

ILLINOIS POLLUTION CONTROL BOARD
October 20, 1988

LAWRENCE BROTHERS, INC.,)
)
 Petitioner,)
)
 v.) PCB 87-180
)
 ILLINOIS ENVIRONMENTAL)
 PROTECTION AGENCY,)
)
 Respondent.)

JAMES T. HARRINGTON AND HEIDI E. HANSON, OF ROSS & HARDIES,
APPEARED ON BEHALF OF THE PETITIONER.

BOBELLA GLATZ AND JAMES O'DONNELL APPEARED ON BEHALF OF THE
RESPONDENT.

OPINION AND ORDER OF THE BOARD (by J. Marlin):

This matter comes before the Board on a petition for variance filed by Lawrence Brothers, Inc. (Lawrence Brothers). Specifically, Lawrence Brothers is seeking variance from 35 Ill. Adm. Code 215.204(j), Miscellaneous Metal Parts and Products Coating, as it relates to clear coatings. Section 215.204(j) imposes a 4.3 pounds per gallon (lb./gal.) standard upon Lawrence Brothers. The original petition in this matter was filed on November 24, 1987. Due to that petition's deficiencies, Lawrence Brothers was directed by the Board's December 3, 1987 Order to file an amended petition. In response, an amended petition was filed on December 21, 1987. On May 25, 1988 Lawrence Brothers filed a Second Amended Petition which requested a five year variance or a variance until a compliant coating was found, whichever occurred first. In the alternative, Lawrence Brothers' challenged the validity of Section 214.204(j) as applied to Lawrence Brothers' hinge coating operation.

The Agency filed a Recommendation and an Amended Recommendation on February 23, 1988 and August 1, 1988 respectively. In both filings, the Agency recommended that the Board deny Lawrence Brothers' variance request as expressed in Lawrence Brothers' petitions. The Agency now agrees to support a variance subject to particular conditions set forth in Joint Exhibit #1.

Hearing was held in this matter on August 4, 1988; no members of the public were present. At hearing, Lawrence Brothers and the Agency reached an agreement as to the variance request. Both parties presented, as Joint Exhibit #1, the terms of the agreement (R. 76-77). Essentially the agreement provides for a two year variance. During the first year Lawrence Brothers

is to continue to search for compliant coatings. At the end of the first year Lawrence Brothers must present to the Agency a report of compliance alternatives. According to the Agreement, Lawrence Brothers must then implement a compliance alternative "as quickly as reasonably possible".

The manufacturing operation at issue in this matter is the lacquering of dull brass hinges at Lawrence Brothers' Rock Falls plant.

The hinges are manufactured at the plant which is located in a rural area in Whiteside County. Prior to the application of lacquer the hinges are brass plated. A total of 88 people are employed at the plant, although only 33 work with the lacquering operation. (Second Am. Pet., p. 1)

The second Amended Petition describes the lacquering operation as follows:

The lacquering operation is accomplished by immersing brass plated hinges into one of two 350 gallon tanks containing a nitrocellulose-based lacquer mixture...The brass-plated hardware is immersed for approximately 1 minute, elevated over a return drip tray, and conveyed through a heating oven to accelerate the air drying process. The entire lacquering process takes approximately 5 minutes... The volatile organic material driven off the plated parts in the drying oven is discharged through an exhaust blower located in the drying oven and discharging from the roof of the building. The lacquering operation is performed on a single shift beginning at 6:00 A.M. and ending at 3:30 P.M. for five days per week.

(Second Am. Pet., p. 1-2)

With regard to emissions data, Lawrence Brothers and the Agency stipulated to Joint Exhibit #2 which sets forth relevant data concerning the lacquer line's VOM emissions. According to that exhibit, Lawrence Brothers uses 37.5 gallons of lacquers per day. The lacquer is mixed with 13.8 gallons of thinner each day. The lacquer has a VOM content of 5.96 lbs./gal, and the VOM content of the thinner is 7.07 lb./gal. As noted earlier, Section 215.204(j) imposed a clear coating VOM limitation of 4.3 lb./gal. Joint Exhibit #2 calculates Lawrence Brothers' actual annual emission rate at 43.4 tons per year.¹

¹ The Board is uncertain as to how the Agency reaches this result. The Board calculates actual emissions at 40.1 tons per

Given the limit prescribed by Section 214.204(j)², Joint Exhibit #2 concludes that allowable emission rate as 3.1 tons/year.

