



United States
General Accounting Office
Washington, D.C. 20548

Resources, Community, and
Economic Development Division

B-275836

January 31, 1997

The Honorable John Glenn
Ranking Minority Member
Committee on Governmental Affairs
United States Senate

Dear Senator Glenn:

In fiscal year 1997, the Department of Energy's (DOE) Environmental Management (EM) program is expected to spend about \$5.6 billion to clean up radioactive and hazardous wastes—the legacy of the Cold War. This effort is being performed primarily under cost reimbursement contracts by contractors that manage and operate (M&O contractors) many of DOE's facilities. DOE, however, has found that using the M&O approach is very expensive and slow.¹ To reduce cleanup costs and spur greater progress, DOE is pursuing a new contracting strategy, which it calls "privatization." This approach does not involve the transfer (sale) of government-owned assets or functions to the private sector. Rather, it relies on the use of a competitively awarded fixed-price performance contract, through which DOE purchases waste cleanup services from a "private" contractor other than the M&O contractor.

In its fiscal year 1997 budget request to the Congress, DOE requested \$185 million to support the privatization of efforts to clean up radioactive tank waste at its Hanford Site in Richland, Washington. The Hanford tank waste cleanup is a very complex task that is expected to cost \$36 billion and take until nearly 2030 to complete. In support of its Hanford funding request, DOE identified six projects that it considered "highly successful" examples of privatization. These include two laundries to clean radiologically contaminated clothing and four

¹We have previously reported the difficulties DOE has experienced in controlling the costs and activities of its M&O contractors. See Energy Management: Vulnerability of DOE's Contracting to Waste, Fraud, Abuse, and Mismanagement (GAO/RCED-92-101, Apr. 10, 1992).

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projects to immobilize radioactive waste. DOE estimated that these projects would cost about \$1.545 billion if the M&O contractor did the work, but only \$462 million if the efforts were privatized, for an estimated cost savings of about \$1.1 billion. Because of your concern about the prospects for successfully privatizing the Hanford tank waste cleanup, you asked us to determine the accuracy of the information provided in DOE's fiscal year 1997 congressional budget request on the six projects.

RESULTS IN BRIEF

The overall estimate of \$1.1 billion in savings from privatizing six projects that DOE provided to the Congress in its fiscal year 1997 budget request was not totally accurate. Specifically, we found some understated costs, incorrect cost data, and cost comparisons of projects with different scopes that affected the accuracy of several of the estimates. We did not find any evidence to suggest that the estimates were intentionally overstated or understated. While DOE could not supply data to produce more accurate estimates for all of the projects, the available data for these projects indicate that the privatized approach has the potential to save several hundred million dollars compared with the current M&O contracting approach. However, only the two laundries were operational when DOE claimed these savings in its budget request. Consequently, DOE's characterization of the six projects as "highly successful" appears to be premature.

BACKGROUND

DOE's production of nuclear weapons during the Cold War resulted in thousands of tons of radioactive and hazardous waste, which must now be cleaned up. The task of cleaning up this waste could stretch beyond the middle of the next century and could cost between \$189 billion and \$265 billion.²

DOE's Office of Environmental Management (EM), which is responsible for the cleanup, is initiating a strategy that it believes will enable it to complete much of the cleanup in the next 10 years. As part of its 10-year strategy, EM is relying on a contracting approach that it calls "privatization" to help reduce the cost of radioactive waste cleanups. This strategy represents a break from DOE's prior approach to such cleanups. In the past, DOE used a cost-plus-award-fee contract, told the M&O contractor how to perform waste-related

²See DOE's report, The 1996 Baseline Environmental Management Report.

cleanup activities, and paid the M&O contractor regardless of what was accomplished. Under privatization, DOE would use a fixed-price, competitively awarded contract; the private contractor(s) would finance, design, build, and operate any required waste cleanup facilities; and DOE would pay the contractor(s) only for a successful cleanup. DOE believes that this fixed-price, competitive strategy will reduce the overall costs of radioactive and hazardous waste cleanups.

