



U.S. Department of Energy
Office of Inspector General
Office of Audit Services

Audit Report

Use of Performance Based
Incentives by the Office of
Civilian Radioactive Waste
Management




Department of Energy
Washington, DC 20585

September 30, 2005

MEMORANDUM FOR THE SECRETARY

FROM:


Gregory H. Friedman
Inspector General

SUBJECT:

INFORMATION: Audit Report on "Use of Performance Based Incentives by the Office of Civilian Radioactive Waste Management"

BACKGROUND

In February 2001, the Office of Civilian Radioactive Waste Management (OCRWM) awarded a cost-plus-incentive fee contract to Bechtel SAIC Company, LLC to manage and operate OCRWM's Yucca Mountain Project. The cost-plus-incentive fee instrument is designed to reward contractors based on their performance. Such instruments are to utilize measurable performance standards and objectives in terms of work product quality, quantity, and timeliness; be based on formal quality assurance plans; and, include specific procedures for reducing incentive fees when work activities are not performed or do not meet contract requirements.

OCRWM structured its incentive fee program so that Bechtel could earn fees as it completed discreet tasks vital to accomplishing the program's long-term goals. One prominent example of such a goal was the effort to Submit the License Application for Yucca Mountain's operation to the Nuclear Regulatory Commission. To encourage Bechtel to work more efficiently, OCRWM also included what is commonly referred to as a "super stretch incentive fee". This was designed to incentivize Bechtel's efforts to complete, ahead of schedule, key Pre-License Application technical documents.

Bechtel's mission and its related performance are integral to OCRWM's efforts to develop a safe system for disposing of spent nuclear fuel from commercial nuclear reactors and high-level radioactive waste from defense activities. Bechtel's five-year contract with OCRWM is valued at approximately \$3.2 billion. We initiated this review to determine if OCRWM's performance based incentives program was effective in maximizing Bechtel's performance.

RESULTS OF AUDIT

Since 2001, OCRWM paid approximately \$4 million in incentive fees, or approximately ten-percent of the fees paid, even though Bechtel did not meet contract performance expectations. Specifically, OCRWM paid incentive fees despite the fact that:



- Additional time beyond the performance period was needed by the contractor to correct poor quality work;
- Work scope was reduced due to poor contractor performance;
- Delivered products were not acceptable to OCRWM; and,
- OCRWM eliminated incentivized work because of concerns about the contractor's performance.

In addition, Bechtel received a super stretch incentive fee for completing additional work when, in fact, it had not completed initial work package requirements.

In administering the contract, OCRWM did not establish an adequate quality assurance plan, as required by the Department's Acquisition Regulations. Specifically, OCRWM's plan did not (1) identify acceptable quality levels for each incentive, (2) specify methods for measuring and evaluating performance, or (3) include procedures to adjust incentive fee payments when milestones were not met. Further, OCRWM did not update the quality assurance plan when incentive expectations changed nor had it documented its rationale for incentive fee payments.

The Office of Inspector General has identified similar problems in other program areas pertaining to the Department's management of performance based incentives. As a result of prior findings regarding the administration of performance based incentives, the Department's contract management was identified as a high risk area vulnerable to mismanagement.

We made several recommendations to improve OCRWM's administration of performance based incentives to assure the contractor submits timely and quality products.

MANAGEMENT REACTION

The Office of Civilian Radioactive Waste Management agreed with the findings and stated that the report would be used to develop a comprehensive corrective action plan. Management comments are included in their entirety in Appendix 4.

Attachment

cc: Deputy Secretary
Under Secretary for Energy, Science and Environment
Chief of Staff
Acting Director, Office of Civilian Radioactive Waste Management
Deputy Director, Office of Repository Development

REPORT ON THE USE OF PERFORMANCE BASED INCENTIVES BY THE OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT

TABLE OF CONTENTS

Performance Based Incentives

Details of Finding	1
Recommendations and Comments.....	6

Appendices

1. Objective, Scope, and Methodology.....	7
2. Prior Reports	9
3. Listing of Performance Based Incentives	10
4. Management Comments	12

USE OF PERFORMANCE BASED INCENTIVES

Incentives Not Reduced

The Office of Civilian Radioactive Waste Management (OCRWM) did not administer Bechtel's performance based incentives to maximize contractor performance. OCRWM paid certain incentive fees even though:

- Additional time was needed by Bechtel to correct poor quality work;
- Work scope was reduced due to poor contractor performance;
- Delivered products were not acceptable to OCRWM; and,
- Incentivized work was eliminated.

