ILLINOIS POLLUTION CONTROL BOARD
July 13, 1989

IN THE MATTER OF:	)	
	)	
THE SITE-SPECIFIC PETITION	)	R 88-19
OF ROADMASTER CORPORATION	)	

PROPOSED RULE. FIRST NOTICE

OPINION AND ORDER OF THE BOARD (by B. Forcade):

This matter is before the Board on a petition for a site-specific rulemaking filed July 19, 1988 by Roadmaster Corporation ("Roadmaster"). Roadmaster seeks relief from the Board's RACT II limitations on the maximum permissible volatile organic matter ("VOM") emissions from two flow coater units at its manufacturing facility near Olney, in Robinson County, Illinois.

A public hearing occurred on October 25, 1988 at Olney. Roadmaster supplemented the record on November 3, 1988, and Roadmaster and the Environmental Protection Agency ("Agency") submitted a stipulation on November 7, 1988. The Department of Energy and Natural Resources submitted its negative declaration that an economic impact study was unnecessary on December 7, 1988, and the Environmental and Technical Committee submitted its concurrence on January 5, 1989. Roadmaster submitted a post-hearing brief on January 20, 1989. The Agency submitted a response brief on March 10, 1989.

Background

Roadmaster manufactures bicycles, toy wagons, tricycles, exercise equipment, and various related items at its 17 acre Olney, Illinois, factory. It began in 1982 after a purchase of this facility from AMF by the present owners. Roadmaster competes in both the U.S and foreign markets. It is the only surviving manufacturer of bicycles in Illinois. It is one of only four remaining domestic producers of bicycles and one of ten wagon producers. Other manufacturers either moved their operations overseas to remain competitive or went out of business. In fact, Roadmaster came into existence when AMF planned the closure of this plant in 1982. AMF lost $8 million on this operation in 1981 and $10 million in 1982. Roadmaster has stabilized tricycle output and increased toy wagon output since taking over the facility. Ex. 4 & 29; R. 28-49 & 123-24. Roadmaster produces about 685,000 tricycles and 315,000 wagons each year. Its share of the domestic tricycle market increased from 60 percent in 1986 to 67 percent in 1988. Its share of the domestic wagon market increased from 20 to 30 percent in this same period.

The Roadmaster plant employs over 900 workers (99 percent from Illinois) and is the largest employer in Richland County. It is the largest single location employer in eleven contiguous counties. According to Stanley Wieber, the Director of the Richland County Development Corporation, 500 local jobs were lost in recent years to plant closings, 760 persons are unemployed, and 600 local residents need jobs. 7,800 people are unemployed in adjacent counties. Richland County has a population of 17,500. Roadmaster employs about 12.5 percent of the local labor and 67 percent of the manufacturing labor. R. 34-35, 39, 43 & 131-34.

Roadmaster participates in highly competitive markets for its products. It sells to mass merchants, such as discount department stores and sporting goods stores, where there is little clerical help for a customer. Therefore, the product must sell itself and appearance is important. Paint is important to the appearance. Also, Roadmaster must have the lowest possible price because the market is very price-sensitive. Imported goods have gained an increased share of the bicycle market, from about 20 percent in 1982 to 60 percent in 1988. This has placed a downward pressure on prices for bicycles and rendered the profit margin thin. Roadmaster believes that although the ultimate consumer might recognize the quality of its products, the retail merchant would not. These buyers base their decisions on price. Roadmaster maintains that a price increase of as little as 4 or 5 cents would affect sales; an increase of 13 cents would halve them. Roadmaster's average price for a tricycle is about $13. Further, Roadmaster is a capital-consumptive company. Its capital spending for the period 1983 through 1987 has averaged 154 percent of net profits. Its capital spending priorities, in decreasing order, are (1) for production equipment and repairs, (2) for new tooling for product improvements and new products, (3) for cost reductions, and (4) for maintenance. Roadmaster's annual capital budget is about $500,000. Ex. 29; R. 30-46 & 124-29.

