DOE/IG-0345

U.S. Department of Energy
Office of Inspector General

March 1994

Report on

Followup Audit of the Cask Development Program

IGIGIGIGIGIGIG
IGIGIGIGIGIGIG
IGIGIGIGIGIGIG
IGIGIGIGIGIGIG

This report can be obtained from the
U.S. Department of Energy
Office of Scientific and Technical Information
P.O. Box 62
Oak Ridge, Tennessee 37831

DOE F 1325.8
(8-89)
EFG (07-90)

United States Government **Department of Energy**

memorandum

DATE: March 15, 1994

REPLY TO ATTN OF: IG-1

SUBJECT: INFORMATION Report on "Followup Audit of the Cask Development Program"

TO: The Secretary

BACKGROUND:

The subject report is provided to inform you of our finding and recommendations.

The Nuclear Waste Policy Act of 1982 required the Department, through the Office of Civilian Radioactive Waste Management, to develop a system to start transporting nuclear waste by January 1998. A transportation cask development program was implemented to manage and oversee the building of ten different cask designs with large payload capacities. The Office of Inspector General audited the cask development program in 1987 and cautioned program management to establish minimum criteria that each cask must meet to qualify for further development funding. The purpose of this current audit was to review the development status of the cask designs; compare the original milestone dates to current milestone dates; and review the program funds that have been used to date on the development of these casks.

DISCUSSION:

Our current followup audit found that the cask development program is behind schedule and over cost. This basically occurred because program officials did not recognize the extent of the problems they would encounter or the time it would take to address the issues associated with the innovative cask designs. In addition, program officials stated that budget cuts had adversely affected cost and schedule. As a result, the Office of Civilian Radioactive Waste will spend an estimated $143 million on the cask development program and receive only two cask designs that were originally estimated to cost $26 million. Moreover, it is not certain, at this time, whether those two cask designs will eventually receive the Nuclear Regulatory Commission certification.

Improvements are needed to establish formal contingency plans to counter further delays and to develop current baselines and schedules in sufficient detail to control cask systems development schedules and costs. There is also a need to reevaluate the current status of the casks under development for the purpose of

justifying further development. We believe that by implementing our recommendations management could better control the program to reduce slippage of the milestone dates and the continued growth in the total cost of the program.

Management generally agreed with our current recommendations to establish formal contingency plans to counter further delays, develop current baselines and schedules in sufficient detail to adequately control cask development schedules and costs, and reevaluate the current status of the casks under development for the purpose of justifying further development. Management has proposed actions to correct the milestone date slippages and to limit continued growth in the total cost of the program.

John C. Layton
Inspector General

Attachment

cc: Deputy Secretary
Under Secretary
Director, Office of Civilian Radioactive
Waste Management

U.S. DEPARTMENT OF ENERGY
OFFICE OF INSPECTOR GENERAL

FOLLOWUP AUDIT OF THE CASK DEVELOPMENT PROGRAM

Report Number: DOE/IG-0345
Date of Issue: March 15, 1994

Capital Regional Audit Office
Washington, D.C. 20585

FOLLOWUP AUDIT OF THE CASK DEVELOPMENT PROGRAM

TABLE OF CONTENTS

		PAGE
	SUMMARY	1
PART I -	APPROACH AND OVERVIEW	2
	Purpose and Objective	2
	Scope and Methodology	2
	Observations and Conclusions	3
PART II -	FINDING AND RECOMMENDATIONS	4
	Followup Audit of the Cask Development Program	4
PART III -	MANAGEMENT AND AUDITOR COMMENTS	12

U.S. DEPARTMENT OF ENERGY
OFFICE OF INSPECTOR GENERAL
OFFICE OF AUDITS

FOLLOWUP AUDIT OF THE CASK DEVELOPMENT PROGRAM

Audit Report Number: DOE/IG-0345

SUMMARY

The Department of Energy is responsible for developing a system for the transportation and storage of spent nuclear fuel generated by utility companies. To carry out this responsibility, the Department of Energy established the Office of Civilian Radioactive Waste Management (Waste Management Office). The Waste Management Office began development of a series of new shipping casks to transport the spent fuel. The purpose of this audit was to review the current development status of the cask designs; compare the original milestone dates to current milestone dates; and review the program funds that have been used to date on the development of these casks.