In addition, OCRWM paid Bechtel a super stretch incentive fee for completing additional work when it had not completed initial work requirements. (See Appendix 3 for a listing of the performance based incentives available and received).

In our opinion, the circumstances surrounding the delays and reductions in work scope and expectations were within Bechtel's control. Examples follow:

Additional Time Needed

OCRWM paid most of the fee associated with the Site Recommendation contract incentive even though Bechtel needed additional time and effort to complete the work products. Bechtel's incentive was for the Department to issue a Site Recommendation to the President by December 18, 2001, for an incentive fee of \$17,670,000. Bechtel submitted the Site Recommendation documents in December 2001; however, the documents contained inconsistencies between models and designs and were not acceptable to OCRWM. According to performance monitors, the additional time needed by Bechtel to correct the inconsistencies in the documents resulted in a 22 day delay in meeting the milestone date.

OCRWM initially withheld \$854,673 from incentive fee payments but subsequently paid all but \$125,786 of the full fee after the Site Recommendation was issued two months later on February 14, 2002. OCRWM's justification for the

incentive fee payment did not mention the delay caused by Bechtel's submission of poor quality work. Instead, the incentive fee justification documents stated the delay was due to events beyond the contractor's control, such as the Nuclear Regulatory Commission's issuance of regulations and OCRWM's extension of public comment periods.

Scope of Work Reduced

OCRWM did not reduce incentive fees when Bechtel's scope of work was reduced due to poor performance. Bechtel was required to prepare a critical decision package to start the Preliminary Design phase of the repository. The incentive required Bechtel to prepare nine documents by September 2002, including a Conceptual Design Report, a Preliminary Project Execution Plan, and an Acquisition Plan. Bechtel submitted the critical decision documents for review on December 20, 2002. However, the OCRWM performance monitor found that the documents were incomplete and not written in accordance with Department orders.

In a letter to Bechtel, OCRWM officials stated their disappointment in the quality of work Bechtel submitted. Because of the importance of the critical decision package and to ensure the documents were completed correctly and timely, OCRWM assumed responsibility for three of the nine documents. Based on the late submission and poor quality of documents submitted, OCRWM reduced Bechtel's \$1.4 million incentive fee by \$364,000. However, the fee justification documents did not show a reduction in fee as a result of the change in the scope of work.

Products Unacceptable to OCRWM

Bechtel was paid the full fee to develop an Issue Management System for tracking management issues and corrective actions even though the system was not acceptable to OCRWM. OCRWM's performance monitor determined that the system was not user-friendly (based upon the ease of entry, retrieval and reporting issues). Further, the system did not provide a single repository for all corrective actions as required by OCRWM. Because the system did not meet OCRWM's requirements, the monitor recommended an incentive fee reduction of \$500,000.

Despite this recommendation, Bechtel received the full incentive fee. OCRWM did not provide an explanation why the incentive fee was not reduced; however, the fee justification documents noted that system corrections would be completed in the following period.

Incentive Eliminated

OCRWM eliminated an incentive for the development of the Licensing Support Network but did not eliminate the fee associated with the incentive. Bechtel was to deploy a Licensing Support Network on the internet, loaded with key documents and schedules that would be accessed by the Nuclear Regulatory Commission and other interested parties during the review of the license application. If the Network was completed by March 2003, Bechtel could earn a \$2 million incentive fee.

Shortly after the start of the performance period, OCRWM determined that Bechtel would not complete the Licensing Support Network by March 2003. OCRWM based its determination, in part, on Bechtel's past performance which had not provided satisfactory support in litigation matters. Bechtel's responsibilities were eliminated, and OCRWM hired an outside contractor to complete the task. Instead of eliminating the \$2 million incentive fee, OCRWM redistributed the fee to new incentives even though Bechtel's contract stated that if an incentive within its control was not achieved, the fee would be lost.

