987, hearing Acme submitted a supplement to the variance petition, consisting in major part of a revised compliance plan and submission of a compliance schedule. On March 30, 1987, Acme filed its post-hearing brief along with a Motion for Leave to File Instanter. This motion is granted.

Previously, by filing of February 2, 1987, the Illinois Environmental Protection Agency ("Agency") recommended denial of variance. In its post-hearing brief, filed on April 10, 1987, the Agency continued to recommend denial. The Agency added: "However, in light of the new compliance plan presented at hearing, the Agency does not maintain the same strong opposition

to the variance extension that it held prior to the presentation of the compliance plan" (Agency Brief, p. 2). Additionally, the Agency noted that Acme's compliance plan "is a promising concept for achieving compliance by December 31, 1987, and that the schedule proposed by Petitioner for implementation of the plan is reasonable" (Id., p. 3).

Acme has previously been granted variance from the same provisions and for the same facility in PCB 83-118. That variance was granted May 18, 1984, and expired on December 31, 1985¹. Acme contends that during the term of the prior variance it made diligent, good faith, and concerted efforts to comply with the conditions of the variance.

FACILITY AND OPERATIONS

Acme is a closely-held Illinois corporation engaged in the reconditioning and sale of steel drums. It owns and operates a plant located at 2300 West 13th Street, Chicago, Cook County, Illinois. The plant is located in a mixed residential, commercial, and industrial area and employs approximately 200 people, 150 of whom are production and trucking workers.

Part of the reconditioning process consists of applying interior and exterior coatings to the drums. The exterior coatings are for weatherability and appearance and for product information. Interior coatings act as a chemically resistant barrier between product and the steel package. Coatings are required by federal and State regulations or by customer specification.

All drums reconditioned by Acme receive exterior coatings. Open-head drums also typically receive an interior coating. Closed-head drums typically receive only an exterior coating. Coatings are applied in three paint booths. Following coating, the drums are moved to bake ovens where the coatings are cured.

Acme has the capacity to recondition approximately 1500 drums per day. Typical production consists of 45% open-head drums and 55% closed-head drums. Acme is able to sell reconditioned closed-head drums at approximately \$11 each and open-head drums at \$15 each (R.² at 14). Acme not only competes

¹ At several places in the instant record the present request is characterized as an "extension" of the prior variance. The Board believes that the present request is more properly characterized as a request for a new variance.

² All citations to the record noted herein are to the transcript

with other drum reconditioners, but also with manufacturers of containers made of alternative materials, particularly plastics, and with manufacturers of new steel drums. New steel drums sell at approximately \$12.75 each (R. at 18), which provides the drum reconditioning industry with little latitude to increase prices and remain competitive. Acme further asserts that the price differential between new and used drums is the lowest it has ever been (R. at 18).

REGULATORY REQUIREMENTS

35 Ill. Adm. Code 215.204 reads in pertinent part:

No owner or operator of a coating line shall cause or allow the emission of volatile organic material to exceed the following limitations on coating materials, excluding water, delivered to the coating applicator:

j) Miscellaneous Metal Parts and Products Coating

| | kg/l | (lb/gal) |
|--------------------------------|------|----------|
| 1) Clear coating | 0.52 | (4.3) |
| 2) Air dried coating | 0.42 | (3.5) |
| 3) Extreme performance coating | 0.42 | (3.5) |
| 4) All other coatings | 0.36 | (3.0) |

VOM emissions attributable to the interior coating of drums are governed by 215.204(j)(1); emissions attributable to the exterior coatings of drums are governed by 215.204(j)(3). Thus, emissions are not to exceed 4.3 lb/gal (.52 kg/l) for interior coating of drums and 3.5 lb/gal (.42 kg/l) for exterior coating of drums.

