

ILLINOIS POLLUTION CONTROL BOARD
June 22, 1978

IN THE MATTER OF:)
)
AMENDMENTS TO THE AGRICULTURE)
RELATED POLLUTION REGULATIONS) R76-15
OF THE ILLINOIS POLLUTION)
CONTROL BOARD)

PROPOSED OPINION AND ORDER OF THE BOARD (by Dr. Satchell):

This regulatory proceeding was initiated before the Board by the Illinois Environmental Protection Agency (Agency) by filing a petition on July 9, 1976 for amendments to the Chapter 5: Agriculture Related Pollution Regulations (Chapter 5). This proposal was numbered R76-15 and published in Environmental Register #130, July 30, 1976. Public hearings were held on this matter on August 23, 1977 in Mt. Vernon, Illinois and August 25, 1977 in Moline, Illinois. Economic impact hearings were held on February 7, 1978 in Galesburg, Illinois and February 8, 1978 in Jacksonville, Illinois.

The purpose of these amendments is largely to comply with Federal requirements. These amendments will make the Board's Chapter 5 consistent with the revised (as of March 18, 1978) USEPA National Pollutant Discharge Elimination System (NPDES) program on animal feeding operations. The second reason for the amendments is to set a fixed date for compliance with part one of Chapter 5 for all feedlots not subject to NPDES authority. The current dates, established in March, 1975, were set to be effective for new facilities when Illinois received NPDES authority from USEPA and for existing facilities thirty months after receipt of NPDES authority. This authority was believed imminent at the time (R. 12). However, Illinois did not receive the authority as expected and the compliance dates were consequently pushed forward. Thus in this proceeding the Agency has sought to establish a date certain for compliance. It should be noted at this point Illinois received NPDES authority in October 1977 and notice was filed with the Secretary of State on October 24, 1977.

Hearings concerning livestock waste were held in 1972 and 1973; however, these were stayed pending further agricultural input and developing federal regulations. On July 5, 1973 the federal regulations were finalized. The Board adopted regulations on August 29, 1974. These were amended on September 5, 1974 and again on March 26, 1975. This final amendment set the current compliance dates.

The Agency believes there has been adequate notice to those facilities not needing NPDES permits to obtain compliance

with the regulations (R. 12, 13) and that thirty months from October of 1977 is an unwarranted amount of time to achieve compliance (R. 13). The Agency proposes a December 31, 1978 compliance date (Aug. 22, 1977 amendment). This would allow a complete construction season for facilities not already in compliance to comply. The Agency further submits that considering the lengthy proceedings in this cause there is no element of surprise to livestock producers (R. 13). The Agency estimated that 300 to 500 facilities would need to make major modifications to meet Rule 203 and that a "goodly number" of the 40,000 feedlots in Illinois would need to make minor modifications to meet the requirements of the regulations (R. 16, 46).

Dr. Donald W. Lybecker, the author of the economic impact study, made the following observation concerning compliance dates.

"The point is that if a farmer is going to have to make a capital investment in animal waste pollution abatement facilities, in general the investment is better made sooner than later. Given the range of interest rates during the last five years and the increase in the cost of labor and materials for the construction of the pollution control systems, a return of from nine to 13 percent above the cost of capital would be realized.

Exceptions to this generalization must, however, be noted. Those producers who are short of capital and find themselves with relatively large debt loads may not be able to finance the necessary capital improvements or if so, they may be required to pay a premium for the required additional funds. Table 3.13 shows the variation of returns for hogs, feeder cattle and dairy cattle for the period 1966-75. During these ten years, only hog producers have been able to cover all of their feed and nonfeed costs. Both the dairy and feeder cattle operators show losses on average. Projected nonfeed costs for future production show increases of from 38 to 50 percent, indicating additional income pressure for these livestock operators." (IIEQ Doc. No. 77/23, pp. 37,41)

This analysis was brought into question at the economic impact hearing because it compares interest rates with price indices. This would cause the "return from nine to 13 percent" to disappear.

