ILLINOIS POLLUTION CONTROL BOARD
June 29, 1972

METROPOLITAN SANITARY DISTRICT OF GREATER CHICAGO	)	
v.	)	# 72-111
ENVIRONMENTAL PROTECTION AGENCY	)	
ENVIRONMENTAL PROTECTION AGENCY	)	
v.	)	# 72-135
METROPOLITAN SANITARY DISTRICT OF GREATER CHICAGO	)	

Mr. Melvin Rieff and Mr. Douglas Moring, for the Environmental Protection Agency

Mr. Allen S. Lavin, Attorney, by Mr. Raul D. Lindauer, Jr., Mr. Sidney B. Baker, Mr. Phillip Rothenber, for the Metropolitan Sanitary District.

Mr. John Petrie, Village Manager, for the Village of Streamwood

Opinion of the Board (by Mr. Currie):

The Metropolitan Sanitary District operates a sewage treatment plant at Streamwood, in Cook County. Equipped with trickling filters designed to give secondary treatment to 1.2 million gallons of sewage per day (Amended petition*, p.2), the plant has become seriously overloaded, receiving an average of 1.76mgd overall in recent months and 2.36mgd in April, 1972 (MSD ex. 14). A program for improved treatment at Streamwood was shelved by the District in early 1968 in favor of a pl embracing the construction of a larger regional facility (Poplar Creek) that would meet the new standards and permit abandonment of the Streamwood plant. (Amended petition, p.5).

Overloaded conditions were not the only problem at Streamwood. Sanitary Water Board standards SWB-14 required tertiary treatment by July, 1972. Whether the Poplar Creek plant would have been ready in tim for the July 1972 deadline if all had gone well is not clear, and in any case no provision was made at that time for improving the quality of the effluent in the meantime. The January 1971 date for submission o: plans for facilities to meet the 1972 standards passed without the submission of plans either for Streamwood improvements or for Poplar Creek, and no request for extending the deadline was received until July of 1971.

*The parties stipulated to the truth of the allegations in the amended petition and its attachments, and to Environmental Protection Agency Exhibits 1-16 (R. 7-8).

At that time the District filed its first variance petition (#71-183), reciting that Poplar Creek had been delayed by a dispute over inclusion of that facility in the regional plan of the Northeastern Illinois Planning Commission, without which neither federal nor state money would be available to help foot the bill. The District then sought an indefinite relaxation of the effluent standards, promising to carry out certain interim improvements at Streamwood while further pursuing a permanent solution. Finding no commitment to any long-term program for compliance, no adequate justification for the delay in meeting the standards, and an inadequate interim program, we denied the variance with a warning that the District was subject to an enforcement proceeding for failure to meet the deadline for submitting plans and advising the District "to get started with dispatch upon adequate interim measures to alleviate the present intolerable situation and upon the construction of whatever it decides is the appropriate means of achieving compliance with the effluent standards of SWB-14."
Metropolitan Sanitary District v. EPA, #71-183 (Nov. 11, 1971).

On March 24, 1972, the District filed a second variance petition (#72-111), which in amended form is before us today. On April 3 the Agency filed a complaint against the District (#72-135) arising out of the Streamwood situation, and the two proceedings were consolidated for hearing.

The first question for decision is the adequacy of the District's present program. The interim program proposed in the 1971 petition, which we disapproved, contemplated operation of a facultative lagoon in parallel with the existing trickling filters, producing an effluent unsatisfactory even by secondary treatment standards and further degenerating over time. The present program envisions conversion of the trickling filters to aeration tanks for an activated sludge plant with adequate capacity, to produce a good secondary effluent estimated at 11 mg/l of five-day biochemical oxygen demand (BOD) and 16 mg/l of suspended solids. An optional additional feature is the construction of tertiary filters to achieve 4 mg/l of BOD and 5 of suspended solids. On either option the improvements are to be completed by June 30, 1973. (Amended petition, p.4).

