

CR-B-02-01

AUDIT
REPORT

FIXED-PRICE CONTRACTING FOR
DEPARTMENT OF ENERGY CLEANUP
ACTIVITIES



OCTOBER 2001

U.S. DEPARTMENT OF ENERGY
OFFICE OF INSPECTOR GENERAL
OFFICE OF AUDIT SERVICES

October 15, 2001

MEMORANDUM FOR THE ASSISTANT SECRETARY, OFFICE OF
ENVIRONMENTAL MANAGEMENT

FROM: Phillip L. Holbrook (Signed)
Deputy Inspector General
for Audit Services
Office of Inspector General

SUBJECT: INFORMATION: Audit Report on "Fixed-Price Contracting for Department of
Energy Cleanup Activities"

BACKGROUND

As part of its Contract Reform effort, the Department of Energy (Department) acted to increase its use of fixed-price contracts. This shift was designed to increase the cost-effectiveness of operations. Since October 1994, the Office of Environmental Management (EM) has awarded a number of fixed-price contracts for environmental cleanup activities. In so doing, EM expected significant cost savings when compared to approaches previously employed by management and operating contractors. Accurately estimating those savings is crucial to contracting strategy and project funding decisions, as well as the Department's overall environmental cleanup strategy.

The objective of our audit was to determine if the cost savings anticipated from the use of fixed-price contracts for environmental cleanup activities would be realized.

RESULTS OF AUDIT

The Department estimated that it would save approximately \$1.7 billion on the 11 fixed-price environmental contracts covered by this audit. However, the audit disclosed that projected savings associated with nine of these contracts were not likely to be fully realized. Projected savings were unlikely to be achieved because some savings estimates were unsupported or based on invalid cost comparisons and because increases in actual costs had occurred or were likely.

In conducting the audit, we found that the Department had not consistently developed comparable and supportable cost comparisons, and officials, in several cases, chose to award fixed-price contracts where uncertainties associated with the work increased the risk of cost increases. Further, the Department did not systematically apply lessons learned from earlier contract awards or establish appropriate procedures to assess performance. As a consequence, at least \$160 million of the anticipated cost savings were unlikely to be achieved. Additional problems that we could not quantify could further reduce estimated savings. The realization of these savings is critically important to accomplishing the Department's commitment to mitigate the risks and hazards posed by the legacy of nuclear weapons production and research. Therefore, it is vitally important that the Department has estimates that are as realistic as possible and which fully consider the risk uncertainties impose on the realization of those savings.

To improve the application of fixed-price contracting, the report recommends that the Assistant Secretary for EM, working in concert with the Director of the Contract Reform and Privatization Office, strengthen the processes by which decisions are made to use fixed-price contracts and implement a process to assess their performance.

MANAGEMENT REACTION

While management disagreed with some of the conclusions in this report, they generally concurred with the finding and agreed to take corrective actions. Detailed comments provided by management and our response are discussed in the body of the report.

FIXED-PRICE CONTRACTING FOR DEPARTMENT OF ENERGY CLEANUP ACTIVITIES

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Overview

INTRODUCTION AND OBJECTIVE

A Department of Energy (Department) 1994 report, *Making Contracting Work Better and Cost Less: Report of the Contract Reform Team*, recommended that work performed by the Department's management and operating contractors be critically assessed to determine whether it could be more efficiently accomplished through competitively awarded contracts. The report included a number of recommendations to make the Department's contracting practices more cost effective, such as increasing the use of fixed-price contracts at both the prime and subcontract levels. A Privatization Working Group formed by the Secretary of Energy in 1996 made similar recommendations.

In response to these initiatives, the Office of Environmental Management (EM) adopted an approach of competitively awarding contracts on a fixed-price basis. Management believed that the use of such contracts would significantly reduce costs and expedite cleanup. Since October 1994, EM has awarded 14 fixed-price contracts, each with award values over \$500,000, for environmental cleanup activities including the construction and operation of waste treatment facilities. Eleven of these contracts were reviewed as a part of this audit. The remaining three contracts, pertaining to the tank waste remediation effort at the Hanford site, were not examined because of extensive prior audit coverage.

