

ILLINOIS POLLUTION CONTROL BOARD  
March 15, 1979

TEXACO, INC., )  
 )  
 ) Petitioner, )  
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 )  
 ) v. ) PCB 78-306  
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 )  
 ) ENVIRONMENTAL PROTECTION AGENCY, )  
 )  
 ) Respondent. )

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

Petitioner has requested a five year variance from Rule 406 of Chapter 3: Water Pollution. Rule 406 requires a standard of 3.0 mg/l ammonia nitrogen in the effluent from Petitioner's petroleum refinery in Lockport. The Agency has recommended a two year variance. No hearing was held.

The Lockport Refinery has the capacity to process 78,000 barrels of crude oil per day. In 1977 the refinery's wastewater treatment plant discharged an average of 3490 gallons of effluent per minute which was admixed with once through cooling water and discharged to the Chicago Sanitary and Ship Canal. The ammonia nitrogen in the effluent comes from the intake water (also from the canal), the sour-water strippers, and a water degassing drum. The wastewater treatment plant consists of pH control, oil/water separation, equalization, air flotation, activated sludge treatment and sludge disposal. Nitrification has reduced ammonia concentrations to 1.5 mg/l during the warmer months as long as intake ammonia has not increased or malfunctions have been avoided in the strippers or degassing drum. Petitioner suspects that unidentified pollutants have occasionally been toxic to the nitrifying bacteria causing upsets in the system. This system has produced annual average concentrations of ammonia of 5.7 mg/l in 1976, 5.4 mg/l in 1977, and 3.7 mg/l during the first eight months of 1978.

Petitioner intends to improve its system through the addition of a new 100 gpm sour-water stripper and installation of caustic injection facilities to remove ammonia presently not amenable to steam stripping. These improvements will be completed by November, 1979, but Petitioner

will still not be assured of meeting the 3.0 mg/l standard during the colder months or during times of high ammonia intake. Petitioner is proposing to use the remainder of the variance to conduct continued studies of further improvements to meet the standard.

Petitioner contends that the impact of this variance would be minimal since its discharge will contribute only .023 mg/l to the 1977 average of 4.5 mg/l in the canal. Petitioner claims it should not be forced to curtail production to meet a standard which other dischargers are not required to meet (through variances) and which requires treatment better than federally defined best practicable treatment. As interim limitations Petitioner proposes to meet the federal standards in its NPDES permit. These are 184 Kg/day average and 405 Kg/day maximum.

In its Recommendation the Agency points out that the new sour-water stripper will probably not solve the problems experienced during cold weather. The Agency has encouraged Petitioner to explore the possibilities of using waste steam and/or partial enclosure to assist nitrification during cold weather. The Agency feels that two years should allow ample time to complete the planned improvements and prepare a plan for compliance.

The Board agrees that compliance with the 3.0 mg/l standard at this time would constitute arbitrary or unreasonable hardship. Although the costs associated with compliance are not quantified, they would probably be substantial. These costs should not be incurred now when substantial progress has been made and improvement is expected. When these costs are coupled with the fact that Petitioner's discharge will have minimal impact on the receiving stream, they are rendered unreasonable. The Board agrees with the Agency's suggestion that Petitioner should explore the feasibility of heating or enclosing the treatment facilities to enhance nitrification. A similar proposal was made by the Petitioner in Union Oil Company v. EPA, PCB 78-168. That case addressed a problem similar to Petitioner's.

The Board is concerned about Petitioner's emphasis on compliance with Federal standards. These standards are based on an analysis of refinery effluent throughout the country, and do not reflect Petitioner's present capability. The 3.0 mg/l standard is based on a strategy for achievement and maintenance of downstream dissolved oxygen concentrations. The Board will reluctantly accept these standards as an interim measure since it has not been advised of any other alternative.

The Board prefers to limit this variance to two years so that it can remain advised of Petitioner's attempts to resolve this problem. The Agency's recommended date of

February 1, 1980 appears reasonable as a deadline for submission of these plans.

This Opinion constitutes the Board's findings of fact and conclusions of law in this matter.

ORDER

It is the Order of the Pollution Control Board that Petitioner be granted a variance from Rule 406 of Chapter 3: Water Pollution until March 31, 1981 subject to the following conditions:

- 1) The discharge of ammonia nitrogen into the Chicago Sanitary and Ship Canal shall not exceed a daily average of 184 Kilograms/day and daily maximum of 405 Kilograms/day.
- 2) Petitioner shall, no later than February 1, 1980 submit a written technical proposal to the Agency detailing methods to be pursued to eliminate the nitrification problems encountered during cold weather.
- 3) Within 45 days of the date of this Order, Petitioner shall execute and forward to the Illinois Environmental Protection Agency, Variance Section, 2200 Churchill Road, Springfield, Illinois 62706, a Certification of Acceptance and Agreement to be bound to all the terms and conditions of this variance. This 45 day period shall be held in abeyance during any period this matter is appealed. The form of the Certification shall be as follows:

CERTIFICATION

I (We) \_\_\_\_\_, having read and fully understanding the Order in PCB 78-306, hereby accept that Order and agree to be bound by all of its terms and conditions.

SIGNED \_\_\_\_\_

TITLE \_\_\_\_\_

DATE \_\_\_\_\_

The Agency is authorized to modify Petitioner's NPDES permit in a manner consistent with this Order.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order were adopted on the 15<sup>th</sup> day of March 1979 by a vote of 5-0.

Christan L. Moffett  
Christan L. Moffett, Clerk  
Illinois Pollution Control Board