In its fiscal year 1997 budget request to the Congress, DOE listed six privatization projects (see table 1) that it considered to be "highly successful." DOE identified these projects to support its request for \$185 million in fiscal year 1997 budget authority to privatize radioactive tank waste cleanup activities at its Hanford Site. DOE estimated that these six projects, which are being performed under fixed-price contracts, would cost almost \$1.1 billion less than if the M&O contractor were performing the work (see table 2). Five of the six projects were started before DOE initiated its privatization strategy. In addition, four of the six projects are fixed-price subcontracts initiated by the M&O contractor. Furthermore, in presenting these projects, DOE stated that no budget outlays would occur on them until they "are operational and providing the service required."

Table 1: Six Privatization Projects Identified in DOE's Fiscal Year 1997 Budget Request

Project	Purpose	Status as of December 1996
Hanford Laundry	Clean radioactively contaminated and regular laundry and all types of respirators.	Contract awarded 8/92; project operational 8/93.
Idaho Laundry	Clean radioactively contaminated laundry and all types of respirators.	Contract awarded 5/93; project operational 10/93.
Savannah River M-Area Mixed Waste Tank Remediation	Treat and package 650,000 gallons of radioactive sludge.	Contract awarded 11/93; project operational 10/96.
Idaho Pit 9 Remediation Demonstration	Retrieve and remediate 110,000 cubic feet of buried transuranic, ^a alpha low-level, and hazardous wastes.	Contract awarded 10/94; facilities under construction.
Hanford Low-Level Mixed Waste Thermal Treatment Facility	Treat and package up to 5,120 cubic meters of low-level mixed waste.	Contract awarded 11/95; project applying for necessary permits.
Idaho Alpha Mixed Waste Treatment Facility	Treat and package about 27,000 cubic meters of alpha mixed low-level waste. ^b	Project replaced with Advanced Mixed Waste Treatment Project; contract awarded 12/96.

^aTransuranic wastes are man-made radioactive elements produced from uranium during a nuclear reactor's operations. All transuranic wastes contain radioactive elements that have an atomic number greater than that of uranium.

^bAlpha low-level waste is radioactive waste containing alpha-emitting radioactive elements. Alpha elements are the least penetrating of the three common forms of radiation (alpha, beta, and gamma). Mixed waste includes both radioactive and hazardous waste.

Table 2: Savings From Six Privatization Projects Presented in DOE's Fiscal Year 1997 Budget Request

Dollars in millions.

Project	Estimated cost under an M&O contractor ^a	Estimated cost under privatization	Savings
Hanford Laundry	\$100	\$40	\$60 ^c
Idaho Laundry	\$6	\$1	\$5 ^c
Savannah River M-Area Mixed Waste Tank Remediation	\$46	\$18	\$28
Idaho Pit 9 Remediation Demonstration	\$313	\$179 ^b	\$134
Hanford Low-Level Mixed Waste Thermal Treatment Facility	\$610	\$40	\$570
Idaho Alpha Mixed Waste Treatment Facility	\$470	\$184	\$286
Total	\$1,545	\$462	\$1,083

^aEstimated cost of having an M&O contractor perform the work under a cost-plus contracting arrangement.

^bCost estimate assumes follow-on work.

^cEstimated savings based on assumed 10-year operation.

Source: DOE.

ESTIMATED SAVINGS ARE NOT TOTALLY
ACCURATE, AND CLAIMS OF SUCCESS
MAY BE PREMATURE

The overall estimate of \$1.1 billion in savings is not a totally accurate indicator of the potential savings associated with the six privatization projects. Specifically, we found some understated costs, incorrect cost data, and cost comparisons of projects with different scopes that affected the accuracy of several of the estimates. We did not find any evidence to suggest that the estimates were intentionally overstated or understated. While DOE could not supply data to produce more accurate estimates for all of the projects, the available data indicate that, for the six projects, privatization has the potential to save several hundred million dollars compared with the current M&O contracting approach. However, only two projects were operational at the time DOE claimed these savings in its budget request. In addition, a 1993 DOE study found that significant cost escalation has occurred in fixed-price cleanup contracts. Consequently, DOE's characterization of the six projects as "highly successful" appears to be premature.

