ILLINOIS POLLUTION CONTROL BOARD
February 19, 1987

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| DEERE AND COMPANY, (Plow and Planter Works), | ) | |
| Petitioner, | ) | |
| v. | ) | PCB 86-162 |
| ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, | ) | |
| Respondent. | ) | |

JEFFREY C. FORT, MARTIN CRAIG, CHESTER & SONNENSCHEIN, AND ELIZABETH O. SHAW, DEERE & COMPANY, APPEARED ON BEHALF OF PETITIONER.

WILLIAM D. INGERSOLL, ESQ., APPEARED ON BEHALF OF THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY.

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

This matter comes before the Board on the October 2, 1986 petition for variance and October 31, 1986 amended petition for variance filed by Deere & Company ("Deere"). Deere seeks variance from the requirements of 35 Ill. Adm. Code 215.204(k), 215.211(b) and 215.212(c)* for three flowcoaters located at its Plow and Planter Works in Moline, Illinois. The variance is requested for such time necessary for the Board to rule favorably on a request for a site-specific rule change (R87-1) or 18 months from the date of denial of such request. The Illinois Environmental Protection Agency ("Agency") filed its recommendation that variance be granted for a period of three and one-half years, subject to conditions, on December 22, 1986. Hearing was held on January 8, 1987 in Moline, Illinois.

Petitioner's facility is located on a narrow strip of land of 81 acres located between the Mississippi River and Third Avenue in Moline, Rock Island County, Illinois. The factory currently employs approximately 1300 persons. In the future, products manufactured at the Plow & Planter facility will consist of planters, hydraulic components and hardware. The facility currently has seven valid operating permits granted by the Agency. However, by the end of December 1987 only two paint

*Although the petition requests relief from 215.212(b), this is apparently a typographical error.

systems will remain at the facility; these are designated Department 62 and Department 88. Pet. at 2. Department 62 contains the three flowcoaters at issue in this variance; they are specifically referred to as the "green prime", "green topcoat" and "yellow topcoat" flowcoaters. Pet. at 1.

Paint systems in Department 62 share a common pre-paint washer and a common paint drying oven at 180° F. Parts to be painted green are routed through the green primer flowcoat unit, then to the paint drying oven. From the oven the parts are routed through the green finish coat flowcoat unit and thence back through the drying oven. Parts to be painted yellow pass through a yellow paint flowcoat and are dried in the common oven. Parts to be painted black are either routed to a black flowcoat unit and dried in the common oven or to a small black dip tank and dried in a separate oven. Under the variance, the green and yellow flowcoaters would continue to utilize solvent-based paints with solvent added for viscosity control. By December 31, 1987 the black flowcoater and black dip tank will have been converted to water-borne paints. Pet. at 3. The VOM emissions from the painting operations at the facility are exhausted through stacks to the atmosphere.

35 Ill. Adm. Code 215.204(k) provides for a limitation of 3.5 pounds of volatile organic matter per gallon (lb VOM/gal) for prime coating and 4.3 lb VOM/gal for the top coat. Section 215.211(b) requires compliance by December 31, 1987 and Section 215.212(c) requires submission of a compliance plan by December 31, 1986. Emissions from the three flowcoat operations at the Plow and Planter facility range from 5.1 to 5.9 pounds VOM per gallon of paint as applied. Based on these figures, Deere has calculated that its actual emissions are 91.7 tons VOM per year and its allowable emissions are 18.9 tons VOM per year for a total excess emissions of approximately 73 tons VOM per year. Pet. at 5.

Rock Island County is designated as an attainment area for ozone. The closest non-attainment areas are Chicago at 160 miles to the east and the St. Louis Metro-East (Illinois) area at 210 miles to the south. An ambient air monitor for ozone is located less than two miles east of Petitioner's facility. No violation of the ambient air quality standard for ozone has been recorded by this monitor since 1983. Rec. at 2. The Agency states that the nearest residence is located approximately one-fourth mile south of the main production and painting areas of the facility and that emissions from the facility have a detectable solvent odor. However, the Agency has no odor complaints on record. Rec. at 2.

Deere states that it has been unable to develop compliant coatings suitable for the flowcoaters in question. Deere states that the lowest cost option for achieving compliance is the

elimination of the flowcoaters and their replacement with alternate technology. Incineration and carbon adsorption were both rejected as more expensive than this approach. The cost of eliminating and replacing the flowcoaters is stated to be $1,526,700 in capital and $75,000 in annual operating and maintenance to achieve a reduction of 73 tons of VOM emissions annually. This translates into an annualized cost of $5,617 per ton. The Agency did not strenuously object to the computation of this figure but did note that the 17.5% interest rate upon which the computation was made is much too high in today's economy. The Agency stated that nonetheless, even using a lower interest rate the cost per ton would appear to be unreasonable. Rec. at 3. Deere submits that implementation of this alternative, which it considers its best option, does not constitute reasonably available control technology (RACT). Consequently, Deere is pursuing site-specific regulatory relief in R87-1. Deere asserts that it would impose an arbitrary or unreasonable hardship to require compliance while it pursues regulatory relief. However, should the relief be denied, Deere has developed a technically feasible compliance plan which is capable of being fully implemented within eighteen (18) months.

