

ILLINOIS POLLUTION CONTROL BOARD
May 29, 1984

DEPARTMENT OF THE AIR FORCE)
(CHANUTE AIR FORCE BASE),)
)
Petitioner,)
)
v.) PCB 84-24
)
ILLINOIS ENVIRONMENTAL PROTECTION)
AGENCY,)
)
Respondent.)

COL. EVANS T. PARKER, USAF, APPEARED FOR PETITIONERS;

MR. BRUCE L. CARLSON, ATTORNEY AT LAW, APPEARED FOR RESPONDENT.

OPINION AND ORDER OF THE BOARD (by B. Forcade):

This matter comes before the Board upon a petition and amended petition for variance filed February 27 and April 3, 1984 by the Department of the Air Force, Chanute Air Force Base ("Chanute"). The original petition, which included a waiver of hearing, was amended to include an affidavit attesting to the facts alleged as required by 35 Ill. Adm. Code 104.124. Chanute has requested a variance from 35 Ill. Adm. Code 304.120(c) concerning effluent limitations for five day biochemical oxygen demand (BOD₅) and suspended solids for their main sewage treatment facility. Chanute has also requested a modification of its NPDES permit in accordance with 35 Ill. Adm. Code 309.184 which provides for permit modification pursuant to a variance. The variance has been requested until Chanute is incorporated into the Rantoul Regionalized Wastewater Facility which is expected to be completed in early 1987.

On April 6, 1984, the Illinois Environmental Protection Agency ("Agency") filed a recommendation that variance be denied. The basis for this recommendation was that the Petitioner had failed to provide sufficient evidence to meet the statutory burden imposed by Section 35 of the Illinois Environmental Protection Act ("Act"), of demonstrating that compliance with the existing effluent limitations would impose an arbitrary or unreasonable hardship. Ill. Rev. Stat. 1983, Ch. 111½, par. 1035. No public comments were received, no hearing was held.

Section 304.120 requires that, effective May 7, 1980, all effluents containing deoxygenating wastes shall meet certain standards. Section 304.120(c), which is the standard from which variance is sought, requires that effluent with a dilution ratio

of less than five to one shall not exceed 10 mg/l of BOD₅ or 12 mg/l of suspended solids. Discharges from Chanute's sewage treatment facilities are covered by NPDES Permit No. 0027073. The current NPDES Permit became effective on October 12, 1983 (Am. Pet. App. A). The NPDES Permit incorporates the BOD₅ and suspended solids standards of Section 304.120(c) and also provides daily maximum standards for the effluent. The permit limits for Outfall 001, the main trickling filter plant, are (Rec. p. 4):

	Flow (MGD)		BOD ₅		Suspended Solids	
	30 Day Average	Daily Max.	30 Day Average	Daily Max.	30 Day Average	Daily Max.
Design/NPDES	1.5	2.6	10	20	12	24
Permit Limits						

Chanute seeks a variance from these standards as they are presently applied to their main sewage treatment facility. It is unclear from the record why the daily maximum for BOD₅ is less than the daily maximum allowable under Section 304.104. Chanute proposes an interim effluent limitation of 20 mg/l for BOD₅ and 25 mg/l for suspended solids for a 30 day average (Am. Pet. p. 10).

Petitioner owns and operates several wastewater treatment facilities at Chanute Air Force Base. These include the main trickling filter plant, which is the subject of this variance request, a separate sewage treatment plant that services a remote area of the base, an oil/water separator for the aircraft refueling training area and an oil/water separator for the aircraft fire extinguishing training area (Rec. p. 2-3). The main trickling filter plant consists of a comminutor, parshall flume, bar screen, raw sewage pump station, Imhoff tanks, dosing tank, recirculating pumps, Calgon carbon adsorption units, chlorination and sludge handling facilities. Plant design average flow is 1.5 million gallons per day ("MGD"). The influent going to the main trickling filter plant is primarily domestic wastewater, but it also receives discharge from the oil/water separator for the fire extinguishing training area and is a potential source of toxics in the system (Rec. p. 3).

The Calgon carbon adsorption units provide tertiary treatment for Chanute's main wastewater treatment system. This tertiary system has proved capable of compliance with the applicable BOD₅ and suspended solids standards when it is operating (Am. Pet. App. B). Violations have occurred, however, due to equipment malfunctions and down-time for repair and maintenance (Rec. p. 4-5). Discharge monitoring reports measuring the effluent from the main trickling filter plant were submitted by Chanute pursuant to their NPDES permit and are provided here in part (Rec. p. 4):

Month	Flow (MGD)		BOD ₅		Concentration (mg/l)	
	30 Day Average	Daily Max.	30 Day Average	Daily Max.	Suspended Solids 30 Day Average	Suspended Solids Daily Max.
Feb. 1984	1.3	2.2	7	19	Data not available	
Jan. 1984	0.9	1.1	4	16	3	6
Dec. 1983	1.4	3.3	11	53	10	27
Nov. 1983	1.1	2.9	9	20	7	18
Oct. 1983	1.1	2.9	7	22	5	19
DESIGN/NPDES PERMIT LIMITS	1.5	2.6	10	20	12	24

The data for November and December 1983 reflect effluent quality that results when the Calgon units are not used. During those two months, the Calgon system was not operational (Rec. p. 4-5). The practical effect of granting the variance would be to allow Chanute to totally discontinue use of the current tertiary treatment system until wastewater from the base is routed to the Rantoul Regionalized Waste Facility, which will be completed in early 1987.