Some Estimates May Be Overstated,
While Others Appear Understated

For two of the six privatization projects—Pit 9 and the Idaho Laundry—the savings associated with privatization may be overstated because, for example, DOE's methodology understated the costs of privatization. For another project—the Idaho Alpha Mixed Waste Treatment Facility—the savings estimated in the budget request appear to be understated.

For the Idaho Pit 9 project, DOE estimated costs of \$313 million if an M&O contractor performed the work. DOE negotiated a privatized contract for \$179 million—for an estimated savings of \$134 million. However, the cost of the privatized contract appears to be understated. Specifically, DOE assumed that the contractor would obtain follow-on work once the Pit 9 contract was completed. Therefore, DOE did not classify \$21 million that the contractor invested in Pit 9 equipment as a cost of the Pit 9 project because DOE assumed that the equipment would likely be used in future DOE works. However, if the contractor successfully completes the Pit 9 project but no future remediation work is available, the government must still pay the contractor the \$21 million (raising the project's total cost to \$200 million). The Pit 9 project engineer agreed that the \$21 million should be included in comparisons of the project's cost.

For the Idaho Laundry project, DOE's budget proposal shows a nonprivatized cost of \$6 million and a privatized cost of \$1 million, for an estimated savings of \$5 million. However, DOE Idaho officials told us that both the \$6 million and \$1 million cost figures were incorrect. They said that no cost estimates had been performed before they decided to contract out the laundry service. However, in response to our questions, they estimated that privatizing the laundry saved about \$733,000 in the first year of operations and could save \$3 million to \$8 million over 10 years.

For the Idaho Alpha Mixed Waste Treatment Facility, DOE officials decided to substantially change the project after submitting the budget information. DOE officials believed that additional savings could be achieved by changing the scope of the project to include transuranic wastes. In December 1994, these officials estimated a nonprivatized cost of \$470 million and a privatized cost of \$184 million, for an estimated savings of \$286 million. However, these estimates reflected the estimated cost of treating only the alpha mixed low-level waste, which was the first phase of a larger Idaho Waste Processing Facility project.³ In June 1995, DOE canceled the Idaho Alpha Mixed Waste Treatment Facility project because it had decided in May 1995 to develop the Advanced Mixed Waste Treatment Project, which would treat and dispose of 65,000 cubic meters of both alpha and transuranic wastes.

Documents at DOE's Idaho Operations Office indicate that the nonprivatized cost for treating both types of wastes would be \$1.6 billion and the privatized cost about \$820 million, for an estimated savings of \$780 million. DOE officials told us that they reported this estimate to congressional staff during budget briefings in April 1996. However, since awarding a \$1.18 billion contract⁴ for this project in December 1996, DOE officials expect the life-cycle cost savings for retrieving and treating the alpha and transuranic wastes to be less than \$780 million. DOE Idaho officials hope to have a revised savings estimate before

³At the time, DOE's Idaho operations office planned to privatize only the first phase of the project—the treatment of alpha mixed waste. They did not plan to privatize the second phase of the project—the treatment of transuranic waste.

⁴This contract includes the retrieval and treatment of 65,000 cubic meters of alpha low-level and transuranic waste currently stored at the site. It also includes an option to treat up to an additional 120,000 cubic meters of waste generated by future cleanup work at the site, as well as some waste generated at other DOE sites.

February 1997; however, they told us that the savings could be as much as \$500 million.

Comparisons of Costs for Projects
That Differ in Scope Make Savings
Estimates Unreliable

For the Hanford Low-Level Mixed Waste Thermal Treatment Facility project, DOE estimated the cost of having the M&O contractor perform the work at \$610 million and the cost of privatization at \$40 million, for an estimated savings of \$570 million. However, the \$610 million estimate was actually for a much larger facility than the project that DOE has privatized. Specifically, this estimate covered the costs to construct and operate for 10 years a facility that would eventually treat about 39,000 cubic meters of both contact- and remote-handled⁵ mixed low-level and mixed transuranic wastes. In contrast, the estimate of \$40 million is to treat no more than 5,120 cubic meters of contact-handled mixed low-level waste at an off-site treatment facility. DOE headquarters officials told us that after the budget proposal was submitted, they determined that the savings estimated for this project were unreliable because of incomplete data and, in April 1996, they dropped this project as an example of successful privatization.