Additional Fees Paid

OCRWM paid Bechtel a super stretch incentive fee even though the contractor had not met the initial requirements, as stipulated by the Department's Performance Based Contracting Guide.

Under OCRWM's Performance Evaluation and Measurement Plan, Bechtel could earn super stretch incentive fees by submitting additional documents due in future periods. Bechtel would receive a higher fee for the early submission of documents under the super stretch incentive than it would be paid for meeting the initial requirements.

**Standards Not
Established**

In one case, OCRWM paid Bechtel approximately \$300,000 for four additional documents provided under the super stretch incentive, although it had failed to provide OCRWM with five documents required by the initial requirements of the incentive. According to a Bechtel official, when Bechtel determined that some of the original documents would not be completed on time, the contractor concentrated on completing the additional documents.

OCRWM could not adequately administer performance based incentives because it had not established clearly defined standards to evaluate Bechtel's performance in awarding incentive fees. OCRWM developed the Performance and Evaluation Measurement Plan (Plan) for assessing Bechtel's performance; however, the Plan did not include measurable performance standards that defined acceptable quality, quantity, and timeliness standards, as required, nor had the Plan been updated when events changed. Further, OCRWM did not have controls in place to assure that the rationale for fee payments could be justified.

Unclear Quality, Quantity, and Timeliness Requirements

Although required by Acquisition Regulations, OCRWM's Plan did not:

- Identify acceptable quality levels for each incentive;
- Specify that initial requirements of an incentive had to be met before Bechtel could receive super stretch fees for competing additional work; or
- Provide specific methodologies to reduce incentive fees when milestones for completion dates were not met.

For example, OCRWM's Plan did not specify formal criteria regarding the acceptable quality and content of documents. In the case of the Site Recommendation package, Bechtel submitted documents that contained inconsistencies between models and designs. OCRWM paid Bechtel the incentive fees for submitting the draft documents by the due date. Since the incentive did not specify the expected quality level, no fee reductions were made even though Bechtel had to rework the documents to meet OCRWM requirements.

Plan not Updated

Although Department of Energy Acquisition Regulations (DEAR 970.5215-1) require performance standards be established prior to the beginning of a performance period and any changes to incentives be made 30 days before the end of the performance period, OCRWM did not always update the Plan. Specifically, OCRWM established some incentives three months after the start of a performance period and another incentive was eliminated after the performance period. According to an OCRWM official, there was not enough time to document the numerous changes made to the plan.

Lack of Documentation

Finally, OCRWM did not fully document its rationale for the amount of incentive fees awarded to Bechtel. Specifically, the minutes of the Performance Evaluation Board (Board) meetings did not address the performance monitor's recommendations for fee reductions for poor quality work and missed milestones, or document why the performance monitors recommendations were not addressed. One official said there was not enough time to document discussions and decisions regarding fee payments. Since the Board did not consider the necessity of documenting discussions and decisions on how the amount of fee awarded was determined, it was unclear what rationale the fee determining official used when deciding the appropriate fee.

Although OCRWM required performance monitors to document and maintain information, this requirement did not apply to the Board or fee determination official.

Expectations Not Met

While the total cost of inappropriate incentive fee payments cannot be determined, we estimate that OCRWM paid approximately \$4 million even though Bechtel delivered poor quality work and missed deadlines.

RECOMMENDATIONS

We recommend the Acting Director, Office of Civilian Radioactive Waste Management:

1. Establish a Plan with clearly defined standards, including:
 - Acceptable quality levels for each incentive;
 - Specific fee reduction procedures to adjust incentive fee payments when performance expectations within Bechtel's control are not met;
 - Controls to ensure that initial requirements are completed before super stretch fees are paid for additional work; and,
 - Current milestone dates and performance expectations, which are modified on a timely basis.
2. Ensure that the rationale for fee payments is documented by the Performance Evaluation Board and the fee determination official.

MANAGEMENT REACTION

Management concurred with our findings and recommendations. Further, management agreed to develop a comprehensive corrective action plan to provide clearer and more objective performance standards in Bechtel's contract.

Management's comments are included in their entirety in Appendix 4.

AUDITOR COMMENTS

Management's comments are responsive to our recommendations.