Congressional oversight of the Department's contracting initiatives has included a series of hearings where the Department was criticized for not properly defining the scope of work and resolving significant uncertainties before entering into fixed-price contracts. Such criticism was primarily based on observations related to contracts awarded by the Department between October 1994 and December 1996 for three complex cleanup projects. The most recent hearing was held in June 2000 to address why the Department's fixed-price cleanup activities were still experiencing problems.

Accurate estimates of cost savings are critical to good program performance. Among other things, these estimates are relied upon to select the contracting strategy and to attract funding to specific projects. For example, some projects with significant anticipated savings were funded from a separate appropriation, which provided additional funding for cleanup. Also, the Department relies on the savings on these projects in order to fund other work. If that funding is not available as planned, other projects could be delayed, thus lengthening the schedule for cleanup. Ultimately, this could result in increased health and environmental risks and overall cost.

The objective of this audit was to determine if the cost savings anticipated by the Department from the use of fixed-price contracts for environmental cleanup activities would be realized.

CONCLUSIONS AND OBSERVATIONS

The Department estimated that, through the use of the fixed-price contract instrument, it would save about \$1.7 billion on the 11 contracts reviewed. The audit disclosed projected savings associated with nine of these contracts were not likely to be fully realized. We determined that the Department's effort was hindered by contract cost estimates that were unsupported; invalid cost comparisons that had been used as bases for calculating anticipated savings; and actual and potential increases in costs. Collectively, these problems made it very unlikely that the Department's anticipated savings would be fully realized. The anticipated savings are important to the Department's overall strategy to fund accelerated cleanup assuming a flat, long-term budget. Thus, if savings are not realized, progress toward cleanup could be slower.

The Department, in several cases, did not consistently follow applicable guidance for developing and documenting cost estimates. Additionally, the Department used fixed-price contracts for several projects where there were significant technical uncertainties, leading to change orders and cost growth. Further, lessons learned from earlier fixed-price awards had not been summarized, disseminated, and effectively used, in all cases, to improve the effort.

As a result, at least \$160 million of the anticipated savings for the fixed-price environmental cleanup contracts were unlikely to be achieved. Additional reductions in anticipated savings beyond the \$160 million were evident but could not be readily quantified. The potential shortfall has implications for the Department's overall environmental remediation program.

This report includes a series of recommendations to strengthen the Department's practices relating to fixed-price contracting. In making these recommendations, it should be noted that we do not question the use of fixed-price contracts for cleanup work. We recognize that under the fixed-price contracting method, the contractors share the risk associated with the work. However, the effectiveness of this

contracting approach in terms of realizing cost savings is limited when technical uncertainties remain at the time of contract award which can lead to cost increases.

This audit identified issues that management should consider when preparing its year-end assurance memorandum on internal controls.

(Signed)
Office of Inspector General

USE OF FIXED-PRICE CONTRACTS FOR ENVIRONMENTAL CLEANUP ACTIVITIES

Savings Anticipated and Realization of Those Savings

A key objective of the Environmental Management Privatization Program was to reduce the costs of cleanup through the use of fixed-price contracts. In implementing this program, the Department developed cost comparisons that showed it would save about \$1.7 billion on the 11 contracts reviewed. However, we determined that those savings would not be fully realized.

Several of the savings projections were based upon unsupported estimates or invalid cost comparisons. Cost increases also diminished the prospect of realizing certain projected savings that were anticipated by Departmental management. The table below summarizes the problems identified by contract award.

Contract Concerns Summary

<u>Eleven Contract Awards</u>	<u>Unsupported Savings</u>	<u>Invalid Comparisons</u>	<u>Cost Increases</u>
Advanced Mixed Waste Treatment Project			√
Oak Ridge Transuranic Waste Treatment Project		√	
Spent Nuclear Fuel Dry Storage Project	√		
Remote Handled Transuranic Waste Shipping Containers (2 contracts)		√	√
ETTP 3 Building Decontamination and Decommissioning Project		√	√
K-1420 Decontamination and Decommissioning Project			√
Contact Handled Transuranic Waste Shipping Containers (2 contracts)	√		
Transuranic Waste Carrier Services (2 contracts)			

A more detailed discussion of the unsupported savings, invalid comparisons, and cost increases identified during the course of the audit follow. Additional examples are detailed in Appendix 2 of this report.

