

ILLINOIS POLLUTION CONTROL BOARD

May 24, 1971

Environmental Protection Agency)	
)	
vs.)	PCB 71-23
)	
Borden Chemical Company)	

Mr. Thomas McMahon represented the Environmental Protection Agency
Mr. James W. Kissel represented the Borden Chemical Company

Opinion of the Board (by Mr. Kissel):

On February 24, 1971, the Borden Chemical Company ("Borden") filed a petition for variance under the Environmental Protection Act (the "Act") with the Pollution Control Board (the "Board") seeking a variance from the provisions of SWB-14 (which is a regulation covering the water quality and implementation plan for the intrastate waters of the State of Illinois), from the time schedule demands and the additional reduction requirements as to biochemical oxygen demand (BOD) and total suspended solids (TSS) outlined in a letter received from the Environmental Protection Agency (the "Agency") dated December 3, 1970 (Borden's Exhibit E) and from any other possibly applicable regulations or standards. Borden requests that it be given until October 31, 1971, to permit study of Borden's present waste treatment facilities to determine whether Borden's effluent can meet the standard of 12.5 milligrams per liter (mg/l) for BOD and TSS with the efficient operation of the existing facilities. Further, Borden will during this study period determine whether there is a practical and feasible method for any reduction below 12.5 mg/l BOD and TSS. If so, Borden requests that it be given until March 1, 1972, in order to prepare construction plans for the improvements to the facilities. Then, Borden wishes that the date for completion of that construction be set as December 31, 1972. The Agency's initial recommendation was that Borden must meet the purported requirements of SWB-14 which would mean that Borden would have to construct facilities by July 1, 1972, so that its effluent would contain no more than 4 mg/l BOD and 5 mg/l TSS. At the close of the proceeding the attorney for the Agency amended the Agency's recommendation--the new recommendation asks the Board to grant a variance to Borden until October 31, 1971, to submit plans and specifications which will be for the construction of facilities by July 1, 1972, to meet the effluent standards of SWB-14.

The Borden facility involved in this proceeding is located in a rural area near Jlliopolis, Illinois. It is a manufacturing facility which produces polyvinylchloride, (which is extruded to make clear plastic bags), styrene-butadiene emulsion (which is used for paint and paper coating) and polyvinyl acetate emulsion (which is used for adhesives, such as Elmer's Glu-All). The waste treatment system is

a three stage process. All the industrial waste is gathered into a collection system and carried to the first stage of the treatment system. In the first stage, chemicals are added to coagulate and flocculate the waste water. After the addition of the chemicals, the water is discharged into a Dorr-Oliver flocculator clarifier which settles the floc, and the supernatant liquid flows to the second stage. This stage consists of the Oxygest system which stabilizes the sludge, and more sludge is removed. The effluent from the second stage flows, then, to two large polishing lagoons which are the third stage of treatment. The effluent from the polishing lagoons flow into an unnamed ditch which eventually finds its way to Long Point Slough, and then the Sangamon River.

The unnamed ditch into which the Borden waste water flows is at many times of the year completely dry, except for the effluent from the Borden plant. Even in the spring of the year the flow is low-- at the time of the hearing a witness indicated that the water in the ditch was about 4 to 5 feet wide and 8 to 12 inches deep. The ditch receives the flow of 250,000 gallons per day from the Borden plant.

The chemical precipitation unit was constructed by Borden in 1959, and has been operating since that date. During the next few years, Borden admitted that there were "some complaints" about the turbidity of the effluent discharged by Borden. As a result, Borden installed the two polishing lagoons in 1965 to correct the problem. Then began the dealings with the technical staff of the Sanitary Water Board. Apparently, some discussions were had between the technical people of SWB and Borden. These discussions culminated in a meeting on April 26, 1968 in the offices of the Technical Secretary. After the meeting Mr. A. A. Brensley, a sanitary engineering consultant to Borden, confirmed the discussion which had taken place by sending a letter to the Technical Secretary. (Borden Exhibit 4). This letter was accompanied by a document entitled "Basis for Design for Added Treatment". (Borden Exhibit A) Essentially, Borden agreed to install a Stage 2 facility between the chemical precipitator and the polishing lagoons, which when added would reduce the final BOD concentration in the effluent from the Borden plant to 10 mg/l. The specific process was not described, but the basic plan was approved by the Technical Secretary in a letter dated May 6, 1968, in the final paragraph of the letter which stated:

"We have reviewed the items listed in your letter [of April 26, 1968] and they are in accord with our requirements and the discussions of the April 26, 1968 meeting." (Borden Exhibit 5).

