

ILLINOIS POLLUTION CONTROL BOARD  
February 6, 1975

NYCO PRODUCTS COMPANY	)	
	)	
Petitioner	)	
	)	
v.	)	PCB 74-414
	)	
ENVIRONMENTAL PROTECTION AGENCY	)	
	)	
Respondent	)	

OPINION & ORDER of the Board (by Mr. Zeitlin)

The Petition for Variance filed by Nyco Products Company (Nyco) on November 7, 1974, seeks relief from the standards of Rule 702(a) of Chapter 3 of the Board's Water Pollution Regulations regarding mercury discharge into a public sewer system. Nyco states that it cannot comply with the 0.0005 mg/1 as Hg standard under that rule.

Nyco is a small manufacturer and compounder of chemical specialties. The Nyco Plant is located at 3021 W. 36th Street, in Chicago. Its manufacturing processes generate an average of 1,200 gallons of wastewater daily, which is discharged into sewers tributary to the Metropolitan Sanitary District of Greater Chicago (MSDGC) West-Southwest Treatment Plant. Sampling done by MSDGC in 1974 yielded the following evidence of violations of the mercury standards of Rule 702(a) in Nyco's wastewater:

<u>DATE</u>	<u>SAMPLE TYPE</u>	<u>mg/1 as Hg</u>
July 31, 1974	Composite	.0010
Aug. 2, 1974	Grab	.0064
Aug. 6, 1974	Grab	.0028

Nyco admits to such violations of the mercury standards, and included the MSDGC sample results as a part of its Variance Petition. Nyco claims, however, these violations result from factors beyond its control.

Nyco was originally notified by MSDGC that it was in violation of MSDGC pH standards in 1973. As a result, Nyco installed a 2,000 gallon tank for treatment of its waste with caustic soda (sodium hydroxide) as a neutralizing agent. This process tends to add mercury to the effluent, however. As stated in Nyco's Petition, "...by complying with one set of standards, we develop a violation of another set of standards.

Nyco alleges that mercury-free caustic soda is not currently available, a fact which the Agency does not dispute in its Recommendation in this case. The use of mercury in the production of sodium hydroxide (caustic soda) was examined in detail by the Board in Monsanto Company v. EPA, PCB 71-110, November 8, 1971, 3 PCB 9, 10. In that Opinion, the Board acknowledged a growing trend toward the use of mercury cells in sodium hydroxide production, but questioned on environmental grounds the advisability of such a trend. The Board there also noted that only about 38% of this country's sodium hydroxide was expected to be produced by the mercury cell method in 1975. While this would not indicate that mercury-free caustic soda is unavailable, as Nyco alleges, the Board will nevertheless accept Nyco's allegation insofar as the Agency has not alleged otherwise. See also, Sherwin-Williams v. EPA, PCB 72-401, November 21, 1972, 6 PCB 285.

The Agency's Recommendation in this matter was filed on December 13, 1974. The Agency computed that Nyco is discharging approximately 0.25 pound of mercury from its plant each year. The Agency points out that this discharge is not causing the effluent from MSDGC's West-Southwest Treatment Plant to exceed the 0.0005 mg/l effluent standard, even when combined with all other sources tributary to that plant.

The Agency also notes that Nyco has apparently acted in good faith in this matter. Nyco has taken steps to correct other discharge problems pointed out by the MSDGC with regard to hexane solubles and copper, as well as the pH problem which has seemingly led to the difficulty with mercury. The Agency also cited several Sherwin-Williams v. EPA cases where the Board has found sufficient hardship. PCB 74-275, Oct. 10, 1974; PCB 73-367, Nov. 15, 1973, 10 PCB 121; PCB 72-401, Nov. 21, 1972, 6 PCB 285; PCB 71-111, Nov. 11, 1971, 3 PCB 37.

The Agency Recommendation noted, however, that Nyco's Petition did not show a plan of compliance. The Agency felt that Nyco should at least investigate the possibilities of substitution to eliminate the caustic soda usage, or of mercury removal from the wastewater discharge.

At a public hearing held in this matter, on January 8, 1975, the parties determined that there was in fact no dispute between the parties to this matter. Nyco agreed to the Agency's Recommendation. The crux of the Recommendation is an investigation by Nyco into the possibility of using other chemicals for pH treatment, eliminating the need for caustic soda. This has also been previously considered by the Board. Sherwin-Williams v. EPA, PCB 71-111, Nov. 11, 1971, 3 PCB 37,44. Specifically, Nyco will investigate the availability of mercury-free caustic soda, and the possibility of substituting other chemicals for the caustic soda used in pH treatment. Nyco will report the results of such investigation within four months of the grant of this variance, and should that investigation prove fruitful, it will begin a program of substitution no later than six months after the grant of this variance. Further, should initial investigations not prove successful, Nyco shall continue to look for pH treatment methods which will not add to the mercury discharge problem.

This Opinion constitutes the findings of fact and conclusions of law of the Board.

ORDER

IT IS THE ORDER of the Pollution Control Board that:

Petitioner Nyco Products Company is granted a variance from the mercury discharge standards of Rule 702(a) of Chapter 3 of the Board's Water Pollution Regulations for a period of one year from the date of this Order, subject to the following conditions:

1. Petitioner's mercury discharge into sewers tributary to the Metropolitan Sanitary District of Greater Chicago West-Southwest Treatment Plant shall not exceed concentrations of 0.001 mg/l on a monthly average, or 0.007 mg/l for a single sample.

2. Petitioner will investigate the feasibility of substituting other chemicals for caustic soda, or the availability of mercury-free caustic soda for the manufacture and compounding of its products and the neutralization of its wastewater.

3. Petitioner will report the results of that investigation to the Illinois Environmental Protection Agency and the Metropolitan Sanitary District of Greater Chicago within four months of the date of this Order.

4. If such substitution or use of mercury-free caustic soda is seen to be feasible, Petitioner shall implement such substitution or use of mercury-free caustic soda within six months of the date of this Order, and shall notify the Illinois Environmental Protection Agency of its intent to do so.

5. If substitution or the use of mercury-free caustic soda is not feasible, Petitioner shall continue the investigation of methods to remove mercury from its wastewater discharge by filtration or any other means which is economically feasible, and shall report its findings in this matter to the Illinois Environmental Protection Agency and the Metropolitan Sanitary District of Greater Chicago should such a method be found.

I, Christian L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion & Order were adopted on the 6<sup>th</sup> day of February, 1975 by a vote of 4 to 0.

  
Christian L. Moffett, Clerk  
Illinois Pollution Control Board