



COMPTROLLER GENERAL OF THE UNITED STATES
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Chairman, Committee on Appropriations
House of Representatives
Chairman, Committee on Appropriations
United States Senate

On May 12, 1975, the Environmental Protection Agency, as required by section 236 of the Legislative Reorganization Act of 1970, submitted to you its written statement on actions taken on the recommendations in our report entitled "Using Solid Waste to Conserve Resources and to Create Energy" (B-166506, Feb. 27, 1975).

Attachment I to that letter contains the Agency's comments on the report which were included on pages 63 through 66 of our report and are discussed on pages 26 through 28, 41, 42, and 61. Attachment II to the Agency's May 12, 1975, letter specifically deals with the Delaware project. In our report the Delaware project is discussed on pages 11 through 15, 22, and 26 through 28. We take issue with the comments made by the Agency in attachment II and would like to offer the following information for your consideration.

In our report we questioned the need for spending \$9 million on the Delaware project and suggested that the Agency attempt to obtain the data from Connecticut's Bridgeport project--due to become operational 2 years before the Delaware project--necessary to evaluate the burning of solid waste in oil-fired boilers. We also noted that the other benefits of the Delaware project had been or would be demonstrated before the project became operational.

The Agency outlined its position on this matter in an attachment to its May letter which stated that:

"The Delaware project was funded in October 1972. Agreement was reached between Delaware and EPA officials in September 1973 to modify the project to its current scope. At that time we had no assurance whether or when the Connecticut Authority would actually implement a system, or what technology the system would employ. The contract for the Bridgeport project was signed in only March, 1975."

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The Delaware project was funded in October 1972 after being rejected twice. The agreement to modify the project was accepted by Delaware in a letter dated November 9, 1973, on the basis of meetings held with the Agency in October of that year.

The question by the Agency on the lack of assurances is interesting because at that time Connecticut had already completed a statewide solid waste management plan for a system designed to be environmentally sound (fostering the recovery of materials and energy), economically feasible (tapping the initiative and resources of industry whenever possible), and technologically flexible (welcoming innovation with a minimum disruption of services). About \$1 million was spent on designing the plan, half of which was funded by industry.

Connecticut's Public Act 73-459, enacted in June 1973, established the Connecticut Resource Recovery Authority as the governmental body responsible for carrying out the plan. The Authority is empowered to issue up to \$250 million in bonds; design, build, and operate the new facilities; market recovered products; condemn land under certain circumstances; and contract with municipalities to receive and process waste. With respect to the technology to be employed, the first project would be the Bridgeport project and would use waste to generate electricity in oil-fired boilers. Thus it would appear that there was assurance as evidenced by the \$250 million bonding authority and a completed plan.

The contract referred to by the Agency was not signed in March 1975 but on February 10, 1975, 1 day before the amended grant agreement between the Agency and Delaware was finally agreed upon and signed. Further, the Connecticut contract was for the design, construction, and operation of the facility, whereas the Delaware agreement was an amended grant agreement between the Agency and the State providing for the modified system with Federal financial assistance. It is expected that the Delaware project will not have a contractor until sometime this summer. Most important is the fact that the Bridgeport project is to become operational in 1977, 2 years before the Delaware project.

The Agency stated that:

"We have recently learned that the boilers to be modified in the Bridgeport project to fire solid waste are cyclone-fired units. The boiler operation and air emission effects of combined firing in these units would not be representative of the effects from the much more prevalent tangentially-, front-, or opposed-fired boilers. Delaware will use the tangentially-fired units to provide evaluation data with wide applicability."

There are both cyclone-fired and tangentially-fired boilers at Bridgeport, and, had the Agency been involved from the beginning, a change might have been made in the type of boilers to be used. Apart from that, however, it is questionable whether using cyclone-fired versus tangentially-fired is really a valid issue.

The Agency funded a survey of electric utility boilers with potential capacity for burning solid waste as fuel and issued a report in 1974 entitled "Where the Boilers are." After discussing the success of the St. Louis energy recovery project, the report states that:

"It also appears that solid waste can be used economically in almost any boiler that has bottom ash handling and air pollution control facilities. This includes tangentially-fired, front-fired, opposed-fired, cyclone-fired and stoker-fired boilers."

A Connecticut Authority engineering official said that tangentially-, front-, and opposed-fired boilers were more prevalent but was of the opinion that boiler operation and air emission effects would not differ significantly by using the cyclone-fired unit.

Concerning the Agency's statement on the uncertainty of obtaining a satisfactory arrangement for evaluating the Bridgeport operations, it seems unfortunate that the Federal agency responsible for solid waste-resource recovery has not been involved from the beginning in Connecticut's endeavor. It appears that, if the agency had been so involved, there would be no question on the availability of an evaluation. To our knowledge there is no other Statewide resource recovery program like Connecticut's in the country. As of May 6, 1975, the Agency had not contacted the parties involved in the Bridgeport operations concerning an evaluation.

With respect to the fuel market for the Delaware project, there is no purchase commitment. Under the original criteria for awarding a demonstration project grant, purchase commitments were required before any grant could be awarded. Although the agency went ahead with the amended grant without such a commitment, the grant contains a condition that a purchase commitment must be obtained before a contract can be entered into for the facilities' design, construction, and operation. This aspect should have already been resolved.

The final point discussed by the Agency relates to the Delaware project demonstrating the marketability of humus recovered from solid waste. Officials at the Altoona plant--the pilot plant for the humus system of the Delaware project--told us that there was no problem in marketing the humus. They said there were plans to build a new 150-tons-of-waste-a-day humus facility--the current plant had a capacity of handling 50 tons of waste a day and produced 8 to 10 tons a day of humus--and letters of intent had been obtained indicating that the new humus facility's entire output will be sold. It appears that the marketability has been demonstrated and the Delaware project is not needed in this regard.

The Agency also commented that the pilot plant at Altoona accepted segregated waste only, whereas the Delaware project would accept all residential and commercial waste. The Agency has already acknowledged that the technology to process unsegregated waste has been sufficiently demonstrated.

There is at least one major point omitted from the Agency's May 12, 1975, letter and that is the \$4 million waste water treatment construction grant that Delaware anticipates receiving from the Agency in order to fund the sewage sludge portion of the project. Without these additional funds it is questionable whether the Delaware project can become a reality. With this anticipated grant the Federal share of eligible cost will increase \$4.1 million to \$13.1 million, whereas the State's contribution of eligible cost will decrease from \$4.7 to \$4.4 million.

Finally the Agency stated:

"In summary, we feel the Delaware system is innovative and worthy of demonstration. Furthermore, we have had a commitment to Delaware since September, 1973, and the State has carried out considerable planning and has expended funds based on this commitment. We feel that it would be irresponsible to fail to meet this commitment at this time."

Although the State has spent planning funds, the Federal share of the cost of this project is apparently going to increase \$4.1 million, whereas the State experiences a slight decrease. A question arises as to whether the Agency should have made such a commitment and whether other States and urban areas should have had an opportunity to submit proposals for a "Delaware type" project. To our knowledge the site of the plant has not been definitely determined because title to the preferred site is not in the name of any of the parties involved. As of May 6, 1975, the State of Delaware had not submitted a grant proposal to the Agency for the \$4.1 million grant needed. There is no contract for the design, construction, and operation of the Delaware project. And last, but certainly not least, the Bridgeport project is to become operational in 1977 and the Delaware project 2 years later in 1979.

The information contained herein should provide you with sufficient information on which to evaluate the Agency's letter.

We are sending a copy of this report today to the Administrator, Environmental Protection Agency.


Comptroller General
of the United States