A representative of the Illinois Livestock Association, John Killam, observed at the February 7, 1978 hearing that the variables affecting the industry are so great that it is difficult to put numbers on the economic impact (R. 109-113).

It was noted at the hearing that the two methods of compliance chosen for economic analysis, the vegetative filter and the holding pond, are perhaps the most expensive methods of compliance and that by use of some simpler methods costs might be decreased (R. 94-96). One such method might be shifting a feedlot from one side on a hill to another to avoid direct runoff into a stream. Assuming some farmers have some such options available the costs would be lower than estimated. It should be noted that data in this area are not readily available. Much of the economic impact analysis was done with reliance on an unpublished Soil Conservation Service (SCS) document (Reference #30 of IIEQ Doc. No. 77/23). This document reflects estimates of numbers of feedlot operations in Illinois that would be believed to be in violation of specified effluent guidelines (R. 101-103). These estimates were received through a survey of people working with SCS and extension services (R. 102).

The Board observes that feedlot operators have had substantial notice of these regulations because of the on-going regulatory process since 1972. These operators even without Chapter 5 would have to be concerned with compliance with Chapter 3: Water Pollution Regulations and Section 12 of the Environmental Protection Act (Act), Ch. 111 1/2 Ill. Rev. Stat. §1012 (1977). The economic impact of these proposed regulations considered in this light become negligible. The fact that these regulations emulate already existing Federal Regulations raises the question: Is there any new economic impact as a result of action by the State of Illinois?

The Board will enact an earlier compliance date for Rule 401(a) of Chapter 5. However, due to the time delay since the Agency's proposal the Board will extend the date beyond its proposal to June 30, 1979. The Agency has indicated that those operations inclined to come into compliance will have already done so (R. 12, 13); however, this will provide an additional six months notice to those who might be awaiting official action on the regulation.

Other than the compliance dates all the proposed changes in the Chapter 5 Regulations are in response to amendments to the Federal NPDES program on Concentrated Animal Feeding Operations published in the Federal Register on March 18, 1976 (R. 41, 51). The changes include six new definitions which are animal feeding operation, animal unit, man-made, man-made ditch, navigable waters and silvicultural point source. An animal feeding operation is defined as a facility where animals are confined for 45 days or more per year and the entire lot is void of vegetation during the normal growing season. This exempts pasture operations with proper management (R. 51). The definition of an animal feeding operation is substituted for the term livestock feedlot. This means that

minor changes occur in Rule 104(c) and to the definitions for feedlot runoff, livestock management facility and livestock waste.

The definition for silviculture point source reflects the latest USEPA revision to clarify that the discharge must be specifically related to silvicultural activities (R. 52). There are no silvicultural point sources in Illinois (R. 79).

The definition of animal unit is quite similar to that promulgated by USEPA. To make the list more nearly complete the Agency proposed to add multiplier numbers for young dairy stock, swine weighing under 55 pounds, turkeys, laying hens or broilers, and ducks (R. 53). During the course of the hearing the term "brood cows" was added to the slaughter and feeder cattle category and "lambs or goats" was added to the sheep category. These changes were also made to assure ease of understanding in computing animal units.

The definitions of man-made and man-made ditch were included to make it clear that a vegetative filter would be considered a treatment device and not a man-made ditch.

The navigable waters definition is that of 40 CFR 125.1(p).

Rule 104(a) has been modified to simply state that all persons must comply with the Environmental Protection Act and all Board regulations. This is simply a restatement of the law.

Rules 202 and 203 deal with NPDES permits. The amendments break down requirements in greater detail than the existing form. As previously stated the modifications in the requirements are made in accordance with the revised USEPA program on Concentrated Animal Feeding Operations. Rule 202(a) requires an NPDES permit for operations with more than 1,000 animal units. The single exception to this is if the operation discharges only in the event of a 25-year, 24-hour storm event. Rule 202(b) requires an NPDES permit for operations with 300 to 1,000 animal units if either of two conditions are met: (1) pollutants are discharged directly into navigable waters through a man-made device, or (2) pollutants are discharged directly into a stream or other body of water which comes into contact with the confined animals.

