

ILLINOIS POLLUTION CONTROL BOARD  
October 4, 1973

SHELL OIL COMPANY )  
(WOOD RIVER) )  
v. ) PCB 73-116  
ENVIRONMENTAL PROTECTION AGENCY )

Mr. William D. Maer appeared for Shell Oil Company;  
Mr. Dale R. Turner, Assistant Attorney General, appeared for the  
Environmental Protection Agency.

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

On March 21, 1973, a variance petition was filed by Shell asking for a variance from complying with Rule 408 of the Water Pollution Regulations. The Agency's recommendation, filed April 25, 1973, contained a recommendation to grant the variance. A hearing was held on June 29, 1973.

The Wood River Refinery is located in Wood River Township, Madison County, Illinois. It is the largest refinery located in Illinois and has a nominal crude oil processing capacity of 260,000 barrels per day. It produces a wide range of petroleum products that are marketed throughout the midwest. Approximately 2,000 people are employed at the refinery complex.

Shell submitted an operating permit application for the refinery's waste water treatment facility on September 22, 1972. On January 11, 1973, Shell modified its permit application to show an average effluent cyanide concentration of 0.09 mg/l instead of 0.016 mg/l. This modification occurred after testing by the Federal Environmental Protection Agency which sampled Petitioner's effluent and found that it contained a higher than reported level of cyanide.

Rule 408 of the Water Pollution Regulations sets forth a 0.025 effluent standard for cyanide dischargers effective December 31, 1973. Shell's effluent empties into the Mississippi River which has a dilution ratio of approximately 2300:1 when comparing the seven-day - ten-year low flow to the refinery's 6 MGD waste water flow. Shell alleges that cyanide levels in the Mississippi River average 0.0035 mg/l which is below the 0.01 mg/l required for Public and Food Processing Water Supply by Rule 204 of the Water Pollution Regulations. Petitioner seeks a variance to allow them to discharge no more than 0.20 mg/l at any time not to exceed 0.09 as a monthly average.

Shell has stated that the cyanide discharge occurs as a waste stream from their catalytic crackers and to force compliance with Rule 408 on December 31, 1973 would require the discontinuance of the cracking units with the result of shutting down the refinery. The Agency has recommended that the Board grant the variance.

The Board finds this petition to be similar to that filed by Texaco, PCB 73-6, decided July 19, 1973. There, as in the present case, Petitioner was seeking a variance from Rule 408. In Texaco (PCB 73-6), we denied the variance from Rule 408 because the Petitioner had not come forth with a program to achieve cyanide reduction. No date was given as to the date for ultimate compliance. The Board was not given any commitment as to the type of cyanide control program.

Shell has not presented any time table to the Board showing ultimate compliance, nor has it set forth what type of a program it is going to undertake to control the problem. Mere reference to "laboratory investigations are continuing" is not sufficient enough to identify the "pig in a poke" (Texaco, 73-6).

The record has an allusion that the new Shell process for cyanide removal may be patentable (R. 25). If this is found to be the case by Shell, then the Board has non-disclosure provisions which can be used for protection.

In its petition, Shell states that it was in conformance with the cyanide standard as late as April 1972. The testimony given by a Shell witness delineates discovery of the high cyanide levels after Federal testing in September 1972 (R. 18).

We make no judgment on the basic question of the availability of cyanide removal technology. Once Shell reveals their promising process both the Agency and the Board will be better able to make that judgment.

One further comment. The computations as to the effect of the cyanide discharges by Shell on the cyanide content of the Mississippi River are not persuasive. The full volume of the River is not immediately available for mixing (unless a jet diffuser is used) and no showing is made as to the cyanide levels at the edge of the mixing zone. This information should be supplied in any future proceeding.

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

#### ORDER

The Pollution Control Board denies Shell Oil's petition for variance without prejudice.

IT IS SO ORDERED.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, certify that the above Opinion and Order was adopted by the Board on the 4<sup>th</sup> day of October, 1973, by a vote of 5 to 0.

Christan L. Moffett

