DOE/IG-0496

# AUDIT REPORT

## SALE OF ENRICHED URANIUM AT THE FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

FEBRUARY 2001

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

February 27, 2001

MEMORANDUM FOR THE SECRETARY

FROM: Gregory H. Friedman (Signed)
Inspector General

SUBJECT: INFORMATION: Audit Report on "Sale of Enriched Uranium at the Fernald Environmental Management Project"

## BACKGROUND

In October 1997, the prime contractor at the Fernald Environmental Management Project (Fernald), Fluor Fernald, Inc. (Fluor), accepted competitive bids for the sale of 978 metric tons of enriched uranium located at Fernald. For this sale, Fluor was required to repackage, weigh, sample, and deliver the material to the winning bidder on the Department of Energy's (Department) behalf. The Department authorized Fluor to offset costs that were directly related to the sale and return the net proceeds to the U.S. Treasury (Treasury). Fluor estimated that the sale would realize net proceeds of $5 million to $7 million for return to the Treasury. This was based on projected sales revenue of $10.5 million.

The objective of this audit was to determine whether the Department returned proceeds from the sale of enriched uranium to the Treasury.

## RESULTS OF AUDIT

Although Fluor estimated that $5 million to $7 million would be realized from the sale of the enriched uranium, only $76,000 in proceeds was returned to the Treasury. The audit disclosed that Fluor offset some of the sale proceeds with costs that were not directly related to the sale. In other instances, we identified costs incurred by Fluor that could have been avoided. This occurred because (1) Fluor did not comply with Department policy for offsetting proceeds from the asset sales, and (2) the Ohio Field Office (Field Office) did not provide adequate oversight and appropriate contractor performance incentives for the project. In our judgment, had this process been effectively managed, the Department could have returned an additional $3.6 million to the Treasury.

In the report, we also questioned award fee payments by the Field Office to Fluor of $675,430. Since Fluor spent four times more than originally estimated, this fee appeared excessive.

The report included recommendations to address the concerns raised regarding this and future asset sales.

## MANAGEMENT REACTION

Management concurred with the recommendations and agreed to take corrective actions. The Field Office has completed an analysis of the questioned costs and is in the process of deobligating $194,275 for return to the Treasury. However, the Field Office concluded that about $3.4 million of the questioned costs were allowable based on criteria in the Federal Acquisition Regulations (FAR), Cost Accounting Standards, and Department policy regarding asset sales. In addition, management believed that the award fees paid to the contractor were appropriate because Fluor met the shipment schedule for the sales project and because the sale was in the best interest of the Department.

We disagree with management's conclusion regarding the $3.4 million in offset costs. The question of whether these costs met the allowability and allocability tests of the Federal Acquisition Regulation or whether the costs were allowable under the terms of Fluor's management contract, both of which form the primary basis of management's position, are not relevant to this matter. The main point in our report was that there was not a clear audit trail showing that the costs were necessary or that they were directly related to the sale. Unless such tests have been successfully met, it is, in our view, inappropriate to offset the costs against proceeds from the sale.

With regard to the award fee, we recognize that the Department did not include project cost effectiveness as a formal contractor performance measure. However, as noted in the report, Fluor's actual project costs were four times greater than originally estimated. By most reasonable standards, this would be viewed as unacceptable performance which should have been reflected in the award fee.

While we are concerned with the instant case regarding uranium sales at Fernald, the more pressing issue is how the Department will handle such sales prospectively. We were informed by responsible officials that similar asset sales would be occurring in the near future as the Department eliminates unneeded asset inventories. We believe that the potential magnitude of such sales requires that the Department's procedures be strictly followed to ensure that the potential benefits of selling excess inventories are fully realized.

Attachment

cc: Acting Assistant Secretary for Environmental Management

# SALE OF ENRICHED URANIUM AT THE FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

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# OVERVIEW

## INTRODUCTION AND OBJECTIVE

When the production of feed materials[1] ceased at the Fernald Environmental Management Project (Fernald) in 1989, and the mission changed from production to environmental restoration, approximately 13,670 metric tons of nuclear materials had accumulated at the site. The Department of Energy (Department) considered several options to dispose of the material, including transferring it to other Departmental facilities for programmatic use, selling material with market value to the private sector, and disposing of some of the material as waste.