In response to our questions, DOE Richland officials provided a rough estimate showing that having a private (non-M&O) contractor process the entire 39,000 cubic meters of waste would cost about \$412 million less than having the M&O perform the work. However, they could not estimate the cost of having the M&O contractor process the smaller amount—5,120 cubic meters of contact-handled mixed low-level waste—as called for in the existing privatization contract, because the data for this estimate were not available. Thus, no comparison of the costs before and after privatization could be made. However, DOE believes that the privatized processing of the 5,120 cubic meters will be less costly than on-site processing by the M&O contractor would have been.

The savings estimate for Savannah River M-Area Mixed Waste Tank Remediation also involves projects with different scopes. DOE stated in its fiscal year 1997 budget request to the Congress that having the M&O contractor

⁵Contact-handled radioactive waste packages have low surface radiation dose rates. Remote-handled packages have high dose rates and workers' exposure should be minimized.

perform the project would cost \$46 million, whereas having a private contractor do the work would cost only \$18 million—a claimed savings of \$28 million. However, the \$46 million estimate was for the M&O contractor to build a permanent facility that would use grout (a cementlike material) to immobilize the existing waste in M-Area tanks plus additional waste that was expected to be generated in support of continuing reactor operations over a 10-year period. The need to support reactor operations ended with the winding down and conclusion of the Cold War. Thus, in contrast, the \$18 million estimate was for a private contractor to build a temporary facility and vitrify (immobilize in glass) only the existing waste in the M-Area tanks. The private contractor was expected to take about 1 year to vitrify the tank waste.

DOE officials stated that they consider the comparison of the original M&O project and the privatized project valid because they believe that each project would process about the same amount of waste. However, the officials could provide no cost estimate for a preprivatized project that, like the privatized project, would have involved building and operating a temporary facility to vitrify only the existing M-Area tank waste in 1 year. Thus, no one-for-one cost comparison could be made of projects with like scopes to determine the savings that could be realized from privatizing the project. EM's team leader for privatization informed us that DOE had lowered its estimate of the costs saved by privatizing the M-Area project to a "more conservative" \$19 million in briefings to congressional staff after DOE submitted its budget request.

In one instance, while the scope did not differ, DOE did use different time frames in estimating its savings. Specifically, for the Hanford Laundry project, DOE's budget request showed a nonprivatized cost estimate of \$100 million and a privatized cost estimate of \$40 million, for an estimated savings of \$60 million. However, a detailed cost estimate prepared at the site when the decision was made to privatize showed \$82 million in savings. This estimate was based on 22 years of operations; however, for the fiscal year 1997 budget request, DOE decided to assume a shorter 10-year operating period and made other adjustments to the original analysis. According to DOE Richland officials, these changes made the analysis more conservative and more consistent with the approach used for other privatization projects.

Claims of Success May Be Premature

In its budget request, DOE stated that the six projects were highly successful examples of privatization, which DOE expected to cost \$1.1 billion less than if the work were being performed by an M&O contractor. However, at the time

DOE submitted its budget request to the Congress, only two of the projects were operational.

Only the two least complex projects—privatizing the Hanford and the Idaho laundry facilities—were operational at the time DOE submitted its budget request and had, therefore, progressed far enough for savings to be realized. Site officials believe that both of these projects have been cost-effective. For example, the Idaho Laundry operation saved about \$733,000 in its first year. Of the four remaining projects, the Savannah River M-Area waste remediation project became operational in October 1996, while the other three waste immobilization projects are still several years away from being operational. In addition, one of these three projects—the Pit 9 waste remediation project—has encountered technical problems and is currently at least 15 months behind schedule.

