

ILLINOIS POLLUTION CONTROL BOARD
November 3, 1988

IN THE MATTER OF:)
)
THE PETITION OF JOHN DEERE)
HARVESTER-MOLINE (FORMERLY) R87-1
PLOW & PLANTER) WORKS OF)
DEERE & COMPANY)

ADOPTED RULE. FINAL ORDER.

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

This matter is before the Board on a petition for amendment to regulations filed by John Deere Harvester-Moline (formerly Plow and Planter) Works of Deere & Company (herein Deere) on December 23, 1986. Deere's petition seeks to add a new section to 35 Ill. Adm. Code 215, which imposes organic material emission standards and limitations. Specifically, the petition requests that Deere's Harvester-Moline Works be exempted from 35 Ill. Adm. Code 215.204(k), which sets a limit of 3.5-4.8 pounds per gallon (lb/gal) on volatile organic material (VOM) emissions from the coating of heavy off-highway vehicles. Deere asks that its existing green and yellow flocoating operations be allowed to emit up to a weekly average of 6.2 lb/gal.

A merit hearing on this proposal was held on October 28, 1987 in Moline, Illinois. The Illinois Environmental Protection Agency (Agency) appeared at the hearing but did not comment or state its position on the proposal. On February 4, 1988 the Department of Energy and Natural Resources (DENR) filed a negative declaration, setting forth its determination that the preparation of a formal economic impact study is not necessary in this proceeding. The negative declaration was based upon DENR's finding that the cost of making a formal study is economically unreasonable in relation to the value of the study to the Board in determining any adverse economic impact of the proposed regulation. On March 17, 1988 the Board received notification that the Economic and Technical Advisory Committee (ETAC) concurred in DENR's negative declaration.

On May 19, 1988, the Board proposed the requested rule for First Notice. The proposed rule was published in the Illinois Register on June 10, 1988, at 12 Ill. Reg. 9787.

The Board received only one public comment after the June 10 publication of the proposed rule. The Department of Commerce and Community Affairs filed a comment on July 22, 1988 which stated that the proposed rule would have no effect on small businesses regulated by the rule. The Board notes that this rule applies

only to Deere's Harvester-Moline Works in Moline, Illinois.

On September 8, 1988, the Board proposed the rule for Second Notice. The rule proposed for Second Notice was unchanged from the May 19 version. On October 19, 1988 the Joint Committee on Administrative Rules (JCAR) filed its Certification of No Objection to the rule. To satisfy JCAR's concerns, the Board has agreed to update the authority note and correct the table of contents. The actual text of the rule adopted today is unchanged from the version which was proposed by the Board on May 19, 1988.

Background

Deere's Harvester-Moline facility is located on a narrow strip of land located between the Mississippi River and Third Avenue in Moline, Rock Island County, Illinois. Harvester-Moline employs approximately 1,300 people and produces planters and hydraulic components and hardware for equipment manufactured at other Deere facilities. Most of the product coating at Harvester-Moline is done by flocoating. This process floods a part with paint as it passes through the painting chamber. The excess paint is then recovered and used again. Deere states that flocoating is particularly well-suited to painting the products manufactured at Harvester-Moline. (Transcript of October 28, 1988 hearing (R.) 10-11, 20-21.)

The three flocoating lines which are the subject of this petition are commonly referred to as the "green prime", "green topcoat" and "gallon topcoat" flocoaters. (Ex. 1.) 35 Ill. Adm. Code 215.204(k)(2) provides for a limit of 3.5 lb/gal for prime coating and 4.3 lb/gal for the top coat. Long-term VOM emissions from these three lines vary from 5.1 to 5.9 pounds per gallon of paint as applied. (R. 11.) Based on these figures, the actual emissions from Harvester-Moline are 91.7 tons VOM per year, while allowable emissions are 18.9 tons VOM per year. This results in excess emissions of approximately 73 tons VOM per year. This excess is entirely the result of emissions from the green and yellow flocoat operations. (Ex. 1.) Harvester-Moline is currently operating under a variance granted by the Board on February 19, 1987, in PCB 86-162. That variance, which expires on August 19, 1990, allows the green prime flocoater to emit up to 5.8 lb/gal on an annual average basis. The green topcoat flocoater is limited to 5.9 lb/gal (annual average basis), while the yellow topcoat line is limited to 5.1 lb/gal. (Ex. 4 at p. 5.)