Unsupported Savings

In May 2000, the Idaho Falls Operations Office awarded a \$217 million contract for the Spent Nuclear Fuel Dry Storage project. The scope of the project included design, licensing, permitting, construction, and operation of facilities to receive, package, and store spent nuclear fuel. The Department anticipated saving \$75 million on this project by awarding a fixed-price contract but did not have adequate support for these estimated savings.

To derive the savings estimate for this project, management took a detailed cost estimate prepared by the management and operating contractor at the Idaho National Engineering and Environmental Laboratory and added an additional cost factor of 40 percent. The revised total estimate (\$292 million) was then compared to the contract award price (\$217 million) to estimate savings for the project. Management indicated that it added the 40 percent factor based, in part, on data contained in a General Accounting Office report, which indicated that projects performed by management and operating contractors typically exceeded original estimates by 30 to 50 percent. Because the \$75 million in estimated savings was based on the assumption that the management contractor would significantly exceed its own estimate, there was no detailed support for the estimated savings. The Department made this assumption despite the fact that the detailed cost estimate prepared by the management and operating contractor (\$209 million) was roughly equivalent to an independent Army Corps of Engineers' estimate of \$208 million and to the fixed-price contract award of \$217 million.

Invalid Cost Comparisons

For four of the contracts reviewed, the anticipated savings were overstated due to invalid cost comparisons. To illustrate, our analysis shows that the savings estimate for the Transuranic Waste Treatment Project was overstated by at least \$30 million. The Department made its calculation estimate using costs included in a 1995 study, less the actual contract award price. However, we found that the 1998 contract and the 1995 study covered different scopes of work. The 1995 study included management contractor support costs (\$30 million), transportation and disposal costs, and certain design, characterization, and demonstration work that was performed during the intervening period between the study and contract award.¹ The fixed-price contract award did not cover any of these activities. Thus, the 1995 study was not an appropriate baseline for evaluating project costs. As a consequence, the estimated savings for this project were overstated.

Cost Increases

We identified, in addition, actual and potential cost increases with five of the eleven contracts reviewed. For example, increases of \$52 million

¹ Except for \$30 million in management and operating contractor support costs, we were not able to readily determine the cost of this additional work scope.

were likely on the \$263 million East Tennessee Technology Park (ETTP) 3 Building Decontamination and Decommissioning contract. Actual cost growth associated with scope changes after contract award and repair of storm damage, totaled about \$10 million as of June 2001. Also, Departmental policy changes preventing the contractor from selling nickel and other metals recovered from its operations on the open market could cost the Department an additional \$42 million.

Further, cost increases were possible on this contract because the contractor had submitted two certified claims against the Department totaling approximately \$30 million for fire protection improvements and material quantity adjustments. Both of these claims asserted that additional work was needed that was not called for in the original contract.

In another example of cost increases related to technical uncertainties, the Carlsbad Area Office awarded two contracts for the fabrication of remote handled transuranic waste shipping containers in August 2000, totaling about \$7.7 million. The Department anticipated savings of \$5.5 million on these contracts. However, at the time of the contract award, there were technical uncertainties associated with the cask design and how Nuclear Regulatory Commission certification would be achieved. Management indicated, in June 2001, that recent changes to the cask will increase costs by about \$1 million.

Management in responding to an earlier draft of this report indicated that certain cost increases would have occurred regardless of whether the work was performed under a fixed-price contract or by a management and operating contractor. We agree. However, since the Department's overall strategy depends on using funds saved on these projects to fund other cleanup projects with legally binding milestones, we believe anticipated savings should be realistic and be adjusted to account for cost increases that will result from uncertainties regardless of the contracting tool.

