

ILLINOIS POLLUTION CONTROL BOARD
February 9, 1984

CONTINENTAL GRAIN COMPANY,)
)
 Petitioner,)
)
 v.) PCB 84-15
)
 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 February 8, 1984 Recommendation of the Illinois Environmental Protection Agency (Agency). The Agency recommends that a 45-day provisional variance be granted to Continental Grain Company (Continental) from 35 Ill. Adm. Code 304.120(c) to allow the Petitioner to discharge about 16 million gallons of water currently ponded on its spray irrigation field.

Continental owns and operates a soybean processing plant on an 80-acre site in Taylorville, Christian County, Illinois. The Petitioner's wastewater treatment facilities include two 1-acre lagoons operated in series (i.e., both an anaerobic lagoon and an aerobic lagoon). Effluent which is discharged from this lagoon system subsequently flows into a final spray irrigation system. The spray irrigation system includes 24 spray nozzles located on a 32-acre irrigation field. A dike which is between two and three feet high surrounds most of the irrigation field. (Rec. 1).

Flows sometime exceed the 200 gallon per minute (gpm) pumping capacity of the spray irrigation pump during the rainy season. Such excess flows are diverted to 3 storm water discharge pipes which are located along the southern edge of the irrigation field. Seepage into the soil is collected by a tile field underlying the irrigation field during such wet weather conditions. After the water is collected by the tile field, it is recycled either back to the spray irrigation system where additional evapotranspiration can occur or into the cooling tower to be utilized as makeup water. (Rec. 1-2).

All noncontact cooling water and stormwater from Continental's site, as well as all process water, is currently combined and treated in the previously described manner within the Petitioner's treatment system. (Rec. 2). However, Continental is in the process of "working on an NPDES permit application to allow surface discharge of noncontact cooling waters, and is consider-

ing establishing a sampling and analysis program of stormwater flows to determine whether or not they can be in the future excluded from the treatment system". (Rec. 2).

Most of the Petitioner's spray irrigation field is presently covered by about 2 feet of water with a 6-inch "ice cap" on top of the water. The estimated volume of the water currently ponded on the 32-acre irrigation field is approximately 16 million gallons. (Rec. 2). This accumulation of water resulted from 3 months in which greater than normal precipitation occurred in the area. During October, November, and December of 1983, precipitation in the Taylorville region was 1.11 inches, 2.78 inches, and 1.45 inches above normal, respectively. (Rec. 2). During the latter half of October, 1983, ponding on the spray irrigation field began. To counteract such ponding, the spray recycle was started to respray the water that filtered through the field tile. Water from the field tile was pumped to the cooling tower during November, 1983. However, because of the freezing of lines due to the cold winter weather, the Petitioner's treatment facilities lost their capacity to recycle water to the spray system and to the cooling tower on December 21, 1983. Similarly, the Petitioner's ability to spray water onto the irrigation field was lost on December 24, 1983 due to lines freezing. (Rec. 2). The spray irrigation line was thawed out on January 7, 1984 and, since that time, the spray recycle line has thawed. Thus, almost all of Continental's treatment system is now back in operation, except for the ability to recycle water to the cooling tower. (Rec. 2).

Because of the current inability to recycle water to the cooling tower, Continental is concerned that impending spring rains might further flood the spray irrigation field and cause runoff to a roadside drainage ditch and nearby property. (Rec. 3). Accordingly, Continental is seeking a provisional variance from Special Condition 2 of its Agency permit issued on February 24, 1983 which reads: "There shall be no discharge from the treatment lagoons or spray irrigation field to any surface waters of the State". (Rec. 1). In its Recommendation, the Agency has construed the requested variance from Special Condition 2 to be a request for variance from 35 Ill. Adm. Code 304.120(c), and the Board concurs in this assessment.

