

ILLINOIS POLLUTION CONTROL BOARD
May 22, 1986

NORCHEM, INC.,)
)
 Petitioner,)
)
 v.) PCB 86-72
)
 ILLINOIS ENVIRONMENTAL)
 PROTECTION AGENCY,)
)
 Respondent.)

OPINION AND ORDER OF THE BOARD (by W. J. Nega):

This provisional variance request comes before the Board upon a May 22, 1986 Recommendation of the Illinois Environmental Protection Agency (Agency). The Agency recommends that a 45-day provisional variance be granted to Norchem, Inc. from 35 Ill. Adm. Code 304.120 as it relates to total suspended solids (TSS) to allow the Petitioner to exceed the TSS effluent limit of 25 milligrams per liter (mg/l) as a monthly average and 50 mg/l as a daily maximum during the time period when planned algae control measures are being installed.

Norchem, Inc. which is located at 8805 N. Tabler Road in Morris, Grundy County, Illinois, owns and operates wastewater treatment facilities that include an equalization basin, activated sludge units, secondary clarifiers, an oil separator, a sludge holding basin and a polishing pond. (Rec. 1). The Petitioner discharges its effluent to the Illinois River pursuant to the appropriate NPDES permit authorization. (Rec. 2).

The company has requested a provisional variance from 35 Ill. Adm. Code 302.210 from applying aquatic herbicide and chlorine to its polishing pond and has also requested relief from the total suspended solids effluent requirement of its NPDES Permit in order to install modifications to the polishing pond for algae control. (Rec. 1). The Agency has stated that it construes the Petitioner's request for relief pertaining to total suspended solids to be a request for relief from 35 Ill. Adm. Code 304.120 as it relates to TSS levels. (Rec. 1).

Discharge monitoring reports submitted to the Agency by the Petitioner indicate the following effluent data for the past year:

<u>Month</u>	<u>Flow (MGD)**</u>	<u>BOD (mg/l)</u>	<u>TSS (mg/l)</u>	
February, 1986	1.4	3	7	
January, 1986	1.3	3	12	
December, 1985	1.4	3	17	
November, 1985	1.3	3	13	
October, 1985	1.3	4	13	
September, 1985*	1.3	5	16	
August, 1985	1.9	5	14	
July, 1985	1.8	3	8	
June, 1985	2.0	4	15	
May, 1985	2.0	5	9	
April, 1985	2.0	4	15	
March, 1985	2.1	4	9	
Average	<u>1.7</u>	<u>4</u>	<u>12</u>	(Rec. 2).

In its June, 21, 1985 supplemental NPDES Permit application filed with the Agency, Norchem, Inc. stated that the highest maximum for total suspended solids from its polishing pond during 1984 was 82 mg/l and the highest monthly average for TSS from the polishing pond in 1984 was 51 mg/l. (Rec. 2).

On July 29, 1985, the Agency reissued Petitioner's NPDES Permit #ILO002917. Norchem's reissued NPDES Permit contained stricter and more stringent daily maximum effluent limitations for biochemical oxygen demand (BOD) and for total suspended solids, as well as a new requirement that each waste stream be sampled individually. (Rec. 2-3). The company's prior NPDES Permit had contained BOD effluent limits of 20 mg/l as a monthly average and BOD effluent limit of 50 mg/l as a daily maximum, while containing a TSS effluent limit of 25 mg/l as a monthly average and 62.5 mg/l as a daily maximum. However, the new effluent limits in the stricter reissued NPDES Permit required the company to meet BOD effluent limits of 20 mg/l as a monthly

* Point at which sampling location was changed in accordance with reissued NPDES permit.

** MGD = million gallons per day. (Rec. 2).

average and 40 mg/l as a daily maximum, plus effluent limits of TSS of 25 mg/l as a daily maximum. (Rec. 2).

Because the reissued NPDES Permit also required that each waste stream be sampled individually, the sampling point for the Petitioner's discharge from its wastewater treatment facilities needed to be moved to a point upstream of the mixing of this effluent with Norchem's cooling water discharge for appropriate sampling activities to take place. According to the Agency, the required change in the location of the sampling point had a greater impact on the company's ability to maintain compliance than the increase in the daily maximum effluent limits for TSS and BOD. (Rec. 2-3).

Although Norchem, Inc. has indicated that it desires to fully comply with the effluent limitations for TSS and BOD set forth in its reissued NPDES Permit, it anticipates difficulty in complying with the more stringent TSS requirement during the warm summer months when algae are expected to be most numerous in its polishing pond. (Rec. 3).

To reduce the amount of total suspended solids discharged from its polishing pond, the Petitioner plans to: (1) install a curtain across the polishing pond just south of the pond discharge point in order to divide the pond into two separate areas;* (2) install special baffle curtains across the northern part of its polishing pond to prevent "short circuiting" and to properly direct the water flow so that stagnant pond areas will be eliminated; (3) install a chlorination system to add chlorine to the contents of the northern portion of its polishing pond in order to retard algae growth by maintaining a low chlorine residual, and (4) apply an appropriate aquatic herbicide to significantly lower the concentration of algae in the polishing pond.