The Office of Inspector General audited the cask development program in 1987. The audit report (DOE/IG-0244), recommended that program management establish minimum criteria that each cask must meet to qualify for further development funding. Our followup audit found that this recommendation had not been adequately implemented. As a result, the Waste Management Office will spend an estimated $143 million on the cask development program and receive only two cask designs that were originally scheduled to cost $26 million. Moreover, it is not certain, at this time, whether those two cask designs will eventually receive the Nuclear Regulatory Commission certification. Historically, the program has experienced slippage in milestone dates and steady increases in total cost.

Management generally agreed with our current recommendations to establish formal contingency plans to counter further delays, develop current baselines and schedules in sufficient detail to adequately control cask development schedules and costs, and reevaluate the current status of the casks under development for the purpose of justifying further development. Management has proposed actions to correct the milestone date slippages and continued growth in the total cost of the program.

Office of Inspector General

PART I

APPROACH AND OVERVIEW

PURPOSE AND OBJECTIVE

The Nuclear Waste Policy Act of 1982 established a program for the safe disposal of radioactive waste. The program, administered by the Department of Energy (Department), includes construction of deep underground repositories and the transportation of the radioactive waste from nuclear generating plants to repositories for permanent disposal, or to a monitored retrievable storage site for temporary storage. Within the Department, the Office of Civilian Radioactive Waste Management (Waste Management Office) manages the program, including its transportation aspects.

Radioactive waste from nuclear generating plants has been shipped within the United States for more than 30 years, and as many as 200 shipments a year have been made. Once the first repository opens and is fully operational, the number of shipments could increase to as many as 3,000 a year. The Waste Management Office has drawn up detailed plans to meet these increased transportation needs. The plans include development of a new series of shipping casks to carry the spent nuclear fuel rods that make up most of the shipments.

The purpose of our review was to follow-up on an earlier Office of Inspector General report on the cask development program (Report No. DOE/IG-0244, August 19, 1987, "Transportation Planning for Civilian Radioactive Waste"). Specifically, we wanted to review the current development status of these casks; compare the original milestone dates to current schedules; and review the program funds that have been used to date on the development of these casks.

SCOPE AND METHODOLOGY

We performed audit work at the Department's Waste Management Office in Washington, D.C., and the Project Management Office in Idaho Falls, Idaho. To assess the current status of the program, we examined cask development data consisting of program planning documents, program guidance letters, current year work plans, annual program reviews, and other related documents. Further, we reviewed cask development contracts and examined the applicable laws, regulations, criteria and Departmental Orders pertaining to this program. We interviewed key Department and contractor personnel and held discussions with representatives of the Nuclear Regulatory Commission (NRC) to discuss the development and certification of the legal-weight truck, and rail/barge, casks.

The audit was made in accordance with generally accepted Government auditing standards for performance audits, which included tests of internal controls and compliance with laws and regulations to the extent necessary to satisfy the objectives of the audit. Accordingly, we assessed significant internal controls over audit resolution and followup of earlier audit recommendations. The assessment included reviews of established Departmental policies, procedures, and responsibilities for audit compliance and followup. Because our review was limited, it would not necessarily have disclosed all internal control deficiencies that may exist.

The audit covered program activities through January 1993. An exit conference was held on September 24, 1993, with the Associate Director, Office of Storage and Transportation, and his staff.

OBSERVATIONS AND CONCLUSIONS

In response to our 1987 audit report, the Waste Management Office addressed most of the recommendations (resulting in a cost avoidance of $45.3 million for three cask designs that were dropped from the program). However, our recommendation relating to establishing minimum criteria that each cask would have to meet in order to qualify for further development funding, was not adequately implemented. Because this criteria was not developed, significant contract funds were expended on these casks before the contracts on five cask designs were eventually terminated. Under current plans, the Department will spend an estimated $143 million on this program and receive only two cask designs that were originally scheduled to cost $26 million. Moreover, it is not certain, at this time, whether those two cask designs will eventually receive the NRC certification.

