

ILLINOIS POLLUTION CONTROL BOARD
January 29, 1976

DE SOTO, INC.,)
)
 Petitioner,)
)
 v.) PCB 75-449
)
 ENVIRONMENTAL PROTECTION AGENCY,)
)
 Respondent.)

OPINION AND ORDER OF THE BOARD (by Mr. Zeitlin):

Petitioner De Soto, Inc. (DeSoto) seeks a Variance to permit continuing mercury discharges which exceed the limitations set in Rules 702 of Chapter 3: Water Pollution, of the Pollution Control Board (Board) Rules and Regulations. PCB Regs., Ch. 3, Rule 702. Rule 702 sets a sewer discharge criteria for mercury of 0.0005 mg/l; DeSoto estimates that its mercury discharges to Bloom Township Sanitary District sewers during the period from October, 1975 until October, 1976 will range from an initial level of 12 parts per billion (ppb) to a final level of less than 1 ppb.

DeSoto's Petition for Variance was filed on November 21, 1975. A Recommendation was received from the Environmental Protection Agency (Agency) on January 2, 1976. No hearing was held in this matter.

DeSoto operates a paint manufacturing plant in Chicago Heights, Illinois. Prior to 1973, DeSoto used phenyl mercurial preservatives in its latex paint to prevent the growth of bacteria and to prevent product spoilage. After conducting a research and development program aimed at substituting non-mercurial compounds as a preservative, DeSoto was able to eliminate the use of mercury preservatives in its paints after January 1, 1973. In early 1975, however, DeSoto received reports of latex paint cans bulging in retail stores. Tests at that time confirmed the presence of bacteria known to generate gaseous byproducts. Various attempts to eliminate that bacteria failed. As a result, DeSoto resumed the use of phenyl mercurial preservatives and reported that fact to the Agency on May 9, 1975.

On July 18, 1975, in a previous case, DeSoto filed a Petition for Variance from Rule 702 regarding the use of those preservatives. On October 9, 1975, the Board issued a final Opinion and Order in that case, denying the Variance for lack of a compliance plan. DeSoto, Inc. v. Environmental Protection Agency, PCB 75-277 (October 9, 1975).

Previous to the Board's decision in PCB 75-277, however, on September 2, 1975, DeSoto discontinued the use of phenyl mercurial preservatives in its latex paint and began using a new formulation of Dowcil and formaldehyde as a preservative. As a result of its 1975 use of phenyl mercuric preservatives, Petitioner now has one-quarter pound of mercury in its wastewater treatment facilities at the Chicago Heights plant. This mercury residue in a three-stage biological lagoon system, containing approximately 2 million gallons of wastewater, results in a concentration in the system of approximately 12 ppb mercury compounds.

The compliance plan in the instant case amounts to a reduction of effluent mercury concentration from the lagoon system by dilution of those mercury-containing wastewaters with other plant waste streams. Even with that dilution, DeSoto states that it will be unable to meet the Board's regulation of 0.0005 mg/l in its sewer discharges. DeSoto instead will be able to maintain the mercury concentrations in its final effluent at a level below 5 ppb at all times. During the variance period, as dilution continues, DeSoto estimates that the following mercury concentrations will exist in its lagoon system:

October, 1975	12	ppb
January, 1976	9	ppb
April, 1976	5	ppb
July, 1976	2	ppb
October, 1976	1	ppb

DeSoto's discharges into the Bloom Township Sanitary District sewers represent less than 1% of the effluent received by that sanitary district. Bloom Township Sanitary District discharges an average flow of 9.11 million gallons per day to Thorn Creek; DeSoto alleges that its mercury discharges will have a minimal, and virtually undetectable effect on the receiving stream.

The Agency agrees with DeSoto's analysis of the impact its mercury discharges will have on the Bloom Township Sanitary District effluent. Agency investigations have shown no detectable concentrations of mercury in the Sanitary District's effluent. Based on that fact, and the Agency's further agreement with DeSoto that there is no known technically feasible method for removing mercury at such low levels from DeSoto's effluent, the Agency recommends that the Variance be granted. The Agency recommends, however, that as the concentration of mercury in DeSoto's lagoon system decreases, the concentrations of mercury in DeSoto's effluent should also be decreased proportionately. We agree. Based on the table above, there is no reason why DeSoto should be allowed to discharge 0.005 mg/l throughout the Variance period. As the concentration in the lagoon system decreases, it should be possible for DeSoto to meet the following discharge levels:

October, 1975	- January 31, 1976	0.005 mg/l
February 1, 1976	- April 30, 1976	0.004 mg/l
May 1, 1976	- July 31, 1976	0.003 mg/l
August 1, 1976	- October 15, 1976	0.001 mg/l
October 16, 1976		0.0005 mg/l

As additional conditions to this Variance, we will require that DeSoto sample its final effluent at least once per week, and report on those analyses to the Agency on a monthly basis. The Variance will also be conditioned on a continuation of the research and study program outlined in DeSoto's Petition. DeSoto states that it has already spent \$350,000 on the research and study of non-mercurial biocides, and intends to spend an additional \$50,000 on such studies during the next year. To assure ourselves that this situation will not be repeated, we shall require that DeSoto continue with this program.

ORDER

IT IS THE ORDER OF THE POLLUTION CONTROL BOARD that:

1. Petitioner DeSoto, Inc. is granted a Variance from Rule 702, Chapter 3: Water Pollution, for the period of November 21, 1975, until October 16, 1976, subject to the following conditions:

a. DeSoto's total discharge of mercury during the Variance period shall not exceed one-quarter pound.

b. The average concentrations of mercury in DeSoto's final effluent shall not exceed the following levels:

October, 1975	- January 31, 1976	0.005 mg/l
February 1, 1976	- April 30, 1976	0.004 mg/l
May 1, 1976	- July 31, 1976	0.003 mg/l
August 1, 1976	- October 15, 1976	0.001 mg/l
October 16, 1976		0.0005 mg/l

c. DeSoto shall sample its final effluent at least once per week, and shall report on the results of such sampling to the Environmental Protection Agency and to the Bloom Township Sanitary District on a monthly basis.

d. DeSoto shall continue its research and development program to assure the efficacy of non-mercurial preservatives.

2. Within thirty (30) days of the date of this Order DeSoto shall execute and forward to the Manager, Variance Section, Division of Water Pollution Control, Illinois Environmental Protection Agency, 2200 Churchill Road, Springfield, Illinois 62706, a certificate of acceptance in the following form:

I, (We), _____ having read the Order of the Illinois Pollution Control Board in case No. PCB 75-449, understand and accept said Order, realizing that such acceptance renders all terms and conditions thereto binding and enforceable.

SIGNED

TITLE

DATE

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order were adopted on the 29th day of January, 1976 by a vote of 5-0.



Christan L. Moffett, Clerk
Illinois Pollution Control Board