It is clear enough that the District should proceed at once with the conversion to activated sludge and the provision of additional capacity, as all parties agree. The present effluent quality is poor (averaging BOD 36, solids 60 over five recent months, MSD Ex. 14); the stream is in bad condition (EPA Exs. 3,10,11,14c,16); the District acknowledges that the improvements will make a big difference in stream quality (R.151); the Poplar Creek plant is an estimated five years away from operation (R. 45); interim improvements will enable the District to meet the revised effluent standard for July, 1972 one year late and, once they are completed, will permit the District to lift its present prohibition on new sewer connections. The cost is about $560,000 (Amended petition, p. 4), which the District is willing to pay and which we consider entirely reasonable.

The District contends, however, that it would be a waste of money to build the additional tertiary filters that will be required to meet our effluent standards after December 31, 1973 (R. 151-53). The Agency disagrees, pointing out that the Poplar Creek plant will in no case be available in less than five years and arguing that the additional $200,000 is a reasonable cost (R. 263). We agree with the Agency that there is no justification on the record for an exemption from the December, 1973 requirements. The dispute over an ultimate resolution of Poplar Creek is still unresolved, the District lately having once again requested the Planning Commission to revise its plan so that federal and state funds will be available (R. 52). While the District has stated its "intention" to proceed with Poplar Creek (ibid), we cannot ascertain from this record a firm commitment to go it alone if necessary. Even if we could, it will be a long time before Poplar Creek is a reality; we agree with the Agency that the price is a reasonable one to assure compliance in the interim. The District testified that in its opinion other waste sources discharging to the same creek were substantial enough that reducing Streamwood's BOD from 11 to 4 would have no significant effect (R. 152), but no supporting information was given, and the answer to pollution by other sources would be to clean them up as well. The District refers also (R. 171) to the Board's opinion in Water Quality Standards, #71-14 (March 7, 1972), in which we recognized that in some situations it may be possible to maintain adequate stream oxygen without going to the most sophisticated treatment. But the District overlooks the conditions imposed upon our somewhat relaxed rule in that regard; specifically, among other things, it has introduced no evidence that adequate oxygen levels would exist in this particular stream if only secondary treatment were provided. Our opinion at the time stressed that such proof was essential before any relaxation could be afforded. We do not hold that tertiary filtration must be provided at Streamwood as a part of the interim program. What we hold is that the District must comply with the more stringent requirements of Rule 404 by December 31, 1973. Whether tertiary filters will in fact be required by Rule 404 depends upon information submitted to the Agency on applying for permits and seeking approval of its compliance schedule.

The third question is what the District can and should do to improve its effluent while it is constructing the interim facilities discussed above. The Agency's recommendation, filed before hearing, asked that during this period the effluent meet a standard of 30 mg/l BOD and 37 suspended solids. Agency testimony at the hearing (R.201-06) endeavored to show, using limited flow information and standard reference materials, that such an effluent should be attainable even when one of the two trickling filters is out of service during actual conversion. Cross-examined on the basis of actual recent information, however, the Agency witness acknowledged that his computations were inapplicable to the Streamwood situation; that, because of the considerable overload, effluents considerably worse than those he predicted represented fairly good operation under the circumstances; and that, given the actual operating data, he would not adhere to his estimate that the 30/37 standard could be met (R. 219-22). Moreover, in response to our opinion in denying the earlier variance, the District introduced careful testimony as to the utility of adding chemicals for interim improvement of treatment. Following laboratory tests indicating significant

improvement, the District began adding both polymers and ferric chloride at Streamwood, but no measurable improvement occurred because the hydraulic overload was so great that retention time was reduced to the point where the materials precipitated could not settle out (R. 140-43, 158-64), effectively distinguishing today's case from the Orland Park and Danville Sanitary District cases, ##71-166 (Sept. 16, 1971) and 71-28 (May 26, 1971). Until additional holding capacity is provided, the District testified without contradiction, there is nothing that can be done to improve the situation (R. 157). On the basis of this testimony we think the best we can do is to order the District to provide the best practicable treatment under the circumstances; to keep its BOD below 50 and solids below 65, as agreed to in the District's Additional Statement filed June 26; to expedite those portions of its construction program which will provide such holding capacity; and to utilize chemicals as soon as holding capacity is available.* The same problem, and the same solution, are presented with respect to disinfection (EPA Ex. 2; R. 168).