This cask program is currently over budget, several years behind schedule, and continues to struggle with engineering and design-related problems that are stalling the further advancement of the cask development.

Management generally concurred with our current recommendations. However, they disagreed with our conclusion that the lack of cost and schedule baselines resulted in inadequate monitoring of the program. Management has proposed actions to correct the slippage of the milestone dates and the continued growth in the total cost of the program. Management comments are discussed in detail in Part III of this report.

Failure to adequately monitor and control costs represent internal control weaknesses that should be considered by management in preparing the yearend assurance memorandum on management controls.

PART II

FINDING AND RECOMMENDATIONS

Followup Audit of the Cask Development Program

FINDING

The Nuclear Waste Policy Act of 1982 required the Department, through the Waste Management Office, to develop a system to transport nuclear waste by January 1998. A transportation cask development program was implemented to manage and oversee the building of ten different cask designs with large payload capacities. The total cost for development of 20 prototypes (two for each cask design) was estimated, in 1986 dollars, to be about $146 million. Current plans call for completion of only 2 of the original 10 cask designs. The total cost of the cask development program through the prototype phase is now estimated at $143 million, including the cost of the terminated cask designs, and the program is approximately four years behind schedule. These cost overruns and schedule delays occurred because the Waste Management Office did not fully anticipate the extent of the problems they would encounter in developing innovative cask designs with high payload capacities, and failed to adequately monitor and control costs. As a result, with only 2 of the 10 cask designs scheduled for completion, over $143 million will have been spent on the cask development program, compared to an originally estimated cost of $26 million for the two cask designs. Moreover, an operational fleet of these shipping casks will not be ready as planned by January 1998.

RECOMMENDATIONS

We recommend that the Associate Director, Office of Storage and Transportation:

1. Establish formal contingency plans in the event that cask designs and development are further delayed;

2. Develop current baselines and schedules in sufficient detail to adequately control cask systems development schedules and costs; and

3. Reevaluate the current status of the casks under development to determine if their continued development is justified.

MANAGEMENT REACTION

Management generally agreed with our recommendations. Part III of this report addresses management and auditor comments.

DETAILS OF FINDING

To meet the transportation requirements of the Nuclear Waste Policy Act for accepting nuclear waste by 1998, the Waste Management Office formulated detailed plans that included the development of up to ten shipping cask designs, at an estimated cost (in 1986 dollars) of about $146 million. The cost included design and engineering, prototype development, testing, and NRC certification.

The shipping cask, which encapsulates and shields the spent fuel during shipment, is essential to the safe transportation of the radioactive waste. The cylinder-shaped casks provide radiation shielding and contain internal "baskets" (or racks) to securely hold the spent fuel rods during shipment.

Ten different cask designs were chosen to provide optimum flexibility in meeting eventual program requirements. The estimated cost of the proposed casks, as of April 3, 1986, through prototype-development and NRC certification is as follows:

Number of Designs	Type of Cask	Cost of Each Cask	Total Cost Including Overhead
3	Legal-Weight Truck Casks	$8,127,713	$ 24,383,139
2	Overweight Truck Casks	12,374,904	24,749,808
3	100-ton maximum rail/barge casks	17,865,173	53,595,519
1	125-ton rail/ barge cask	20,558,514	20,558,514
1	Dual purpose heavy-haul rail cask	22,860,514	22,860,514
10	Cask Designs		$146,147,494*

*Expressed in Fiscal Year 1986 dollars and includes technical support costs. Adding inflation factors for year of expenditure would increase the estimated costs to $170,893,452 as of Fiscal Year 1993.

PRIOR INSPECTOR GENERAL PROGRAM REVIEW

In 1987, the Office of Inspector General reviewed the cask development program. The review examined all ten casks being proposed and questioned the need to develop three of them: the two overweight truck casks and the 125-ton rail/barge cask. These three designs, at a combined estimated cost of $45.3 million, had economic and institutional problems as well as other drawbacks that, in our opinion, called for delay and rejustification before going ahead with their development. We also questioned the cost effectiveness of trying to develop a full complement of high-risk, innovative cask designs, instead of using some existing cask designs as part of the program.

