

ILLINOIS POLLUTION CONTROL BOARD  
February 2, 1989

MINNESOTA MINING AND )  
MANUFACTURING COMPANY, )  
 )  
Petitioner, )  
 )  
v. ) PCB 88-14  
 )  
ILLINOIS ENVIRONMENTAL )  
PROTECTION AGENCY, )  
 )  
Respondent. )

JEFFREY C. FORT AND JAMES J. DeNAPOLI, GARDNER CARTON & DOUGLAS,  
APPEARED ON BEHALF OF PETITIONER; AND

SUSAN J. SCHROEDER, APPEARED ON BEHALF OF THE RESPONDENT.

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

This matter is before the Board on the January 11, 1988 petition and July 12, 1988 amended petition for variance of Minnesota Mining and Manufacturing Company ("3M"). 3M seeks relief from Board rules 215.204(c) and 215.207, which relate to volatile organic material ("VOM") emissions, as they would apply to 3M production lines at its Bedford Park plant. The requested variance term is from the effective date of these rules, December 24, 1987, see 12 Ill. Reg. 815 (Jan. 8, 1988), until April 1, 1989.

The Illinois Environmental Protection Agency ("Agency") filed its variance recommendation on August 23, 1988, and a revision on September 21, 1988. The Agency urges that the Board grant the variance until April 1, 1989, subject to certain conditions. The public hearing occurred on November 10, 1988, and no member of the public attended. R. 5. The parties chose not to submit post-hearing briefs. See R. 116-19.

I. Background

3M owns and operates a tape manufacturing plant at Bedford Park, in Cook County. The plant has 11 production lines applying 20 different coatings to paper and synthetic media. The plant originally had no controls for its VOM emissions. R. 11-24.

3M has over the last several years taken several measures to control these emissions and maintain compliance. Prior to 1975, 3M installed thermal oxidizers and reformulated some of its coatings to control emissions of volatile organic chemicals of

regulatory concern at that time. 3M came into compliance with the more recent RACT I regulations, see 3 Ill. Reg. iss. 30, p. 9 (Apr. 13, 1979) (formerly codified in significant part at 35 Ill. Adm. Code 215.204 & 215.207 (1985)), during 1982. 3M's mode of compliance involved the installation of an activated carbon absorption system on one production line, converting another to a solventless coating system, then applying the then-existing internal offset rule for its uncontrolled production lines. See 35 Ill. Adm. Code 215.207 (1987). 3M employed computer scheduling of production runs to assure compliance, and frequently shut down production runs emitting high levels of VOM when the computer indicated lower-emitting production runs would not offset those emissions. 3M took additional measures to assure future compliance by replacing its thermal oxidizers before their obsolescence caused their failure and by installing an activated carbon control on a previously uncontrolled line. 3M spent \$17,000,000 in controlling its emissions. R. 11-29 & 79-80; Ex. 1.

3M filed the present action when the Board adopted its RACT III regulations. See 12 Ill. Reg. 815 (Jan. 8, 1988) (effective Dec. 24, 1987; codified in significant part as 35 Ill. Adm. Code 215.207 (1988)). The RACT III regulations changed the basis for internal offsets from a volume-based to a solids-based calculation. Compare 35 Ill. Adm. Code 215.207 (1988) with 35 Ill. Adm. Code 215.207 (1985). 3M was one of about six Illinois companies whose compliance status this revision adversely affected. Increased production line shutdowns and scheduling problems would have resulted. In its participation in the RACT III proceedings, 3M proposed an alternative site-specific rule that would have imposed an absolute numerical limit on its VOM emissions, and offered to install controls on its only three remaining uncontrolled production lines: 2G, 3G, and 4G. The Agency opposed this alternative, and the Board chose not to adopt it. R. 30-48; Ex. 3-8. Immediate compliance with RACT III was only possible by a shutdown of production lines 2G, 3G, and 4G. R. 51 & 98-99. 3M elected to stay the effective date of the RACT III revisions long enough to come into compliance by filing the instant petition for variance. R. 52; see Ill. Rev. Stat. ch. 111 1/2, par. 1038(b) (1988).

3M plans to reduce its VOM emissions below those permitted by RACT III as part of its compliance plan. 3M plans to donate most of the resulting emissions credits to the state for improvements in local air quality. R. 57-58; see R. 69-71. Under RACT I, 3M's allowable VOM emissions were about 13,000 tons per year, and 3M had actual emissions of about 9,000 tons. RACT III reduced 3M's allowable emissions to about 8,000 tons per year, and 3M proposed a numerical leveling as part of its proposed site-specific rule that the Agency and Board rejected. 3M presently intends to install controls on its three uncontrolled lines, 2G, 3G, and 4G and plans to make improvements in

the controls existing on lines 2H and 3H, to reduce its overall emissions to about 4,000 to 5,000 tons per year. R. 49-51, 54-62, 69-74, 80, 88-95 & 99. 3M has already obtained the necessary construction permits and acquired and installed the thermal destruction control equipment for lines 2G, 3G and 4G; it planned to have tested those controls by this date; and 3M intends to demonstrate compliance by April 1, 1989. R. 82-88; Ex. 11-16. 3M intends to complete its continued voluntary efforts with regard to lines 2H and 3H by April 1990. R. 88-95. 3M has further agreed to separately permit its one solventless production line, so it will not take emissions credits for that line. Ten 3M lines are therefore subject to this proceeding and Board rules 215.204(c) and 215.207. and all will very soon have some form of VOM emissions control. R. 62, 64-65, 73-74 & 99.

