

ILLINOIS POLLUTION CONTROL BOARD
June 26, 1975

ENVIRONMENTAL PROTECTION AGENCY,)
Complainant,)
)
v.)
)
ILLINOIS NITROGEN CORPORATION,)
Respondent,)
)
and)
-----)
ILLINOIS NITROGEN CORPORATION,)
Petitioner,)
)
v.)
)
ENVIRONMENTAL PROTECTION AGENCY,)
Respondent.)

PCB 73-517 and PCB 74-169
Consolidated

OPINION AND ORDER OF THE BOARD (by Mr. Goodman):

This matter comes before the Pollution Control Board (Board) upon stipulation of facts and proposed settlement between Complainant-Respondent, the Environmental Protection Agency (Agency) of the State of Illinois, and Respondent-Petitioner, Illinois Nitrogen Corporation (Illinois Nitrogen).

The Agency filed a complaint against Illinois Nitrogen on December 7, 1973, PCB 73-517, alleging that Illinois Nitrogen's fertilizer and nitric acid plant located at Marseilles, Illinois, LaSalle County, has been operating without an Agency operating permit thereby violating Rule 103(b) of the Air Regulations and Section 9(b) of the Environmental Protection Act (Act). In addition the Agency alleges that Illinois Nitrogen is allowing emissions of contaminants into the environment of the State so as to tend to cause air pollution in Illinois in violation of Section 9(a) of the Act.

An appeal from permit denial was filed with the Board on May 1, 1974, by Illinois Nitrogen, PCB 74-169, alleging that the Agency had denied a permit for Illinois Nitrogen's nitric acid plant which, they alleged, had been demonstrated to be in compliance with applicable regulations. On May 9, 1974, upon motion to consolidate by Illinois Nitrogen, the Board ordered the two cases, PCB 73-517 and PCB 74-169, to be consolidated. On June 6, 1974, Illinois Nitrogen filed an open waiver against the requirement of Section 40 of the

Act, which waiver was amended on July 1, 1974 by Illinois Nitrogen to extend until 60 days after the close of the record.

A hearing was held April 30, 1975, at which time both parties indicated that the matter had been settled and that a stipulation of fact and proposed settlement would be forthcoming. The aforementioned stipulation of facts and proposed settlement was filed with the Board May 1, 1975. On May 20, 1975, the Agency filed with the Board a proposed Order for the Board's consideration in the case.

Stipulation of Facts

Illinois Nitrogen operates a nitrogen fertilizer manufacturing plant located on the Illinois River approximately one mile east of the city of Marseilles, LaSalle County, Illinois. This is the company's only manufacturing facility. The basic products of the plant are liquid nitrogen fertilizer solutions and solid ammonium nitrate prilled fertilizer. The plant also trans-ships anhydrous ammonia for fertilizer use. The fertilizer from the plant is sold solely for agricultural purposes in Illinois and other midwestern states.

The basic raw material used at the plant is anhydrous ammonia. This material is received by barge and stored in two large refrigerated tanks with capacities of 20,000 and 22,000 tons respectively. The anhydrous ammonia is piped to a 350 ton per day (rated capacity) nitric acid plant which produces a 55% concentration of weak nitric acid. The weak nitric acid is then reacted in a neutralizer to produce an 83% ammonium nitrate solution. This ammonium nitrate is stored in a 17,000 ton stainless steel storage tank, and is fed, as required, to either the solutions plant for the production of liquid fertilizer or to the prilling tower for the production of solid fertilizer. These operations produce atmospheric emissions of nitrogen oxide, ammonia gas, and particulate.

The stipulation indicates that Illinois Nitrogen has equipped its nitric acid plant with a control system known as the MASAR system for the abatement of NO_x emissions. The MASAR system has reduced visible emissions from the nitric acid plant stack to near zero opacity, and it is concluded that the nitric acid plant: (a) is in compliance with the NO_x emissions limits; and (b) is entitled to an operating permit. (Stipulation, page 4)

The prilling operation at the Illinois Nitrogen facility causes some particulate emissions of very small particle size, mostly being in the 0.05 to 0.4 micron range. These particulate emissions are caused during the production of solid ammonium nitrate from the liquid ammonium nitrate solution generated by the nitric acid plant, the transformation

taking place in what is known as a prilling tower. Stack tests indicated particulate emissions of approximately 42 pounds per hour at a prilling tower process weight rate of 8.7 tons per hour. The allowable emissions under Rule 203(b) of Air Regulations for a process weight rate of 8.7 tons per hour is 17.3 pounds per hour.