The pertinent part of 35 Ill. Adm. Code 215.211 is subsection (a)(1), which establishes December 31, 1983, as the date for compliance with Section 215.204(j) for all sources located in non-attainment counties (as is Cook County). The pertinent part of 35 Ill. Adm. Code 215.212 is subsection (a), which states in full:

The owner or operator of an emission source subject to Section 215.211(a)(1) or (2) shall submit to the

of the second hearing, held March 6, 1987.

Agency a compliance plan on or before August 19, 1983.

Also pertinent to the instant matter is 35 Ill. Adm. Code 215.205, which establishes alternative emission limitations. In full, Section 215.205 states:

Owners or operators of coating lines subject to Section 215.204 may comply with this Section, rather than with Section 215.204. The methods or procedures used to determine emissions of organic material under this Section shall be approved by the Agency. Emissions of volatile organic material from sources subject to Section 215.204, are allowable, notwithstanding the limitations in Section 215.204, if such emissions are controlled by one of the following methods:

- a) An afterburner system, provided that 75 percent of the emissions from the coating line and 90 percent of the nonmethane volatile organic material (measured as total combustible carbon) which enters the afterburner are oxidized to carbon dioxide and water, or:
- b) A system demonstrated to have control efficiency equivalent to or greater than that provided under the applicable provision of Section 215.204 or subsection (a) as approved by the Agency.

PREVIOUS COMPLIANCE EFFORTS AND HARDSHIP

Compliant Coatings

Acme's initial efforts at achieving compliance were directed towards seeking compliant coatings. Acme asserts that it was able to make some significant early progress, such that during the term of the variance granted in PCB 83-118 Acme was able to achieve emission levels of 4.88 lb/gal for its interior coating operation and 4.26 to 4.29 lb/gal for its exterior coating operation³.

Acme also asserts, however, that it has been unable to make further progress toward finding compliant coatings beyond that

³ A condition of the PCB 83-118 variance was that average VOM emissions of interior and exterior coatings were not to exceed 5.46 lb/gal and 4.25 lb/gal, respectively, during the term of the variance.

achieved during the pendency of the prior variance. This failure has occurred, Acme asserts, in spite of a diligent, good faith, and concerted effort to seek and test low-VOM coatings. Prior to filing the present variance petition, Acme had tested 24 different exterior coating products from 10 different coating manufacturers. Results of these tests are summarized in Acme's Quarterly Reports filed with the Agency and contained in the record in this matter as Petitioner's exhibits A through G. Acme has also continued to conduct tests of low-VOM coatings in the period since expiration of the prior variance. Results of 38 tests conducted between January 1986 and January 1987 are summarized in Petitioner's Group Exhibit 1.

All of the compliant coatings which have been tested have presented problems, the most common of which is an unfavorable mix of the number of drums which can be coated per gallon and the cost per gallon of coating. Compliant coatings have a higher cost (R. at 55-6) but generally are capable of coating only an equivalent or lesser number of drums per gallon of coating (R. at 46-53, 59-60). The later condition exists at least in part because the steel drum reconditioning industry is faced with an inherent limitation on the thickness of coatings which may be applied to their product. This limitation arises because it is necessary to shotblast the surface of the used drums in order to remove the previous coatings. Shotblasting leaves small indentations on the surface of the drums, which in turn must be completely filled with the new coating to produce a product favorable in appearance to new steel drums.

Acme has also undertaken several changes in production process designed to improve transfer efficiency and hence the "mileage" which can be derived from a gallon of coating. These have included heating the coatings prior to application to decrease viscosity, increasing the rate of rotation of drums during the coating operation, modifying the coating spray nozzles, and increasing the curing temperature (R. at 25-8). Nevertheless, these have been insufficient to reverse the unfavorable unit cost figures. Thus, the unit cost of coating a drum with the compliant coatings, as tested, is contended to range from 40% to 115% above the current cost (R. at 43). This cost increase is additionally contended to materially affect the price of the drums sold by Acme (R. at 44).