Rock Island County, where Harvester-Moline is located, is designated as an attainment area for ozone. The closest non-attainment areas are Chicago, 160 miles to the east, and the St. Louis (Illinois) metropolitan area, 210 miles to the south. An ambient air monitor for ozone is located approximately two miles east of Harvester-Moline. No violation of the ozone standard has

been recorded at this site since 1983. Deere has also provided monitoring information from Rockford, Elgin, and Cary, Illinois, and from Beloit and Madison, Wisconsin. Except for one occurrence at Cary in 1987, none of these stations has shown any violation of the zone standard since at least 1984. (R. 15-16; Ex. 5, Attachment B.)

Proposal and Justification

Deere asks that the existing green and yellow floccating operations at Harvester-Moline be allowed to emit up to a weekly average of 6.2 lb/gal. As noted above, these three floccating lines are currently allowed to emit between 5.1 and 5.9 lb/gal (annual average basis) under the terms of the variance. At hearing, John Smith, a Deere engineer, testified that Deere is requesting a slightly higher limitation of 6.2 lbs/gal in order to allow for the variation in the amount of painting done from day to day. Mr. Smith stated that the major coating of concern is the 5.9 lb/gal coating, and that the request for 6.2 lb/gal seeks to allow a reasonable margin for the variation in production which results in a fluctuation in the amount of solvent added on a given day. (R. 19-20.) A similar explanation was given for the request that the limitation be based on a weekly average. Mr. Smith pointed to the day-to-day variation in operation of the floccating system, and stated that even with automatic viscosity control, there is not a uniform rate of application because of the varying size and surface area of the parts to be painted. Mr. Smith further testified that solvent addition varies from day to day, and that some solvent loss occurs over the weekend and during the weekly cleanup. Finally, Mr. Smith noted that the Board granted a weekly limitation to the National Can Corporation in R85-28. That regulation is found at 35 Ill. Adm. Code 215.206(a)(3). (R. 18-19.)

Deere believes that its proposed rule is justified for three reasons. First, Deere maintains that the cost of meeting the VOM standard of 35 Ill. Adm. Code 215.204(k) at the Harvester-Moline facility is far above what can be considered reasonably available control technology (RACT). Deere states that it has been unable to develop compliant coatings suitable for these floccaters, despite an intensive effort to do so. (See generally R. 27-31; Ex. 1; Ex. 8, pp. B1-B15.) Deere has evaluated three compliance options and contends that the lowest cost option is the elimination of the floccaters and the installation of a new indexing dip system. The capital costs of this system are estimated at \$1,526,700 and annual operating costs are estimated at \$75,000. (R. 12; Ex. 8.) Given that compliance would serve to abate the excess 73 tons of VOM emitted annually by Harvester-Moline, Deere calculates that the annual abatement cost per ton would be \$5,617. Deere points out that in the economic impact study (EcIS) prepared by the Illinois Institute of Natural Resources in May 1981 for the RACT II proceedings before this

Board, abatement costs for surface coatings for miscellaneous metal parts in attainment areas were projected at \$1,032 per ton. (R. 12). During the previous variance proceeding, both the Agency and the Board noted that these costs per ton were figured using the 17 percent interest rate used in the RACT II EcIS. While maintaining that it is appropriate to use the same baseline in order to compare the relative cost for Harvester-Moline to the expected norm, at the hearing in this regulatory proceeding Deere provided a calculation of abatement cost using a nine percent interest rate. This calculation resulted in a cost of \$4,298 per ton. (R. 13; Ex. 5, Attachment A.) Regardless of which figure is used for Harvester-Moline facility, Deere contends that the cost per ton is clearly beyond RACT costs envisioned by the Board when establishing these regulations. In sum, Deere insists that although compliance is technologically feasible, such compliance is economically unreasonable, given the small amount of its VOM emissions.*