The next issue is that of penalties. Violations alleged by the Agency, and not denied, include water pollution; the discharge of materials causing objectionable bottom deposits or other nuisance conditions; failure to remove color, odor, turbidity, and settleable solids; and violation of dissolved oxygen standards in the receiving stream. Evidence in support of these charges consisted entirely of exhibits, with no testimony or interpretive argument to enlighten us as to what the Agency thinks went wrong or what it wants us to do. We should appreciate more informative presentations in future cases.

As we read the exhibits, they focus upon two distinct problems. The first, as illuminated by the District's testimony, is that from September 22 to 24, 1971 one of the two trickling filters was taken out of service during replacement of a mercury seal, which the Agency had ordered (R. 84-88). The result was that nearly half the sewage reaching the plant was bypassed after only primary treatment directly to the stream (R. 98). Dissolved oxygen went to zero at more than one place in the stream, and 230 to 250 fish were killed (EPA Exs. 8, 15a). The District responded by denying there was anything it could do at the time to prevent the discharge of inadequately treated effluent while making the necessary repair (R. 90, 93-122), and the Agency had nothing to say in rebuttal. But we do not think this disposes of the issue. Our decisions have consistently recognized an obligation to perform necessary repairs without wrecking the receiving stream. See Springfield v. EPA, #71-125 (Aug. 13, 1971); EPA v. Lake Zurich, #72-26 (May, 30, 1972 This obligation requires planning ahead in the construction of a treatment plant, to include holding tanks, duplicate facilities, or other means for preventing harm when one unit is out of service. That no such means were provided at Streamwood is no defense. It is proof that inadequate precautions were taken and cause for imposing a money penalty.

*The District testified that six hours' detention time upon completion of the large primary and final tanks will allow a satisfactory effluent even during actual conversion of the trickling filters (R. 155). Chemicals should be used at that time.

In other cases of this kind we have in addition ordered payment to the Conservation Fund to the extent of the value of fish killed, but there is no evidence of such value in this case.

The second problem addressed by the Agency's complaint is the more general one of continuous inadequate treatment resulting in harm to the stream. This too is proved. Biological samples showed no life below the Streamwood outfall, contrasted with a normal environment above (EPA Exs. 11, 12). Mucky sludge deposits six inches deep were attributed to Streamwood discharges (EPA Ex. 10). As is not denied, the District has caused water pollution under section 12(a) of the Environmental Protection Act and has violated the cited provisions of Rules and Regulations SWB-14 with respect both to stream nuisance conditions and to the removal of gross contaminants. The issue is what penalty, if any, is called for.