Rule 203 provides for case-by-case determination for NPDES permits other than those coming under Rule 202. After consideration of the factors set forth in the regulation the Agency may designate a facility as requiring an NPDES permit. Prior to requiring a permit the Agency must make an onsite inspection and notify the owner or operator in writing. No permit may be required if the animal feeding operation discharges only in the event of a 25-year, 24-hour storm event. Under Rule 203 NPDES permits can be required only if either of the following conditions is met: (1) there is a discharge through a man-made device, or (2) a stream or other water comes into contact with the confined animals.

A new paragraph will be added to Rule 207. Rule 207(c) concerns land trust disclosure. This once again simply states the law of Illinois.

In the economic analysis Dr. Lybecker considered most of the changes proposed other than the compliance date, as having no economic impact. The one exception in the analysis was the 300-1,000 animal unit operation. If it is assumed these operations are not covered under current regulations then about 6,300 livestock operations would be affected (IIEQ Doc. 77/23 p. 2). For 128 farms with surface runoff problems the investment costs for pollution abatement would be about \$1.6 million, and an additional net operating cost of over \$192,000 would be incurred annually, id. This of course is based on the assumption; however, these operations could possibly come under the current Rule 203 and would come under Federal regulation if not covered by the State. Consequently, as stated earlier there is a question if there is any economic impact. Many of the problems discussed with the economic analysis of the compliance date arise again now: the great variability in the industry, the availability of data, the choice of compliance methods, and the requirements of the Environmental Protection Act and other Board regulations.

Based on the information presented the Board will make the changes requested by the Agency in Rules 103, 104, 202, 203, 207 and 303 of Chapter 5: Agriculture Related Pollution Regulations. Rule 401 will be modified as consistent with this opinion.

ORDER

It is the order of the Pollution Control Board that the following modifications shall be made to Chapter 5: Agriculture Related Pollution Regulations:

In Rule 103 the definition of Livestock Feedlot is repealed.

Rule 103 will contain the following new or modified definitions:

Animal Feeding Operation: A lot or facility (other than an aquatic animal production facility) where the following conditions are met:

- (i) Animals have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period, and
- (ii) Crops, vegetation, forage growth or post-harvest residues that are grown in place are not sustained in the normal growing season over any portion of the lot or facility.

Two or more animal feeding operations under common ownership are deemed to be a single animal feeding operation if they are adjacent to each other or if they utilize a common area or system for the disposal of wastes.

Animal Unit: A unit of measurement for any animal feeding operation calculated by adding the following animal numbers:

Brood cows and slaughter and feeder cattle multiplied by 1.0
Milking dairy cows multiplied by 1.4
Young dairy stock multiplied by 0.6
Swine weighing over 55 pounds multiplied by 0.4
Swine weighing under 55 pounds multiplied by 0.03
Sheep, lambs or goats multiplied by 0.1
Horses multiplied by 2.0
Turkeys multiplied by 0.02
Laying hens or broilers multiplied by 0.01 (if the facility has continuous overflow watering)
Laying hens or broilers multiplied by 0.03 (if the facility has a liquid manure handling system)
Ducks multiplied by 0.2.

Feedlot Runoff: Polluted liquid flowing from any animal feeding operation caused by precipitation or other water sources falling on or flowing onto an animal feeding operation.

Livestock Management Facility: Any animal feeding operation, livestock shelter, or on-farm milking and accompanying milk-handling area.

Livestock Waste: Livestock excreta and associated feed losses, bedding, wash waters, sprinkling waters from livestock cooling, precipitation polluted by falling on or flowing onto an animal feeding operation, and other materials polluted by livestock

Man-made: Constructed by man and used for the purpose of transporting waste.

