

ILLINOIS POLLUTION CONTROL BOARD
October 6, 1988

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|------------------------|---|-----------|
| BORDEN CHEMICAL AND |) | |
| PLASTICS OPERATING |) | |
| LIMITED PARTNERSHIP, |) | |
| |) | |
| Petitioner, |) | |
| |) | |
| v. |) | PCB 88-90 |
| |) | |
| ILLINOIS ENVIRONMENTAL |) | |
| PROTECTION AGENCY, |) | |
| |) | |
| Respondent. |) | |

MARION P. HERRINGTON OF SIDLEY AND AUSTIN APPEARED ON BEHALF OF PETITIONER;

JOHN J. BRESLIN APPEARED ON BEHALF OF RESPONDENT.

OPINION AND ORDER OF THE BOARD (by J. Theodore Meyer):

This matter is before the Board on a May 18, 1988 petition for variance filed by Borden Chemicals and Plastics Operating Limited Partnership (Borden). Borden seeks variance from 35 Ill. Adm. Code 302.208 "Chemical Constituents" and from 35 Ill. Adm. Code 304.105 "Violations of Water Quality Standards", as these rules pertain to the water quality standards for total dissolved solids (TDS) (1000 mg/l) and chloride (500 mg/l.) On May 19, 1988, the Board found the petition deficient for lack of sufficient information, and on June 15, 1988 Borden filed an amended petition. The Illinois Environmental Protection Agency (Agency) filed its recommendation in support of grant of variance, subject to conditions, on July 29, 1988. Hearing was held in Springfield on August 2, 1988. No members of the public were present at hearing.

Borden requests an extension of the TDS and chloride variance granted by the Board on December 5, 1985, in Borden Chemical Company v. Illinois Environmental Protection, PCB 82-82. That variance, which expired July 1, 1988, allowed Borden to discharge effluent which would not cause the water quality of the receiving body to exceed a monthly average concentration of 2200 mg/l TDS or 700 mg/l chloride. The variance granted in PCB 82-82 also required Borden to file a request for site-specific rule change from the TDS and chloride water quality standards on or before April 1, 1986, because Borden had identified a site-specific rule as one of its compliance options. Borden filed its petition for site-specific rule change (R86-14) on March 31, 1986, and hearing was held on December 10, 1986. Borden made

supplemental submissions of information on January 30, 1987 and March 31, 1987. On January 27, 1988, the Board received notification from the Department of Energy and Natural Resources (ENR) that ENR had decided to prepare an economic impact study (EcIS) on the requested site-specific rule. According to the instant petition for variance, ENR has indicated that the EcIS is expected to be completed this fall. The Board can take no further action on the site-specific request until the EcIS is completed. Because the prior variance (PCB 82-82) expired on July 1, 1988 without final action on the site-specific, Borden now seeks an extension of the variance.

The Borden plant is located in a rural area one mile west of Illiopolis, Illinois. The facility employs about 280 people, and produces polyvinyl chloride (PVC) suspension and dispersion resin and PVC plastic films and molding compounds. Plant wastewater originates from three separate waste streams, which combine prior to a serpentine final polishing stream and discharge through a common point, Outfall 001. Discharge is to an unnamed tributary to Long Point Slough, a stream which flows into Old River, which is tributary to the Sangamon River. Design average flow of the treatment plant is 1.0 MGD. Most wastewater from the facility originates from two manufacturing areas, PVC Plant I and PVC Plant II, and from a boiler house. In 1987, Borden sold its Polyco polyvinyl acetate manufacturing facility to another firm, Rohmhaas. The Rohmhaas facility is still located on the grounds of the site, and Rohmhaas wastewater is treated by Borden. According to testimony from Jack Kirby, a process engineer for Borden, the plant's effluent contains levels of TDS and chloride due largely to two sources: 1) plant intake water obtained from area wells, which is then softened; and 2) waste water from air pollution control technology. (Tr. at 10-11.)

