

ILLINOIS POLLUTION CONTROL BOARD
March 2, 1978

BFGOODRICH CHEMICAL COMPANY,)
(CHEMICAL DIVISION),)
)
Petitioner,)
)
v.) PCB 77-227
)
ENVIRONMENTAL PROTECTION AGENCY,)
)
Respondent.)

OPINION AND ORDER OF THE BOARD (by Dr. Satchell):

On September 8, 1977 BFGoodrich Company (Chemical Division) (hereinafter Goodrich) filed a request for variance from the limitations of Chapter 3, Rule 408(b) from July 1, 1977 until June 30, 1982, or until the Board accepts the proposal made in R76-21 to delete Rule 408(b) as it applies to discharges in the Illinois River, whichever is earlier. On October 21, 1977 the Illinois Environmental Protection Agency (Agency) filed a recommendation to grant the variance from July 1, 1977 until June 20, 1982 or until the Board takes final action in R76-21 subject to several conditions. On January 27, 1978 the parties filed a joint stipulation of fact in lieu of a hearing as a basis for the Board's decision.

The facility in question is operated by Goodrich at Henry, Illinois and produces polymer chemicals and polyvinyl chloride. The plant employs 345 persons with an annual payroll of \$7.0 million. Annual production of the polymer chemicals facility is 21 million pounds and of the polyvinyl chloride facility is 200 million pounds. These products are used in numerous goods and industries. Of particular concern is an accelerator used to cure properly the rubber used in motor vehicle tires. The accelerator is a special delayed action variety. Goodrich represents that this type of accelerator is produced by only one other manufacturer but is used by other tire manufacturers and by Goodrich. Goodrich states that if the Henry plant were unable to produce this accelerator that there would be a measurable effect upon the motor vehicle tire industry.

Wastewater from the plant is processed through a Primary Waste Treatment System and a Secondary Waste Treatment System. The end result is a sludge and a clarified effluent, the latter is discharged to the Illinois River.

Presently, the effluent TDS concentration of the Henry plant discharge is generally more than 3,500 ppm, but less than 6,000 ppm. The maximum rate of discharge is 1.89 cubic feet per second, which

is 0.015 percent of the normal Illinois River flow past the Henry plant of 12,550 cubic feet per second or 0.054 percent of the 7 day, 10 year low flow in the Illinois River (R. 74, R75-6, Sept. 23, 1975).

The water quality sampling station on the Illinois River record levels of TDS from 260 to 660 ppm. The water quality standard is 1000 ppm. The Henry plant contribution of dissolved solids is calculated at .56 ppm (R. 74, R75-6, Sept. 23, 1975). The contribution to these levels of TDS in the Illinois River by industries in general is minimal. This statement is supported by the findings of the Illinois Institute for Environmental Quality in IIEQ No. 76/17 and by the conclusions of Gretchen Van Meer, a doctoral candidate at Northwestern University, in a study entitled, "A Mathematical Model of Conservative Substances in the Illinois River Waterway," (Exhibit F to exhibit 41 in R76-21).

Construction of facilities to reduce the TDS concentration at the Henry plant's discharge would be extremely costly. Capital costs would be at least \$800,000 (not including capital costs for removal of the resulting brine other than construction of an earthen pond to contain the waste brine stream) and operating costs would be at least \$200,000 annually.

There is no applicable demonstrated technology for TDS removal on a large scale from complex wastewaters such as those at the Henry plant. Control systems for removal of dissolved solids are very energy intensive. The removal systems generate another problem, the disposal of the brine generated by those processes. Goodrich believes that the costs of TDS removal far outweigh any benefits from such efforts.

Goodrich could conceivably achieve compliance by curtailing certain parts of plant production, most likely the accelerator processes. If this were to be the result, annual wage losses exceeding \$350,000 could occur. Production losses from this action would result in the loss of operating income in excess of \$1,250,000 annually to the Henry plant. Further, the lack of these accelerators would affect Goodrich's tire and other rubber manufacturing operations at a cost that is presently undefined.

Goodrich believes it has acted in good faith to comply with applicable regulations and statutes. Efforts for TDS control were begun prior to December 31, 1973. When production activities increased at the Henry plant increasing TDS concentrations, Goodrich sought relief by participating in R75-6 and R76-21.

Interim standards are suggested as follows:

Weekly maximum TDS concentrations: 9,000 ppm

Monthly average TDS concentrations: 6,000 ppm.

The Agency does not dispute these facts. Both the Agency and the Institute support the deletion of Rule 408(b) in R76-21.

The Board does find that Goodrich has demonstrated the existence of an arbitrary and unreasonable hardship if Goodrich were required to comply with Rule 408(b) of Chapter 3. The high cost of compliance balanced against the fact there is no significant effect on the water quality of the Illinois River (Limnetics, Inc. study, Ex. 3) warrants the grant of a variance. The variance will be granted subject to the proposed interim standards until June 30, 1982 or until the Board takes final action in R76-21 as it pertains to TDS. Should the final action taken not alleviate Goodrich's problem, Goodrich shall have 90 days to file for additional relief.

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 BFGoodrich Company (Chemical Division) is granted a variance from Rule 408(b) Chapter 3: Water Pollution Regulations for its Henry, Illinois facility from July 1, 1977 until June 30, 1982 or until this Board takes final action on R76-21 as it pertains to TDS. Should the final action taken not alleviate BFGoodrich's TDS problem, BFGoodrich shall have 90 days to file for additional relief. This variance is subject to interim standards as follows:

Weekly maximum TDS concentrations: 9,000 ppm

Monthly average TDS concentrations: 6,000 ppm.

CERTIFICATION

Within 45 days of the adoption of this Order, the BFGoodrich Company (Chemical Division) shall execute and forward to both the Illinois Environmental Protection Agency, 2200 Churchill Road, Springfield, Illinois 62706 and the Pollution Control Board a Certification of Acceptance and Agreement to be bound to all terms and conditions of this Order. The 45 day period shall be held in abeyance during any period this matter is being appealed. The form of said certification shall be as follows:

I (We), _____ having read and fully understanding the Order of the Illinois Pollution Control Board in PCB 77-227 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 Order was adopted on the 2nd day of March, 1978 by a vote of 5-0.



Christan L. Moffett, Clerk
Illinois Pollution Control Board