Deere states that it has investigated many alternatives in an attempt to find a practicable solution to VOM compliance including the use of:

1. water-borne paint in flowcoaters
2. fume incineration
3. exempt solids
4. powder coating
5. electro-deposition
6. high solids net spray
7. water-borne dip

Each of these options was rejected, however, for reasons of appearance, performance, technical feasibility or economic reasonableness. See Pet. at 7-10.

Environmental Impact

Deere states that any environmental impact will be minimal since there will be no increase in emissions over historical levels. In fact, as a result of using water-borne and high solids paints where feasible, there will be an absolute decrease in emissions. In this regard, Deere notes that by December 31, 1987 all existing systems except the green prime, green topcoat

and yellow topcoat flowcoaters in Department 62 will have been eliminated or switched to compliant coatings.

Moreover, Deere noted at hearing that emissions at the facility have dropped from approximately 900 tons in 1980 to a projected level of 91 tons for 1987. This is approximately a 90% redution in emission levels. R. at 14. Two other Deere facilities in the Quad-City area have also experienced significant drops in VOM emissions. One facility experienced a drop in emission levels from 990 tons in 1983 to approximately 420 tons projected for 1987 for a 58% to 60% reduction; the other has dropped from 1979 levels of 84 tons to 60 tons in 1986 for a 21% reduction. R. at 16-17. Overall, Deere estimates that a total 1,400 ton reduction in VOM emissions occurred over the 1980 to 1987 time period in its facilities alone in the Quad-Cities area. R. at 17.

Deere also noted that other VOM emission sources in the area have been closed or are projected to close shortly. These include: the International Harvester Farmall Tractor Plant, the American Air Filter facility, the Case International Rock Island facility and the Case International Bettendorf facility. R. at 20.

The Agency stated at hearing that this evidence coupled with the monitored data concerning ozone in the area indicates that the level of excess emissions that would be allowed by the granting of the variance would not adversely impact air quality in the Quad-Cities area and would not jeopardize the maintenance of the National Ambient Air Quality Standard for ozone. R. at 33.

The Board notes that both Petitioner and the Agency are careful to point out that the closest non-attainment areas are 160 miles east (Chicago) and 210 miles south (East St. Louis). Rec. at 2, Pet. at 2. While the Board is appreciative of the difficulties associated with determining the potential for ozone transport, it does not believe that such recitations demonstrate that transport is <u>not</u> occurring. However, since Deere has been successful in reducing VOM emissions by approximately 1400 tons over all its facilities in the Quad-Cities area over a seven year period, and at this facility from 900 tons per year to 91 tons per year. The Board finds that any environmental impact will be minimal. The Board finds that in light of the costs to Petitioner and the minimal environmental impact associated with granting the relief requested, that denial of the variance would constitute an arbitrary or unreasonable hardship. Accordingly, the Board will grant variance subject to conditions as suggested by the Agency.

ORDER

Deere & Company is hereby granted a variance from 35 Ill. Adm. Code Sections 215.211(b), 215.212(c), and 215.204(k) for its green prime, green topcoat and yellow topcoat flowcoaters at its Plow and Planter works in Moline, Illinois, subject to the following conditions:

1. This variance shall expire on August 19, 1990;

2. Painting operations in Department No. 05 shall be discontinued;

3. Painting operations in Department No. 07, 40, 44, and 75 shall be discontinued by December 31, 1987;

4. Painting operations in Department No. 88 shall comply with 35 Ill. Adm. Code Section 215.204(k) by December 31, 1987;

5. Painting operations in Department No. 62 shall comply with the following limitations by December 31, 1987:

   a. Black topcoater flowcoater shall comply with Section 215.204(k);

   b. Black dip tank shall comply with Section 215.204(k);

   c. Green prime flowcoater shall not emit more than 5.8 lb VOM/gal of coating (annual average basis), less water, delivered to the coating applicator;

   d. Green topcoat flowcoater shall not emit more than 5.9 lb/ VOM/gal of coating (annual average basis), less water, delivered to the coating applicator;

   e. Yellow topcoat flowcoater shall not emit more than 5.1 lb VOM/gal of coating (annual average basis), less water, delivered to the coating applicator;

6. Petitioner shall submit reports to the Agency, Division of Air Pollution Control, 5415 North University, Peoria, Illinois, every three months reporting paint (including VOM content) and solvent usage during the previous three months;

7. Petitioner shall begin the compliance project schedule contained in the amended petition in this matter dated October 31, 1986 and attached to this Order no later than two years from the date of this variance order and shall be in compliance by August 19, 1990; and

8. Within forty-five (45) days after the date of variance order, Petitioner shall execute a certification of acceptance of this variance by which it agrees to be bound by its terms and conditions. Such certification shall be sent to the Agency's attorney of record. This forty-five (45) day period shall be held in abeyance for any period during which this matter is appealed. The form of the certification shall be substantially as follows:

CERTIFICATION

I, (We) _____, hereby accept and agree to be bound by all terms and conditions of the Order of the Illinois Pollution Control Board in PCB 86-162, dated February 19, 1987.

_____
Petitioner

_____
By: Authorized Agent

_____
Title

_____
Date

IT IS SO ORDERED.

Board Member B. Forcade concurred.

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 February, 1987, by a vote of 6-0.

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