Roadmaster has a few painting lines, which apply a variety of coatings and colors. Before RACT II, Roadmaster's annual VOM emissions were 446 tons per year ("TPY"). RACT II allows Roadmaster to emit a maximum of about 100 TPY. Roadmaster converted most of its painting to high-solids coatings and reduced its VOM emissions by 315 TPY (91 percent of the excess emissions), to about 131 TPY, at a cost of over $100,000. Those coatings that Roadmaster has converted are now below the 3.5 pounds of VOM per gallon allowed by the Board's rules. <u>See</u> 35 Ill. Adm. Code 215.204(k)(2). However, Roadmaster was unsuccessful in bringing its black and white flowcoaters into compliance, and the 9 TPY reductions for the other coatings below that which is allowable under RACT II do not offset the 40 TPY excess flowcoater emissions. Roadmaster's black flowcoat paint, used on its wagon underparts, contains about 5.74 lb/gal VOM, and its white paint, used on its tricycle wheels and cranks, contains 5.36 lb/gal. Roadmaster conducted two tests of compliant coatings at a cost of over $10,000, but these tests proved unsuccessful. Ex. 10-13; R. 59-69.

Roadmaster uses flowcoating for its cost efficiency. It allows only minimal waste, and it is an automated process. The painting units are large: about 150 feet long, 30 to 40 feet wide, and 10 to 12 feet high. The system, which was designed in 1962, sprays paint over the parts, allowing paint to flow over the part and drain for reuse. After coating the parts, Roadmaster dries and cures the paint in ovens. Roadmaster introduces its black flowcoated parts in one oven together with electrostatically coated, high solids-painted wagon parts. It similarly introduces the white flowcoated parts into another oven together with electrostatically coated tricycle parts. Roadmaster tested white and black waterborne flowcoat paints in 1986 and 1987. Initial tests of black paint showed promise, but problems arose with water contamination of the coatings on the simultaneously-run electrostatically-coated parts; a loss of gloss and unbaked areas resulted. Blistering of white waterborne paints occurred, and the white paint would not adhere to spokes, so Roadmaster could not find a compliant white flowcoat paint. Further, assuming Roadmaster could find both acceptable black and white waterborne flowcoatings, it still could not run waterborne coatings at different times from its electrostatic coatings. Water vapor would linger in the ovens and cause the same problems experienced in running them simultaneously. Further, additional handling, storage, energy, lost efficiency, and parts damage costs arise. Ex. 6-9; R. 56-59 & 275.

Roadmaster explored three basic presently-available compliance alternatives: conversion to high solids black and white paint, conversion of black to waterborne and white to high solids, and the use of add-on controls (thermal oxidizers). Roadmaster found that add-on controls were the least costly alternative. Alternative No. 1 involved the removal of the existing flow coaters and installation of new equipment for the electrodeposition of high solids paint. The capital cost of this alternative is $374,400, and the annual operating cost is $76,518. The total annualized cost of the first alternative is $142,787. This alternative has a lower coating transfer efficiency than flowcoating, and it would require additional labor for touch-up of inadequately painted parts. Alternative No. 2 would require removal of the white flowcoater, similarly to Alternative No. 1, but the conversion of the black line to a waterborne paint. This would require an additional bake oven. Its capital cost is $397,200, its operational cost is $63,653, and its overall annualized cost is $133,957. Alternative No. 3 would require installation of some type of thermal oxidizer and ducting to vent air from the paint areas. These areas are widely scattered throughout Roadmaster's plant.

Roadmaster examined the alternatives of a standard incinerator, a standard incinerator with heat recovery, a catalytic incinerator, and a regenerative-type system for Alternative No. 3. Roadmaster found that a standard incinerator and a regenerative-type incinerator were the most cost effective. For a standard incinerator with a primary heat exchanger, the capital cost is $394,500, the annual operating cost is $57,900, and the overall annualized cost is $127,727. For a regenerative-type unit, the capital cost is $499,000, the operating cost is $48,993, and the overall annualized cost is $137,316. Roadmaster used the standard incinerator with primary heat recovery for estimation of its cost of compliance under Alternative No. 3. Not included in this estimate is the cost of a plant shutdown for its installation nor the cost of a second unit, should a single unit prove inadequate to fully reduce the VOM emissions. Ex. 14-22; R. 77-105.