Many of the compliant coatings, as tested, were also judged by Acme to have performance deficiencies. These include deficiencies such as poor gloss, cratering, high film thickness, inability to dry or cure, poor appearance, poor coverage, and poor hiding (Group Exhibit 1).

Process Modifications and New Equipment

Acme estimates that since 1984 it has expended approximately one-quarter million dollars on process modifications and new equipment designed to reduce VOM emissions (R. at 33). These include the transfer efficiency devices and processes previously mentioned, including a new oven especially for use with high solids coatings. The cited cost also apparently includes at least some of the costs associated with coating tests and trials.

Add-On Technology

Acme asserts that it has investigated the feasibility of installing various add-on equipment, particularly an afterburner. The afterburner solution is asserted to have a capital cost of \$200,000 to \$600,000 (R. at 30). To this figure must be added operating and maintenance costs. The total cost is characterized by Acme as being "prohibitively expensive" in light of the company's after-tax profit in 1986 of \$152,000 (R. at 16, 29).

COMPLIANCE PROGRAM

Given its failure to achieve compliance via use of compliant coatings, Acme now proposes to achieve compliance pursuant to Section 215.205(b).⁴ This it intends to do by venting emissions from its bake ovens⁴ through its drum incinerator afterburner⁵ thereby incinerating those emissions. The drum incinerator is an existing piece of equipment used to burn out the residue from open-head drums after the drums arrive at the plant and prior to physical reconditioning of the drums. The drum incinerator afterburner operates at a temperature of 1600 degrees Fahrenheit, which Acme contends is a sufficient temperature to incinerate the bake oven VOM emissions (R. at 32-3). Modifications necessary to use the drum incinerator to also incinerate the bake oven exhaust

⁴ At hearing Acme proposed to duct only the bake ovens emissions to the drum incinerator afterburner. In Acme's post-hearing brief, however, there is reference to "ducting of emissions from the spray booths and cure ovens" to the afterburner (emphasis added; Acme Brief at 10). Absent other indication that this latter statement constitutes an amended compliance program, the Board herein assumes that the compliance program is as presented at hearing.

⁵ The Board notes that the existing afterburner referred to in the proposed compliance plan is distinct from the afterburner discussed by Acme in regard to possible add-on compliance methods. The latter would be an additional afterburner which presumably would be coupled directly to the paint booths and/or ovens.

are estimated to cost \$85,000 (R. at 33-4, 38).

Acme additionally contends that approximately 40% of its total VOM emissions are emitted in the bake ovens (R. at 31). Thus, complete incineration of the bake oven emissions would produce a 40% reduction in total emissions, or be equivalent to a 40% reduction in the VOM content of the coatings.

Acme proposes to achieve compliance via the incineration method according to the following schedule:

- a. Submit to the Agency a demonstration of equivalency under Section 215.205(b) by April 30, 1987;
- b. Complete final design and begin procurement by June 1, 1987;
- c. Commence construction by September 1, 1987;
- d. Complete construction and commence startup by October 30, 1987; and
- e. Demonstrate compliance by November 30, 1987.

The Board notes that acceptability of Acme's compliance program is contingent upon Agency approval of equivalency, pursuant to 35 Ill. Adm. Code 215.205(b).

ENVIRONMENTAL IMPACT

Acme contends, and the Board agrees, that the steel drum reconditioning industry performs a valuable environmental function by providing for recycling of used drums. The industry also serves a valuable function by disposing of or destroying residual wastes left in used drums. Both functions would be lost should the industry become uncompetitive with new drum manufacturers or with manufacturers of non-steel containers.