In Fiscal Year (FY) 1997, the Department's prime contractor at Fernald, Fluor Fernald, Inc. (Fluor), obtained the necessary reviews and approvals required for the sale of a portion of the nuclear material. The competitive bidding process carried out by Fluor concluded in October 1997 with the sale of a total of 978 metric tons of enriched uranium. Fluor was required to repackage, weigh, sample, and deliver the material. Fluor was authorized to offset costs that were directly related to these activities and return the net proceeds to the U.S. Treasury (Treasury). Based on the projected sales revenue of $10.5 million, Fluor estimated that it would realize net proceeds of $5 million to $7 million for return to the Treasury.

The objective of this audit was to determine whether the Department returned proceeds from the sale of enriched uranium to the Treasury.

## CONCLUSIONS AND OBSERVATIONS

The Department did return about $76,000 in proceeds from the sale of enriched uranium to the Treasury. However, some of the proceeds were offset with costs that were not directly related to the sale or were avoidable. This occurred because (1) Fluor did not comply with Department policy for offsetting proceeds from the asset sales, and (2) the Ohio Field Office (Field Office) did not provide adequate oversight and appropriate performance incentives for the project. As a result, at least $3.6 million in proceeds was not returned to the Treasury. Also, the Field Office should not have paid Fluor $675,430 in award fees, since the project was not completed within budget.

[1] Feed materials were uranium products that were supplied to other defense-related facilities within the Department of Energy complex.

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

(Signed)
Office of Inspector General

**Offsets to Proceeds Were Not Appropriate**

Although the Department did return $76,051 in proceeds from the sale of uranium to the Treasury, Fluor offset some of the proceeds with costs that were not directly related to the sale or were avoidable. We reviewed the costs incurred for the project and identified about $3.6 million in costs that should not have been offset against the proceeds. These costs are summarized below.

- Fluor charged $1,375,493 to the uranium sales project that was not directly related to the sale. For example, a portion of labor costs associated with warehousing, surveillance, and packaging of the nuclear material to be stored on-site was allocated to the sales project. These labor costs could not be traced to timesheets or other auditable records to verify a direct relationship to the repackaging, weighing, sampling, and delivery of the sales product.

- Fluor charged $61,000 to the uranium sales project for engineering services performed for another project at Fernald. The costs incurred for the other project were transferred to the uranium sales account after the other project's account was closed.

- The Department reimbursed Fluor $1,272,095 for analytical services performed by a Departmental laboratory that could have been paid by the customer. During contract negotiations, the customer proposed to pay a fixed cost for packaging and analytical services to be performed by Fluor. Subsequently, the customer requested to have an independent laboratory perform analytical services rather than have Fluor perform them. Fluor agreed to the independent laboratory, but was reluctant to accept the customer's original fixed price for the services without knowing how much the independent laboratory services would cost. The customer agreed to reconsider the original fixed amount to be paid when the independent laboratory's cost information became available. Even though the customer was willing to consider additional laboratory costs, Fluor did not request additional payment.

- Fluor paid $552,939 in excessive architect and engineering (A-E) costs for the T-Hopper Turner[2]. A-E costs were more than twice the original estimate and about 80 percent of construction cost. According to one of its representatives, the engineering firm's experience is that A-E costs are generally around 20 percent of the construction costs. Using that guideline, we determined that the A-E cost should have been about $168,800, as compared to the actual cost of $721,739.

- Fluor incurred at least $168,984 in unproductive labor costs. The T-Hopper Turner was shut down for 5 weeks beginning in June 1998, after being damaged due to operator error. Operators continued to charge time to the uranium sales project, including overtime, while the T-Hopper Turner was inoperable. In fact, the average hours charged weekly to the project increased slightly during this period. In another instance, packaging was halted for one week because the building needed to be relamped. Operators could not package the product until maintenance workers were available to replace the lights. These unproductive periods were charged to the sales project.

- The Field Office overpaid the Oak Ridge Operations Office $194,275 for analytical services provided by Lockheed Martin Energy Systems in Oak Ridge, Tennessee. In FY 1998, the Field Office transferred about $1.4 million to the Oak Ridge Operations Office for analytical services provided by Lockheed Martin Energy Systems. The actual cost was around $1.2 million. In May 2000, Fluor asked the Field Office to request a refund for $194,275. However, as of November 2000, this request had not been made.

[2] The T-Hopper Turner was a device designed to remove enriched uranium from the T-Hopper storage containers. When full, the T-Hoppers weighed around 12,000 pounds, and needed to be turned over to allow the contents to flow out. Thus, Fluor had to design and construct the T-Hopper Turner to transfer the containers into drums.

