

ILLINOIS POLLUTION CONTROL BOARD  
September 29, 1977

UNION OIL COMPANY OF CALIFORNIA, )  
 )  
Petitioner, )  
 )  
v. ) PCB 77-163  
 )  
ENVIRONMENTAL PROTECTION AGENCY, )  
 )  
Respondent. )  
 )

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

This matter comes before the Board on an amended petition for variance from the requirements of Rule 406 (Ammonia Nitrogen as N) of Chapter 3: Water Pollution of the Board's Rules and Regulations. The Agency has recommended that the variance be granted subject to certain conditions.

Petitioner owns and operates an oil refinery in Lemont, Illinois which discharges to the Chicago Sanitary and Ship Canal. The refinery processes approximately 150,000 barrels of crude oil per day and discharges approximately 3.5 million gallons per day of process wastewater. Ever since Petitioner's wastewater treatment system began operation, it has failed to produce an effluent of 3.0 mg/l ammonia nitrogen as required by Rule 406 even though the system was designed to meet a limit of 2.5 mg/l. The concentration of ammonia nitrogen in Petitioner's effluent has ranged from 3.2 to 37.6 mg/l on the basis of monthly averages from June, 1976 through May 1977.

Petitioner claims that there is no "demonstrated," "practicable," or "available" technology which can bring this facility into compliance with Rule 406. While these claims are relevant to the issue of arbitrary or unreasonable hardship, they cannot cloud the fact that Petitioner must eventually comply with Rule 406.

The Board was faced with a similar situation in the case of Mobil Oil Corporation v. EPA, PCB 77-22 (decided June 9, 1977). In that case the Board granted Mobil a one year variance with interim effluent conditions based upon Mobil's performance. The Board agreed with Mobil and the Agency that although the Des Plaines River (with ammonia levels now at 3.6 to 9.2 mg/l) was not meeting the 1.5 mg/l water quality standard for ammonia, granting a one year variance would not cause significant additional adverse environmental effects. As a further condition Mobil was required to conduct research that could lead to compliance with Rule 406.

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In this case Petitioner has asked for a five year variance. It should be noted that the date for compliance with the 3.0 mg/l standard passed over 33 months ago. This variance shall run for only one year from the date of this Order so that the Board can be advised of Petitioner's success in moving toward compliance.

Petitioner seeks interim effluent limitations based upon the Federal standards for best practicable technology. While these pound limitations are a good indicator of performance throughout the refining industry, they are not based upon the performance of this particular refinery. The Agency has proposed that concentrations based on the average flow at this facility and Petitioner's proposed pound limits be used. Neither approach impresses the Board as an appropriate means to evaluate Petitioner's present ammonia removal capability. The Agency's proposal would require a consistent level of treatment no matter what the flow may be. Petitioner has shown that its performance to date has not been consistent. The Board shall adopt Petitioner's proposal because these are the Federal standards which it must meet anyway and because no better criteria have been presented. The ammonia levels (at 3.5 MGD) would be about 19.7 mg/l for the daily average loading.

The Board finds that it would be unreasonable to order Petitioner to develop a compliance plan in a specified period of time. Instead the Board shall simply order that Petitioner submit bi-monthly reports of its progress to the Agency. These reports should include summaries of Petitioner's research efforts and evaluations of the biological nitrification process including but not limited to biological contactors, the "two-sludge" system, etc. Ammonia stripping should also be investigated.

The Board finds that a one year variance will not have a significant adverse environmental impact on the Chicago Sanitary and Ship Canal since Petitioner will be contributing only 0.057 mg/l over the ammonia levels reported upstream. The dissolved oxygen levels in the Illinois River in the La Grange Pool (a critical area) appear to be at or above Board standards. Since this petition was filed on June 17, 1977 the Board finds that it would be appropriate for this variance to run from July 1, 1977.

Immediate compliance with Rule 406 of Chapter 3: Water Pollution of the Board's Rules and Regulations would impose an arbitrary and unreasonable hardship on Petitioner.

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

ORDER

It is the Order of the Pollution Control Board that:

- 1) Petitioner shall be granted a variance from the requirements of Rule 406 of Chapter 3: Water Pollution of the Board's Rules and Regulations for a period to run from July 1, 1977 until one year from the date of this Order.

2) During the term of this variance Petitioner shall be required to limit its discharge of ammonia nitrogen to a daily average of 575 pounds and a daily maximum of 1260 pounds.

3) Petitioner shall make a good faith effort to develop a program which will enable it to comply with Rule 406. In developing this program Petitioner shall conduct research on alternative treatment techniques. This research shall include an analysis of biological nitrification in various formats.

4) Petitioner will submit bi-monthly progress reports on its research efforts, detailing with particularity what methods or systems are being tried or considered, to the Agency.

5) Petitioner shall within twenty-eight (28) days after the date of the Board Order herein, execute and forward to the Illinois Environmental Protection Agency, Variance Section, Manager, Division of Water Pollution Control, 2200 Churchill Road, Springfield, Illinois, 62706 and to the Illinois Pollution Control Board, a Certificate of Acceptance and Agreement to be bound by all of the terms and conditions of the Variance. The form of said certification shall be as follows:

CERTIFICATION

I (We), \_\_\_\_\_ having read and fully understanding the Order of the Illinois Pollution Control Board in PCB 77-163 hereby accept said Order and agree to be bound by all of the terms and conditions thereof.

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 29<sup>th</sup> day of September, 1977 by a vote of 4-0.

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

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