Acme further contends that VOM emissions from the Acme plant have had no adverse effect on human, plant, or animal life, and that these emissions are not interfering with Illinois' attainment of the ambient air quality standard for ozone. In support of this contention Acme notes that there has been a downward trend in the number of days that the ozone air quality standard was exceeded at the two air quality monitoring stations closest to Acme, as follows:

| <u>Station Location</u> | <u>Number of Exceedences</u> | | | |
|-------------------------|------------------------------|-------------|-------------|-------------|
| | <u>1983</u> | <u>1984</u> | <u>1985</u> | <u>1986</u> |
| | | | | |

| | | | | |
|-----------------|---|---|---|----|
| 2200 N. Cannon | 1 | 1 | 0 | -- |
| 57th and Museum | 3 | 0 | 0 | 1 |

CONCLUSION

Given the entirety of the circumstances in this matter, the Board finds that if variance were denied, thereby requiring Acme to come into immediate compliance, Acme would suffer an arbitrary or unreasonable hardship. Acme has undertaken extensive efforts to identify compliant coatings. Absent complete success in these efforts, Acme is now committed to a control system which offers high prospect of attaining compliance. The Board believes that allowing Acme to implement its control system program during the period of the variance serves a general good. Therefore the Board will grant variance as requested subject to conditions consistent with Acme's compliance plan.

While the Board does not dispute that there has been some improvement in ozone air quality in the Chicago area, as shown by the cited monitoring data, the Board does not believe that these data are sufficient to carry Acme's argument of "no adverse effect" of its particular emissions. Such improvement in air quality as has occurred is attributable to diligent efforts on the part of a great many individual emitters. Acme has yet to demonstrate that it has made a significant personal contribution to the observed reduction. It is only because Acme is now committed to making its contribution, and that grant of variance will facilitate Acme's coming into compliance within a short time, that the Board can accept that Acme's excess emissions might have minimal adverse environmental impact for the term of the variance.

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

ORDER

1. Petitioner, Acme Barrel Company, is hereby granted variance from 35 Ill. Adm. Code 215.204(j), 215.211, and 215.212, subject to the following conditions:
 - A. This variance will expire on December 31, 1987, or at such earlier time as compliance is achieved;
 - B. On or before May 15, 1987, Petitioner shall submit to the Agency a demonstration of equivalency under 35 Ill. Adm. Code 215.205(b) for its program of venting emissions to its drum incinerator afterburner;

- C. On or before June 1, 1987, Petitioner shall complete final construction design and shall submit to the Agency an application for a construction permit to effectuate the compliance plan;
- D. On or before September 1, 1987, Petitioner shall commence construction of the permitted equipment of paragraph C;
- E. On or before October 30, 1987, Petitioner shall complete construction and commence startup of the permitted equipment of paragraph C;
- F. Petitioner shall demonstrate compliance by November 30, 1987;
- G. Beginning June 1, 1987, and every month thereafter, Petitioner shall submit written reports to the Agency detailing all progress made in achieving compliance.

The reports shall be sent to the following addresses:

Environmental Protection Agency
Division of Air Pollution Control
Control Programs Coordinator
2200 Churchill Road
Springfield, IL 62706

Environmental Protection Agency
Division of Air Pollution Control
Region 1, Field Operations Section
1701 South First Avenue
Suite 600
Maywood, IL 60153

- 2. Within 45 days of the date of this Order, Petitioner shall execute a Certification of Acceptance and Agreement to be bound to all terms and conditions of the variance. Said Certification shall be submitted to the Agency at both the addresses specified in paragraph G. The 45 day period shall be held in abeyance during any period that this matter is being appealed.

The Certification of Acceptance shall read as follows:

CERTIFICATION

I, (We), _____, having read the Order of the Illinois Pollution Control Board in PCB 86-31, dated April 30, 1987, understand and accept the said Order, realizing that such acceptance renders all terms and conditions thereto binding and enforceable.

Petitioner

By: Authorized Agent

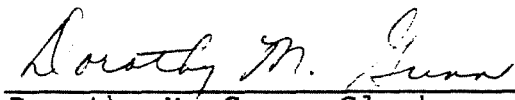
Title

Date

IT IS SO ORDERED.

Board Member B. Forcade dissented.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the, 30th day of April, 1987, by a vote of 5-1.



Dorothy M. Gunn, Clerk
Illinois Pollution Control Board