The limits of Section 214.204(j) are imposed upon Lawrence Brothers through Section 215.211(b). That Section states that sources located in counties which are not classified as nonattainment counties (for ambient air quality standards for ozone) and are also not adjacent to nonattainment counties must comply with Section 215.204(j) by December 31, 1987. Lawrence Brothers' Rock Falls plant is located in Whiteside county. Since Whiteside county is neither a nonattainment county nor adjacent to a nonattainment county, Lawrence Brothers should have been in compliance with Section 215.204(j) since December 31, 1987. The requirements of Sections 215.204(j) and 215.211 were adopted by the Board in Docket R80-5 on December 30, 1982. 50 PCB 255. The Opinion setting forth the rationale behind the regulations is found at 49 PCB 67.

According to Lawrence Brothers, there are currently no solvent-based lacquers which would afford compliance with Section 215.204(j). Lawrence Brothers has tested between 60 or 70 lacquers in the hopes of finding a compliant coating. However, Lawrence Brothers asserts that none of these lacquers were able to successfully meet Lawrence Brothers' product specifications (R. 34). Lawrence Brothers asserts that the lacquers it uses must be able to sufficiently protect a hinge from corrosion during a 75-hour salt spray test. (R. 24). A Lawrence Brothers witness stated that the common understanding among lacquer suppliers is it is currently "unrealistic" to expect a water-based (compliant) lacquer to meet these specifications of Lawrence Brothers. (R. 36). In fact, Lawrence Brothers tried using water-based lacquers on its hinges three years ago. At hearing, Lawrence Brothers' vice-president of sales and marketing recounted the company's experience with water based lacquers.

[W]e incurred a real rash of problems because the hinges were rusting even before they were opened at the millwork producer's end. We would ship skid loads of hinges and they would open the carton and they were already rusting. We had a number of complaints from customers, particularly in coastal areas

year by utilizing the following method: 13.8 gal. per day for the thinner is multiplied by 7.07 lb./gal. and 37.5 gal. per day for lacquer is multiplied by 5.96 lb./gal.

² The Board is uncertain as to how the Agency reaches this result. The Board calculates allowable emissions at 8.52 tons per year by utilizing the following method: gallons of solids currently applied is equivalent to 0.17 multiplied by 37.5 gal. per day of lacquer (not 13.8 gal. per day of thinner).

where they're subject to salt water or salt air. It really raised and caused a lot of problems. We took back probably a third of all the hinges we shipped out. It was an extremely expensive folly is what it was.

(R. 14)

Lawrence Brothers states that it has been unsuccessfully looking for compliant coatings since the coating line first came into existence. According to Lawrence Brothers, a water-based, baked lacquer which withstood a 40-hour salt spray test is the closest Lawrence Brothers has come to finding a compliant coating which would meet its requirements. Besides not providing the degree of protection as required by Lawrence Brothers' specifications, Lawrence Brothers' asserts that the use of a water-based baked lacquer would require modifications to its oven and coating lines which would in turn cost in excess of \$430,000. (R. 44; pet. Exh. #10).

Lawrence Brothers has also looked into a solvent recovery system. It received an estimate of \$253,500 for such a system. However, Lawrence Brothers claims that the estimate is incomplete because it does not include the cost of a distillation system. (R. 42-43, Pet. Exh. #9).

Lawrence Brothers also tested the process of double coating the hinges with a water-based lacquer. According to the Lawrence Brothers, no significant increase in resistance to corrosion was observed in the experiment. (R. 54-55).

At one time, Lawrence Brothers started using less of the solvent-based lacquer because it was operating the line without the accelerated drying process of an oven. A fire in a drying oven and insurance litigation precipitated that process change. However, Lawrence Brothers states that it received about a dozen complaints from customers. (R. 49). At that time the hinges were withstanding only 45 to 55 hours of salt spray tests. (R. 53). Subsequently, Lawrence Brothers again used a heated oven and more lacquer to correct the quality problems. (R. 49).

When Mr. Ted Witt, Manager of manufacturing for Lawrence Brothers, was asked what the company would do if it were forced to comply with Section 215.204(j), Witt stated:

Our only alternative, if we had to meet the rule tomorrow would be to go to a water-based air-dry lacquer like we previously had in the line. And we would expect to have a number of problems.