Man-made Ditch: A discrete fissure or channel excavated in the earth for the purpose of transporting livestock waste directly to navigable waters. This is not to be confused with a vegetative filter or acceptable disposal area which is a treatment device and may take the form of a man-made terrace or grass waterway system.

Navigable Waters: All waters of the United States as defined in 40 CFR 125.1(p):

- (1) All navigable waters of the United States;
- (2) Tributaries of navigable waters of the United States;
- (3) Interstate waters;
- (4) Intrastate lakes, rivers, and streams which are utilized by interstate travelers for recreational or other purposes;
- (5) Intrastate lakes, rivers, and streams from which fish or shellfish are taken and sold in interstate commerce; and

- (6) Intrastate lakes, rivers, and streams which are utilized for industrial purposes by industries in interstate commerce.

Silvicultural Point Source: Any discernible, confined and discrete conveyance related to rock crushing, gravel washing, log sorting or log storage facilities which are operated in connection with silvicultural activities and from which pollutants are discharged into navigable waters.

Rule 104(a):

104 LIVESTOCK MANAGEMENT FACILITY AND LIVESTOCK WASTE-HANDLING FACILITY OPERATIONS

(a) General Criteria

- (1) Besides the Regulations contained within this Chapter, every person shall also comply with the provisions of the Act and Board Regulations.
- (2) The owner or operator of any livestock management facility or livestock waste-handling facility shall comply with the FWPCA, NPDES filing requirements, and the feedlot category of point source effluent guidelines.
- (3) These Regulations shall apply to stockyards and similar operations where animals are held briefly, as well as to conventional livestock operations.
- (4) The transportation of livestock wastes shall be planned and conducted so as not to cause, threaten, or allow any violation of the Act and applicable regulations.

Rule 104(c):

(c) Protection of Livestock Management Facilities and Livestock Waste-Handling Facilities

- (1) Existing livestock management facilities and livestock waste-handling facilities shall have adequate diversion dikes, walls, or curbs that will prevent excessive outside surface waters from flowing through the animal feeding operation and will direct runoff to an appropriate disposal, holding, or storage area. The diversions are required on all aforementioned structures unless there is negligible outside surface water which can flow through the

facility or the runoff is tributary to an acceptable disposal area or a livestock waste-handling facility. If inadequate diversions cause or threaten to cause a violation of the Act or applicable regulations, the Agency may require corrective measures.

- (2) New livestock management facilities and livestock waste-handling facilities shall have adequate diversions, dikes, walls, or curbs that will prevent excessive outside surface runoff waters from flowing through the animal feeding operation and will direct runoff to an appropriate disposal, holding, or storage area. The diversions are required on all aforementioned structures unless there is negligible outside surface water which can flow through the facility or the runoff is tributary to an acceptable disposal area or a livestock waste-handling facility. A holding pond must be capable of storing a volume equal to or exceeding the area of the animal feeding operation, plus any tributary area not a part of the animal feeding operation (including roof area if tributary to the facility), multiplied by 12 inches for runoff from earthen areas or 15 inches for runoff from concrete areas unless the operator has justifiable reasons substantiating that a lesser storage volume is adequate. If inadequate storage volumes cause or threaten to cause a violation of the Act or applicable regulations, the Agency may require corrective measures. In no case shall the storage volume of the containment facility be less than the 25-year, 24-hour storm effluent guidelines as required by the new source performance standards of the U.S. Environmental Protection Agency for the feedlot point source category.

Rule 202:

202 PERMITS REQUIRED FOR LARGE OPERATORS

An NPDES permit shall be required for an animal feeding operation which falls within the criteria set forth in (a) or (b) below: provided, however, that no animal feeding operation shall require a permit if it discharges only in the event of a 25-year, 24-hour storm event.

