

ILLINOIS POLLUTION CONTROL BOARD
September 25, 1986

PETITION FOR SITE-SPECIFIC)
VOLATILE ORGANIC MATERIAL)
EMISSION LIMITATIONS) R85-28
FOR NATIONAL CAN CORPORATION)

Proposed Rule. First Notice.

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

This matter comes before the Board upon a November 8, 1985, petition for site-specific relief filed on behalf of National Can Corporation (National). National requests site-specific relief from 35 Ill. Adm. Code 215.204(b)(3) which provides that interior can body spray coating materials contain no more than 4.2 lbs. of volatile organic material (VOM) per gallon. National seeks to increase this limitation to 5.8 lbs of VOM per gallon for the interior can body spray coating materials used at its Rockford plant. Hearing was held on February 4, 1986. Briefs were filed by National and the Illinois Environmental Protection Agency (Agency) on March 25 and 26, 1986, respectively with National submitting a reply brief on March 31, 1986. The Department of Energy and Natural Resources issued a negative declaration for this rulemaking on June 9, 1986, and the Economic Technical Advisory Committee concurred with this finding at its June 20, 1986, meeting.

National owns and operates a facility in Rockford, Illinois in Winnebago County which employs 150 people in the manufacture of metallic beverage and food cans. The production process at issue is the manufacture of three-piece steel beer cans. (Pet. Exh. A). The three-piece steel beer cans must be coated twice in the inside with an "interior body spray" to insure that the can's contents do not adversely react with the steel can body, thereby preventing flavor deterioration. (R. p. 10). The steel beer can is manufactured for use by a single brewery customer. (R. p. 6).

VOMs are emitted during the metal coating operations. National has developed a compliant end sealing compound for use in the manufacture of aluminum cans but has been unable to develop an interior body spray which complies with the 4.2 lbs. of VOM per gallon emission limitation of Section 215.204(b)(3). (Pet. p. 3). Mr. Alan Gans testified for National on how interior body coating materials are selected by National. Once a coating is obtained it undergoes an extensive testing procedure. A coating is first tested by filling up a finished steel can with electrolytic solution to determine milliamp charge (MA). The MA is a measure of the resistance of the coating,

electrolytic corrosion, with the can contents. If the MA is high, then the coating is rejected. If an acceptable MA is obtained, the cans are then filled with the customer's product (i.e., beer) and are stored for six months. At the end of six months, the customer's flavor panel tastes the beer. If there is a bad taste or if the MA is still high, the improperly coated beer can is rejected and a new coating must be found. (R. pp. 10-11). Mr. Gans testified that finding an acceptable interior body spray for use with beer is more difficult than finding an acceptable one for soft drink cans. Taste is not a critical issue with soft drinks which have a sweet taste and high carbonation level whereas a brewery prides itself on the taste of its beer. (R. p. 12).

Mr. Gans also testified on the efforts undertaken by National to obtain a compliant interior body spray for use on its three-piece steel beer cans. Prior to the 1982 compliance date, National and PPG, one of its primary suppliers, developed a compliant coating. Subsequently, the coating was rejected for failing the taste test. (R. p. 13). In May, 1983, PPG and Mobil developed more compliant coatings which were applied to cans and submitted to National's customer. In October, 1983, the customer notified National that the coating failed the MA test and it should resubmit more cans because maybe the cans manufactured were not up to par. (R. p. 14). In January, 1984, National was notified that the new batch also failed, this time for taste. At this time, National went back to its suppliers requesting the development of new coatings. In June 1984, PPG and Glidden submitted new coatings. These coatings were tested and submitted to National's customer in August, 1984. The cans underwent the shelf-life test for six months. In February, 1985, National was contacted by its customers that the cans needed to be tested again with the same product. By the end of June, 1985, all of the cans were rejected. At this time, none of National's coating suppliers would send it any more coatings. (R. p. 15). Mr. Gans testified that National's suppliers are more interested in high-volume coating applications in which hundreds of thousands of gallons are used annually. National has the only three-piece steel beer can plant in the United States and National's coating suppliers cannot economically justify the expenditure for research and development of a compliant interior can body coating when the demand for such a coating is approximately 10,000 gallons per year. (R. pp. 15-16).

Using the third quarter of 1985 as a representative manufacturing period, National asserts that it exceeded its daily allowable emission limitation approximately ten percent of the time, and on those non-compliance days, the excess emissions

averaged 13 pounds per day with the maximum exceedance being 30 pounds per day. These numbers are based on an average of approximately 700 pounds of VOM per day being emitted from the plant. (R. p. 19). Also, National contends that the VOM emissions attributable to the manufacturing of three-piece steel cans in 1985 were about 12 tons. This number represents approximately 12% of the total VOM emissions emitted from National's plant in 1985. (R. p. 39).