We recommended (1) that the three cask designs questioned, be reviewed for cancellation; (2) that the remaining seven cask designs be reviewed to see if sufficient justification still existed for development of each of them, (taking into consideration recent changes that were taking place in the program); and (3) that as a program control, minimum criteria be established that each cask would have to meet in order to qualify for further development funding.

We were concerned at that time that the remaining seven cask designs, at an estimated development cost of $101 million, could continue to use up program funds without achieving the program objectives. We felt that strict program controls were needed to guard against large cost overruns, significant slippage in program milestones, and the failure to achieve the basic program objectives; namely, increasing the shipping capacities for each cask design and obtaining NRC acceptance of those designs.

CURRENT REVIEW

Beginning in 1992 we performed a followup review of the cask program and examined the status of each of the remaining seven cask designs; compared the original milestone dates to current milestone dates; and reviewed the program funds that have been used to date on the development of these casks. Each of these subjects is discussed below.

Current Status of Cask Development

In 1988, program officials awarded five contracts to private companies to develop the seven cask designs at a total estimated cost of $69.5 million (exclusive of technical support costs). Each of these contracts included design specifications and cost estimates to build the prototype casks and to have them certified by the NRC. Two of seven designs were never started, as contract options were not exercised. In 1990, after a preliminary design review of the other five casks, program

officials cancelled the contract for one cask, reduced funding and later cancelled (in 1992) two others, and fully funded the two remaining cask designs (a legal-weight truck cask and a rail/barge cask). Thus only two of the seven designs will be pursued to completion.

Technical and engineering changes have been encountered in the remaining two casks due to the design for high payload capacities. The fuel assembly basket on the legal-weight truck cask was shortened and other revisions were made to accommodate fuel-assembly hardware and NRC requirements. Also, the rail/barge cask, originally specified to hold up to 52 fuel assemblies, was reduced to a maximum of 37 (a 29 percent reduction in payload capacity) to compensate for these same technical and operational changes.

In August 1992 an Independent Management Review Group was established by the Waste Management Office to provide objective assessments of the cask development program. The Review Group report informed program officials that the emphasis on payload capacity had compromised the functional adequacy and performance of the shipping casks. The report further stated that measures must be taken to provide better balance between capacity and operational margins, and that alternative actions must be evaluated in terms of transportation system plans and objectives. Additionally, the Review Group concluded that because the cask payload capacities were set so high, the innovative designs left little margin for uncertainty or adjustments to radiation shielding and weight considerations.

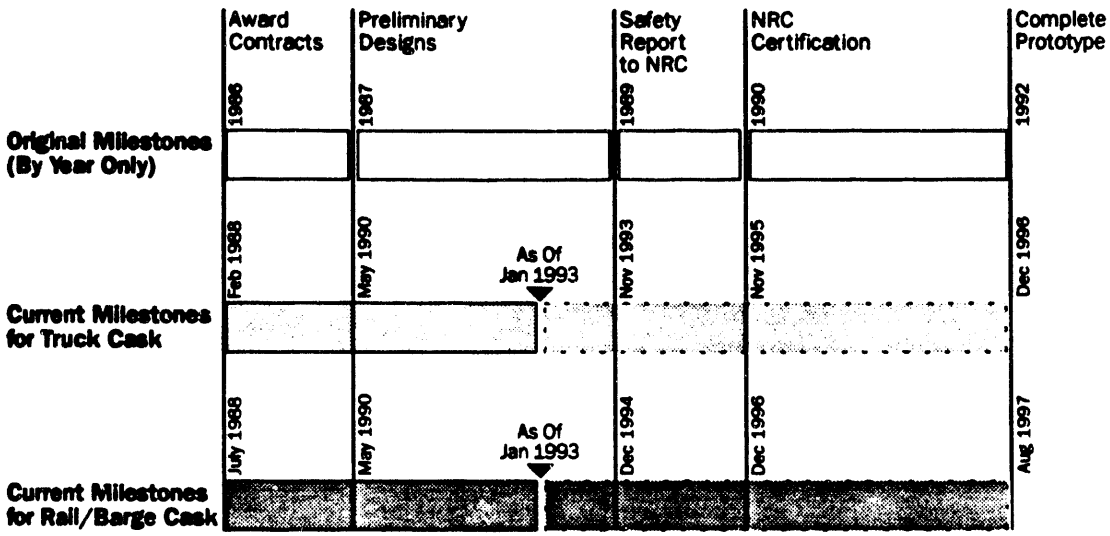
Another problem area raised by the Review Group was an issue called "burnup credit." The current regulatory practice is to assume that fuel transported in shipping casks is unused fuel with high reactivity levels. The Waste Management Office wants to account for the fact that the planned shipping casks will be transporting fuel that has been used in a reactor and therefore has been partially used or "burned-up" and thus has reduced reactivity levels. Because the planned casks will be transporting aged fuel that is less reactive, program managers wanted to design casks with simplified fuel baskets, thus increasing the payload capacity. The Review Group reported that resolution of this issue would be key to cask certification, and further stated that because of the additional scrutiny by the NRC surrounding this issue, the time allowed in the milestone schedule for cask certification was unrealistically short.

