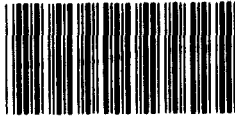


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UNITED STATES GENERAL ACCOUNTING OFFICE

WASHINGTON, D.C. 20548



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STATEMENT OF
HUGH J. WESSINGER, SENIOR ASSOCIATE DIRECTOR
RESOURCES, COMMUNITY AND ECONOMIC DEVELOPMENT DIVISION

BEFORE THE
SUBCOMMITTEE ON INVESTIGATIONS AND OVERSIGHT
OF THE
HOUSE COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION

ON

THE MALDEN AND ELK-PINCH, WEST VIRGINIA, WASTEWATER
TREATMENT PROJECTS

Mr. Chairman and members of the Subcommittee:

At the request of your Subcommittee, we have made a review of the problems surrounding the Malden and Elk-Pinch, West Virginia, wastewater treatment projects. Specifically, you were concerned about the high cost of the projects; user affordability; federal, state, and local reviews of the project's planning, design, and construction; and the Elk-Pinch project default.

We are here today at your request to discuss the results of our work, to present our observations on these projects in terms of the problems we noted, the reasons for the problems, and the lessons to be learned, which may be applicable to other projects.

In summary, Mr. Chairman, the Malden project which cost about \$25 million is complete but it is not working properly, and not all users have hooked up to the treatment system. The Elk-Pinch

project which is estimated to cost about the same as Malden is over 70 percent complete, but construction was stopped 6 months ago because of financial problems.

PROJECT SIZE AND COST

Located on the outskirts of Charleston, West Virginia, Malden and Elk-Pinch are public service districts (PSD's) which were created to acquire and operate wastewater treatment systems. The Malden system consists of about 55 miles of sewer line, 33 pump stations, and a 1.5 million gallon per day treatment plant. The system became operational in August 1980 and serves 3,600 users, mostly residences. EPA grants amounted to \$16.5 million of the \$24.7 million project; state and local funding made up the \$8.2 million balance. The Elk-Pinch project when complete will consist of about 60 miles of sewer line, 20 pump stations, and a 1.4 million gallon per day treatment plant. The system is estimated to serve 2,800 users, mostly residences. EPA has approved grants amounting to about \$13.7 million of the estimated \$23.8 million total project cost, with state and local funding making up the \$10.1 million balance. In total, the two projects will cost an estimated \$48.6 million in federal, state, and local funds to plan, design, and construct.

Engineering plans and studies of alternatives on how to resolve the two districts' sewage problems were considered in the planning process and were evaluated by the EPA Philadelphia regional office and by local citizen groups. The conclusion of the studies was that because of the geography and soil conditions

of the Charleston area, and the scattered location of the residences, a treatment plant with extensive collector lines was the most cost-effective alternative to the water pollution problems.

From our review of EPA records and our discussions with representatives of the various entities involved, we believe that EPA followed its procedures for approving grants for the planning, design, and construction of the two projects.

USER AFFORDABILITY

Residents from both project areas have raised concerns about the high user charges that they have to pay or will have to pay. At the time EPA approved the Malden project in 1978, EPA and the state had not developed criteria for determining user affordability of sewage charges. Both entities subsequently developed affordability criteria to help them decide whether a wastewater treatment project needed further study because low income users may not be able to pay the user charges. If the criteria had existed at the time EPA and the state approved the Malden project, the proposed user charges would have exceeded EPA's December 1978 criteria. However, EPA revised its criteria in April 1980, and under the revised criteria the Malden user charges met the criteria. In October 1982, the state also developed criteria which the Malden user charges would not have met. On the Elk-Pinch project, the proposed user charge met both EPA's 1980 criteria and the state's 1982 criteria.

Meeting EPA and state affordability criteria, however, does not mean that all users can afford the charges because the criteria are based on the median family income of the project area. A median family income of \$19,000, as established in the Malden project area, means that some families are earning far less than the median amount and might have difficulty paying the user charge. Because areas of the Malden PSD include pockets of the poor or unemployed, some families in the project area most likely earn significantly less than the \$19,000 median. Data was not readily available, however, showing the various levels of family incomes for users served by the two projects, such as the number of families with very low incomes.

