



COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

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MAR 16 1978

The Honorable Abraham A. Ribicoff
Chairman, Committee on
Governmental Affairs
United States Senate

Dear Mr. Chairman:

On November 14, 1977, the Under Secretary of the Department of Energy (DOE) responded to you on our August 17, 1977, report on the first Federal attempt to demonstrate a synthetic fossil energy technology--the Coalcon project. Our report and the DOE response are enclosed for your reference.

The purpose of this letter is to summarize the situation with respect to the Coalcon project and to comment on parts of the DOE response where it disagrees with our report.

The Coalcon project was a part of the former Energy Research and Development Administration's (ERDA's) Clean Boiler Fuel Demonstration Program which was initiated in 1974 by the Office of Coal Research, Department of the Interior. Coalcon--a partnership between Chemical Construction Corporation and Union Carbide Corporation--was awarded a \$237 million contract by Interior on January 17, 1975, to design, construct, and operate a clean boiler fuel demonstration plant.

ERDA terminated the project on June 15, 1977, without achieving project objectives. We reported that the project failed in its initial phase despite a \$10 million cost overrun (211 percent) and a 14-1/2 month schedule slippage. Overall, we concluded that ERDA did not properly manage the project.

In responding to you on our report, DOE disagreed with our (1) computation of the cost overrun for the project and (2) assessment of the adequacy of DOE's monitoring of the project. As discussed below, we believe our report was accurate on both accounts.

COST OVERRUN

In computing the 211 percent cost overrun for the Coalcon project, we attributed all of the project's \$14.8 million cost at the time of our review to Phase I of the contract (conceptual and preliminary demonstration plant design and pilot tests) and compared that to the contract ceiling of \$4.75 million for Phase I.

DOE said that we erred in doing this because we (1) ignored a factor for escalation which, according to DOE, would account for \$1 million--or 10 percent of our reported \$10 million cost overrun--and (2) did not consider that 15 percent of Phase II (detailed design) was completed and that some of the final costs should have been attributed to that phase.

ERDA's contract with Coalcon was a cost-plus-fixed-fee contract not to exceed \$4.75 million under Phase I. Although the contract provided that the ceiling cost could be revised if the contractor could support escalated labor costs, no such determination was made--or even attempted--and the original estimated contract cost was never revised.

For this reason, (1) our report considered the cost overrun to be that increase in cost over the ceiling \$4.75 million Phase I contract amount and (2) we believe that DOE is wrong claiming that we should have included a factor for escalation in computing the cost overrun.

Regarding the percentage of completion for Phases I and II, DOE and Coalcon records do not allocate costs between these phases. We were and still are unable, therefore, to determine the amounts actually spent on each phase. DOE's contention that 15 percent of Phase II was completed is based on a negotiated settlement with the contractor--not on the actual work that was completed. According to an undated DOE memorandum to the file--which was unavailable to us at the time of our review--there was considerable disagreement and negotiation between DOE and the contractor as to how much Phase II work was actually completed. The memorandum shows, for example, that the contractor originally claimed 50 percent was completed while DOE maintained that no more than 10 percent was completed. In the interest of compromise, both parties agreed to 15 percent.

Because we were unaware of the above memorandum, our report relied heavily on a November 18, 1976, memorandum from the Director, Clean Boiler Fuel Program, to the Director, Fossil Demonstration Division which stated that:

"Our records to date based upon Coalcon furnished information indicate that Phase I, preliminary engineering, shows a cost growth from \$4,750,000 to \$12,785,000 * * * without any warning from the contractor. * * * I wish to emphasize this data was not made available to ERDA until 30 September 1976, and then only after considerable pressure from the program office * * * Coalcon led me to believe that their major effort was on Phase II with Phase I being about 97% complete. Actually,

Phase I is only on the order of 36% complete, and Phase II effort, according to Coalcon's 9/30/76 submission, 3% complete. * * * our inability to track preliminary engineering progress * * * is very well documented." (Underscoring supplied.)

Our report relied equally on a November 24, 1976, ERDA directive that Coalcon cease all Phase II efforts and on a December 1976 ERDA decision to reduce the scope of the project, forego any additional Phase II work, and terminate the project after the rescoped Phase I was completed. Our report, therefore, attributed all of the costs of the project to Phase I because the best information available to us indicated that Phase II was only about 3 percent complete in November 1976 and further Phase II work was terminated.

Because definitive records are not available even today, we believe debating the amount and percentage of the cost overrun at this time is academic and ignores the major point of our report--that is, the project failed without achieving its objectives and that this occurred primarily because

- research and development had not been sufficiently carried out to resolve several significant technical problems;
- ERDA never had both an adequate work plan for the project and an effective system to monitor and control the contractor's progress and project costs; and
- ERDA did not take timely action to redirect or terminate the project when it became evident that it was in serious trouble.

In short, ERDA did not properly manage the project. Nothing in DOE's comments changes this assessment.

PROJECT MONITORING

DOE also told you that it had an adequate monitoring system in existence for the Coalcon project. We disagree because, as stated on page 11 of our report, a project management team was not established until September 1975--8 months after the project was started. Even after the team was established, a work plan, with performance and cost milestones and decision points, was never developed against which to monitor project progress.

In addition, in its letter to you and in negotiations with the contractor, DOE had to estimate the cost of Phases I and II based on estimates of how much each phase was completed. These are additional indications of ERDA's ineffectiveness in monitoring the cost and progress of the project.

Sincerely yours,

SIGNED ELMER B. STAATS

Comptroller General
of the United States

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