Milestone Date Slippages

Due largely to the technical and engineering changes encountered thus far, the cask development program is behind schedule, and several milestones have slipped by 4 to 5 years. The two casks originally scheduled for completion in 1992 were

42 and 48 percent complete as of January 1993. A comparison of original milestone dates to current milestone dates is shown below.

Comparison of Original Milestone Dates to Current Milestone Dates



The August 1992 Independent Management Review Group also assessed the current cask development schedule and indicated little confidence that the casks could be certified and fabricated on a schedule to meet the waste acceptance requirements of January 1998.

Detailed baselines with not-to-exceed funding levels are essential to adequately maintain, monitor and control the cost of any project, but they were not developed until 1990, about 4 years after the work began. Initially, these baselines provided only scheduled milestones, and when supporting costs were added in 1991, only a single figure for total program costs was included in the baseline. Program officials acknowledged the cost and schedule control system was not used to monitor the progression of the cask development. The management and operating contractor for the program has made it a primary objective in 1993 to create an integrated cost and schedule control system to adequately monitor this program.

Program officials pointed out that this cask development program was not designated by the Department as a Major Systems Acquisition until 1990, thus a cost and schedule control system was not required. However, we believe that an important program such as this should have had detailed schedules and cost

estimates and that the program should have been monitored against these estimates from the beginning.

Cost to Date of Cask Development

A review of cask development costs showed that the program is exceeding the initial cost estimates. Cost figures through January 31, 1993, show that $34 million had been spent on the five contracts including the costs for the terminated casks. In addition, $43 million had been spent on the technical support costs for a total to date of $77 million. It is estimated that it will take another $66 million to complete the two cask designs including the technical support costs. Consequently, the two casks, if eventually completed at current estimates, will cost $143 million as shown below.

COSTS TO DEVELOP PROTOTYPES
(As of January 31, 1993)

COST INCURRED			
Cask Contracts			
Cancelled Casks	10,067,312		
Legal Truck Cask	10,764,440		
Rail Barge Cask	13,290,276		
Subtotal		34,122,028	
Technical Support		43,056,524	
Total Costs Incurred			**$ 77,178,552**
ESTIMATED COST TO COMPLETE			
Remaining Two Contracts		29,279,184	
Technical Support		36,704,000	
Total Estimated Additional Cost			**$ 65,983,184**
TOTAL ESTIMATED COST AT COMPLETION			**$143,161,736***

* The total estimated cost does not include the Waste Management Office overhead cost; management and operating contractor cost; or NRC certification cost.

PROGRAM CHANGES

We noted that several changes are taking place, or are being proposed, that may obscure the separate identity and accountability of the cask development program. These include:

- changing the contracts for the cask development from existing prime contracts with independent traceability of funds and milestones, to subcontracts under another prime contract.