- (a) More than the numbers of animals specified in any of the following categories are confined:

Number of Animals	Kind of Animals
1,000	Brood cows and slaughter and feeder cattle
700	Milking dairy cows
500	Horses
2,500	Swine weighing over 55 pounds
10,000	Sheep, lambs or goats
55,000	Turkeys
100,000	Laying hens or broilers (if the facility has continuous overflow watering)
30,000	Laying hens or broilers (if the facility has a liquid manure handling system)
5,000	Ducks
1,000	Animal units

(b) More than the following numbers and types of animals are confined and either condition (1) or (2) below is met:

Number of Animals	Kind of Animals
300	Brood cows and slaughter or feeder cattle
200	Milking dairy cows
750	Swine weighing over 55 pounds
150	Horses
3,000	Sheep, lambs or goats
16,500	Turkeys
30,000	Laying hens or broilers (if the facility has continuous overflow watering)
9,000	Laying hens or broilers (if the facility has a liquid manure handling system)

1,500	Ducks
300	Animal units

- (1) Pollutants are discharged into navigable waters through a man-made ditch, flushing system or other similar man-made device; or
- (2) Pollutants are discharged directly into navigable waters which originate outside of and pass over, across, through or otherwise come into direct contact with the animals confined in the operation.

None of the requirements listed in Rule 201, 202, or 203 preclude the voluntary filing of an NPDES application by the owner or operator of an animal feeding operation.

Rule 203:

203 CASE-BY-CASE DESIGNATION REQUIRING NPDES PERMITS

- (a) Notwithstanding any other provision of this Part, the Agency may require any animal feeding operation not falling within Rule 202 to obtain a permit. In making such designation, the Agency shall consider the following factors:
 - (1) The size of the animal feeding operation and the amount of wastes reaching navigable waters;
 - (2) The location of the animal feeding operation relative to navigable waters;
 - (3) The means of conveyance of animal wastes and process wastewaters into navigable waters;
 - (4) The slope, vegetation, rainfall, and other factors relative to the likelihood or frequency of discharge of animal wastes and process wastewaters into navigable waters; and
 - (5) Other such factors bearing on the significance of the pollution problem sought to be regulated.

The Agency, however, may not require a permit under Rule 203(a) for any animal feeding operation with less than the number of animal units (300) set forth in Rule 202(b) above, unless it meets either of the following conditions:

- (i) Pollutants are discharged into navigable waters through a man-made ditch, flushing system or other similar man-made device; or

- (ii) Pollutants are discharged directly into navigable waters which originate outside of and pass over, across, through or otherwise come into direct contact with the animals confined in the operation.
- (b) In no case may a permit application be required from an animal feeding operation designated pursuant to this Rule until there has been an onsite inspection of the operation and a determination that the operation should and could be regulated under the permit program. In addition, no application may be required from an owner or operator of an animal feeding operation designated pursuant to this Rule unless the owner or operator is notified in writing of the requirement to apply for a permit.
- (c) Upon receipt of the Agency's notification that an NPDES permit is required pursuant to Rule 203(b) of this Chapter, the operator shall make application to the Agency within 60 days. The Agency may issue an NPDES permit with a compliance schedule detailing interim steps to be taken along with a final date, not to exceed 14 months from the date the permit is issued, by which compliance with the Act and all applicable regulations shall be achieved.
- (d) No animal feeding operation may be required to have a permit if it discharges only in the event of a 25-year, 24-hour storm event.

A new Rule 207(c) :

207 APPLICATIONS - FILING AND FINAL ACTION BY AGENCY

- (c) Disclosure Required For Land Trusts. An applicant filing for an NPDES permit shall satisfy the requirements of Chapter 148, Section 72, of the Illinois Revised Statutes (1975) before the Agency grants the applicant its permit.

Rule 303:

303 SILVICULTURAL ACTIVITIES

NPDES permits are required for discharges from silvicultural point sources.

Rule 401:

401 COMPLIANCE DATES

Compliance with the limitations of Part I of this Chapter shall be achieved by the following dates:

- (a) With respect to existing facilities not required

to obtain NPDES permits, by June 30, 1979.

- (b) With respect to all other existing and new facilities, as of the effective date of this amendment.

I, Christian L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order were adopted on the 22nd day of June, 1978 by a vote of 5-0.

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