## Proceeds Must Be Returned to the Treasury

Federal Acquisition Regulation (FAR) Part 45.610-3, *Proceeds of Sales*, stipulates that proceeds from the sale of Government-owned materials be returned to the Treasury. Specifically, the FAR states "Proceeds of any sale are to be credited to the Treasury of the United States as miscellaneous receipts, except where the contract or any subcontract thereunder authorizes the proceeds to be credited to the price or cost of the work."

In order to achieve the President's goal of a balanced budget, the Secretary of Energy established a goal in 1996 to return $75 million to the Treasury through the sale of assets that no longer contribute to various missions. On May 31, 1996, the Department's Chief Financial Officer issued a memorandum directing Departmental elements to deposit net proceeds from asset sales in the General Fund of the Treasury as miscellaneous receipts. The memorandum stated that in order for a cost to be offset against proceeds, it must be clear in an auditable trail that it is directly related to the sale.

## Fluor Did Not Comply With Policy and Field Office Did Not Provide Oversight or Performance Incentives

The Department only returned $76,051 to the Treasury because (1) Fluor did not comply with Department policy for offsetting proceeds from the asset sales, and (2) the Field Office did not provide adequate oversight and appropriate performance incentives for the project.

Fluor did not comply with the Department's policy for offsetting proceeds from the sale of assets. Contrary to the Department's May 1996 guidance, Fluor offset proceeds from the sale of enriched uranium with costs that were not directly related to the sale or were avoidable. For instance, Fluor allocated costs to the sales project based on managers' estimates of the resources used without evidence that the costs were directly related to the sales project. Further, Fluor was not diligent in ensuring that avoidable costs were not incurred and charged to the project.

Also, the Field Office did not provide adequate oversight or appropriate performance incentives to ensure that Fluor avoided unnecessary expenses for the project. Fluor estimated that it would cost $2.4 million to repackage, weigh, sample and deliver the product, and anticipated that it would realize $5 million to $7 million in net proceeds from the sale. However, the Field Office did not evaluate Fluor's cost estimate or use the estimate to monitor costs. The Field Office received monthly variance reports from Fluor which indicated that the project was exceeding the established cost estimates. Yet, the Field Office was not aware that the net proceeds from the sale would be reduced to about $76,000 until months after the project was completed. The final shipment was made to the customer in February 1999, but the Field Office did not ask Fluor to provide detailed information on the sales project expenses until December 1999.

Further, the Field Office did not develop performance incentives giving adequate consideration to cost. The Department developed performance measures related to the sales project in accordance with the Governmental Performance and Results Act of 1993. However, the performance measures were based primarily on meeting specific deadlines without adequate consideration of costs. For example, Fluor received a performance award for shipping enriched uranium in accordance with the sales agreement schedule, but was not penalized for overrunning the project.

## The Department Could Have Returned More Proceeds to the Treasury

The Department returned $3.6 million less than it should have to the Treasury. More proceeds could have been returned had the Field Office monitored project costs and developed incentives for Fluor to perform the uranium sales project in a cost-effective manner. Further, by improving oversight, the Field Office could ensure that a sale of enriched uranium currently in progress does not incur the same problems.

Also, the Field Office should not have paid Fluor $675,430 in award fees, since the project was not completed within budget. Additionally, Fluor was awarded $144,341 for waste management activities, which included an excellent rating on the T-Hopper project. Award fees were paid by the Field Office, and not deducted from the proceeds.

## RECOMMENDATIONS

We recommend that the Manager, Ohio Field Office:

1. Require Fluor to implement the Department's policy of charging only costs directly related to the sales project;

2. Review the avoidable project costs discussed in this report, recover overpayments to Fluor and the Oak Ridge Operations Office considered to be unallowable, and return recovered amounts to the U.S. Treasury in accordance with the Federal Acquisition Regulation and Department policy;

3. Ensure that Field Office personnel monitor Fluor projects more closely and initiate timely corrective actions to ensure project costs are directly related and necessary;

4. Ensure that contractor performance measures provide incentives for cost containment as well as timeliness; and,

5. Ensure that proceeds from future sales of assets are handled in accordance with Departmental guidance.

## MANAGEMENT REACTION

Management concurred with the recommendations and agreed to initiate corrective actions. Specifically, management will require Fluor to comply with Departmental policy concerning the sale of assets, and will ensure that project costs are directly related and necessary by requiring Fluor to provide an action plan which demonstrates compliance with policy. Further, management's new contract with Fluor, awarded in December 2000, has a fee structure that provides incentives for completing the job ahead of schedule at or below target costs.

