

ILLINOIS POLLUTION CONTROL BOARD  
May 26, 1977

PEOPLE OF THE STATE OF ILLINOIS, )  
 )  
 Complainant, )  
 )  
 v. ) PCB 76-181  
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 )  
 DECATUR SANITARY DISTRICT, )  
 )  
 Respondent. )

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

On October 12, 1976, the People of the State of Illinois (People) by the Illinois Attorney General filed a Complaint against the Decatur Sanitary District (District). The Complaint alleged that, since February 1, 1976 and on specific dates thereafter, the District had emitted odors from its sewage treatment plant so as to cause air pollution as defined by Section 3(b) of the Environmental Protection Act (Act), in violation of Section 9(a) of the Act. Hearings were held in this matter on November 8 and 9, 1976, and April 11, 1977, in Decatur, Illinois. Several citizen witnesses testified at the hearing. At the April 11 hearing the parties submitted a Stipulated Statement of Facts and Proposed Settlement (Stipulation). The final Stipulation was submitted to the Board on April 20, 1977.

The Decatur Sanitary District serves a population of approximately 110,000. The District's sewage treatment plant has been operational since 1923. The area east and northeast of the plant is predominantly residential, consisting of homes built generally in the 1950's through 1970's. The nearest residences are approximately 1/4 mile from the plant.

In February, 1972, the District began renovation and expansion of its facilities. Prior to renovation, the plant's sewage treatment system consisted of a primary system comprised of Imhoff tanks and separate sedimentation tanks followed by trickling filters as well as

a parallel activated sludge process with a capacity of 18 million gallons of sewage per day (MGD). Renovation included the following changes in the plant and its operation: abandonment of existing grit removal facilities and construction of new grit handling facilities; expansion of the separate primary sedimentation system; installation of a Unox pure oxygen activated sludge system; renovation of the conventional activated sludge system; abandonment of the trickling filter process; construction of an aerated tertiary polishing lagoon; expansion and renovation of anaerobic digestion facilities; abandonment of 5 Imhoff tanks and reconstruction thereof into secondary stage digesters; conversion of another Imhoff tank to an aerated waste activated sludge tank addition; and addition of complete chlorination facilities.

Although prior to 1976 the persons residing near the plant had experienced intermittent odors from the plant, the odors increased in duration commencing in January of 1976 and reached a peak during the period of April through July, 1976. Numerous witnesses testified during the hearings that the odor during that period was extremely offensive, causing them to curtail outdoor activities, refrain from inviting guests to their homes, and excessively use their air conditioners and aerosol sprays to lessen the strength of the odor indoors. Several witnesses also testified that the odor caused them physical discomfort, such as headaches and nausea.

The parties stipulate that the major cause of the increased odors from the plant was odors from two sludge lagoons. These lagoons encompass approximately 25 acres in area and have an average depth of ten feet. Because the plant's Imhoff tanks and digesters were inoperative due to reconstruction and renovation, the District, commencing in September, 1975, placed approximately 90,361,000 gallons of raw and partially digested sludge into the lagoons. During September - November, 1975, the Imhoff tanks were sequentially taken out of service for conversion to secondary digesters. The converted tanks were placed in partial operation in March, 1977, and were to be fully operational by April 30, 1977. Primary digesters 1, 2 and 3 were taken out of service on June 28, July 13 and August 2, 1976, respectively, and were placed back in operation on July 13 and December 2, 1976, and January 12, 1977, respectively. However, on January 29, 1977, digester #2 was taken out of service due to freeze damage. It was to be placed back in service on April 11, 1977.

In June, 1976, the District stopped pumping sludge to the east lagoon and thereafter pumped all unstabilized sludge to the west lagoon. The parties stipulate that in approximately six weeks the odors from the east lagoon stopped. On July 29, 1976, the District began chlorination of the west lagoon. Several citizens testified that subsequent to that date the odor problem eased.

The parties stipulate that from March, 1976, to January, 1977, the District spent \$61,481.53 to control odors at the plants. In December, 1976, the Attorney General's office retained an expert to identify the cause of odors emanating from the plant and to evaluate various solutions to the odor problem. On March 10, 1977, the expert, Dr. Semmens, took six samples from each lagoon. In summary, the results of the laboratory analysis of these samples indicate that the east lagoon, which had not received any sludge for approximately ten months, was quite stable. The pH values, the percentage of volatile solids in the bottom sludge and the volatile acid content of the sludge samples were characteristic of a well-digested sludge. The parties indicate that the east lagoon should, therefore, not present any odor problem this summer beyond what is normal for this type of lagoon. The results for the west lagoon indicate the sludge had not yet stabilized. The sludge in the west lagoon would still support biological activity and cause offensive odors. The parties agree that, if the sludge discharge were redirected to the east lagoon and the west lagoon was chlorinated for odor control, the west lagoon will eventually stabilize.

In the Proposal for Settlement, the District agrees to continue chlorination in the west lagoon until the sludge in the lagoon has stabilized to 25 to 35% volatile solids and volatile acids less than 400 mg/l. Until that time the District agrees to chlorinate in quantities sufficient to minimize odors to the greatest degree possible. The District also indicates that the west lagoon will receive all sludge until the digesters are functioning satisfactorily and producing a well-digested sludge at which time the District will stop pumping to the west lagoon and pump solely to the east lagoon. The District also agrees to place the secondary digesters on line and cease venting gases from the digesters by April 30, 1977. In addition, the District agrees to carry out several other actions in an attempt to reduce the odor emissions from its plant.

The parties agree that the District has made a good faith effort to control the odor problem. They furthermore recommend that no penalty be assessed against the District.

The Board finds that the District has violated Section 9(a) of the Act in its emission of odors from its sewage treatment plant. The Board furthermore finds that the Stipulation and Proposed Settlement submitted by the parties is an acceptable solution to the serious odor problem presented herein. However, the Board finds that a penalty in this case would not aid in enforcement of the Act and will, therefore, assess no penalty.

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


ORDER

It is the Order of the Pollution Control Board that:

1. The Decatur Sanitary District is found to have emitted odors of such quantity, characteristics and duration as to have caused air pollution in Illinois, in violation of Section 9(a) of the Act.
2. The District shall comply with all the terms of the Proposal for Settlement submitted by the parties on April 20, 1977, which is incorporated by reference as if fully set forth herein.

Mr. Dumelle concurs.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order were adopted on the 26<sup>th</sup> day of May, 1977 by a vote of 5-0.

  
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Christan L. Moffett, Clerk  
Illinois Pollution Control Board