**Factors Hindering
Attainment of Goals**

We found that EM had not consistently followed applicable guidance for supporting and preparing comparable cost estimates nor fully considered the risk of technical uncertainties. Additionally, it had not developed a mechanism to assess the effectiveness of its fixed-price contracting efforts or comprehensively applied lessons learned from earlier fixed-price awards.

The Department did not always prepare comparable cost estimates as stipulated in the *Environmental Management Privatization Cost Estimating Guide*. Specifically, field offices did not ensure that cost comparisons were fully documented and work scopes were similar. This was contrary to the guide and Departmental direction on cost estimation, which state that estimates should be traceable, well documented, and detailed. Further, both fixed-price and management contractor estimates must be updated and refined to reflect current project plans. Project cost estimates must incorporate the contract price and support costs not included in the contract.

In addition, management did not fully and formally consider significant uncertainties in calculating cost savings. For example, under the ETTP 3 Building Decontamination and Decommissioning contract, the scope of work had never before been attempted, and , the buildings to be cleared had not been fully characterized. These uncertainties increased the risk of cost increases as work progressed. Similarly, at the time of the contract award for the Advanced Mixed Waste Treatment Project, there was significant uncertainty about the contractor's planned use of an incinerator. After contract award, the Department decided, due to concerns over public acceptance, that an incinerator would not be used, which could lead to increased costs to the Department.

Also, the Department had not systematically assessed its fixed-price contracting experience or comprehensively disseminated results of lessons learned. Specifically, it had not:

- Defined or implemented guidance for periodically accumulating and reviewing cost savings information and for assessing the effectiveness of its fixed-price contracting applications. A September 1997 report issued by the Contract Reform and Privatization Project Office, the *Contract Reform Self Assessment Report*, advocated periodic Department reviews to assess the effectiveness of its fixed-price contracting applications. However, no action has subsequently been taken by the Contract Reform and Privatization Office to trigger such an assessment.
- Summarized and disseminated results of lessons learned regarding conditions to resolve prior to entering into fixed-price contracts. In commenting on an earlier draft of this report, management pointed out that it had taken some steps to disseminate lessons learned. Specifically, management indicated that it had established a website

providing access to a “Lessons Learned database” and conducted a workshop. While the Department developed and shared some lessons learned, more could be done. In August 2000, the former Contract Reform and Privatization Project Office conducted a Workshop on Environmental Management Privatization Projects. The workshop and related follow-up activities were aimed at producing a number of outputs including a summary of lessons learned and course corrections needed. Our follow-up on this matter in June 2001 disclosed that results from the workshop had yet to be issued.

Increased Risk and Decision Making Impacts

The Department is implementing an aggressive plan to accelerate the cleanup of its contaminated sites assuming a flat, long-term budget. Accordingly, realizing planned cost savings from the fixed-price contracting strategy is important to accomplishing the overall environmental cleanup schedule. Invalid estimates and subsequent cost increases for individual activities at various sites will likely result in less than anticipated funding to accelerate cleanup at other sites and activities. Thus, if savings are not realized, progress toward cleanup could be slower, which may increase health and environmental risks and the overall cost of the cleanup. In addition, inaccurate savings estimates could result in improper contract tool selection and project funding.

As part of this review, we identified at least \$160 million² of the \$1.7 billion in anticipated savings that are unlikely to be achieved. The true reduction in savings, while yet to be determined, is likely to be more than we were able to specifically identify. This was because, for many of the problems cited, we were not able to quantify the associated reduction in savings. Furthermore, all of the projects were still in process at the time of our review.

² Quantifiable savings unlikely to be realized are comprised of:

\$75 million in unsupported savings for the Spent Nuclear Fuel Dry Storage Project

\$ 2 million in unsupported savings on the contact handled transuranic waste shipping container contracts

\$ 1 million increased cost on the remote handled transuranic waste shipping container contracts

\$30 million from invalid cost comparison for the Transuranic Waste Treatment Project

\$52 million in cost increases for the ETTP 3 Building Decontamination and Decommissioning contract

\$160 million

RECOMMENDATIONS

The Assistant Secretary for Environmental Management should initiate action to:

1. Assure consistency in the development of cost estimates for significant Environmental Management fixed-price contracts as stipulated in the *Environmental Management Privatization Cost Estimating Guide* and DOE Guidance 430.1-1, *Cost Estimate Guide*.
2. Formally consider the risks and uncertainties in the contracting tool selection process.