(R. 46)

Environmental Impact

Lawrence Brothers asserts that the granting of a variance will not result in the increase of emission from the Rock Falls plant.

In the Agency's February 23, 1988 Recommendation, the Agency states that Lawrence Brothers' Rock Falls plant is located in a rural area approximately two miles east of the main part of Rock Falls. According to the Agency, no other large VOM sources are in the area. The Agency also points out that Whiteside County is an attainment county and that the nearest ozone monitoring station, located 40 miles northeast of the plant, has not recorded any ozone violations in the past seven years. (Ag. Rec. p. 6). On the issue of environmental impact, the Agency concludes:

In terms of effect on air quality... the emissions from this facility and its location lead the Agency to believe that air quality in the area will not deteriorate as a result of the emissions from the facility.

(Ag. Rec., p. 7).

In addition, the Agency believes that the United States Environmental Protection Agency would not disapprove of the variance for air quality reasons. Id.

Findings

It is clear from the record that Lawrence Brothers has been diligent in a search for a lacquer which would comply with the requirements of Section 215.204(j). It is particularly significant that Lawrence Brothers' efforts have included more than just cursory testing of other coatings; for a while, Lawrence Brothers even utilized water-based coatings on its hinges. This was done even before Section 215.204(j) was applicable to Lawrence Brothers.

It is also apparent that Lawrence Brothers receives complaints from customers when its hinges are not sufficiently lacquered. Despite its efforts Lawrence Brothers has not been able to find a water-based lacquer which meets the company's standards. Lawrence Brothers' primary competitors are firms located in New Britain, Connecticut and St. Louis, Missouri. (R. 12).

The Board recognizes Lawrence Brothers' need to produce hinges that are durable and relatively rust resistant. A hinge is a type of product that is generally expected to wear well and not need frequent replacement or maintenance.

Given the circumstances of this particular case the Board

finds that Lawrence Brothers would suffer an arbitrary or unreasonable hardship if it were denied a variance as requested. As a result, the Board will grant Lawrence Brothers a variance. In general, the Board will impose conditions similar to those jointly requested by Lawrence Brothers and the Agency. Some of the wording and timing of the conditions have been altered to more clearly ensure that Lawrence Brothers will begin to implement a compliance alternative after one year of coating investigation. Although the two parties to this proceeding have reached an agreement with regard to the variance request, the Board is certainly not bound by any such agreement. Specifically, the variance will begin on December 24, 1987 and terminate on October 20, 1990. During the first year, Lawrence Brothers must actively seek a compliant coating as well as investigate other compliance alternatives. Lawrence Brothers then must choose and implement a compliance option during the second half of the variance.

Normally, the Board does not grant variances where a compliance plan does not detail a specific compliance alternative which will be utilized. However, the Board has granted, in particular instances, short-term variances to allow further investigation of compliance options. In this instance, compliance by the end of the variance period is mandated.

As a final note, Lawrence Brothers' Second Amended petition alternatively challenges the validity of Section 215.204(j) as applied to Lawrence Brothers' Rock Falls plant. The Board has not reviewed the validity of the rule as requested by Lawrence Brothers, and consequently, the Board makes no finding as to the validity of the rule as applied to Lawrence Brothers. This course of action is consistent with the Board's decisions in Container Corporation of America v. Illinois Environmental Protection Agency, PCB 87-183 (June 2, 1988 and August 18, 1988).

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

ORDER

The Board hereby grants Lawrence Brothers Inc. (Lawrence Brothers) variance from 35 Ill. Adm. Code 215.204(j), as it applies to clear coatings, subject to the following conditions.

1. The variance shall begin on December 24, 1987 and expire on October 20, 1990 or when Lawrence Brothers achieves compliance, whichever occurs first.
2. Until Lawrence Brothers determines and notifies the Illinois Environmental Protection Agency (Agency) that it intends to achieve compliance by means other than a corrosion resistant, clear, air-dry compliant coating, or until October 20, 1989, whichever occurs first,

Lawrence Brothers shall implement the following schedule for investigation of compliant coatings.