Technical Feasibility and Economic Reasonableness

National contends that the only emission control technology available to it to control VOM emissions is thermal incineration. (R. p. 20). Carbon-absorption technology is not compatible with can coating operations because too many solids are picked up into the carbon-absorption unit which tends to blind it, thereby allowing the VOMS to pass through the unit. Also, National contends that the VOMS change during the baking of the can which also allows VOMS to pass through the unit. (R. pp. 20-21). National estimated the cost of acquiring and installing an incineration unit at its Rockford plant with a heat recovery of 60% efficiency. The cost of such a unit was estimated to be \$300,000, which includes purchasing and installing the incineration unit, and an annual operating cost of \$80,000. (R. p. 21). Based on an average production level of 12 million steel cans per year, the cost to control VOM emissions from the non-compliant coating would be approximately \$6,500 per ton. (R. p. 22). National also explored the possibility of acquiring an incineration unit with a more efficient recovery system. However, such a unit would cost between \$100,000 and \$200,000 more than the unit which had been evaluated. (R. p. 25).

Both National and the Agency submit that \$6,500 per ton of VOM control is unreasonable from an economic standpoint. In a nutshell, National's argument is that it is able to afford the cost of controlling its VOM emissions, but it makes little sense economically to spend \$80,000 on an annual basis to control, on the average, 13 lbs. of excess VOM emissions per day when those emissions occur only over the span of less than forty-five days per year. (R. p. 29). The Agency appears to be in agreement with National's position and has proposed additional language so that a cap could be placed on the available emissions for National. (R. p. 42). The Agency has proposed, with National in agreement, that National be able to show compliance pursuant to Section 215.207 on a weekly basis rather than a daily basis.

Environmental Impact

National's facility is located in Winnebago County which has been classified by USEPA as "cannot be classified or better than

National Standards" for ozone. (40 CFR 81.314). VOM emissions from National's facility are ozone precursors and, as a result, are regulated in an effort to control the formation of ozone in the atmosphere. Mr. Robert Godare of the Agency testified that the ozone monitoring station near National's plant reported no exceedances of the ozone standard in 1983, 1984 or 1985. Mr. Godare also testified that although the VOM emissions from National's plant could cause a recognizable odor downwind of the plant, the Agency has received no complaints of odors emanating from National's plant. (R. p. 43).

Conclusion

Based on the foregoing facts, the Board finds that National's compliance with 35 Ill. Adm. Code 215.204(b)(3) although technologically feasible is not economically reasonable in light of the fact that coating suppliers cannot be expected to expend the necessary time and resources on research and development of a compliant interior can body coating material based on annual demand of only 10,000 gallons. The Board also finds that the add-on control technology to control excess VOM emissions from National's plant is available but not economically justified. Requiring the installation and operation of such control technology would impose an unreasonable financial hardship on National without conferring a measurable environmental benefit on the surrounding area. Also, since the production of steel cans at National's facility occurs on such a sporadic basis, it makes little sense to require National to spend \$80,000 per year to control 13 pounds of excess VOM emissions per day of steel can production which National asserts is less than forty-five days per year.

Lastly, the participants are in agreement over the inclusion of the Agency's proposed language setting a cap on National's emission by requiring National to demonstrate compliance with Section 215.207 on a weekly rather than daily basis. The Board will include such a requirement in its First Notice Order. However, the Board notes that the emission of volatile organic material is governed by Section 215.204 and Section 215.207 establishes the internal offset provision. During the first notice period, the Board requests that the participants address the mechanics of how this provision will be implemented.

ORDER

The Board hereby orders first notice publication in the Illinois Register of the following amendment to 35 Ill. Adm. Code 215.206:

Title 35: ENVIRONMENTAL PROTECTION
SUBTITLE B: AIR POLLUTION
CHAPTER I: POLLUTION CONTROL BOARD
SUBCHAPTER c: EMISSION STANDARDS AND
LIMITATIONS FOR STATIONARY SOURCES

PART 215
ORGANIC MATERIAL EMISSION STANDARDS
AND LIMITATIONS

SUBPART F: COATING OPERATIONS

Section 215.206 Exemptions from Emission Limitations

The limitations of this Subpart shall not apply to:

- 1) Coating plants whose emissions of volatile organic material as limited by the operating permit will not exceed 22.7 Mg/year (25 T/year), in the absence of air pollution control equipment; or
- 2) Sources used exclusively for chemical or physical analysis or determination of product quality and commercial acceptance provided that:
 - A) The operation of the source is not an integral part of the production process;
 - B) The emissions from the source do not exceed 363 kg (800 lbs) in any calendar month; and,
 - C) The exemption is approved in writing by the Agency.
- 3) Interior body spray coating material for three-piece steel cans used by National Can Corporation at its Rockford can manufacturing plant in Loves Park, Illinois, provided that:
 - A) The emission of volatile organic material from the interior body spray coating line shall not exceed 0.70 kg/l (5.8 lb/gal) of coating material, excluding water, delivered to the coating applicator; and
 - B) The emission of volatile organic material shall comply with the provisions of Section 215.207 on a weekly weighted average basis.

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 25th day of September, 1986 by a vote of 6-0.

Dorothy M. Gunn
Dorothy M. Gunn, Clerk
Illinois Pollution Control Board