The Assistant Secretary for Environmental Management, in concert with the Director of the Contract Reform and Privatization Office, should initiate action to:

3. Accumulate cost savings information and assess the effectiveness of significant fixed-price contracts, considering both contracts awarded by Environmental Management and those awarded by its management contractors.
4. Document and disseminate lessons learned from the August 2000 Workshop on Environmental Management Privatization Projects.

MANAGEMENT COMMENTS

While management disagreed with some of the conclusions in this report, they generally concurred with the finding and agreed to take corrective actions. They pointed out that the Office of Inspector General (OIG) only questioned \$160 million of the \$1.7 billion in estimated savings. Additionally, they made the following specific comments.

In regard to the Spent Nuclear Fuel Dry Storage Project, management believed that increasing the original management and operating contractor cost estimate by 40 percent was both appropriate and well justified. Management stated that this factor was applied because the original estimate (1) did not provide adequate contingency, (2) did not include any allowance for fee or cost of capital, (3) contained substantial omissions and understatements, and (4) was based on an overly optimistic schedule. As such, they did not agree that the associated \$75 million in estimated savings was unsupported.

With respect to the ETTP 3 Building Decontamination and Decommissioning Project, management agreed that there was a degree of uncertainty in entering into this particular contract, especially since it

was a first-of-its-kind project in the Department. However, they maintained that complex environmental cleanup projects such as this could be successfully accomplished using a fixed-price contracting strategy. Management stated that prior to award of this contract, they had a significant amount of project-related data, several cost estimates from a variety of sources, and a contractor with experience in the area.

AUDITOR COMMENTS

Management's comments and proposed actions are generally responsive to the issues raised in the report. However, we disagree with some of the conclusions in those comments. Specifically, while we were only able to quantify \$160 million in reduced savings, the report and Appendix 2 provide several examples of problems where estimated cost savings are likely to be less than anticipated, but we were not able to specifically quantify that reduction. Savings associated with 9 of the 11 contracts reviewed were not likely to be fully realized.

In regard to the Spent Nuclear Fuel Dry Storage Project, we determined that the escalation of the management and operating contractor cost estimate by 40 percent was based simply on an estimated cost overrun and, as such, is not viable support for cost savings. Further, the \$209 million management and operating contractor cost estimate included contingency, at a rate of 18.5 percent of capital and operating costs. It also contained an adjustment of \$45 million to make the scope and schedule of the project comparable to the request for proposals for the fixed-price contract. While we agree that the management and operating contractor cost estimate did not include any allowance for fee or cost of capital, the fixed-price contract price it was compared to (\$217 million) did not include estimates for economic price adjustments. These price adjustments will likely be more substantial than any adjustments for fee or cost of capital. In addition, as stated in the report, the \$209 million estimate was comparable to two other independent estimates.

Finally, the uncertainties in entering into first-of-its-kind projects, such as the ETPP 3 Building Decontamination and Decommissioning Project, need to be fully considered when choosing a contracting strategy and calculating any anticipated savings. Despite management's statement regarding good planning and contractor experience on this contract, uncertainties associated with the work will most likely lead to cost increases that should be considered by management in budgeting for environmental clean-up activities.

OTHER MATTERS

We reviewed 30 subcontracts, valued at \$178 million, awarded by the Department's management contractors for environmental cleanup work. We could not determine whether cost savings would be realized. In most instances, cost savings had not been identified since the goods or services either had already been provided under a subcontract or were new requirements with no prior basis for comparison.