Regarding the recommendation to review the avoidable project costs discussed in the report and recover overpayments, management has completed its analysis, and is in the process of deobligating $194,275 for return to the U.S. Treasury. We provided documentary evidence to management that, in our opinion, supports the conclusion that a clear audit trail did not exist to show the questioned costs were directly related to the sale or were avoidable. Management obtained additional explanations from personnel involved in the sale and determined that $3,430,511 of the questioned costs were allowable based on criteria in the Federal Acquisition Regulation (FAR), Cost Accounting Standards, and Department policy regarding the sale of assets. Management cites FAR 31.201-4, "Determining Allocability" which states that a cost is allocable if it benefits the government contract and can be distributed in reasonable proportion to the benefits received.

Management stated that, in retrospect, separate and unique charge numbers should have been established to collect all costs associated with the sale. Nevertheless, management believed the allocated costs were correctly offset against the sale proceeds based on criteria in the FAR and applicable Departmental policy. In addition, management believed that the award fees paid to the contractor were appropriate because Fluor met the shipment schedule for the sales project and because the sale was in the best interest of the Department.

**AUDITOR COMMENTS**

Management's proposed actions were responsive to recommendations 1, 3, 4, and 5. However, we disagree with its action on recommendation 2 that $3,430,511 in questioned costs were allowable as offsets against the sale. We did not question whether the costs met the allowability and allocability tests of the FAR, or whether the costs were allowable under the terms of Fluor's management contract. Instead, we questioned whether a clear audit trail existed showing that the costs were necessary and directly related to the sale, and whether the costs should have been offset against proceeds from the sale for return to the Treasury. In responding to the draft report, management did not provide any additional evidence to change our opinion, which was that, these costs did not meet the Department's criteria and should not have been offset against the proceeds from the sale. Further, we believe the fees should not have been awarded on the sales project since Fluor spent four times more than originally estimated.

## SCOPE

The audit was performed from August 8, 2000, to November 29, 2000, at the Ohio Field Office in Miamisburg, Ohio, and the Fernald Environmental Management Project in Fernald, Ohio. The scope of the audit included costs charged to the uranium sales project between July 1996 and September 1999.

## METHODOLOGY

To accomplish the audit objective, we:

- Examined the terms and conditions established in the sales agreement between Fluor and the customer;
- Reviewed FAR provisions and Departmental guidance regarding the sale of assets;
- Analyzed Fluor's estimate of costs, compared it to actual costs, and examined the reasons for major discrepancies;
- Determined the reasonableness of costs charged to the sales project for the major cost categories; and,
- Held discussions with Department and contractor personnel regarding the sales project.

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. Accordingly, the assessment included reviews of costs incurred on the sales project from July 1996 through September 1999. 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. The Office of Inspector General has previously conducted reliability assessments on the system from which the cost data was derived and deemed it to be reliable. Therefore, we did not assess the reliability of the data.

We held an exit conference with the Deputy Director, Fernald Environmental Management Project, on February 8, 2001.

## PRIOR AUDIT REPORTS

The Office of Inspector General has issued the following audit reports addressing the sale or disposition of excess property:

Report DOE/IG-0475, *Non-Nuclear Weapons Parts at the Rocky Flats Environmental Technology Site*, dated June 29, 2000. The objective of the audit was to determine if the Rocky Flats Field Office and its contractor, Kaiser-Hill Company, LLC, accounted for and properly disposed of the remaining weapons parts. The audit raised concerns about the adequacy of controls over classified and unclassified weapons parts at the Rocky Flats Field Office.

Report CR-B-99-02, *Management of Unneeded Materials and Chemicals*, dated September 30, 1999. The objective of the audit was to determine if the Department efficiently disposed of its unneeded materials. The audit determined that the Department had not aggressively pursued the disposition or reuse of large quantities of unneeded inventories at many contractor locations.

Report DOE/IG-0450, *The U.S. Department of Energy's Non-Nuclear Materials Inventory at the Kansas City Plant*, dated July 26, 1999. The audit objective was to determine if Department and contractor officials were identifying and disposing of non-nuclear materials inventory for which there was no current or future designated need. The audit concluded that the Department had not made a final decision on whether to retain or dispose of about $275 million of non-nuclear materials for which there was no current or future designated need.

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