

ILLINOIS POLLUTION CONTROL BOARD  
June 23, 1992

IN THE MATTER OF: )  
 )  
PETITION OF THE DECATUR SANITARY ) AS 91-7  
DISTRICT FOR ADJUSTED STANDARD ) (Adjusted Standard)  
FROM 35 ILL. ADM. CODE 306.305(b) )

OPINION AND ORDER OF THE BOARD (by G. T. Girard):

On August 22, 1991, the Decatur Sanitary District (District) filed a petition for an adjusted standard with the Board. The District is seeking an adjustment to the combined sewer overflow (CSO) disinfection requirement of 35 Ill. Adm. Code 306.305(b). On February 21, 1992, the Illinois Environmental Protection Agency (Agency) filed its response recommending that the adjusted standard be granted with certain conditions. No hearing was held in this proceeding (See Petition of Decatur Sanitary District for adjusted standard from 35 Ill. Adm. Code 306.305(b), April 23, 1992) and the Board has received no comments from the public on this petition.

BACKGROUND

The District, located in Macon County, acts as the regional wastewater treatment authority for the City of Decatur and the Villages of Forsyth and Mt. Zion. The wastewater treatment plant, owned and operated by the District, employs 70 full time employees and serves approximately 100,000 residents and industrial and commercial users. (Pet. at 1.)<sup>1</sup> Approximately 31 million gallons per day are processed at the treatment plant and then discharged into the Sangamon River just upstream from the confluence with Stevens Creek. The treatment process has a design average flow of 41.0 million gallons per day and includes preliminary and primary treatment followed by a two-stage activated sludge biological treatment process with effluent disinfection by chlorination. (Pet. at 2). Treated sludge is ultimately disposed of by land application on area farms. The expansion and upgrading of the main treatment plant was completed in the spring of 1990 at a construction cost of \$74,221,650. (Pet. at 2.)

The District also owns and operates two combined sewer overflow treatment facilities (CSO treatment facilities) and has two others under construction to be completed in the spring of 1992. These four CSO treatment facilities were built by the District pursuant to a consent decree entered in the U.S. District Court. (Pet. at 7.) The four CSO treatment facilities

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<sup>1</sup> The Petition is cited as "Pet. at " and the Agency Response will be cited as "Res. at ".

will provide for the capture of first-flush-flows and will provide the equivalent of primary treatment for flows in excess of the first flush. The four CSO treatment facilities do not have provisions for the disinfection of post-first flush flows; therefore the District is seeking an adjusted standard for these four CSO treatment facilities. The combined cost of the construction of the four CSO treatment facilities was \$16,042,000. (Pet. at 2.)

### DISCUSSION

Section 28.1(a) of the Illinois Environmental Protection Act (the Act) provides that after adopting a regulation of general applicability, the Board may grant an adjusted standard for persons who can justify such an adjustment. Section 28.1(b) provides that the Board may specify a level of justification required of a petitioner for an adjusted standard. Although the Board's regulations at 35 Ill. Adm. Code 306 do not contain a level of "justification" for an adjusted standard, the Board has held that the substantive requirements of 35 Ill. Adm. Code 306.Subpart D are to be used for justification of an adjusted standard from the regulations at 35 Ill. Adm. Code 305. (Petition of the City of Jacksonville for Adjusted Standard From 35 Ill. Adm. Code 306.305(b), AS 90-1, August 9, 1990; and City of Oglesby v. Illinois Environmental Protection Agency, PCB 86-3, February 6, 1992). Therefore Section 28.1(b) of the Act applies to the District's petition for adjusted standard.

The District proposes that the Board adopt the following adjusted standard for its CSO discharges:

The Sanitary District of Decatur is granted an adjustment to the disinfection requirements of 35 Ill. Admin. Code 306.305(b). This adjustment allows the Sanitary District of Decatur to discharge combined sewer overflows in excess of the first flush without disinfecting such flows.

Pet. at 9.

The Agency, which recommends granting the adjusted standard, suggests that the language proposed by the District be amended to include the specific sites of the four CSO treatment facilities.

### Justification

The District asserts that to achieve compliance with the existing regulation, the District would need to add disinfection equipment to the newly constructed CSO treatment facilities. The District indicated that the annualized capital cost is \$1,829,939 and the annual operation and maintenance cost is

\$304,070. (Pet. at 8.) The increase in annual cost would result in an additional cost to the average residential user of approximately \$13.84 per year. (Pet. at 9.) These costs are in addition to the \$16,042,000 already spent by the District to construct the CSO treatment facilities. Therefore, the District maintains that a chlorination disinfection system is "technically infeasible to operate and will substantially increase annual capital, operational and maintenance costs". (Pet. at 9.)

The District maintains that chlorination is technically infeasible because of the difficulty of establishing proper chlorine dosages due to the variations in the CSO flow rate, solid concentrations and relative short duration in post-first-flush flow. The District states that:

The inability to establish a proper chlorine dosage could result in either a chlorine level so low that the fecal limit would be exceeded; or so high that excess chlorine concentrations would be released to the stream causing a negative impact on the stream biota. (Pet. at 11.)