We were, however, able to draw conclusions on the propriety of management contractors using fixed-price subcontracts considering such factors as work scope definition, the nature of the work requirement being satisfied, and the technical uncertainties. Based on our analysis, we concluded that the use of fixed-price contracts for these awards was in most cases appropriate. Scopes of work were clearly defined, contract periods were relatively short in duration, and technical uncertainties were minimal. As a result, successful completion of the contracts appeared likely.

We also concluded that the Department, working through its management contractors, could do more to maximize the benefits of fixed-price contracting by expanding outsourcing opportunities. Specifically, several management contractors still did not have viable make-or-buy plans in place despite a 1997 Departmental requirement that they develop such plans. For example, since approval of the make-or-buy program at Savannah River in 1999, the Westinghouse Savannah River Company had yet to solicit industry price data to determine if work should be done in-house or by subcontractors.

In February 2000, the OIG issued an audit report entitled *The Department's Management and Operating Contractor Make-or-Buy Program* (DOE/IG-0460). The report estimated that the Department could save about \$5 million if it made a detailed cost-benefit analysis of functions identified by three management contractors for potential outsourcing. Additional savings were also considered likely had the Department reviewed functions, valued at \$1.3 billion, that were excluded from the make-or-buy process.

Appendix 2

OBSERVATIONS ON ENVIRONMENTAL MANAGEMENT AWARDED FIXED-PRICE CONTRACTS

OTHER CONTRACTS WITH UNSUPPORTED SAVINGS

- The Carlsbad Area Office awarded two contracts for the fabrication of contact handled transuranic waste shipping containers in October 1999 for \$5.2 million. Anticipated total savings for both contracts of \$2 million was based upon a comparison to a management contractor estimate. Supporting data for the management contractor estimate was not available, so an analysis of the comparability of the estimates was not possible.

OTHER CONTRACTS WITH INVALID COST COMPARISONS

- The 2 remote handled transuranic waste shipping containers contracts for \$7.7 million had anticipated savings of \$5.5 million. In addition to the likely cost increases discussed in the body of this report, we noted differences in scopes of work, which made the estimate and the contract award comparison invalid.
- The \$263 million ETTP 3 Building Decontamination and Decommissioning contract had anticipated savings of at least \$450 million. In addition to the likely cost increases discussed in the body of this report, we also noted that there were differences in work scopes and processes between the estimate and contract award that made the two cost estimates not comparable.

OTHER CONTRACTS WITH POTENTIAL COST INCREASES

- In November 1997, the Oak Ridge Operations Office awarded a \$10 million fixed-price contract for the K-1420 Decontamination and Decommissioning Project. Additional work scope was added and the contract award increased to \$13 million. In December 2000, the contractor suspended cleanup work on this project. An agreement in principle has been reached with the contractor that will close the existing contract after approximately 90 percent completion of work and payment of \$11.8 million. The remaining 10 percent of the work will be completed under a new contract. Management believes that the project will be completed at a cost close to the \$13 million. However, there may be additional costs associated with the contract closure, the new contract, and with the delay in project completion.
- Cost increases may also occur on the Advanced Mixed Waste Treatment Project. As a result of the Department's decision not to use an incinerator as part of this project, an alternative process will be necessary. The Department is evaluating technological and regulatory alternatives for the waste previously planned for incineration. Cost impacts resulting from implementation of any alternatives are yet to be determined, and could potentially increase or decrease the contract price. A technical review panel was appointed and has made recommendations for alternatives. Cost and schedule impacts will be assessed after an alternative has been selected.

Appendix 3

SCOPE

The audit was performed from July 2000 to January 2001 at Department Headquarters in Washington, DC and Germantown, MD; Carlsbad Field Office in Carlsbad, NM; Idaho Falls Operations Office in Idaho Falls, ID; Oak Ridge Operations Office in Oak Ridge, TN; and Savannah River Operations Office in Aiken, SC. We reviewed 11 fixed-price contracts having an original value of about \$1.6 billion awarded by the Department, and 30 fixed-price subcontracts valued at about \$178 million awarded by management contractors.