EM's team leader for privatizing DOE's waste cleanup projects told us that EM considers a project successfully privatized when a fixed-price contract for the project is signed. At the time DOE indicated in its budget request that all six projects were successful, only four of the six projects were under contract. Moreover, having a signed contract, even for a fixed price, does not ensure that the project will be successful and cost-effective. For example, a 1993 study of EM's contracting practices found that for a representative sample of EM's contracts, the actual cost of the fixed price contracts exceeded the estimated cost by almost 75 percent. This cost growth occurred primarily because projects were poorly defined, leading to contract change orders after the contract was signed.⁶ A recent update to the study showed that overall cost overruns in EM contracts still range from about 30 to 50 percent.⁷ However, the update did not distinguish between cost growth in cost-reimbursement contracts and cost growth in fixed-price contracts. Thus, the extent to which these fixed-price projects succeed in producing savings may not be known until DOE has some operational experience.

⁶The Department of Energy, Office of Environmental Restoration & Waste Management, Project Performance Study, Independent Project Analysis, Inc. (Reston, Va., Nov. 30, 1993).

⁷The Department of Energy, Office of Environmental Restoration & Waste Management, Project Performance Study Update, Independent Project Analysis, Inc. (Reston, Va., Apr. 1996).

THE STATEMENT ABOUT BUDGET OUTLAYS
IN DOE'S BUDGET REQUEST WAS NOT ACCURATE

In its fiscal year 1997 budget request, DOE stated that no budget outlays would occur on privatized projects until they "are operational and providing the service required." However, DOE made payments on two of the six privatized projects identified in its request before they were operational and plans to make payments on a third before it is providing the required services.

As of December 1996, DOE had paid the Idaho Pit 9 project contractor almost \$53 million, and the project was still at least 15 months from being operational. Since the contract was signed, DOE made payments for design work and construction activities. According to officials in DOE's Idaho operations office, the contract was structured with milestone and progress payments in order to keep the negotiated contract price as low as possible.

DOE also made payments to the contractor before the Savannah River M-Area tank waste remediation project was operational. These payments totaled about \$2 million and were mainly for preconstruction design activities, radiation control and other project safety assurance activities, drums to store vitrified waste, and the clean closure of one of M-Area's waste storage tanks. Savannah River officials told us that most of these payments were necessary to start up the project and, in some cases, were for activities that represented changes or additions to the contract's original statement of work.

In addition, DOE plans to make payments to the contractor for the Idaho Advanced Mixed Waste Treatment Project before the contractor provides waste treatment services. Payments of about \$16.3 million will be made for several deliverables during the first phase of the project, including developing a plan for public involvement and obtaining permits for the facility within 3 years of the contract's award. DOE agreed to make these payments because it considered obtaining the permits from the state of Idaho within the project's 3-year schedule to be the greatest risk to meeting the project's objectives. According to DOE's Deputy Project Manager for this project, if the contractor is unable to obtain the required permits on schedule, DOE or the contractor has the option to terminate the contract with no further obligations or liability.

EM's team leader for privatization told us that when DOE stated in its budget request that no government outlays would be made on privatized projects before they were providing required services, it intended the statement to apply only to projects privatized in fiscal year 1997 and beyond. He said that, in his opinion, the statement should not have been made in the context of presenting

information on these six privatized projects. In commenting on our report, DOE officials told us that they have learned that it may be in the best interest of the government to pay for early deliverables, such as a permit, to balance risk and to maintain competition by encouraging a sufficient number of bidders.

AGENCY COMMENTS

We provided DOE with a draft of this report for its review and comment. DOE agreed that our report was factually accurate. However, DOE disagreed with several aspects of the report, including the tone, which it believed was imbalanced and could mislead the reader about the cost-effectiveness of the privatization program. In addition, DOE provided annotated comments on technical aspects of the draft, which we have incorporated where appropriate. (See enc. I for DOE's comments.)

