

ILLINOIS POLLUTION CONTROL BOARD
July 19, 1990

MINNESOTA MINING AND)
MANUFACTURING COMPANY,)
)
Petitioner,)
)
v.) PCB 90-45
) (Variance)
ILLINOIS ENVIRONMENTAL)
PROTECTION AGENCY,)
)
Respondent.)

JEFFREY C. FORT, LEE R. CUNNINGHAM AND MARK LATHAM, 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 comes before the Board on an April 2, 1990 petition for variance filed by Minnesota Mining and Manufacturing Company ("3M"). 3M seeks relief from Condition 2C of the variance granted by the Board in PCB 88-14 on February 2, 1989 and modified on May 11, 1989. In PCB 88-14 variance from the volatile organic material ("VOM") emissions limitations 35 Ill. Adm. Code 215.204(c) and 215.207 was made subject, in part, to Condition 2C, which required that 3M install a thermal oxidizer on lines 2H and 3H of its Bedford Park plant. 3M requests that the Board extend the completion date in Condition 2C from April 1, 1990 until June 30, 1990, due to construction delays primarily caused by weather conditions. 3M also requests that two oxidizers, rather than one, be installed. The Illinois Environmental Protection Agency ("Agency") recommends granting the requested modification and extension of the variance granted in PCB 88-14.

Procedural History

In response to 3M's petition of April 2, 1990, the matter was accepted for hearing by Board Order of April 12, 1990. On April 23, 1990, 3M filed a motion to supplement its petition. The Board granted the motion on May 10, 1990, and construed the filing as an amended petition, consistent with other Board decisions, as cited in the May 10, 1990 Order. On May 3, 1990, the Agency filed its recommendation in favor of granting the requested extension. Hearing was held on June 1, 1990. At hearing, the parties indicated that no briefs would be filed.

Background

In PCB 88-14, 3M sought a variance from volatile organic material ("VOM") emissions limitations of 35 Ill. Adm. Code 215.204(c) and 215.207, as they applied to ten (10) production lines at 3M's tape manufacturing plant in Bedford Park, Cook County, Illinois. 3M's compliance status was adversely affected when the Board's RACT III regulations changed the basis for internal offsets from a volume-based to a solids-based calculation. 3M's allowable VOM emissions were previously about 13,000 tons per year and its actual emissions were about 9,000 tons. RACT III reduced 3M's allowable emissions to about 8,000 tons per year. On January 11, 1988, 3M filed a variance petition in PCB 88-14 to allow time to implement a compliance plan that would result in emissions of about 4,000 to 5,000 tons per year. On February 2, 1989, the Board granted the variance, with conditions, effective from December 24, 1987 until April 1, 1989. See Minnesota Mining and Manufacturing Company v. IEPA, PCB 88-14, 96 PCB 13, (Feb. 2, 1989).

On May 11, 1989, the Board modified the Order of February 2, 1989 by including a new subparagraph (c) regarding lines 2H and 3H, which produce masking tape. The Board reissued the Order in PCB 88-14, as reproduced below in pertinent part. Condition 2C, below, is the subject of 3M's petition in this proceeding, PCB 90-45. At hearing, the parties also agreed that Conditions 1, 2 a/b, 3, 4, 5, and 6, below, would remain in effect.

The pertinent terms and conditions of the Board's grant of variance in PCB 88-14, as modified by Order of May 11, 1989, are as follows:

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.
 - c. However, nothing in this Order shall be construed to require that lines 2H and 3H achieve line-by-line compliance with the 2.9 lbs VOM/gallon limitation using the formulas contained in Section 215.207 until April 1, 1990 by which time 3M shall install a single thermal oxidizer to control solvent not trapped by the carbon absorbers on lines 2H and 3H and to act as a backup when the solvent recovery units are down for maintenance.
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. [IEPA addresses deleted]
 - 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...a Certificate of Acceptance and Agreement of this variance...

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IEPA, PCB 88-14, 99 PCB 15, May 11, 1989.