METHODOLOGY

To accomplish the audit objective we:

- Reviewed pertinent reports issued by the OIG;
- Reviewed Departmental and external assessments of privatization contracts and related issues;
- Reviewed the Office of Environmental Management Privatization Program Management Plan, Environmental Management Program/Project Manager's Privatization Guide, and Environmental Management Privatization Cost Estimating Guide;
- Reviewed applicable laws and regulations including the Department of Energy Acquisition Regulations, Federal Acquisition Regulation, Office of Management and Budget Circulars, Departmental Directives, and Good Practice Guides related to privatization issues;
- Reviewed Defense Environmental Management Privatization Annual Reports submitted to Congress for Fiscal Years 1997 and 1999 and calendar year 1999;
- Reviewed pertinent contract files for sample fixed-price contracts and subcontracts;
- Reviewed incentives provided for in Performance Evaluation Management Plans;
- Reviewed performance measures related to privatization and the use of fixed-price contracts developed in response to the requirements of the Government Performance and Results Act;

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- Obtained information from the Department’s management and operating, and management and integrating contractors concerning their subcontracting strategy and make-or-buy programs;
 - Held discussions with personnel from the Headquarters Office of Environmental Management and the Contract Reform and Privatization Office; and
 - Held discussions with project managers and other field-level representatives from the Carlsbad Field Office, the Idaho Falls, Oak Ridge, and Savannah River Operations Offices and their supporting contractors.

The audit was performed in accordance with generally accepted Government auditing standards for performance audits, and included tests of internal controls and compliance with laws and regulations to the extent necessary to satisfy the audit objective. Because our review was limited, it would not necessarily have disclosed all internal control deficiencies that may have existed at the time of our audit. We did not conduct a reliability assessment of computer-processed data because such data was not relied upon during the audit.

PRIOR AUDIT REPORTS

- *The Decontamination and Decommissioning Contract at the East Tennessee Technology Park*, (DOE/IG-0481, September 12, 2000). In August 1997, the Department entered into a fixed-price contract with BNFL, Inc. to decontaminate and decommission (D&D) three uranium enrichment buildings at the East Tennessee Technology Park (ETTP) on the Oak Ridge Reservation. BNFL was not on track to complete the D&D of the three buildings at the ETTP within the current contract price or on schedule. This condition occurred primarily because BNFL's management team was ineffective. In addition, the Oak Ridge Operations Office did not provide sufficient oversight of BNFL's project costs.
- *The Department's Management and Operating Contractor Make-or-Buy Program*, (DOE/IG-0460, February 17, 2000). Only one of four contractors reviewed had included all operating functions in its make-or-buy planning efforts. The other three contractors had either not included all functions in their make-or-buy plans or had not scheduled cost-benefit analyses for many outsourcing candidates. Program offices had not provided management and operating contractors with guidance to assist in the identification process, and procurement officials did not monitor contractor implementation of the program adequately. As a result, cost saving opportunities were missed.
- *Nuclear Waste: DOE's Advanced Mixed Waste Treatment Project – Uncertainties May Affect Performance, Schedule, and Price*, (GAO/RCED-00-106, April 29, 2000). Since award of this fixed-price contract in 1997, changes in the technical approach have simplified the treatment of 75 percent of the waste and reduced the contract price. For the remaining waste that was to be incinerated, recent events have required a reexamination of the treatment approach. As of April 2000, the project was behind schedule attributable to BNFL's overly optimistic assumption for state and Environmental Protection Agency approval of construction permits. GAO concluded that project uncertainties increased the likelihood of increases in the contract price.
- *Department of Energy: Alternative Financing and Contracting Strategies for Cleanup Projects*, (GAO/RCED-99-169, May 29, 1999). The audit was conducted to determine what conditions need to be present to successfully use fixed-price contracting for Environmental Management's privatized cleanup activities and what alternative financing approaches could be used. The GAO found that fixed-price contracts could successfully be used for environmental cleanup when: projects are well defined, uncertainties can be allocated between the parties, and sufficient price information and/or multiple competing bidders are available. The GAO identified government guarantees of debt, performance payments, and progress payments as other financing approaches that attempt to strike a balance between performance risk and financing costs.

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