- combining the funding and management of the cask development program with another part of a program for a monitored retrievable storage facility.

- changing the name and identity of the original cask development program. For example, the development of these new technology casks has been referred to as Phase I casks since 1985. Now Phase I work will include work on existing technology casks.

The future ability to review the success of this cask development program relies solely on keeping a separate accountability and audit trail. Therefore, we are concerned that the data concerning the performance of the program will be obscured by these changes.

REASONS FOR PROGRAM DELAYS AND COST OVERRUNS

The cask development program is behind schedule and over cost partly because program officials did not fully anticipate the extent of the problems they would encounter and the time it would take to address the issues associated with requiring the casks to have innovative designs with large payload capacities. The lack of detailed schedules and cost estimates to monitor this program have also contributed to the program falling behind schedule and being over cost.

Some program officials believed that the reason for the increased costs and milestone delays was due largely to the budget cuts they have sustained. They pointed out that when contractors are underfunded, it results in additional cost and delays to the program. These officials provided information on the amount of budget cuts and a limited analysis of how the cuts directly affected the program. For example, the rail/barge cask contractor maintained that every $250,000 cut in their budget request, resulted in an additional $82,000 in costs and added one month to the contract completion date. Even if budget cuts and other factors have caused some program delays, however, they would not, in our opinion, have affected cost and milestone delays to the extent of the large overruns that have been experienced on the program.

EFFECT OF PROGRAM DELAYS AND COST OVERRUNS

Our prior report indicated that funds were continuing to be spent without achieving the cask development objectives. This report points out that the program objective of developing a full fleet of large payload shipping casks will not be met. As a result of the engineering and development changes experienced thus far, at most, only 2 of the original 10 cask designs will be completed and certified by the NRC. In addition, over $143 million will have been spent on this cask development program. In this respect, the two cask designs planned for completion were originally estimated to cost a total of $26 million.

PART III

MANAGEMENT AND AUDITOR COMMENTS

In response to our report, management generally agreed with the recommendations. However, they disagreed with our conclusion that the lack of cost and schedule baselines resulted in inadequate monitoring of the program. Management comments to our finding and recommendations are summarized below.

Recommendation 1. Establish formal contingency plans in the event that cask designs and development are further delayed.

Management Comment. Management concurs with this recommendation.

Auditor Comment. Management's intended actions are responsive to the recommendation.

Recommendation 2. Develop current baselines and schedules in sufficient detail to adequately control cask systems development schedules and costs.

Management Comment. Management concurs with the intent of the recommendation but believes that adequate controls for cask systems development schedules and costs are already in place. Management stated that cost and schedule baselines for the Monitored Retrievable Storage Facility which includes cask systems development cannot be developed until the Secretary's current review of the Waste Management Office program is complete. Management also stated that in the interim a working baseline is being established on the basis of current assumptions, and control will be maintained through the use of annual work plans.

Auditor Comment. Management's comments are only partially responsive to our recommendation. Continuous cost and schedule controls are needed throughout the entire program, regardless of external program reviews taking place. Our finding shows the need to better monitor and control costs at the Headquarters level.

Recommendation 3. Reevaluate the current status of the casks under development to determine if their continued development is justified.

Management Comment. Management concurs with this recommendation. Management stated that reevaluation activities conducted since completion of the IG audit in January 1993 should allay the concern that resulted in this recommendation.

Auditor Comment. Management's comments are partially responsive to our recommendation. Although management has reevaluated its cask acquisition strategy, which also included existing technology casks, we believe there is a need to reevaluate the current status of the casks under development to assess their cost effectiveness. The Independent Management Review Group also confirmed the need for reassessment and additional analysis that considers the cost effectiveness of the rail/barge cask.

Additional Management and Auditor Comments on Finding

Management Comment. The discussion of technical and engineering problems, basket modifications and payload concerns is incorrect in that characterization of technical and engineering trade-offs as "problems" implies a lack of understanding of the normal design process. The shortening of the truck cask fuel basket and the reduction in the number of fuel assemblies from 52 to 37 in the rail/barge cask are examples of design modifications that were made in response to an unanticipated change in design requirements.