Based on the minimum $127,724 annualized cost of compliance, using an incinerator with a primary heat exchanger, and an estimated VOM emissions reduction of 40.1 TPY, Roadmaster estimates its cost of abatement at $3,185 per ton of VOM. Ex. 22; R. 84. This estimated cost of compliance is higher than the estimated normal RACT II cost of $1,708 per ton (1987 dollars) for a miscellaneous metal parts and products surface coater located in an attainment area. <u>See</u> Ex. 23 & 24; R. 106-07. Calculated on a per unit of tricycles and wagons basis, Roadmaster estimates that this would require a 12.8 cent price increase. Ex. 28; R. 123-24 & 127. Roadmaster asserts that this expenditure would consume about 25 percent of its capital budget and/or result in a loss of half its current business. R. 39 & 126-27; <u>see</u> Ex. 29.

Crawford County is an attainment area for ozone. <u>See</u> 40 CFR 81.314 (1988). The neareast non-attainment areas are East St. Louis (120 miles west), Indianapolis (150 miles northeast), and Chicago (230 miles north). The Effingham, Illinois, monitoring station (40 miles northwest) indicated no ozone excursions from 1984 through 1987. The Marion, Illinois, station (80 miles southwest and now closed) showed none for 1984 through 1986. Ex. 25; R. 112.

In support of its request for relief, Roadmaster highlights the fact that its largest domestic competitor, Huffy Corporation at Celina, Ohio, recently obtained a site-specific exception for its VOM emissions. Roadmaster believes that this relief confers a competitive advantage on Huffy. R. 37. Celina, Ohio, is an attainment area, and the Ohio rule does not allow an increase in emissions, so the U.S. Environmental Protection Agency approved it as a revision to Ohio's State Implementation Plan. Ex. 26 (a copy of 52 Fed. Reg. 10241-42 (Mar. 31, 1987)); Nov. 3, 1988 Supplement to Record (copy of Ohio Adm. Code 3745-21-09(U)(2)(j) (The Huffy Corporation site-specific exception)). Roadmaster also highlights a site-specific VOM exception the Board proposed for John Deere Harvester-Moline for its flowcoating operations in R87-1. R. 118; see Ex. 27 (copy of R87-1 May 19, 1988 Proposed Opinion and Order, now codified as 35 Ill. Adm. Code 215.206(c)).

For the foregoing reasons, Roadmaster requests that the Board adopt a site-specific rule granting it an exception for the VOM emissions from its black and white flowcoaters. Roadmaster requests a ceiling of 5.9 pounds of VOM per gallon of paint, which would allow running exclusively black paint with a modest margin for variation (0.16 lb/gal). R. 64. Roadmaster also requests that the Board base the rule on weekly averaging, to account for daily and seasonal variations. R. 63. Roadmaster maintains that this requested relief does not embrace new flowcoaters, but only the existing units -- to allow their continued present operation. R. 70. This is the extent of relief that the State of Ohio granted Huffy. R. 151-52. The weekly average basis derives from the relief the Board granted Deere. R. 118. The text that Roadmaster proposes is as follows:

> Notwithstanding the limitations of Section 215.204(j)(3), the Roadmaster Corporation, Olney, Illinois, shall not cause or permit the emission of volatile organic material from its existing black and white flowcoating operations to exceed a weekly average of 5.9 lb/gal.

The Agency stipulates that the requested relief would allow Roadmaster to emit 39.5 TPY in excess of the existing rule. This stipulation expresses concurrence that the minimum annualized cost of compliance is $127,727, by using an add-on incinerator with a primary heat exchanger, and the minimum cost of control is $3,234 per ton of VOM eliminated. The Agency stipulates that the Board should grant the requested relief with conditions, and Roadmaster stipulates to the following conditions:

A. That Roadmaster contact a reasonable number of paint vendors each year in the continued search for a compliant coating which can be used successfully in its present flowcoating/oven operations, including the contacting of any paint vendors which the Agency has a reasonable belief have a compliant coating which can be successfully used in Roadmaster's present flowcoating/oven operations;

B. If any vendor provides Roadmaster with laboratory test results which demonstrate a substantial likelihood that a paint can be successfully used in the Roadmaster flowcoater and oven, Roadmaster will do production tests of that paint;

C. Roadmaster will submit an annual report to the Agency each year which will include a summary of its compliance with the foregoing conditions contained in Paragraphs A and B above; and

D. If Roadmaster locates a compliant paint that it can successfully use in its present flowcoating operation and oven, which is economically reasonable, Roadmaster agrees to switch to the use of complaint paint within a reasonable time after the location and testing of such a paint.