DOE disagreed with our statement that its characterization of the six projects as "highly successful" appeared to be premature. DOE noted that success could be measured at several points, including when a contract was awarded, when a project became operational, and when a project was completed. DOE believed that we expected success to be measured only when a project was completed, which in some cases would not be until 2015. We do not believe that DOE needs to wait until all of its privatization efforts have been completed before it can gauge their success. However, given that only the two least complex projects were operational at the time of DOE's fiscal year 1997 budget submission and that one of the biggest projects—Pit 9—is currently experiencing problems, we continue to believe that characterizing the projects as highly successful was premature. We have consistently supported efforts by DOE to reform its contracting approaches to make them more cost-effective, and we believe that fixed-price contracts can be an important component of this endeavor. We also recognize in the report that privatization has the potential to save money. At the same time, the Department needs to ensure its credibility by providing sound evidence on the potential success of its contract reform initiatives.

DOE also disagreed with our having cited a 1993 study performed by Independent Project Analysis, Inc., which showed cost growth in fixed-price contracts. DOE noted, among other things, that the study focused mostly on environmental restoration work, while most privatization projects are not for environmental restoration. Additionally, DOE pointed out that the study did not address the six projects identified in its fiscal year 1997 budget request as highly successful. We recognize that any study has its limitations; however, we believe the results of the 1993 study are valid, since the fixed-price contracts

discussed in the 1993 study were let by DOE's M&O contractors, a feature found in four of the six projects identified in DOE's fiscal year 1997 budget request. More importantly, we included the results of the 1993 study as only one piece of evidence to support our view that DOE's characterization of the six projects as highly successful appeared to be premature.

DOE also noted that the six projects were prototypical and that the Department would use them to prove the concept and apply the lessons learned to future privatization work. DOE stated that we repeatedly criticized it for not adhering to privatization principles articulated in 1995, such as not making progress payments. Our objective was to determine the accuracy of the information provided in DOE's fiscal year 1997 budget request, not to determine whether the projects adhered to the privatization principles. In that request, which was submitted in March 1996, DOE stated that no budget outlays would occur until the privatized projects were operational and were providing the service required. In examining the evidence, we found that payments had been made before service was provided, and we have reported this information as part of our evaluation of the accuracy of DOE's statements. We recognize that, as part of its privatization effort, DOE may need to modify some of its principles to ensure that privatization is successful.

Finally, DOE cited a discussion that appeared in the draft it reviewed about whether the cost of capital for the Pit 9 project should have been included in calculations of the cost of privatization. After discussing this issue with DOE, we agreed that DOE treated the costs of capital appropriately and deleted this paragraph from the report.

SCOPE AND METHODOLOGY

We conducted our review at DOE's Richland, Idaho, and Savannah River operations offices and at DOE headquarters in Washington, D.C., and Germantown, Maryland. We reviewed relevant documents describing the six privatized projects, including feasibility and cost studies for the projects. We discussed the details of these documents and other information on the projects with the DOE and contractor officials who are responsible for the projects. Our work was performed from September through January 1997 in accordance with generally accepted government auditing standards.

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 10 days after the date of this

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letter. At that time, we will send a copy to the Secretary of Energy. We will also make copies available to others upon request.

If you have any questions about this report, please contact me at (202) 512-3841. Major contributors to this report include Chris Abraham, James Noël, Jack Paul, Thomas Perry, William Swick, and Charles Sylvis.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Victor S. Rezendes", written over the typed name and title.

Victor S. Rezendes
Director, Energy, Resources,
and Science Issues

Enclosure



Department of Energy

Washington, DC 20585

January 27, 1997

Mr. Victor S. Rezendes
 Director, Energy, Resources and Science Issues
 Resources, Community, and
 Economic Development Division
 U.S. General Accounting Office
 441 G Street, N.W.
 Washington, D.C. 20548

Dear Mr. Rezendes:

Thank you for the opportunity to comment on your draft report dated January 16, 1997, entitled Nuclear Waste: DOE's Estimates of Potential Savings From Privatizing Cleanup Projects (GAO/RCED-97-49R, Code 302202). We appreciate your recognition that privatization has the potential to save substantial money when compared with the current management and operating (M&O) contracting approach.