Discussion

The additional two months extension does not involve any non-compliance by 3M with the Board's emissions regulations. 3M noted in its petition that allowable emissions for 1989 were 1,856 tons, compared with 1,732 tons of actual emissions for line 2H. Similarly, allowable emissions for 1989 were 2,333 tons, compared with 1,871 tons of actual emissions for line 3H. Pet. at p. 4. 3M anticipates that the oxidizers, which cost approximately \$2.85 million, will cause an emissions reduction of 2,600 tons per year. Pet. at p. 6. However, 3M's current compliance is not at risk because of the unanticipated delays. Rather, 3M summarized its current compliance as follows:

3M wishes to make its present compliance status clear to the Board. 3M operates ten coating lines pursuant to an air operating permit which allows compliance to be determined according to 35 Ill. Adm. Code 215.207. Pursuant to that rule compliance is achieved by demonstrating that the actual emissions from the ten lines are less than or equal to the combined allowable emissions as determined by a specified equation. Thus, while lines 2H and 3H may not comply with the 2.9 lb/gal limitation of 35 Ill. Adm. Code 205.204(c)(1) at all times, overall emissions are in compliance. After installation of the oxidizers, all of the ten lines will be in line by line compliance.

Pet. at pp. 3, 4.

Compliance with Condition 2C

3M contracted on June 22, 1989 to install two thermal oxidizers on lines 2H and 3H by April 1, 1990. 3M asserts that two separate oxidizers would be more efficient and economical and would maintain pollution control during repairs. Pet. at p. 5. Thus, without sacrificing efficiency, 3M expected cost savings from modifying the planned installation. However, since Condition 2C specified a single oxidizer, 3M would not be in compliance.

Delays in completing the installation were caused by severe cold weather and heavy rains. Both the availability and efficiency of workers, as well as the ability to maneuver equipment, were adversely impacted. The result is that 3M missed

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the April 1, 1990 deadline. The contractor supplied a letter as to the unavoidable delays and the particular reasons for delay, as part of 3M's amended petition of April 23, 1990. The amended petition was also supported with an affidavit of 3M's Principal Project Engineer, Mr. William Pothen.

At the hearing held on June 1, 1990, an environmental engineer with 3M, Mr. William Patrick Thiel, testified as to the progress made towards compliance with Condition 2C. The witness described the installation process in detail. As of June 1, 1990, both oxidizers were completely constructed and the duct work connections between the oxidizers and the lines were being completed. For line 3H, the duct work was completed, and by June 6, 1990, it was expected to be in full use on the production line. For line 2H, the duct work was expected to be completed by June 8, 1990, with the line to be back in service on June 11, 1990. Mr. Thiel testified that no problems could be foreseen with meeting the June 30, 1990 deadline. He also agreed that Conditions 1, 2 a/b, 3, 4, 5 and 6 (primarily reporting requirements) would continue to be met.

Hardship

In light of the unforeseen construction delays experienced by 3M, to require compliance with the April 1, 1990 deadline would constitute an arbitrary and unreasonable hardship. The Board is persuaded that the hardship was not self-imposed. The record indicates that the contractor and 3M personnel worked overtime but could not overcome the delays.

Environmental Impact

No adverse environmental impact can be shown from 3M's non-compliance with Condition 2C since 3M is in compliance with the allowable emissions levels. The anticipated reduced emissions attributable to the thermal oxidizers is not required under the current regulatory framework.

Consistency with Federal Law

Section 205.207 has not yet been federally approved as part of the Illinois State Implementation Plan ("SIP"). The Agency believes that the proposed variance is not required to be submitted to USEPA for federal approval, but that it would be approvable as a SIP revision should Section 215.207 be approved as part of the Illinois SIP. Both the Agency and 3M believe that the proposed variance is consistent with federal law, in particular, the provisions of the Clean Air Act, 42 USCA, par. 7401 et seq. (1983).

Conclusion

The Board finds that the variance should be extended and modified to allow 3M time to complete the installation of two thermal oxidizers on line 2H and line 3H at the Bedford Park facility by June 30, 1990.

This Opinion constitutes the Board's finding of facts and conclusions of law in this matter.

ORDER

The Board hereby grants the Minnesota Mining and Manufacturing Company ("3M") a modification and extension of the terms and conditions of the variance granted in PCB 88-14 by Board Order of February 2, 1989, and modified by Board Order of May 11, 1989, pursuant to 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" process 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.
 - c. However, nothing in this Order shall be construed to require that lines 2H and 3H achieve line-by-line compliance with the 2.9 lbs. VOM/gallon limitation using the formulas contained in Section 215.207 until June 30, 1990 by which time 3M shall install two thermal oxidizers to control solvent not trapped by the carbon absorbers on lines 2H and 3H and to act as a backup when the solvent recovery units are down for maintenance.

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 90-14, dated July 19, 1990, 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

Section 41 of the Environmental Protection Act, Ill. Rev. Stat. 1989, ch. 111½, par. 1041, provides for appeal of final Orders of the Board within 35 days. The Rules of the Supreme Court of Illinois establish filing requirements.

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 19th day of July, 1989, by a vote of 5-0.

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