Appendix 1

OBJECTIVE

The objective of this audit was to determine if OCRWM administered Bechtel's performance based incentives to maximize contractor performance.

SCOPE

The audit was performed between September 2004 and August 2005, at the Office of Repository Development and Bechtel SAIC Company, LLC in Las Vegas, Nevada. We also interviewed personnel from OCRWM and the Office of Procurement and Assistance Management in Washington, D.C. The scope was limited to the activities associated with 15 performance based incentives from February 2001 through September 2004 and the available incentive fees totaling \$50,900,626.

METHODOLOGY

To accomplish the audit objective, we:

- Obtained and reviewed applicable Federal and Department of Energy Acquisition Regulations and Guidelines, prior audits, and contract documents;
- Assessed compliance with the Government Performance and Results Act of 1993;
- Interviewed appropriate program and contract personnel; and,
- Analyzed performance incentive documentation, including: evaluations, fee determination recommendations, and fee payments.

The audit was conducted 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 rely on computer processed data to accomplish our audit objective. The Department established performance measures under the Government Performance and Results Act of 1993 and passed them down to Bechtel through the performance based incentives. While we identified deficiencies with the administration of the

Appendix 1 (continued)

performance based incentives, we found the Department complied with the Government Performance and Results Act of 1993.

We discussed the results of the audit with OCRWM on August 18, 2005. Management waived the exit conference.

PRIOR REPORTS

Office of Inspector General

- *Use of Performance-Based Incentives at Selected Departmental Sites* (DOE/IG-0510, July 2001). Department field sites did not utilize performance based incentives to improve contractor performance. Specifically, contractor's performance incentives fees were increased, while the corresponding performance measures were either unchanged or decreased. Further, the Department established performance measures after the work was completed. As a result, \$5.3 million was questioned as to whether the fees could have been better used to incentivize other work.
- *Inspection of Selected Aspects of the Office of River Protection Performance-Based Incentive Program* (DOE/IG-0506, June 2001). The Office of River Protection's incentives did not challenge the contractor to perform at a higher level and high priority tasks were not always incentivized. A lack of internal controls and no quality acceptance criteria impacted management's ability to effectively administer the program. Additionally, management's rationale for establishing and changing incentive fees was not documented.
- *Incentive Fees for Bechtel Jacobs Company LLC* (DOE/IG-0503, May 2001). The Oak Ridge Operations Office did not establish incentives for Bechtel Jacobs prior to the start of performance periods and performance expectations were reduced during the performance periods. As a result, Bechtel Jacobs received \$6.2 million in incentive fee payments even though the performance expectations were not met.

Government Accountability Office Reports

- *Department of Energy - Status of Contract and Project Management Reforms* (GAO-03-570T, March 2003). The report credited the Department with progress in implementing contract and project management reform; however, the Department was not able to show that contractors' performance improved. The Yucca Mountain Project, as of March 2003, showed a three year delay and a \$2.1 billion cost increase to submit the license application. The report recommended improving contract management and establishing meaningful performance measures.
- *Contract Reform – DOE Has Made Progress, But Actions Needed to Ensure Initiatives Have Improved Results* (GAO-02-798, September 2002). Contract reforms did not result in improved contractor performance, as contractors still incurred schedule delays and cost increases. Further, the Department did not clearly define incentive goals, establish results-oriented measures, and use results-oriented data to evaluate the effectiveness of the incentives and make additional changes as needed. To improve contract incentives, the report recommended that the Department align its incentives with the current best practices.