The District has allowed the Streamwood plant to become grossly overloaded to the point where nuisance conditions occur in the stream. Its attempt justification is that the Poplar Creek plant, which will ultimately solve this and other problems, has been held up because of the dispute over regional planning. We acknowledge the District's interest in obtaining as much outside financial assistance as it can in curing its problems, and we favor regional solutions. But, as we said in denying the earlier variance petition, neither construction grants nor regionalization should be pursued to the exclusion of correcting current problems. Whatever the situation when the originally planned Streamwood improvements were put on the shelf in 1968, it should have been clear to the District some time ago that Poplar Creek would not be available for several years and that the problem had become so acute as to demand an interim improvement. This was especially so as January, 1971 approached with its deadline for submitting plans to meet a more stringent effluent standard. The District began thinking about interim facilities in August, 1970 (Amended petition, p.9); but the plan was rejected by the Agency and found wholly inadequate by this Board. About a year and a half went by as the District sought approval of a scheme it should have known was insufficient. The program that is before us today is adequate, but it is tardy. The District is doing now what it should have done some time ago. Once it became clear that the effluent was seriously out of compliance and that Poplar Creek was years away, it was the District's obligation to scramble to make interim improvements with all speed. Indeed the overload that is responsible for the violations should have been anticipated and expansion undertaken early enough to prevent it. We think the District was unjustifiably slow in coming up with interim measures that will significantly alleviate the problem. Penalties are therefore called for. Without them we could not consider giving the District a shield against future complaints during the construction program.* Once again, the amount of the penalty is less

* We note with displeasure the District's statement(R. 70) that without a variance the improvements are not likely to be built. No variance is needed to correct existing violations. The notion that a polluter need not stop violating the law unless he is given immunity until the construction is done is quite unacceptable.

than would otherwise be appropriate because we are dealing with a governmental body. See City of Springfield v. EPA,#70-55 (April, 7, 1972).

The Agency asks that security for performance be required, and we shall set it at the cost of the improvements. We think $500,000 will suffice under the precedent of Illinois Power Co. v. EPA, #71-193 (Oct. 1, 1971). We deny the Agency's request that the District be ordered to proceed with Poplar Creek, since the improvements we have required will so far as the record shows assure compliance at Streamwood. The Agency also asks us to require the District to continue forbidding new sewer connections until the improvements are done. The record graphically demonstrates the adverse effect of additional connections on a plant that has reached its hydraulic capacity, even to the point of rendering interim chemical treatment useless. We assume the District, in recognition of its sorry effluent and its duty to maintain an effluent of 50/65 during the coming year, will not permit further connections; the Agency has its own permit powers which it is free to invoke to protect against new sources; and the Board is always open to additional enforcement proceedings, with proper statutory notice, to impose a connection ban if other channels fail.

ORDER

1. The Metropolitan Sanitary District of Greater Chicago (District) shall within 35 days after receipt of this order pay to the State of Illinois the following sums as penalties for the violations indicated:

a. $1000 for violation of stream standards SWB-14 respecting dissolved oxygen during replacement of a trickling filter seal;

b. $5000 for water pollution and violation of SWB-14 nuisance standards for effluent and stream quality.

Such payment shall be made by check payable to Environmental Protection Agency, Fiscal Service Division, 2200 Churchill Road, Springfield, Illinois 62706.

2. The District shall construct and operate, as soon as is practicable but in any event by June 30, 1973, the secondary treatment facilities described in its amended petition for variance.

3. Pending completion of the facilities described in paragraph two of this order, the Streamwood plant shall provide the best practicable treatment under the circumstance, and in no event shall the effluent from the Streamwood plant exceed BOD of 50 mg/l or suspended solids of 65, computed on a 30-day moving average basis consistent with Board regulations.

4. The District shall expedite construction of those portions of the facilities described in paragraph 2 of this order which will provide additional retention time and, as soon as such portions are ready, shall utilize them to provide improved disinfection and chemical additions for removal of solids and BOD.

5. The district shall, within 35 days after receipt of this order, post with the Agency a bond or other adequate security in the amount of $500,000 to assure compliance with the terms and conditions of this order.

6. The District shall construct whatever facilities may be necessary to meet the more stringent requirements of Rule 404 by December 31, 1973.

7. The District is hereby granted a variance until June 29, 1973, from Rule 404 of Chapter 3 of the Rules and Regulations of the Pollution Control Board, on condition that the other provisions of this order are complied with.

I, Christan Moffett, Clerk of the Pollution Control Board, certify that the Board adopted the above Opinion this 29th day of June, 1972, by a vote of 4-0.

Christan L. Moffett