However, the Petitioner is very concerned that, due to the unusually warm weather this spring, the algae concentration may dramatically increase before its planned algae control measures can be installed and become effective, thereby causing effluent total suspended solids violations. To prevent TSS excursions along with concomitant NPDES Permit violations, Norchem, Inc. has requested effluent TSS limitations of 50 mg/l as a monthly

* The intended result of this division of the polishing pond into two distinct areas is to allow a quiescent area in the southern portion of the pond and to reduce the water detention time in the northern portion of the pond so that the algae will not have a chance to proliferate in the northern portion before the water is discharged. To allow sufficient flow between the two areas of the pond, the curtain will have appropriately sized apertures or "windows". (Rec. 3).

average and 100 mg/1 as a daily maximum during the short interim time period (i.e., 45 days) while its algae controls are in the process of being installed. (Rec. 3).

Additionally, Norchem, Inc. has also requested provisional variance relief from 35 Ill. Adm. Code 302.210 to allow the application of an aquatic herbicide and chlorine to its polishing pond contents. (Rec. 1; 3). Because there are no chlorine residual limits either in the company's NPDES Permit or in the Board's Water Pollution Regulations, and since the Petitioner will only introduce the herbicide as an algae control mechanism, the Agency considers relief from Section 302.210 to be unnecessary and has recommended that the Board deny relief from the provision. The Board agrees with the Agency's reasoning in reference to the Petitioner's requested relief from Section 302.210 and will therefore follow the Agency's recommendation in that regard.

Norchem, Inc. has analyzed and considered various alternative methods of compliance, but believes that its four-part plan for reducing the amount of total suspended solids discharged from its polishing plan is best. Concerning possible alternatives, the Agency has stated that it "agrees with Petitioner that the method selected is the most feasible for Petitioner to obtain and install". (Rec. 4). Nonetheless, the Agency's discussion adds the caveat that "the Agency considers the only relief necessary during the requested variance period is from the NPDES permit TSS effluent limit". (Rec. 4).

Because of the unseasonably warm weather experienced this spring which has caused algae concentrations to increase earlier than expected, Norchem, Inc. has contended that it would experience an arbitrary or unreasonable hardship if its requested provisional variance relief were denied. (Rec. 4).

In its Recommendation, it is stated that "the Agency agrees with Petitioner and feels that Petitioner should not be penalized for circumstances beyond its control when it has anticipated the problem and has been working toward a workable solution to have a solution in place by the time the problem would normally be expected to occur". (Rec. 4).

The Agency has also indicated that there are no federal regulations that would preclude the granting of the requested provisional variance, and notes that "there are no immediate downstream public water supplies which would be adversely impacted by this variance since the nearest one is approximately 100 miles downstream in the Peoria area". (Rec. 4).

In reference to the potential environmental impact on the receiving stream, the Agency has indicated that it "expects any environmental impact on the Illinois River due to increased TSS

levels in the effluent discharged to be minimal". (Rec. 4).

The Agency has therefore concluded that compliance with the applicable standards would impose an arbitrary or unreasonable hardship upon Norchem, Inc. (Rec. 1; 4). Accordingly, the Agency has recommended that the Board grant the Petitioner a provisional variance from 35 Ill. Adm. Code 304.120, subject to certain conditions.

Pursuant to Section 35(b) of the Illinois Environmental Protection Act, the Board will grant the provisional variance as recommended.

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

ORDER

Norchem, Inc. is hereby granted a provisional variance from 35 Ill. Adm. Code 304.120 to allow the Petitioner's wastewater treatment facilities to exceed the total suspended solids (TSS) effluent limit set by its NPDES Permit #IL0002917 of 25 milligrams per liter (mg/l) as a monthly average and 50 mg/l as a daily maximum, subject to the following conditions:

1. The provisional variance shall commence on May 22, 1986 and shall continue for 45 days thereafter, or until the Petitioner has completed the installation of its selected algae control method, whichever occurs first.
2. The Petitioner shall sample and analyze for total suspended solids as specified in its current NPDES Permit #IL0002917.
3. The Petitioner shall notify Mr. Dan Ray of the Agency's Compliance Assurance Section via telephone at 217-782-9720 when installation of the selected control method is completed. This oral communication and notification shall be supplemented by a written confirmation that shall be submitted within 5 days to:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Compliance Assurance Section
2200 Churchill Road
Springfield, Illinois 62706
Attention: Mr. Dan Ray

4. Effluent TSS, during the provisional variance period, shall be limited to 50 mg/l as monthly average and 100 mg/l as a daily maximum.

5. The Petitioner shall operate its wastewater treatment facility so as to produce the best effluent practicable.

6. Variance from 35 Ill. Adm. Code 302.210 is hereby denied as unnecessary.

7. Within 10 days of the date of the Board's Order, the Petitioner shall execute a Certification of Acceptance and Agreement which shall be sent to Mr. James Frost of the Agency at the following address:

Mr. James Frost
Illinois Environmental Protection Agency
Division of Water Pollution Control
2200 Churchill Road
Springfield, Illinois 62706

This certification shall have the following form:

I, (We), _____, having read the Order of the Illinois Pollution Control Board in PCB 86-72, dated May 22, 1986, understand and accept the said Order, realizing that such acceptance renders all terms and conditions thereto binding and enforceable.

Petitioner

By: Authorized Agent

Title

Date

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 22nd day of May, 1986 by a vote of 7-0.

Dorothy M. Gunn
Dorothy M. Gunn, Clerk
Illinois Pollution Control Board