Chanute has operated the Calgon carbon adsorption system since 1980. Chanute investigated other tertiary systems such as polishing lagoons, microscreening, and filtration during the mid-1970's (Am. Pet. p. 8). The Calgon system was selected because it appeared to be the most feasible and cheapest short-term method to achieve compliance with the effluent limitations applicable in 1980 (Am. Pet. p. 8). The petitioner contracted with Calgon to design and construct a carbon adsorption system to modify their existing plant. Chanute chose not to purchase the system but to lease it from Calgon. Chanute has a renewable service fee and maintenance contract with Calgon (Am. Pet. p. 8). Chanute claims it has spent over two million dollars altogether on the Calgon system and is faced with the option of either purchasing the unit for \$613,000 or to continue the lease arrangement at an approximate cost of \$31,000 per month (Am. Pet. p. 12-13).

It is not altogether clear what environmental impact will result if the variance is granted. The receiving waters are a tributary to the Upper Salt Fork Drainage Ditch and are classified as general use waters. These waters meander through primarily agricultural land (Am. Pet. p. 7). Petitioner provides little environmental analysis beyond a description of the receiving stream's characteristics and a conclusory statement declaring that there will be a minimal impact on the environment (Am. Pet. p. 7). The impact of a variance on toxics and ammonia nitrogen removal through the use of the carbon adsorption system has not

been addressed either (Rec. p. 5). Petitioner proposes to investigate various methods of minor plant modification and a more rigorous maintenance program to ensure efficiency and reduce environmental impact (Am. Pet. p. 10-11).

Chanute has been the subject of a number of environmental enforcement actions related to their sewage treatment facilities in the recent past. In 1977 Region V of the U.S. Environmental Protection Agency issued a Finding and Notice of Violation and Order for Compliance. In 1980, the Illinois Attorney General, because of continued violations and unsatisfactory compliance, issued a Notice of Clean Water Act Violation. In 1981, the Illinois Attorney General filed suit against Chanute in U.S. District Court. The parties agreed to a consent judgment which included a commitment by the Petitioner to fund its share of the regional treatment plant to be built by the Village of Rantoul (Rec. p. 7).

The Petitioner's position is that the tertiary system now in operation is expensive to rent, service and repair, and that due to frequent malfunctions is an unreliable method of complying with the BOD₅ and suspended solids standards. Ultimate compliance with the standards will be achieved when Chanute is incorporated into the regional treatment system now under construction. If the variance is granted for this interim period, Chanute will investigate certain minor plant modifications and maintenance techniques to increase the efficiency of treatment and minimize the environmental impact of the variance.

The Board will deny the variance request because Chanute has failed to provide sufficient information to allow the Board to make an informed decision. The Board generally agrees with the Agency's rationale supporting its recommendation that variance be denied. Chanute fails to sustain the statutory burden of showing that denying the variance would impose an arbitrary and unreasonable hardship. Petitioner provides cost figures for rental, maintenance and repair but provides little else. Cost figures alone do not allow the Board to evaluate the degree of hardship involved. Furthermore, it appears that much of this burden may be self-imposed through Chanute's choice of tertiary systems, its decision to lease rather than purchase the unit, its contractual dealings with Calgon, or its failure to elicit full contractual performance from Calgon. Since the marginal performance of the tertiary system is not explained, the Board cannot exclude poor operation of the system as a factor in non-compliance. Petitioner also inadequately analyzes the environmental impact of granting a variance and offers no information with which to determine the degree of potential impact. Chanute's assertion that through minor plant modifications effluent quality equivalent to the present tertiary system can be achieved is not supported by petitioners own data (Rec. p. 5-6). Chanute's variance request is deficient both in terms of addressing economic and environmental impact as required by 35 Ill. Adm. Code 104.121 (g) and (k). If

Chanute can develop adequate information to allow informed Board decisionmaking they may again file for a variance.

While Chanute's tertiary system does not consistently comply with current standards, it does achieve compliance or near compliance to a much greater degree than any alternative the Petitioner has presented. Petitioner does not ask for variance in order to gradually work towards compliance. Petitioner is frequently in compliance today, but seeks a variance based on inadequate information that contradicts Chanute's conclusions.

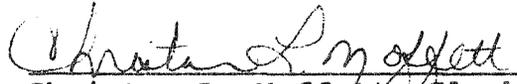
ORDER

Department of the Air Force (Chanute Air Force Base)'s, request for variance from 35 Ill. Adm. Code 304.120 for its main trickling filter sewage treatment facility is hereby denied.

IT IS SO ORDERED.

Chairman J.D. Dumelle dissented.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 29th day of May, 1984 by a vote of 5-1.


 Christan L. Moffett, Clerk
 Illinois Pollution Control Board