Illinois Nitrogen concedes that its prilling tower particulate emissions exceed the limit set for either new or existing sources. Illinois Nitrogen further concedes that it is operating its prilling tower without an operating permit issued by EPA.

The stipulation proposes that Illinois Nitrogen proceed to install a newly developed system for particulate control at a capital cost of \$1,015,000. In addition they propose a compliance schedule which would achieve final compliance by July, 1977. Illinois Nitrogen agrees to pay a penalty in the amount of \$2,500 for operating the prilling tower without an operating permit issued by the Illinois Environmental Protection Agency.

The stipulation further states that no significant quantities of ammonia gas are emitted to the atmosphere at Illinois Nitrogen as a result of normal manufacturing operations. Varying amounts of ammonia gas can be emitted, however, from storage tank relief valves, railroad tank cars, barge unloading and pump seals if such pump seals are defective. Illinois Nitrogen agrees to take a number of steps to improve housekeeping and to change a number of minor handling procedures in order to eliminate any ammonia emissions on their property. Illinois Nitrogen also agrees that in the event that a leak, spill, or equipment malfunction occurs, which releases any significant amount of ammonia into the atmosphere, it will notify the Agency Emergency Action Center, and that they will work together with the Agency to prevent or minimize any adverse environmental effects or impact caused by said occurrence.

Considerations

The Board accepts the stipulation of facts and proposed settlement as submitted by the parties. There was no comment by the public at the hearing and the solutions to the issues proposed by the parties appear to be in the best interest of the public and the environment. The Agency agrees that the nitric acid plant is in compliance with the emission limits and is entitled to an operating permit and Illinois Nitrogen concedes its prilling tower particulate emission exceeds the limits set for new or existing sources and accepts the proposed penalty of \$2,500 for operating the prilling tower without an operating permit issued by the Agency. Illinois Nitrogen in addition agrees to install equipment to correct the emissions from the prilling tower and to improve its

ammonia handling procedures. The total cost of the project to be undertaken by Illinois Nitrogen to abate the prilling tower emissions is \$1,015,000 and the project completion date is projected to be July, 1977. The Board, having thoroughly considered the stipulation of facts and proposed settlement, hereby adopts the terms of that settlement as though fully set forth herein.

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

ORDER

It is the Order of the Pollution Control Board that:

1. Illinois Nitrogen is found to have operated their ammonia nitrate prilling plant in violation of Rule 103(b) of the Air Regulations, Rule 3-3.2512 of the Rules and Regulations governing the control of air pollution (Air Rules), and Section 9(a) of the Act, and is ordered to pay a penalty of \$2,500 for said violations, payment to be made by certified check or money order payable to the State of Illinois, Environmental Protection Agency, Fiscal Services Division, 2200 Churchill Road, Springfield, Illinois 62706, payment to be made within 35 days of the adoption of this Order.
2. Illinois Nitrogen is hereby ordered to:
 - a. Commence on-site construction and installation of emission control equipment for their prilling tower no later than October 31, 1976; and
 - b. Complete on-site construction and installation of emission control equipment including process modifications for the prilling tower no later than January 31, 1977; and
 - c. Achieve final compliance with Rule 203(a) of the Air Pollution Regulations no later than April 30, 1977; and
 - d. Complete all testing necessary for determining final compliance of prilling tower by July 31, 1977.
3. Illinois Nitrogen shall apply to the Environmental Protection Agency by July 31, 1975, for all necessary permits based on the then available information.
4. The Agency shall issue an operating permit for Illinois Nitrogen's nitric acid plant located in

Marseilles, Illinois, on or before September 1, 1975.

5. Illinois Nitrogen shall post a performance bond without surety to the Environmental Protection Agency in the amount of \$100,000 within 35 days of this Order.
6. Illinois Nitrogen shall submit quarterly written reports to the Agency setting forth its progress in the implementation of this Order.

IT IS SO ORDERED.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order were adopted on the 26th day of June, 1975 by a vote of 4-0.



Christan L. Moffett, Clerk
Illinois Pollution Control Board