

ILLINOIS POLLUTION CONTROL BOARD
November 19, 1981

STEPAN CHEMICAL COMPANY,)
)
) Petitioner,)
)
) v.) PCB 79-161
)
) ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,)
)
) Respondent.)

PERCY L. ANGELO, MAYER, BROWN, & PLATT, APPEARED ON BEHALF OF THE PETITIONER.

NANCY J. BENNETT, ASSISTANT ATTORNEY GENERAL, APPEARED ON BEHALF OF THE RESPONDENT.

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

On August 10, 1979 Stepan Chemical Company (Stepan) submitted a Petition for Review of the NPDES permit issued by the Illinois Environmental Protection Agency (Agency) on July 12, 1979 for Stepan's Millsdale plant. No members of the public attended the hearing held on February 4, 1980.

The Millsdale plant, located in Elwood, Will County, produces a variety of organic and specialty chemicals. The organic chemicals consist mainly of phthalic anhydride, urethane foam products, and tertiary oil recovery products. The speciality chemicals are used in the production of surfactants. Effluent from the wastewater treatment system discharges to the Des Plaines River.

Stepan seeks review of the following conditions:

1. the imposition of a chlorine residual limitation,
2. the frequency of required monitoring for pH, biochemical oxygen demand (BOD), total suspended solids (TSS), and fecal coliform,
3. the requirement of methylene blue active substances (MBAS) and chemical oxygen demand (COD) monitoring,
4. the specification of mathematical compositing for oil and grease monitoring,
5. the prohibition on transfer of the NPDES permit,

6. the requirement of retaining monitoring records for specific periods of time, and
7. the incorporation of other state requirements into the NPDES permit.

Stepan's NPDES permit contains a chlorine residual effluent limitation of 0.75 mg/l pursuant to Rule 405 of Chapter 3: Water Pollution (R. 68). Chlorine is used at the Millsdale plant to reduce fecal coliform levels. Stepan's NPDES permit limitations for fecal coliform are 200 organisms per 100 ml of discharge for a 30-day average sampling and 400 organisms per 100 ml of discharge for a daily maximum sampling. Stepan asserts that it has not been able to establish a reasonable correlation between fecal coliform and chlorine residual concentration (R. 30), and consequently is having difficulty in simultaneously meeting the fecal coliform and chlorine residual standards (R. 19).

Stepan alleges that the Agency usurped the Board's rulemaking authority by imposing a chlorine residual limitation which is not governed by a promulgated state or federal regulation (Pet. Brief, p.6). Rule 910(a)(6) of Chapter 3: Water Pollution Control Rules and Regulations (Chapter 3) states:

"Prior to promulgation by the Administrator of the U.S. Environmental Protection Agency of applicable effluent standards and limitations pursuant to Sections 301, 302, 306, and 307 of the Federal Water Pollution Control Act (FWPCA) [the Agency shall impose] such conditions as the Agency determines are necessary to carry out the provisions of the FWPCA; . . ."

The Second District Appellate Court in U.S. Steel Corporation v. Illinois Pollution Control Board, 52 Ill.App.3d 1, 9 Ill.Dec.893, 367 N.E.2d 327 (1977), determined that Rule 910(a) (6) constitutes a directive, and not a delegation, from the Board to the Agency which is consistent with the Agency's authority under Section 39(b) of the Illinois Environmental Protection Act (Act) to issue NPDES permits with conditions. Peabody Coal Company v. Illinois Pollution Control Board, 344 N.E.2d 279 (5th Dist. 1976), however, invalidated Rule 910(a)(6) as an unauthorized delegation of the Board's rulemaking authority. The 3rd District, in which Will County is located, did not reach this issue in a recent opinion (Illinois Power v. Illinois Pollution Control Board et al., No. 81-34, Appellate Court of Illinois, 3rd District, Sept. 30, 1981).

Without reaching the issue of delegation, the Board finds pursuant to Rule 910(a)(6) and Section 39(b) of the Act that the imposition of a chlorine residual limitation by the Agency upon Stepan was not necessary to carry out the provisions of the Act or the FWPCA [Clean Water Act (CWA)]. Stepan has encountered

technological difficulty in meeting fecal coliform and chlorine residual limitations simultaneously. Compliance with the non-promulgated chlorine residual limitation causes frequent non-compliance with promulgated fecal coliform limitations. The Board, therefore, finds that the chlorine residual limitation clearly is not required to accomplish the purposes and provisions of the Act or the CWA. The Board notes that the use of chlorination for the control of fecal coliform is before the Board in R77-12.