Borden asks that the instant variance be granted to allow, as did the prior variance, the discharge of effluent which will not cause the water quality in the unnamed ditch to exceed a monthly average concentration of 2200 mg/l of TDS and 700 mg/l of chloride. In the PCB 82-82 variance, Borden did not request a variance from the TDS and chloride standards for Long Point Slough and Old River. The record in the site-specific proceeding (R86-14) indicates that Long Point Slough and Old River may exceed the TDS and chloride standards during low flow periods, however. Therefore, Borden requests that this variance extend to those receiving waters. Borden seeks variance until such time as the Board issues a final order in the site-specific proceeding.

COMPLIANCE PLAN

Borden has not proposed a specific compliance plan outside of its pending request for site-specific regulation. That site-specific rule would, if adopted, grant permanent relief from the TDS and chloride water quality standards. If the Board denies

Borden's site-specific request, Borden asks that the variance extend eighteen months after the entry of the Board's final order "to allow adequate time for Borden to implement any necessary corrective measures." (Petition at 4.) Although Borden, in its amended petition, states that it would undertake construction of control methods "in accordance with the schedule contained in [the] original petition for extension" (Amended Petition at 4), the original petition does not contain any "schedule".

ENVIRONMENTAL IMPACT

Borden hired the Academy of Natural Sciences of Philadelphia to conduct an environmental impact study in support of its petition for site-specific rule change. (The relevant parts of the rulemaking docket (R86-14) have been incorporated into the record of this variance proceeding.) The Academy conducted chemical, physical, and biological studies in July, September, and October 1984 along the unnamed ditch which receives Borden's effluent and along Long Point Slough. These studies found that the chemical composition and physical characteristics of the water in the unnamed ditch and Long Point Slough are altered by the discharged effluent. However, the Academy concluded that "[t]here is no indication that the concentrations of chloride and total dissolved solids observed at the time of the study would alter the biota of the receiving bodies." (Petition for Rule Change (R86-14), Exhibit A.) Mr. Kirby testified at hearing that based upon these findings, Borden believes that extension of its variance will have negligible environmental impact. (Tr. at 16.)

In its recommendation the Agency cites the Academy's 1984 study, and concludes that since the requested limits in the variance extension are the same as those limits studied by the Academy, no adverse environmental impact is expected.

HARDSHIP

Borden contends that it would be unreasonable to require installation of equipment to reduce the amount of TDS and chloride in its effluent pending the outcome of the site-specific rulemaking. (Tr. at 19.) Borden states that to meet the existing water quality standards for TDS and chloride it would have to install add-on treatment technology such as reverse osmosis or deionization. Borden maintains that the Board and the Agency have repeatedly recognized that these treatment alternatives are neither technologically or economically feasible. (Tr. at 17.) Borden states that design and construction of either alternative would cost between \$2.7 to \$5.3 million, with annual operating and maintenance costs between \$270,000 and \$500,000. In sum, Borden argues that given the minimal environmental effect of continued discharge at present levels, combined with the expense of treatment technology, compliance with the existing water quality standards would work

an undue hardship while the petition for site-specific rule change is pending.

The Agency agrees with Borden's statement that compliance with the water quality standards for TDS and chloride would impose an arbitrary and unreasonable hardship since there is no proven conventional technology which is also economically feasible. The Agency states that the treatment methods (reverse osmosis, electrodialysis, distillation, and ion exchange) are costly and have their own environmental problems associated with them. Finally, the Agency notes that Borden has stated that the reason for the requested variance extension is to allow time for the Board to take action on Borden's proposed site-specific rule.

FEDERAL LAW

The Agency notes that Borden's process falls under a new federal pretreatment categorical regulation (Organic Chemical and Plastic Synthetic Fibers), with a compliance date of March 31, 1989. However, the regulations do not contain limits for TDS and chloride. Therefore, the Agency states that there are no federal laws which preclude the granting of this variance.

CONCLUSIONS

As previously stated in PCB 82-82, the Board finds that immediate compliance with the water quality standards for TDS and chloride would impose an arbitrary and unreasonable hardship. Based on this finding, and what appears to be a minimal short-term adverse environmental impact, the Board will grant Borden a variance from those water quality standards. The Board stresses, however, that its finding of an arbitrary or unreasonable hardship is based upon the unique circumstances surrounding the progress of Borden's petition for site-specific rule change. Although Borden has made statements regarding the economic reasonableness and technical feasibility of treatment technology, the Board points out that the issue in a variance case is whether immediate compliance with a particular standard would impose an arbitrary or unreasonable hardship. The issues of economic reasonableness and technical feasibility will be addressed in the rulemaking: the Board specifically makes no findings on those issues today.