The second reason Deere believes that the proposed site-specific rule is justified is that there is no requirement for the imposition of RACT because Harvester-Moline is located in an attainment area. Deere points out that the level of VOM emissions from Harvester-Moline has been significantly reduced, from 916 tons in 1980 to 91.7 tons in 1987. This is a reduction of approximately 90 percent. (R. 17; Ex. 2, p. 14; Ex. 3.) In addition to these reductions, overall VOM emissions in Rock Island County have been further reduced because other emitters have shut down or moved out of state. In addition to the 825 tons of reductions from Harvester-Moline, two other John Deere facilities in the area reduced VOM emissions by 588 tons, and the closing of six other manufacturing facilities reduced emissions by approximately 918 tons. (R. 17, 31-36; Ex. 3.) Deere also maintains that the Harvester-Moline facility is no longer a "major stationary source" as that term is defined for purposes of RACT controls under the Clean Air Act, since the maximum expected emissions are under 100 tons. (R. 18.)

Third, Deere contends that the VOM emissions from the Harvester Moline facility do not cause or contribute to any adverse effect upon air quality. As set forth above, Deere introduced monitoring data from monitoring stations in Moline and other Illinois and Wisconsin cities. Except for one occurrence

*Deere has also provided cost estimates for an electrodeposition dip paint system (E-coat) and for incineration. The total first year cost estimate (capital expense plus operating cost) for the E-coat system is \$2,808,700, and the estimate for incineration is \$3,900,334. While the Board believes that the incineration estimate may be high, even a more conservative estimate would not be less expensive than the indexing dip system. (Ex. 8.)

at Cary, Illinois in 1987, none of the stations have recorded any violation of the ozone standard since at least 1984. (R. 16; Ex. 5, Attachment B.) Deere reiterates that the facility is located in an attainment area and is 160-210 miles away from the nearest non-attainment areas. Taken together, Deere submits that this evidence demonstrates that emissions from Harvester-Moline do not cause or contribute to any occurrence of the ozone standard.

Conclusion

The Board finds that although technologically feasible, compliance with 35 Ill. Adm. Code 215.204(k) is not economically reasonable for Deere's Harvester-Moline facility. The Board is also convinced that any environmental impact of the proposed regulation will be minimal. These findings are based upon the relatively small amount of excess VOM emissions from Harvester-Moline (73 tons per year) measured against the cost of installing either a new painting system or add-on control technology. It should be pointed out that the fact that the facility is located 160-210 miles from the nearest non-attainment areas does not demonstrate that ozone transport is not occurring. The Board is appreciative of the difficulties associated with determining the potential for such transport, however. The Board also notes that the Moline-Rock Island area is economically troubled with at least six major plant closings in the 1980s. Ironically, these plant closings have aided Deere's case for the proposed regulation, since VOM emissions in the area have been drastically reduced. Additionally, the Board notes that even if the proposed rule is adopted, the Harvester-Moline facility is expected to emit less than 100 tons of VOM per year. Thus, the facility is apparently not subject to the imposition of RACT because it is no longer a major stationary source. For these reasons, the Board finds that under the specific circumstances of this case, compliance with 35 Ill. Adm. Code 215.204(k) is not economically reasonable for the existing green and yellow flocoating operations at Deere's Harvester Moline facility. The Board will adopt the requested regulation. However, the regulation will be added as a new subsection of 35 Ill. Adm. Code 215.206 "Exemptions from Emission Limitations", instead of as a new section as suggested by Deere. This will allow all exemptions from Subpart F "Coating Operations" to be found in one place.

ORDER

The Board hereby adopts, as final, the following amendments to be filed with the Secretary of State.

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

- 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.

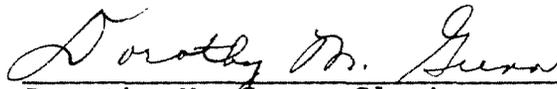
c) Notwithstanding the limitations of Section 215.204(k)(2), the John Deere Harvester-Moline Works of Deere & Company, Moline, Illinois, shall not cause or permit the emission of volatile organic material from its existing green and yellow floccating operations to exceed a weekly average of 6.2 lb/gal.

(Source: Amended at 12 Ill. Reg. _____, effective _____)

IT IS SO ORDERED.

R. Flemal was not present.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Proposed Opinion and Order was adopted on the 3rd day of November, 1988, by a vote of 6-0.



Dorothy M. Gunn, Clerk
Illinois Pollution Control Board