Thus, the Petitioner is asking to be allowed to discharge about 16 million gallons of water presently ponded on the 32-acre spray irrigation field after appropriately draining the ponded water. To accomplish this drainage, Continental could either pump the water over the dike a distance of about 30 feet to a roadside ditch or unseal the outlet from an 18-inch sluice gate and discharge the water to the field tile system. Effluent from both the anaerobic and the aerobic lagoons would be discharged with the ponded water if the sluice gate were used, as Continental would be unable to keep such waters separated. (Rec. 3). Whatever method of drainage would be used, the ponded water from the spray irrigation field would travel about 1¼ miles before empty-

ing into an unnamed ditch which is tributary to the South Fork of the Sangamon River. (Rec. 3).

In evaluating this proposed discharge, the Agency has taken various water samples and performed a laboratory analysis of the ponded water which indicates BOD levels ranging between 4.9 parts per million (ppm) and 17.7 ppm; TSS levels varying between 5 ppm and 22 ppm; ammonia nitrogen levels of between 0.32 ppm and 0.39 ppm; and pH ranging between 6.7 and 6.97. (Rec. 3). After its laboratory evaluation, the Agency concluded that the discharge of this ponded water would have a minimal environmental impact because the receiving waters will be carrying high levels of dissolved oxygen and biological activity will be at a low level during the requested variance period. The Agency believes that the receiving waters will have the capacity to assimilate the low levels of pollutants which would be discharged in such a case. (Rec. 4).

Accordingly, the Agency has concluded that compliance on a short term basis with the provisions of 35 Ill. Adm. Code 304.120(c) would impose an arbitrary or unreasonable hardship. Therefore, the Agency recommends that the Board grant Continental Grain Company a provisional variance from Section 304.120(c), subject to certain conditions. Pursuant to Section 35(b) of the Illinois Environmental Protection Act, the Board hereby grants the provisional variance as recommended.

ORDER

Continental Grain Company is hereby granted a 45-day provisional variance from 35 Ill. Adm. Code 304.120(c) to allow the discharge of approximately 16 million gallons of water currently ponded on its 32-acre spray irrigation field, subject to the following conditions:

1. This variance shall commence on February 9, 1984 and shall terminate 45 days thereafter.
2. By March 1, 1984, Continental shall:
 - a). Submit an application to the Agency for an NPDES Permit to allow implementation of its compliance plan; and
 - b). Establish a program for sampling and analyzing stormwater flows to collect data for determining whether or not all, or part, of the stormwater flow can be safely excluded from treatment in Continental's lagoon and spray irrigation system.
3. Continental shall discharge to the drainage ditch and shall control such discharge by use of either pumps or another method which can be turned on and shut off.

4. Continental shall sample, using approved methods, any discharge 2 times per week for BOD, TSS, pH, temperature, and ammonia nitrogen.

5. Within 7 days after the end of each calendar week of discharging, Continental shall submit sample results to James C. Frost, Compliance Assurance Section, Division of Water Pollution Control, Illinois Environmental Protection Agency, 2200 Churchill Road, Springfield, Illinois 62706.

- 6. During the period of this variance, Continental shall:
 - a). work to thaw the line to the cooling tower so that all treatment options can be utilized; and
 - b). return as much of the ponded water as possible through the recycle spray and cooling tower (after frozen line thaws out) so as to minimize the amount of water which is discharged.

7. Continental shall notify James C. Frost by telephone whenever discharging is commenced.

8. Continental shall keep record of the length of time discharge occurs and the volume discharged on a daily basis. A copy of these records shall be submitted with the sample results (item 5).

9. Within 10 days of the date of the Board's Order, Continental Grain Company shall execute a Certificate of Acceptance and Agreement which shall be sent to: Illinois Environmental Protection Agency, Division of Water Pollution Control, Compliance Assurance Section, 2200 Churchill Road, Springfield, Illinois 62706. This certification shall have the following form:

CERTIFICATION

I, (We) _____, having read the Order of the Illinois Pollution Control Board in PCB 84-15 dated February 9, 1984, understand and accept 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, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 9th day of February, 1984 by a vote of 7-0.

Christan L. Moffett
Christan L. Moffett, Clerk
Illinois Pollution Control Board