The Agency has recommended that Borden be given a five year variance, or until the Board takes final action in the site-specific proceeding, or until the development of new technology to treat wastewater in an economically feasible manner, whichever occurs first. The Board feels that a five year variance is not necessary, and will grant a variance for 2 years, or until the Board takes final action on the rulemaking, whichever occurs first. The two-year period is sufficient for the Board to take final action on the site-specific, assuming that the EcIS is not

further delayed. If the Board denies the petition for site-specific relief, the variance will extend for an additional eighteen months, as requested by Borden to allow installation of treatment technology. The Board notes that Borden has failed to identify any specific compliance plan to be used if site-specific relief is denied. Thus, the variance conditions will include a schedule for submission of plans to the Agency. The Board will not include the Agency's suggestion that the variance terminate upon the development of new technology to treat wastewater in an economically feasible manner because such a criterion is too subjective to be included as an automatic termination of the variance.

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

ORDER

Borden Chemical and Plastics Operating Limited Partnership (Borden) is hereby granted a variance from 35 Ill. Adm. Code 302.208 "Chemical Constituents" and 35 Ill. Adm. Code 304.105 "Violation of Water Quality Standards", but only as they relate to the total dissolved solids (TDS) and chloride standards. This variance applies only to Borden's Illiopolis, Illinois facility. The variance is subject to the following conditions:

1. Borden's discharge shall not cause the water quality in the unnamed ditch, Long Point Slough, or Old River to exceed a monthly average concentration level of 2200 mg/l TDS or 700 mg/l chloride, based upon the sampling frequency contained in Borden's NPDES permit.
2. This variance will expire on October 6, 1990, or upon adoption by the Board of a final order in the site-specific rulemaking (R86-14), whichever occurs first.
3. If Borden is denied relief in the site-specific proceeding, this variance will extend for an additional eighteen months from the date of decision of the site-specific if Borden complies with the following schedule:
4.

| <u>Items</u> | <u>Completion Date</u> |
|--|---|
| Submit compliance plan and specifications to the Agency for permit review. | 4 months from date of final Board Order in the site-specific proceeding R86-14. |
| Receive permits. | 7 months from date of final Board Order in R86-14. |

Complete construction of improvements and be in compliance. 18 months from date of final Board Order in R86-14.

- 4. Borden shall monitor the TDS and chloride levels in its effluent and in the unnamed ditch above and below Borden's discharge.
- 5. Within 45 days after the date of this Opinion and Order Borden shall execute and send to:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Compliance Assurance Section
2200 Churchill Road, P.O. Box 19276
Springfield, Illinois 62794-9276

a certificate of acceptance of this variance by which it agrees to be bound by the terms and conditions contained herein. This variance will be void if the County fails to execute and forward the certificate within the 45 day period. The 45 day period shall be in abeyance for any period during which the matter is appealed. The form of the certification shall be as follows:

CERTIFICATION

I, (We), _____, having read the Opinion and Order of the Illinois Pollution Control Board, in PCB 88-90, dated October 6, 1988, understand and accept the said Opinion and Order, realizing that such acceptance renders all terms and conditions thereto binding and enforceable.

Petitioner

By: Authorized Agent

Title

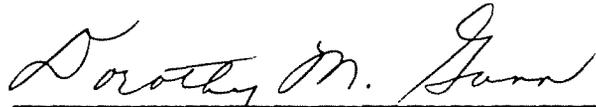
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- 13. Section 41 of the Environmental Protection Act (Ill. Rev. Stat. 1987, ch. 111^{1/2}, par. 1041) provides for appeal of final Orders of the Board within 35 days. The

Rules of the Supreme Court of Illinois establish filing requirements.

IT IS SO ORDERED.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 6th day of October, 1988, by a vote of 7-0.



Dorothy M. Gunn, Clerk
Illinois Pollution Control Board