The Board proposes a rule that grants the requested relief with conditions substantially similar to those stipulated by the Agency and Roadmaster. The record supports several conclusions favoring such relief. First, Roadmaster is located in an attainment area for ozone, so RACT II compliance is not required by federal law. Second, the estimated VOM emissions in excess of the present rule would not likely cause or contribute to a violation of the NAAQS for ozone. Finally, requiring Roadmaster to achieve compliance with the existing rule would impose an economic hardship on Roadmaster. Therefore, site-specific relief from the generally-applicable RACT II rules is warranted for Roadmaster.

However, the Board is sensitive to the concerns underlying the Agency's request for conditions. It is possible that further diligence on Roadmaster's part over time might disclose a compliant coating that would allow Roadmaster to achieve compliance with the general RACT II limitations at a reasonable cost and without unacceptable degradation of product quality. For this reason, the Board proposes the suggested conditions with modifications.

The first modifications relate to the style of a few phrases. The rule must comport with requirements of the Illinois Administrative Code. Phrases such as "reasonable number," "reasonable belief," "successfully used," "substantial likelihood," and "economically reasonable" may be found to lack the specificity required by the Illinois Administrative Code. The Board strongly encourages the participants to provide alternate, and more specific, language to replace these phrases. In some instances, the Board has selected more specific language and invites comment on the chosen language. The second modification is to add a sunset provision to the proposed rule. The Board believes such a provision is appropriate where the technology of complaint coatings is developing rapidly and the rule involved requires the regulated entity to undergo an ongoing search for complaint coatings. The Board believes a five-year life is appropriate. Roadmaster can petition for a change in this sunset date as the deadline approaches if it has not found a compliant coating. The Board proposes the following language for the rule, new subsection 35 Ill. Adm. Code 215.206(d):

> Notwithstanding the limitations of Section 215.204(j)(3), the Roadmaster Corporation, Olney, Illinois, shall not cause or permit the emission of volatile organic material from its existing black and white flowcoating operations to exceed a weekly average of 5.9 lb/gal; Roadmaster shall fulfill all of the following conditions:
>
> 1) Roadmaster shall contact at least three paint vendors each year in a continuing search for a compliant coating that it can successfully use in its existing flowcoating/oven operations, including any paint vendors suggested by the Agency in a writing delivered to Roadmaster by certified mail;
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> 2) If any vendor provides Roadmaster with laboratory test results which demonstrate a substantial likelihood that Roadmaster might successfully use a paint in its existing flowcoater and oven, Roadmaster will conduct production tests of that paint;
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> 3) Roadmaster will submit a report to the Agency by March 1 of each year that includes a summary of its efforts during the preceding calendar year, as those efforts relate to Roadmaster's compliance with the foregoing conditions contained in subsections (1) and (2), above;
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> 4) If Roadmaster locates a compliant paint that it can successfully use in its existing flowcoating operations at a cost of less than $100 per gallon (in July 1989 dollars), Roadmaster shall convert its present flowcoating operations to the use of that paint within 180 days after the final successful testing of such a paint; and

5) Subsection 215.206(d) shall expire on January 1, 1995, at which time Roadmaster shall comply with the provisions that generally apply to VOM emissions.

The Board invites comments on this proposed rule. Specifically, the Board invites comments on the propriety and viability of various of the conditional requirements:

1. Is three a "reasonable number of paint vendors," as intended by the Agency?

2. Is there a more definite way to succinctly define what test results "demonstrate a substantial likelihood that Roadmaster might successfully use a paint in its existing flowcoater and oven"? By the use of this phrase, the Board intends that successful use is contingent on Roadmaster finding an economical coating that gives an acceptable coating quality without giving other unacceptable adverse results. However, the Board recognizes the potential for ambiguity in the chosen proposed language and would welcome any suggestion of more objective language.