The District further maintains that the receiving stream, the Sangamon River, is not used as a public water supply within 100 miles of the District. The fecal coliform levels in the river will be reduced downstream with the completion of the CSO treatment facilities. However, the District maintains that releases from Lake Decatur during wet weather are more likely to be the cause of increased fecal coliform levels than the District's being granted the requested relief. The District further maintains that the four new CSO treatment facilities will provide some reduction of the fecal coliform levels downstream. (Pet at 9.) The District states that the reduction is "due to the capture and complete treatment and disinfection of dry weather and first-flush-flows, that is equivalent to the primary treatment to flows in excess of the first flush". (Pet. at 9.)

With the completion of the four CSO treatment facilities, the District maintains that it "will reduce the number of overflow events from 94 to 35 annually". (Pet at 11.) The District states that prior to the implementation of the CSO program there were 690.7 million gallons of overflow per year. Upon completion of the CSO program, 39.9 million gallons annually will be captured in first flush tanks and returned to the sewer system for complete treatment. In addition, an estimated 650.8 million gallons will receive the equivalent of primary treatment prior to discharge into rivers. (Pet. at 11.)

#### Agency Response

The Agency states that it "generally supports the District's petition for adjusted standard". (Res. at 7.) The Agency agrees that there are "difficulties in establishing and maintaining the proper chlorine dosage while ensuring an adequate reduction in fecal coliform levels and preventing high chlorine residuals". (Res. at 4.) The Agency further agrees that the CSO treatment facilities will reduce the fecal coliform levels in the receiving stream and thus the environmental impact of the adjusted standard is not significant. (Res. at 5.)

The Agency disagrees with the District's statement that fecal coliform water quality violations typically occur in Lake Decatur. (Res. at 5.) The Agency also questions the District assertion that there is little or no human contact with the receiving stream. The Agency stated that it is:

concerned generally with human health risks associated with disinfection exemptions, and will not generally grant disinfection exemptions pursuant to 35 Ill. Adm. Code 304.121 for sewage treatment plant discharges in residential areas unless there is some kind of barrier precluding access to the stream. (Res. at 6.)

The Agency's concern with public safety is well taken. However, as noted in the Board's April 23, 1992 order, no member of the public has presented comments to the Board on this matter. Further, other than expressing the concern about public safety and noting the proximity to residential areas of two of the CSO treatment facilities, the Agency has not presented any facts which persuade the Board that the granting of the adjusted standard would be a threat to public safety.

#### CONCLUSION

The Board finds that the District has demonstrated that meeting the provisions of the 35 Ill. Adm. Code 306, the rule of general applicability, is not technically feasible nor economically reasonable. Further, the District has demonstrated that an adjusted standard which excepts the combined sewer overflow from treatment will not have an adverse environmental effect. The Agency's response indicates that an adjusted standard is warranted. Therefore, the Board grants the District the following adjusted standard from 35 Ill. Adm. Code 306:

The Sanitary District of Decatur is granted an adjustment to the disinfection requirements of 35 Ill. Adm. Code 306.305(b) for its discharges from the McKinley Avenue, Lincoln Park, 7th Ward, and South Oakland CSO treatment facilities. This adjustment allows

the Sanitary District of Decatur to discharge combined sewer overflows from these facilities in excess of the first flush without disinfecting such flows.

This opinion constitutes the Board's findings of fact and conclusions of law in this matter.

ORDER

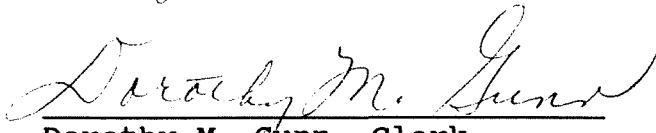
Pursuant to Section 28.1(b), the Board hereby grants an adjusted standard from 35 Ill. Adm. Code 306.305(b) to the Decatur Sanitary District. The following standard becomes effective on the date of this order:

The Sanitary District of Decatur is granted an adjustment to the disinfection requirements of 35 Ill. Adm. Code 306.305(b) for its discharges from the McKinley Avenue, Lincoln Park, 7th Ward, and South Oakland CSO treatment facilities. This adjustment allows the Sanitary District of Decatur to discharge combined sewer overflows from these facilities in excess of the first flush without disinfecting such flows.

IT IS SO ORDERED.

Section 41 of the Environmental Protection Act (Ill.Rev.Stat. 1991, ch. 111 1/2, par. 1041) provides for the appeal of final orders of the Board within 35 days. The Rules of the Supreme Court of Illinois establish filing requirements.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, do hereby certify that the above opinion and order was adopted on the 23<sup>rd</sup> day of June, 1992, by a vote of 7-0.

  
 Dorothy M. Gunn, Clerk  
 Illinois Pollution Control Board