## II. Discussion

3M requests variance relief from the effective date of RACT III until April, 1989. 3M intends full compliance by that date and voluntarily plans to continue its efforts to further reduce its emissions. This is commendable. The Agency recommends that the Board grant the requested variance relief with certain conditions. Agency Recommendation at 12-14; Agency Amended Recommendation at 1-3. 3M accepts the Agency-requested conditions. R. 69. The Agency maintains that "no increase in adverse environmental or health effects will directly result from 3M's operations during the pendency of the petition," id. at 8, and "agrees that 3M cannot immediately comply, ... [so that] requiring immediate compliance would impose an arbitrary and unreasonable hardship on 3M." Id. at 9. The Agency believes that USEPA would approve this variance if granted. Id. at 8-9.

The Board will grant the requested variance from 35 Ill. Adm. Code 215.204(c) & 215.207 from December 24, 1987 until April 1, 1989. The Board will impose Agency-requested conditions on the variance verbatim. The Board notes that the agreed conditions would impose a 2.9 pound per gallon VOM emission standard as calculated under Rule 215.207 ninety days after installation or upon normal operation of new control equipment on any of production lines 2G, 3G, 4G, 2H, or 3H. 3M projected at hearing that it would complete the earliest installation on one production line, line 2G, on or about November 11, 1988. 3M intended to conduct final emissions testing on all three of lines 2G, 3G, and 4G on or about December 19, 1988. R. 82-88. This means that the condition emissions standard has applied to 3M since about December 19, 1988, or that it will apply about February 8, 1989.

The foregoing constitutes the Board's findings of fact and conclusions of law in this matter.

ORDER

The Board hereby grants the Minnesota Mining and Manufacturing Company ("3M") a variance from 35 Ill. Adm. Code 215.204(c) and 215.207, as amended at 12 Ill. Reg. 815, 840-42 (Jan. 8, 1988), for the period from December 24, 1987 until April 1, 1989, provided it fulfills the following conditions:

1. Compliance for Line 6H will be determined according to Section 215.204(c).
2. Ninety days after installation of new control equipment on any of Lines 2G, 3G, 4G, 2H and 3H or upon normal operation of the new control equipment on any of Lines 2G, 3G, 4G, 2H and 3H, whichever occurs first for each line:
  - a. Volatile organic material from the "adhesive coating" will not by-pass the thermal oxidizers and the thermal oxidizers will achieve 95% destruction efficiency on the captured volatile organic material, except during malfunction and breakdown as authorized by the IEPA operating permit.
  - b. Lines 2G, 3G, 4G, 2H and 3H shall be operated to achieve at least equivalence with 2.9 lb. VOM/gallon using the formulas contained in Section 215.207 for each product manufactured, except during malfunction and breakdown as authorized by the IEPA operating permit.
3. Control efficiency of the carbon absorption units on Lines 2H and 3H will be documented on a daily basis. The thermal oxidizer to be installed on Lines 2H and 3H shall have a destruction efficiency of 90%, except during malfunction or breakdown as authorized by the IEPA operating permit.
4. 3M shall submit to IEPA every quarter a report describing in detail the program made in the previous three months in the design and construction of the thermal oxidizers and the improvements made to the carbon absorption units.

5. a. Quarterly reports shall be submitted to the IEPA's regional office in Maywood and the Permit Section in Springfield within 20 days of the end of the quarter.

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
The Intercontinental Center  
1701 First Avenue  
Maywood, IL 60153

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
Permit Section  
2200 Churchill Road  
Springfield, IL 62702

- b. The quarterly report shall include a summary of the daily operations of the coating lines operating pursuant to Section 215.207 and include the following information:
- i. Weighted average VOM content of coating (lb/gallon, less water);
  - ii. Weighted average control efficiency for VOM (percent);
  - iii. Actual VOM emissions (lb/day),
  - iv. Allowable VOM emissions (lb/day) pursuant to Section 215.207; and
  - v. Actual VOM emissions expressed as percent of allowable, i.e., (actual divided by allowable) times 100%.
- c. The quarter report shall include a summary of afterburner and carbon absorption malfunctions, with the nature and duration of the malfunction, and a description of measures taken to prevent future occurrences.

- 6. Within 45 days after the date of this Order, 3M shall execute and send to:

Illinois Environmental Protection Agency  
 Attention: Susan Schroeder  
 Enforcement Programs  
 2200 Churchill Road  
 Springfield, IL 62794-9276

a Certificate of Acceptance and Agreement of this variance by which it agrees to be bound by the terms and conditions contained herein. This variance will be void if 3M fails to execute and forward the certificate within the 45-day period. The 45-day period shall be in abeyance for any period during which the matter is appealed. The form of the certification shall be as follows:

CERTIFICATION

I, (We) \_\_\_\_\_, having read the Opinion and Order of the Illinois Pollution Control Board in PCB 88-14, dated February 2, 1989, understand and accept the said Opinion and Order, realizing that such acceptance renders all terms and conditions thereto binding and enforceable.

\_\_\_\_\_  
 Petitioner

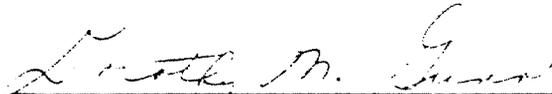
\_\_\_\_\_  
 Authorized Agent

\_\_\_\_\_  
 Title

\_\_\_\_\_  
 Date

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 2<sup>nd</sup> day of February, 1989, by a vote of 7-0.

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