Borden proceeded with the plans and specifications and received a permit from the Sanitary Water Board "to install and operate Phase II additions to the existing industrial waste treatment facilities... all in accordance with plans and performance specifications [Borden Exhibit A] ... being made a part hereof." (Borden Exhibit B).

Borden selected, and built the Oxygest system under the permit. The system was completed and operable, in October 1969.

Since the final system has been completed by Borden, the Agency and Borden have sampled the effluent. The Agency averaged all samples prior to the date of completion and the results showed that the BOD was 72 mg/l and the TSS was 42 mg/l. (Borden Exhibit E) On October 21 and 22 samples were taken and tests of the samples were made by the Agency, Smith and Loveless and the Decatur Sanitary District. These samples showed BOD to be measured as "insignificant" (by the Agency) to 7 mg/l by the Smith and Loveless laboratory. TSS was measured as 14 by the Agency. (See Borden Exhibits C and D)

On December 3, 1970, the Director of the Agency sent a letter to Borden indicating that the effluent from the treatment facilities was "not producing a satisfactory effluent at the time of sample collection." (Borden Exhibit E) The letter went on to say that in order that Borden comply with present regulations it must, by July 1, 1972, not have an effluent beyond 4 mg/l BOD and 5 mg/l TSS. Plans and specifications for the facilities were required by January 1971 and awarding of construction contracts was required by July 1971. Subsequent to that date, the Agency admitted that the effluent samples it had used as the basis for figures in the December 3, 1970 letter "did not show the final effluent sampling results ... which were more representative of the effluent quality after the development of the procedures had been completed." (Borden Exhibit G)

The heart of this matter is the decision as to what level of treatment Borden must provide to its effluent. On the one hand, Borden argues that, as a result of the dealings with the Agency and its predecessor group, Borden need only provide treatment facilities which attain an effluent quality of 12.5 mg/l of BOD and TSS. Borden is, however, willing to study the problem to see if additional BOD and TSS reduction is technically and economically possible. The Agency, on the other hand, argues that Borden, like others who discharge into intrastate waters, must meet the requirements of SWB-14, which would, according to the Agency, require meeting an effluent BOD of 4 mg/l and TSS of 5 mg/l by July 1972. Although the Agency presented no witnesses, it did elicit on cross-examination that systems to accomplish this are presently available, although some pilot studies must be done to determine technical feasibility. An examination of the specific language of SWB-14, as it applies to Borden, is imperative before a ruling can be made by the Board. Section 1.08 of SWB-14, entitled "Implementation and Enforcement Plan", provides in paragraph 10a as follows:

"All municipal or industrial facilities for treatment of deoxygenating waste shall provide at least secondary biological treatment, or advanced waste treatment, adequate to reduce the organic pollution load of the treatment works effluent at the final treatment structure in accordance with effluent guidelines in paragraph 11, below."
(Emphasis supplied)

Paragraph 11 of that Section provides that where the stream dilution is less than 1 to 1, Advanced Waste Treatment Facilities are required to provide an effluent BOD of 4 mg/l and TSS of 5 mg/l.

It is clear from the language of SWB-14, referred to above, that Borden must provide Advanced waste treatment as stated in paragraph 11 of Section 1.08. Since the testimony was that at periods of time there is no flow in the unnamed ditch to which Borden's effluent is discharged, the dilution ratio obviously is less than 1 to 1. The more difficult question is trying to determine on what date Borden must meet that requirements. Paragraph 14 of Section 1.08 provides that municipal treatment works must meet the standards by July 1972. There is however no specific date given as to when industrial discharges must meet the standards. Rather, industries will be required to meet a timetable "established by the Board subsequent to facility inspection and progress conferences." Paragraph 15, Section 1.08, SWB-14. It seems therefore, and this Board so holds, that Borden was and is required to provide advanced waste treatment, but that until a determination of a date is made as to when the facilities should be completed, Borden was not under any timetable for said completion. This means, then, that at this point Borden was not violating any rule, or regulation, contained in SWB-14 from which a variance could be granted. This is the case even though the Director of the Agency attempted to impose a July 1972 date on Borden in the Director's letter to Borden dated December 3, 1970. (Borden Exhibit E) The Director, however, did not, and does not, have the authority to set the timetables for industrial dischargers to intrastate waters. This function is by regulation reserved exclusively to the Board. See paragraph 15, Section 1.08, SWB-14.