- a) Not later than one month of the date of this Order Lawrence Brothers shall:
 - 1) Submit to the Agency a detailed listing of Lawrence Brothers' coating specifications;
 - 2) Survey clear coating suppliers using a comprehensive directory of formulators and suppliers to the coatings industry comparable to the current issue of "Paint Red Book", as agreed to between the Agency and Lawrence Brothers; and
 - 3) Send letters to suppliers and formulators surveyed in subdivision (a)(2) of this paragraph. Such letters shall contain Lawrence Brothers' coating specifications and testing procedures. The letters shall request a response within two weeks. If responses are not sent within two weeks Lawrence Brothers shall continue sending letters. Lawrence Brothers should keep records of letters sent and responses received for each supplier and formulator.
- b) Not later than four months after the date of this Order Lawrence Brothers shall:
 - 1) Obtain at least 25 samples of lacquer from suppliers and formulators identified in subdivision (a) of the paragraph; and
 - 2) Schedule, conduct and complete the necessary tests on the lacquer samples obtained to determine whether the lacquers would afford compliance and the degree to which such lacquers meet Lawrence Brothers' specifications.
- c) Not later than 8 months after the date of this Order Lawrence Brothers shall:
 - 1) Compile the results of the tests conducted pursuant to subdivision (b)(2) of this paragraph; and
 - 2) Conduct and complete any necessary follow-up tests.
- d) If Lawrence Brothers discovers an acceptable compliant coating as a result of its efforts

pursuant to subdivisions (a), (b), and (c) of this paragraph, it shall take steps to utilize such a coating as quick as reasonably possible.

- e) If Lawrence Brothers has not identified an acceptable compliant coating despite its efforts pursuant to subdivisions (a), (b), and (c) of this paragraph, it shall engage the services of a coating consultant. The coating consultant shall review the work which was accomplished by Lawrence Brothers pursuant to subdivisions (a), (b), and (c) of this paragraph. The coating consultant shall submit a written preliminary review to the Agency, not later than 9 months after the date of this Order. The Agency may comment upon the preliminary review. Not later than 10 months after the date of this Order, a final report, incorporating any Agency comments, shall be submitted to the Agency.
 - f) If the consultant's final report concludes that further coating testing could produce a compliant coating acceptable to Lawrence Brothers, Lawrence Brothers shall conduct and complete such tests pursuant to the consultant's recommendations not later than 12 months after the date of this Order.
- 3) At any time during the variance period, the Agency may identify new, clear water-based compliant coatings, up to a maximum of 10 in a 12-month period, for Lawrence Brothers to test. After the Agency notifies Lawrence Brothers of such coatings, Lawrence Brothers shall test the Agency-identified coatings to determine whether the coatings afford compliance and the degree to which such coatings meet Lawrence Brothers' specifications. These tests shall be conducted and completed as quickly as reasonably possible after the Agency notifies Lawrence Brothers of the coating's identity.
 - 4) Notwithstanding the procedures set forth by paragraph #2 and prior to Lawrence Brothers' selection of a compliance alternative, Lawrence Brothers shall seek to discover and test new compliant coating formulations.
 - 5) Not later than 12 months after the date of this Order, Lawrence Brothers shall submit a compliance report to the Agency. The report shall address compliance alternatives, including but not limited to, the use of afterburners, solvent recovery, and compliant coatings. The report shall also state which alternative Lawrence Brothers will implement in order to achieve compliance.
 - 6) Lawrence Brothers shall implement its chosen compliance

alternative as quickly as reasonably possible.

- 7) Compliance with Section 215.204(j) shall be achieved by Lawrence Brothers not later than 24 months after the date of this Order.
- 8) Within 45 days of the date of the Board's Order, Lawrence Brothers shall execute a Certificate of Acceptance and send that Certificate to:

Illinois Environmental Protection Agency
 Enforcement Programs
 Attn: James O'Donnell
 2200 Churchill Road
 P.O. Box 19286
 Springfield, IL 62794-9276

This Variance shall be void if Lawrence Brothers fails to execute and forward the Certificate within the 45-day period. The 45-day period shall be held in abeyance during any period that this matter is being appealed. The form of the Certificate of Acceptance shall be as follows:

Certificate of Acceptance

I, (We), _____,
 having read the Order of the Illinois Pollution Control Board, in PCB 87-180 dated October 20, 1988, understand and accept the said Order, realizing that such acceptance renders all terms and conditions thereto binding and enforceable.

 Petitioner

 By: Authorized Agent

 Title

IT IS SO ORDERED.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 5th day of October, 1988, by a vote of 7-0.



Dorothy M. Gunn, Clerk
Illinois Pollution Control Board