LISTING OF PERFORMANCE BASED INCENTIVES

Performance Based Incentives Reviewed	Available Incentive Fee	Incentive Fee Received	Questioned Fees Paid
Long Term Incentives			
1. Department Issues Site Recommendation	\$17,670,000	\$17,544,214	\$728,887 ⁱ
2. Department Submits License Application ⁱⁱ	13,980,626	9,575,640	
Short Term Incentives:			
1-2.1 Deliver Critical Decision Package	1,400,000	1,036,000	467,000 ⁱⁱⁱ
1-2.2 Engineering Design Readiness Review	1,400,000	1,330,000	
1-2.3 Total System Performance Assessment- License Application Method and Approach Documents	1,400,000	1,400,000	
1-2.4 2002 Key Technical Issue Agreements	1,400,000	1,295,000	
1-2.5 Safety Conscious Work Environment ^{iv}	1,900,000	1,900,000	500,000
1-2.6 2003 Key Technical Issue Agreements Super Stretch Incentive Fee ^v	795,000 530,000	402,469 300,000	300,000
1-2.7 Safety Conscious Work Environment ^{vi}	1,700,000	1,400,000	
1-2.8 Deploy the Department's Licensing Support Network Web Site ^{vii}	0	0	0
1- 2.8 ^{viii} Draft and Initiate Team on License Application Chapters	1,325,000	1,325,000	1,000,000
1-2.9 Feeds of Preliminary Information to Total System Performance Assessment – License Application	1,825,000	1,222,750	
1-2.10 Interim License Application Design Review	1,325,000	1,033,500	1,000,000
1-2.11 Develop Integrated Package for Key Technical Issue Agreements	1,450,000	1,252,500	
1-2.12 Develop and Recommend Requirements and Stabilized Design	1,500,000	1,145,000	
1-2.13 Deliver Draft Pre-Closure Safety Analysis	200,000	200,000	
1-2.14 2003 Feeds to Total System Performance Assessment for Modeling	1,100,000	1,089,000	
Totals	\$50,900,626	\$43,451,073	\$3,995,887

Appendix 3 (continued)

- ⁱ OCRWM initially withheld \$854,673 from incentive fee payments for Bechtel's lateness and poor quality of documents submitted; however, OCRWM only withheld \$125,786 from the final fee payment. We questioned the payment of incentives fees totaling \$728,887 which were initially withheld to reflect reductions for Bechtel needing additional time and effort to correct work.
- ⁱⁱ OCRWM's second incentive was changed to allow Bechtel to earn progress payments and short term incentive fees as their work progressed towards the completion of the License Application. Bechtel received \$9,575,640 in progress payments from a total available amount of \$13,980,626. OCRWM's available short term incentive fees totaled \$19,250,000, as listed in incentives 1.2-1 to 1.2-14.
- ⁱⁱⁱ OCRWM completed three of nine reports for Bechtel. Therefore, we questioned one-third of the incentive fee due to the reduced scope of work. ($\$1.4 \text{ million} \times 1/3 = \$467,000$)
- ^{iv} We questioned \$500,000 because a performance monitor said the incentive fee payment should be reduced since Bechtel did not meet incentive performance expectations.
- ^v We questioned \$300,000 of super stretch fees paid even though the initial work was not completed.
- ^{vi} At the end of a performance period, OCRWM eliminated part of a performance expectation in incentive 1.2-7 and redistributed the fee. Incentives 1.2-6, 1.2-8, 1.2-9 and 1.2-10 each received \$325,000 from the \$1.3 million incentive fee.
- ^{vii} OCRWM eliminated Bechtel's original incentive 1.2-8, Deploy the Department's Licensing Support Network Web Site, and redistributed the \$2 million incentive fee. OCRWM created two new incentives and assigned incentive fees of \$1 million to each. We questioned the redistribution of the \$2 million incentive fee since Bechtel's contract stated that if an incentive was not achieved and was within their control, the fee would be lost. (See incentives 1.2-8 and 1.2-10 for the \$2 million questioned.)
- ^{viii} OCRWM created two new incentives after the original incentive 1.2-8 was eliminated. OCRWM reused the incentive number 1.2-8 and created a new number, 1.2-10, for the two new incentives.




Department of Energy
Washington, DC 20585

QA: N/A

SEP 01 2005

MEMORANDUM FOR: George W. Collard (IG-32)
Vickie L. Scofield (IG-353)

FROM: Paul M. Golan, Principal Deputy Director
Office of Civilian Radioactive Waste Management 

SUBJECT: Feedback on Audit Report "The Use of Performance-Based
Incentives by OCRWM"

The purpose of this memorandum is to provide feedback on subject draft Audit Report. I accept the recommendations and agree with the findings of the report. I will use this report to develop a comprehensive corrective action plan that will provide clearer and more objective performance standards in the contract.

OPM&I:HCW-1803

cc:
P. M. Golan, DOE/HQ (RW-1), FORS
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