Notwithstanding the previous omission to have this Board, or the predecessor Board set a date for Borden to install advanced waste treatment facilities, this Board can set the date at this time. Based upon the recommendation of the Agency and upon the testimony of Borden's consulting engineer that two systems were available¹ for Borden to attain the required BOD and TSS effluent concentrations of 4 and 5 mg/l respectively, this Board believes that the 1972 date must be met by Borden. With that date now set, this Board hereby grants a variance to Borden to October 31, 1972, to finalize its plans and specifications for the installation and construction of facilities which will meet the requirements of SWB-14 which this Board has held applicable to Borden. If Borden after study and research cannot meet the final deadline of July 1972, it must seek another variance from this Board. The Variance herein granted to Borden is from the project completion schedule of

1. The two systems were described by Mr. A.A. Beasley, consulting engineer of Warren and Praag. (See R. 113-4) One is the system of the Neptune Meter Company, but this is an untried system. The other is sold by Calgon and is known as the granular activated carbon system. Beasley has worked with people from Calgon and the total capital cost of the system would be between \$175, and \$180,000. Some pilot plant work is needed, but at this time the record does not contain enough facts on whether that will delay the project beyond July 1972. That could be, as we have stated, the subject of another variance proceeding when the facts are known.

Section 1.08, paragraph 12, SWB-14. Under the Board's ruling, Borden shall submit its plans and specifications for the facilities by October 31, 1971, and award construction contracts by February 1, 1972, with the completion date of July 1, 1972.

We hope that other industrial dischargers covered by SWB-14 have already been given approved timetables from the prior Sanitary Water Board. Without these timetables, actually approved by the Board, each industrial discharger covered by SWB-14 has in fact no timetable to follow. Directions from the Technical Secretary, or the Director of the Agency, as the case may be are not sufficient under paragraph 15, Section 1.08 of SWB-14 to create a legally enforceable timetable in regard to those industries covered by SWB-14. If those timetables have not been properly approved, we expect that the Agency will seek such approval from the Board as soon as possible.

Two other points must be discussed. First, Borden attempted to show that its discharge had no effect on the stream because the stream was probably polluted downstream from the plant. We regard this as totally irrelevant testimony. If we were to allow each discharger to present that argument before this Board, we could never do anything about the pollution of the waters of the State. Second, the Agency criticized the petition for variance because it did not contain a list of all chemical constituents being discharged from the plant. We feel that contention is also without merit. The variance petition sought a variance from BOD and TSS effluent standards, not standards for heavy metals, or other constituents. If the Agency has information that Borden or any other company is discharging harmful constituents into the waters of the state, it is required to file complaints before this Board. No such information was made available to the Board in this case.

This opinion constitutes findings of fact and conclusions of law of the Board in this case.

Based upon the testimony and the exhibits introduced into this case the Board hereby orders the following:

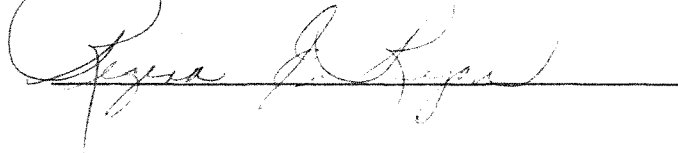
1. Borden is hereby required to meet the following timetable for the construction of advanced waste treatment facilities as required by paragraph 11b, Section 1.08, SWB-14:

- a. Completion of plans and specifications - October 31, 1971;
- b. Awarding of construction contracts - February 1, 1972; and
- c. Completion of construction - July 1, 1972.

2. During the period before completion of construction of the facilities outlined in paragraph, Borden shall not increase its production so as to increase the average strength, concentration

and volume of the waste water, as it existed prior to the date of the variance petition filed herein.

I, Regina E. Ryan, Clerk of the Pollution Control Board, certify that the above Opinion and Order was adopted by the Board this 24 day of May, 1971.

A handwritten signature in cursive script, appearing to read "Regina E. Ryan", is written over a horizontal line.