MALDEN PROJECT PROBLEMS

The Malden treatment plant became operational in August 1980 and has experienced problems ever since. Engineering reports indicate that performance problems are due to a variety of reasons, including design error, pump station malfunctions because of power failures, excessive water, and foreign objects in the sewer system.

The effect of the performance problems is that water pollution control permit limits set by EPA for operating the Malden treatment plant have been continually exceeded. During the 41-month period, August 1980 to December 1983, the effluent exceeded one or more of the permit limitations in 34 of the 41 months. And in 28 of the 34 months, the EPA region determined

that the plant was in significant noncompliance, that is, the monthly average limitation was exceeded by 40 percent or the daily maximum limit was exceeded by one milligram per liter. The plant has improved its performance during calendar year 1983, having recorded significant noncompliance in 5 of the 12 months. Because of the continuing noncompliance, the EPA regional office requested the state in December 1983 to pursue enforcement action against the Malden PSD. Two months later, however, an official in the state's compliance monitoring action told us that other PSDs in the state had more severe problems than Malden and had higher priority for enforcement action. Thus, no enforcement action was being taken.

Other major problems we identified were:

1. Numerous residents have not connected their service lines to the collector system. Engineers from the State Department of Natural Resources estimated in September 1983 that an average of 20,000 gallons per day of untreated sewage was being discharged. PSD officials could not explain why residents were not hooked up after 3 years of system operation. As of March 1984, PSD was taking action to identify these residents and require them to connect their lines to the system.
2. In February 1983, the West Virginia Public Service Commission approved an increase in the user rate which averaged about 8 cents per 1,000 gallons. At the same time, the treatment system was experiencing operating

problems and sewage was backing up into homes. Users then began refusing to pay their sewer bills. As of August 1983, 24 percent of the residents billed were delinquent for more than 90 days, with the delinquency amounting to \$190,000.

3. As of March 1984, PSD was in technical default of its bond resolution with the Water Development Authority because it had not set aside funds with the Authority to renew and replace the system in future years, and because it was exceeding its permit. The Authority had not placed the project in receivership because it was monitoring PSD's actions to resolve its problems.

ELK-PINCH PROJECT PROBLEMS

The Elk-Pinch project defaulted in December 1983 because the agreement to finance construction was not carried out as planned. To better understand this problem, let me briefly provide some background data.

During construction, the grantee must pay for construction expenses from its own funds, and EPA later reimburses the grantee for eligible expenses the grantee incurred. Most grantees obtain short-term loans from local banks to pay the construction expenses. When construction is completed, the grantee issues long-term bonds to pay off the short-term loans and the unreimbursed expenses. The expense of these bonds, along with estimated project operation and maintenance expenses, represents

the local share which is paid by the system's users in monthly user charges.

The Elk-Pinch PSD did not obtain short-term loans, but used a different financing arrangement in an effort to reduce its local cost share. It issued short-term anticipatory notes--notes which anticipate certain amounts of revenue and expense--and placed the note proceeds in secured investments to generate interest income to cover the note interest expense. At the completion of construction, PSD planned to issue long-term bonds for the local share of the project costs and pay off the notes. The crucial aspect of the Elk-Pinch financing arrangement was that actual cash receipts (grant funds and interest) and expenditures occur in amount and at the time anticipated by the cash flow analysis on which the plan was based (the plan was prepared by the consulting engineer), and that project expenses remain within the budget estimate. If expenses exceeded revenues at any point during the construction period, the project would be in a deficit situation and therefore in default.

To put this financial arrangement in action, PSD adopted on August 18, 1981, a Bond and Note Resolution prepared by a bond counsel. The resolution outlined what the project was to accomplish, how it was to be financed, the terms of the notes and bonds, the application of proceeds from the sales of bonds, covenants to the note and bond holders by PSD, and who was responsible for the various activities. The resolution and subsequent amendments constituted a contract between PSD and the

purchaser of the obligations. No other documents were prepared which provided additional details on the roles and responsibilities of the parties involved.