The Department of Energy (DOE) generally agrees that the data contained in the report have been corrected to be factually accurate. However, the Department believes that the tone of the report is imbalanced and presents a biased view which could mislead the reader regarding the cost effectiveness of the Environmental Management privatization program. For example, in Table 2, the GAO references six privatization projects which DOE had previously presented as being "highly successful," resulting in "estimated cost savings of about \$1.1 Billion." Your report states that these estimates are "not totally accurate and may be premature." The Department agrees that we do not currently have the data available for the Hanford Low Level Mixed Waste Thermal Treatment Facility project to enable us to make a valid "apples-to-apples" M&O-to-privatization comparison for like scope. Although we continue to believe that this project is leading to substantial cost saving we withdrew this project as an example of successful privatization in subsequent briefings to Congressional staff on the FY 1997 Budget Request. The removal of this project from Table 2 would result in five example projects with estimated savings of \$513 million. The current EM estimate of cost savings and cost avoidances for these five projects is approximately \$700 million, an increase of almost 40 percent over the "inaccurate" estimate criticized in your report.

We believe that our estimates of cost savings and cost avoidances are conservative and follow generally accepted industry and government estimating guidelines and practices. For example, the GAO report criticizes the Department for not including the cost of capital incurred by the Government in making payments for deliverables on the Idaho Pit 9 project. Generally, under the privatization approach, the cost of financing the project is incurred by the contractor and is included in the cost estimates for privatization. However, we have excluded the Government's cost of capital incurred under the traditional M&O approach and have therefore significantly understated the estimated cost savings from privatization.

The estimation of savings from privatization has been an iterative process with continuous improvements. Privatization estimates used during the budget formulation process are based upon the best knowledge available at that time. As a planned privatization project matures, scopes are often further refined; different technical approaches may be evaluated to ensure feasibility, efficiency and cost effectiveness; and additional new technologies may become available. As a result, cost estimates are revised to incorporate the most current available information. Finally, the contract award process may produce additional changes in the proposed scope, contract terms and conditions in order to obtain the best overall deal for the Government. For these reasons, cost estimates will be updated or modified as appropriate.

Page two of your report discusses the Hanford Tank Waste Remediation System (TWRS) project as well as the six projects which DOE considered as "highly successful" examples of privatization. Please be advised that technical and programmatic considerations, in addition to cost savings, were major factors in the decision to privatize the Hanford TWRS project.

The GAO report makes three references to a 1993 study performed by Independent Project Analysis, Inc. (IPA) for DOE. The GAO alleges that this study shows that DOE has experienced "significant cost escalation in fixed price contracts for waste cleanup" (page 3), that "DOE acknowledged that significant cost escalation has occurred in fixed-price contracts for waste clean-up" (page 8), and that "for a representative sample of EM's fixed price contracts, the actual cost exceeded the estimated cost by almost 75 percent" (page 15). The Department believes that the study results were unintentionally, yet materially, misrepresented by GAO. The referenced IPA study measures cost growth from the start of remedial design to the completion of remedial action. It does not measure contractual cost growth for fixed price contracts. In addition, the study was done almost exclusively on environmental restoration work and the study itself states that "the waste management [project] sample is too small for statistical reliability" (most DOE privatization projects are not for environmental restoration work). DOE has not determined the number of fixed price projects used in the IPA study, but it is thought to be small and is not thought to be statistically reliable. Also, the IPA study does not address any of the six projects cited by DOE as being "highly successful" examples of privatization. According to senior officials from IPA, the GAO did not contact IPA to determine if their conclusions from reading the report were valid. DOE does not acknowledge "that significant cost escalation has occurred in fixed price contracts for waste clean-up," and it is our belief that the study is not a "representative sample of EM's fixed price contracts." For example, on the Savannah River M-Area Mixed Waste Tank Remediation project (one of the six projects cited by DOE), the contract award in November 1993 was for \$13.9 million and the current contract price as of October 1996 (almost three years later when the facility became operational) is \$14.2 million; an increase of only two percent due to contract modification.