3. Similarly, is there a more definite way to succinctly define what constitutes "a compliant paint that it can successfully use"? The Board directs attention to the above comment in this regard.

4. Is there a more appropriate price per gallon or other trigger for determining when Roadmaster must convert production to a compliant paint? The Board randomly selected the $100 per gallon threshold without any indication in the record of what constitutes a reasonable price for paint. The Board selected this mechanism to add definition to the phrase "economically reasonable," as suggested by the Agency. It is possible to construe such a rule bearing the word "reasonable" as a Board delegation of its standards-setting authority to the Agency, in derrogation of the Act provisions that reserve this authority to the Board. See Ill. Rev. Stat. ch. 111-1/2, pars. 1004 & 1005.

5. Is the use of a sunset provision appropriate? If so, was the selected five year limitation on the rule, until January 1, 1995, appropriate?

ORDER

The Board hereby proposes the following rules for First Notice publication and directs the Clerk of the Board to file them with the Office of the Secretary of State.

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

PART 215
ORGANIC MATERIAL EMISSION STANDARDS AND LIMITATIONS

SUBPART F: COATING OPERATIONS

Section
215.202 Compliance Schedules
215.204 Emission Limitations for Manufacturing Plants
215.205 Alternative Emission Limitations
215.206 Exemptions from Emission Limitations
215.207 Compliance by Aggregation of Emission Sources
215.208 Testing Methods for Solvent Content
215.209 Exemption from General Rule on Use of Organic Material
215.210 Alternative Compliance Schedule
215.211 Compliance Dates and Geographical Areas
215.212 Compliance Plan
215.213 Special Requirements for Compliance Plan

Section 215.206 Exemptions from Emission Limitations

a) 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 215.204 by use of the internal offset provisions of Section 215.207 computed on a weekly weighted average basis.

b) The limitations of Section 215.204(j) shall not apply to the Waukegan, Illinois, facilities of the Outboard Marine Corporation, so long as the emissions of volatile organic material related to the surface coating of miscellaneous metal parts and products at those facilities do not exceed 35 tons per year.

c) Notwithstanding the limitations of Section 215.204(k)(2), the John Deere Harvester-Moline Works of Deere & Company, Moline, Illinois, shall not cause or permit the emission of volatile organic material from its existing green and yellow flocoating operations to exceed a weekly average of 6.2 lb/gal.

d) Notwithstanding the limitations of Section 215.204(j)(3), the Roadmaster Corporation, Olney, Illinois, shall not cause or permit the emission of volatile organic material from its existing black and white flowcoating operations to exceed a weekly average of 5.9 lb/gal; Roadmaster shall fulfill all of the following conditions:

1) Roadmaster shall contact at least three paint vendors each year in a continuing search for a compliant coating that it can successfully use in its existing flowcoating/oven operations, including any paint vendors suggested by the Agency in a writing delivered to Roadmaster by certified mail;

2) If any vendor provides Roadmaster with laboratory test results which demonstrate a substantial likelihood that Roadmaster might successfully use a paint in its existing flowcoater and oven, Roadmaster will conduct production tests of that paint;

3) Roadmaster will submit a report to the Agency by March 1 of each year that includes a summary of its efforts during the preceding calendar year, as those efforts relate to Roadmaster's compliance with the foregoing conditions contained in subsections (1) and (2), above;

4) If Roadmaster locates a compliant paint that it can successfully use in its existing flowcoating operations at a cost of less than $100 per gallon (in July 1989 dollars), Roadmaster shall convert its present flowcoating operations to the use of that paint within 180 days after the final successful testing of such a paint; and

5) Subsection 215.206(d) shall expire on January 1, 1995, at which time Roadmaster shall comply with the provisions that generally apply to VOM emissions.

(Source: Amended at ___ Ill. Reg. _____, effective _____________)

IT IS SO ORDERED.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above First Notice Opinion and Order was adopted on the 13th day of July, 1989, by a vote of 7-0.

Dorothy M. Gunn

Dorothy M. Gunn, Clerk
Illinois Pollution Control Board