The West Virginia Public Service Commission reviewed and approved the financing plan. Neither EPA nor the State Department of Natural Resources analyzed the financial arrangement to determine whether it was sound or whether they should be monitoring its execution. They relied on the Commission's review. EPA has no regulations covering the monitoring of local share financing during construction.

PSD defaulted on the financing arrangement in December 1983, about 21 months after construction work started. The major cause of the default was that PSD authorized payments in excess of budgeted amounts for such items as engineering fees and bond issue costs. PSD believed that there would be sufficient funds to cover higher than expected expenses because data provided by the consulting engineer and the project accountant indicated that sufficient funds would be available to cover such expenses. PSD was not aware of their actual financial position because they did not perform financial analyses to monitor cash flow--the receipt of grants and interest earnings less the payment of expenses--to determine how it compared with the cash flow estimate on which the project budget was based.

Besides the cash flow analyses, the other major control was a requirement in the Bond and Note Resolution that the PSD and the consulting engineer certify to the local bank handling the funds

and accounts established by the resolution that the project accounts would show a minimum projected balance at all times of \$12.8 million--the amount of the notes sold--so that the notes could be refunded at the completion of the project, thus protecting the noteholders. The certification computations made by the consulting engineer to the PSD after May 1983, however, were predicated on a local share amount greater than the amount in the approved budget because actual costs were higher than approved. The consulting engineer could not provide us with documentation showing how the local share amount in the certification was computed, or with a basis for estimating that additional funds would be available to cover the additional local share costs. Our analysis showed that the \$12.8 million balance was not met in May 1983 and thereafter. As a result the project was in technical default of its note resolution seven months before the default was disclosed.

The default of the Elk-Pinch financing arrangement raises the issue of the extent to which EPA or the state should review the local share financing plan and then monitor its execution. The importance of monitoring is underscored by the fact that the Elk-Pinch default has jeopardized the project's financial standing and its ultimate completion.

With today's higher interest rates and more incentive for using "creative" financing, local financing arrangements may need EPA's or the state's attention.

GRANTS MANAGEMENT

Both the Malden and Elk-Pinch grantees lacked technical expertise and were inexperienced in grants management. They relied on consulting engineers to carry out most of their responsibilities. This situation is not unique to these two projects, as we have pointed out in our studies over the past 4 years. What is of concern is that the grantees are primarily responsible under the grant agreement for the successful completion of their projects and are accountable to EPA if the projects do not meet their intended purposes. EPA's philosophy is to maintain clear lines of responsibility and to hold the grantee accountable for how it spends federal funds. But EPA also has an oversight role stemming from its basic responsibility for abating water pollution and as the federal government's agent in disbursing federal funds. This would suggest that before EPA disburses federal funds, it should have reasonable assurance that a potential grantee has the management and financial capability to effectively carry out a construction grant project.

As you may recall, Mr. Chairman, we discussed the question of accountability and responsibility for construction grant projects in our November 1980 report entitled Costly Wastewater Treatment Plants Fail To Perform As Expected (CED-81-9, Nov. 14, 1980). The study showed many examples where projects constantly exceeded the plant's water pollution permit limits. But we had difficulty identifying the parties responsible for treatment plant deficiencies. Technically, the municipality as the grantee is

responsible; in practice, no one party seems to be accountable. Charges, countercharges, innuendos, and finger pointing by all parties involved in construction permeate the history of these projects. Unfortunately, it appears that the Malden and the Elk-Pinch projects can now be added to the list.

To resolve the responsibility/accountability issue, we recommended that the Congress require EPA to test various alternatives to the construction grants funding concept. The alternatives included the turnkey concept, in which one party, most likely the consulting engineer, would plan, design, and construct the plant, make sure it works, then turn over the plant to the municipality for operation. The other alternatives were to have EPA become a signatory to the contracts, or to have EPA become an advisor to the grantee.

The Congress has not adopted our recommendation. We believe that the experiences in the Malden and Elk-Pinch projects indicate a need to reconsider our recommendations.

Mr. Chairman, this concludes my prepared remarks. We will be pleased to respond to any questions you may have.