Stepan also objects to the increase in the frequency of monitoring pH, BOD, TSS, and fecal coliform from once per week to twice per week because Agency tests conducted over the past several years demonstrate that the effluent has been well within Stepan's prior NPDES permit limitations for these parameters. The Agency states that monitoring frequency requirements are based upon the probability of toxic pollutants in a source's discharge, the size of the discharge, and the nature of the receiving stream (R. 135). There is no indication in the record that these criteria were misapplied. Furthermore, the record indicates that Stepan originally consented to twice per week monitoring (R. 71). The Board finds that the twice per week monitoring requirements are reasonable under Rule 910(f) of Chapter 3 regardless of the absence of excursions beyond the limitations in previous permits.

Stepan also objects to the requirement of monitoring MBAS to determine surfactant levels in its discharge. Stepan stated that interferences from organic sulfates, sulfonates, and carboxylates present in its waste stream would artificially increase MBAS readings and render the testing meaningless (R. 30-33). Stepan cites "Standard Methods for the Examination of Wastewater and Waste," 14th Ed. (1975), p. 600, Method No. 512A, to demonstrate that such interferences would occur.

Testing for surfactants through the use of MBAS monitoring is required by 40 C.F.R. §136.3(a). Number 113 of Table I, "Lists of Approved Test Procedures," lists "colorimetric (methylene blue)" as the approved method, and reference is made to Standard Methods, supra, and to the "Annual Book of ASTM Standard," Part 31, "Water," Standard D2330-68, Method A, p. 494 (1976). Section 136.3(a) of 40 C.F.R. also states that alternative testing procedures may be applied for by a discharger under certain conditions. The Board notes that Stepan has not applied for an alternative test procedure even though ASTM Standards, supra, Part 31, "Water," Standard D2330-68, p. 497, contains a Method B which is specifically designed to limit interferences encountered in the methylene blue colorimetric test. The Board finds that the requirement of monitoring MBAS is reasonable.

The Agency states that because 40 C.F.R. §417, subparts I, J, N, P, and R impose effluent limitations for COD (Resp. Brief, p.5), that monitoring requirements are implicitly imposed for COD. Stepan, on the other hand, argues that the COD effluent limitation does not apply to its facility (Pet. Brief pp. 10-11; Pet. Reply Brief, p.8).

Assuming arguendo, that Stepan is correct, the Agency would not be precluded from imposing monitoring requirements. Both Section 39(b), paragraph 2, and Rule 910(f) allow the imposition of monitoring requirements in the absence of applicable effluent limitations. The Board must decide whether the monitoring requirements are necessary to accomplish the purposes of the Act under the circumstances of the case. Because Stepan's process streams, some of which are not subject to COD limitations, converge into a single discharge stream, it is impossible to determine which portion of COD in Stepan's discharge is from a process with a COD limitation (R. 5). The Board finds in this case that requiring the accumulation of COD monitoring data is not necessary to accomplish the purposes of the Act, therefore, the Board finds that Stepan need not monitor COD in the combined stream.

As to composite sampling of oil and grease monitoring, the Board upholds the requirement although nothing in Chapter 3 requires such compositing. A composited sample taken over a period of time is more representative than a single sample taken at a given moment. Compositing also allows dischargers more flexibility in their plant design and operation because they have to meet merely an average rather than an absolute standard. The cost of the plant design, construction, and operation, and not the cost of monitoring, were major factors in the formulation of the compositing rule (R. 74-1, -8, -9).

The Board recognizes that mathematical compositing may be more expensive than mechanical compositing; however, accuracy is absolutely essential. The environmental benefit derived from mathematical rather than mechanical compositing outweighs its cost. The Board, therefore, upholds the mathematical compositing requirement for oil and grease as a representative testing method which complies with Chapter 3, and is necessary to accomplish the purposes of the Act.

Stepan's objections to the prohibition on transfer of the NPDES permit, the requirement of retaining monitoring records for specific periods of time, and the incorporation of other state regulations into the NPDES permit may be dealt with summarily. The prohibition on transfer of the permit does not necessitate the closure of the facility upon sale as Stepan argues; a permit by the new owner may be applied for in advance of the transfer of the facility. The scope of a permit is not just facility-related; it also depends upon the owner's operating procedures and policies. Requiring Stepan to maintain monitoring records during periods of unresolved litigation or when required by the Agency is a reasonable means, under Section 39(b) of the Act, of assuring compliance with the Act. The Board finds that the Agency has not abused its discretion by imposing such a requirement. Lastly, incorporation of other State requirements into the permit does not increase Stepan's liability. The provision merely assures consistency in the application of State laws and regulations and is a reasonable exercise of Agency discretion.


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

ORDER

It is the Order of the Illinois Pollution Control Board that the NPDES permit application of Stepan Chemical Company be remanded to the Illinois Environmental Protection Agency for reconsideration consistent with the Opinion herein.

IT IS SO ORDERED.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 19th day of December, 1981 by a vote of 5-0.



Christan L. Moffett, Clerk
Illinois Pollution Control Board