Further, the GAO has repeatedly criticized the Department's performance on cost reimbursable contracts. (Reference the August 1993 GAO Report, Management Problems Require a Long-Term Commitment to Change, which states that "DOE's [M&O] contractors have little incentive to be cost-effective when the government pays all expenses and assumes nearly all risk.") The

Department believes that EM will be much more successful in containing cost growth on our fixed price privatization contracts than we have been under the traditional M&O approach.

It is noteworthy that all six "highly successful" examples of privatization projects are now under contract or have been completed. These six projects are not scheduled to be complete until 2015. By stating that our claims of success are "premature" the implication is that DOE should wait to report cost savings until the projects are complete, 18 years hence. The Department feels an obligation to provide more timely status reporting to the public and to the Congress. We believe that presenting our estimates of cost savings at the time of contract award is both necessary and appropriate and not "premature." We fully intend and indeed are required, to provide the Congress with regular status updates on these projects.

The EM program has consistently cited these six projects as being prototypical in that we would use them to prove the concept and would apply the lessons-learned to future privatization work. Indeed, the GAO report correctly states that five of these contract awards precede the initiation of the EM Privatization Program. Your report repeatedly criticizes the Department for not adhering to the EM privatization principles, such as not making progress payments, yet the principles were first articulated in the 1995 time frame, well after most of the six contracts had been awarded. This represents the creation of an historical anachronism by the GAO. The application of the current privatization principles to these historical examples, is inappropriate and misleading. Additionally, the principle of not making payments before waste is treated is not intended to be rigidly applied. The report correctly notes that for the AMWTF project, the Department anticipates making approximately \$16 million in payments for deliverables if the contractor successfully obtains the required permits. As we have progressed, it has become clear that on large projects where there is high risk associated with the permitting and licensing phase of projects, the contractor should be paid for permitting/licensing deliverables. That phased contracting structure with payment for deliverables encourages more companies to bid. After Phase I, if the company cannot obtain needed permits after a good faith effort, both parties can agree to terminate the contract with no further obligation. These payments represent less than 2 percent of the anticipated contract costs and should not unduly influence the contractor's incentive to perform. DOE believed that making such a minor payment was in the Government's best interest. For each privatization project, EM intends to carefully evaluate the issue of making payments to contractors and will develop an appropriate sharing of financial risk between the Government and the contractor. DOE adheres to the principle of paying only for product, and we believe that the criticism exhibited in the GAO report is unwarranted.

We do not believe that the savings estimate for the Savannah River M-Area Mixed Waste Tank Remediation project involves projects with different scopes. This example is very instructive and demonstrates a fundamental benefit of privatization. The GAO asserts that since the M&O estimate was for permanent facility and the privatization contractor is building a temporary facility, the projects have different scopes. From the DOE perspective, the remediation project scope is to treat 720,000 gallons of radioactive sludge - we do not

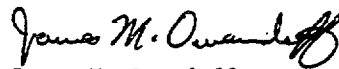
care what type of process or facility the contractor uses, only that they meet the applicable environmental, safety, and health regulations and they treat the waste to the desired waste form and acceptance criteria. In fact, the construction of a permanent facility would lead to even higher costs and larger relative cost savings since the facility would have to be maintained and would eventually have to be decontaminated and decommissioned.

As stated in the April 1992, GAO Report Energy Management: Vulnerability of DOE's Contracting to Waste, Fraud, Abuse, and Mismanagement, "Correcting the contract management problems that face DOE will be difficult and time-consuming...Foremost among the issues that need to be addressed is the old corporate culture which includes the contract management approach." Our privatization and contract reform initiatives represent a strong effort to address the criticisms stated in this 1992 report. Privatization challenges "the old corporate culture" which persisted in DOE for more than a half century.

This current report seems to be in conflict with the conclusions of your 1992 and 1993 reports. More work remains to be done; however the success of the EM privatization program should be highlighted in the current GAO Report.

We thank you for the open communications throughout the process between your representatives and our staffs at both the Headquarters and sites. If you have any questions, please contact me at (202) 586-7720 or Thad Konopnicki of my staff at (202) 586-6331.

Sincerely,



James M. Owendoff
Acting Principal Deputy Assistant Secretary
for Environmental Management

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