Auditor Comment. Our use of the word design problem was not intended to imply management's lack of understanding, but merely to point out that there have been unanticipated design changes and they in turn have caused program delays and the expenditures of additional program funds.

Management Comment. Management stated that the cost estimates in the report predate by 3 3/4 years the establishment of the cost and schedule baseline in October 1989 and should not be used for cost comparisons.

Auditor Comment. The initial estimated cost of the cask development program in 1986 was $146 million. This was the estimate that was given to us at the time of our 1986 audit of this program, and this estimate was also confirmed in a letter to the Inspector General from the program office dated November 17, 1986.

Management Comment. Management stated that contract costs and technical support costs are included in incurred costs, while only estimated contract costs are included in the preliminary cost estimates. In addition, our cost comparison included the cost of terminated contracts.

Auditor Comment. Our cost comparisons are consistent in that technical support costs are included in the cost estimates as well as in incurred costs. For reporting requirements there needs to be full disclosure of all costs associated with cask development. Therefore, the costs of terminated contracts is a part of, and should be included in, the total cost of the cask development program.

Management Comment. Management stated that there are no references provided in the report for the original or current milestone dates.

Auditor Comment. The original milestone dates are taken from the 1986 Transportation Business Plan. The current milestone dates are taken from the cask contracts, the preliminary design executive summary reports, and the estimate for completion of the two remaining cask contracts.

Management Comment. Management did not agree with the IG concern about program changes. Management stated that the transfer of management responsibility for cask development contracts from the Idaho Operations Office to DOE Headquarters will not have a negative impact on traceability since each contract has a specific line item in the Waste Management Office work breakdown structure. In addition, the combining of the transportation element of the Waste Management Office (which includes cask development) along with its Waste Acceptance and Storage elements into a Major Systems Acquisition called the MRS Project was a decision undertaken to optimize management of three interdependent program elements.

Auditor Comment. We note managements assurance but believe that accountability could be lost for the reasons given in the report.

Management Comment. The Waste Management Office agrees that there have been delays in the cask development program and that costs have increased over initial projections but does not agree that these cost increases should be characterized as cost overruns.

Auditor Comment. When current costs and milestone dates far exceed the original estimates, we consider these increases to be cost and schedule overruns.

Management Comment. Management stated that increases in contract values for cost-type contracts do not necessarily indicate lack of cost control. Also, the cask contracts have undergone changes since they were originally awarded in 1988. Many of the changes were technically based, others were based on changing and better defined systems requirements and such changes are consistent with development activities.

Auditor Comment. Our report did not comment on the value of the changes that were made, but simply disclosed that changes have been made, that milestone dates have changed, and that the costs of the program have risen significantly above original estimates.

IG Report No. DOE/IG-0345

CUSTOMER RESPONSE FORM

The Office of Inspector General has a continuing interest in improving the usefulness of its products. We wish to make our reports as responsive as possible to our customers' requirements, and therefore ask that you consider sharing your thoughts with us. On the back of this form, you may suggest improvements to enhance the effectiveness of future reports. Please include answers to the following questions if they are applicable to you:

1. What additional background information about the selection, scheduling, scope, or procedures of the audit or inspection would have been helpful to the reader in understanding this report?

2. What additional information related to findings and recommendations could have been included in this report to assist management in implementing corrective actions?

3. What format, stylistic, or organizational changes might have made this report's overall message more clear to the reader?

4. What additional actions could the Office of Inspector General have taken on the issues discussed in this report which would have been helpful?

Please include your name and telephone number so that we may contact you should we have any questions about your comments.

Name_____ Date_____

Telephone_____ Organization_____

When you have completed this form, you may telefax it to the Office of Inspector General at (202) 586-0948, or you may mail it to:

Office of Inspector General (IG-1)
Department of Energy
Washington, D.C. 20585

ATTN: Customer Relations

If you wish to discuss this report or your comments with a staff member of the Office of Inspector General, please contact Rob Jacques at (202) 586-3223.

END

DATE
FILMED
5/12/94