ILLINOIS POLLUTION CONTROL BOARD July 10, 1980

MOBIL OIL CORPORATION,)
Petitioner,)
v.) PCB 80-54
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,))
Respondent.)

OPINION AND ORDER OF THE BOARD (by I. Goodman):

On April 15, 1980 the Petitioner, Mobil Oil Corporation, filed a Revised Petition for Variance from Rule 406 of Chapter 3: Water Pollution (hereinafter, Chapter 3). The Petitioner has waived hearing in this matter. The Illinois Environmental Protection Agency (Agency) recommends that Petitioner be granted a variance subject to specified conditions.

Petitioner owns and operates a conventional petroleum fuel refinery in Channahon Township, Will County, Illinois. The facility utilizes water from the Des Plaines River for boiler feed, cooling tower makeup, and as once-through, noncontact cooling water. Process water from the refinery is subjected to pretreatment and final treatment before being discharged into the Des Plaines River.

The Board has granted Petitioner a variance from Rule 406 of Chapter 3 on two prior occasions. The most recent variance was granted on June 8, 1978 until July 1, 1980 (PCB 78-97). Since that Order issued, Petitioner has initiated two projects studying control of ammonia nitrogen effluent levels, a temperature control program, and a pilot nitrification plant.

Petitioner, for the purpose of improving biological nitrification efficiency, upgraded its existing 40-pound steam system to a 150-pound steam system in order to increase and maintain higher aeration basin temperatures during cold weather. Even with this improved temperature control biological nitrification could not be re-established or maintained; therefore, ammonia nitrogen reduction had not been improved. The operational costs of maintaining the elevated temperatures during 1979 exceeded \$200,000.

In August of 1979, Petitioner installed a 10-gpm, two-stage pilot plant to evaluate ammonia reduction through biological

nitrification. Performance of this plant has been discouraging. Ammonia nitrogen reduction has been intermittent and has not proven to be a significant improvement over the single stage refinery waste treatment plant. Nitrification has been achieved for varying lengths but not on a continuous basis.

Mobil has stated in its variance petition that it needs two years to determine whether the two-stage pilot plant can be effectively utilized to reduce ammonia nitrogen effluent to comply with Rule 406. The Agency has recommended that a variance be granted for a period of one year with interim limitations of 25 mg/l (monthly average) and 40 mg/l (daily maximum). In response to the Agency's recommendation, Mobil stated that it still requires a two-year variance and that interim limits of 35 mg/l (monthly average) and 60 mg/l (daily maximum) for ammonia nitrogen are more realistic.

Considering the past good faith efforts by Mobil and its continuing search for a method of compliance, the Board is willing to grant the variance for a period of two years to ensure that sufficient data are collected to determine the feasibility of biological nitrification as a means to reduce ammonia nitrogen. The Board, however, believes that interim standards of 25 mg/l (monthly average) and 40 mg/l (daily maximum) are achievable based on the information provided by the Petitioner. Excursions due to unforseeable malfunctions, unseasonable weather, and emergency situations are faced by all permittees and must be addressed if and when they occur.

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

ORDER

It is the Order of the Illinois Pollution Control Board that Mobil Oil Corporation be granted a variance from Rule 406 of Chapter 3: Water Pollution until July 1, 1982, subject to the following conditions:

- a) Petitioner's ammonia nitrogen effluent discharge shall not exceed a monthly average concentration of 25 mg/l and a daily maximum concentration of 40 mg/l during the period of this variance.
- b) Petitioner shall continue efforts to develop a program which will result in compliance with Rule 406 of said Chapter 3.
- c) Petitioner shall continue to submit bi-monthly reports to the Illinois Environmental Protection Agency outlining Petitioner's efforts to achieve compliance with Rule 406 of said Chapter 3.
- d) Petitioner shall, by May 1, 1982, provide said Agency

with a written technical proposal and time schedule for compliance with Rule 406 of Chapter 3.

e) Within 45 days after the date of this Order, Petitioner shall execute and forward to the Illinois Environmental Protection Agency, Division of Water Pollution Control, Compliance Assurance Unit, 2200 Churchill Road, Springfield, Illinois 62706, a Certification of acceptance and agreement to be bound to all terms and conditions of the variance. This 45-day period shall be held in abeyance for any period during which this matter is appealed. The certification shall be as follows:

CERTIFICATION

	e order of the Pollution Control
Petitioner	
Ву	_, Authorized Agent
Title	_
Date	
	lerk of the Illinois Pollution that the above Opinion and Order of, 1980 by a vote
	Christan L. Moffett, Clerk Illinois Pollution Control Board