



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

Special Report

Need for Enhanced Surveillance
During the Yucca Mountain Project
Shut Down

OAS-SR-10-01

JULY 2010



Department of Energy
Washington, DC 20585

July 21, 2010

MEMORANDUM FOR THE UNDER SECRETARY

FROM: 
Gregory H. Friedman
Inspector General

SUBJECT: INFORMATION: "Need for Enhanced Surveillance During
the Yucca Mountain Project Shut Down"

INTRODUCTION

The Nuclear Waste Policy Act Amendments of 1987 (Act) designated Yucca Mountain in Southwestern Nevada as the site for a national geologic repository for high-level nuclear waste, primarily the waste generated by U.S. commercial nuclear plants. The Department of Energy (Department) assigned management of the program to the Office of Civilian Nuclear Waste Management (OCRWM) and formally designated the project as the Yucca Mountain Project (Project).

By every measure, this was to have been one of the largest efforts of its kind ever undertaken. In fact, since 1987, the Department has spent in excess of \$10.5 billion in pursuing the Project. These funds have been used to:

1. Evaluate the suitability of the site as repository, on a science and engineering basis;
2. Make major real property infrastructure improvements at the site, including tunneling through the mountain and constructing buildings for office and ancillary purposes;
3. Purchase significant quantities of personal property (computers, office furniture, etc.) to carry out ongoing operations; and,
4. Develop and accumulate massive amounts of scientific and technical data concerning the Project and a variety of related issues.

In accordance with the Act, the Project has been funded primarily by a rate premium charged to those customers of public utilities who relied on nuclear power for electricity generation. Federal funding has supported aspects of the Project, but to a much lesser degree.

On June 3, 2008, the Department filed a license application with the Nuclear Regulatory Commission (NRC) to begin construction of the repository.

PROJECT TERMINATION

In early 2009, the Department indicated that it intended to terminate the Project. As memorialized in the Fiscal Year (FY) 2011 budget request, the Department has sought to have virtually all funding for the Project eliminated and, in March 2010, moved to withdraw the NRC license application, with prejudice. Pending approval, the Department is moving to shut down all activities at the Yucca Mountain site by September 30, 2010.

Although the Office of Inspector General (OIG) takes no position regarding the policy judgment to terminate the Project, we have been and remain concerned that any shut down be consummated in a way that protects the national interest, including the interests of the ratepayers and taxpayers who financed the Project. Other than the termination of the Department's Superconducting, Super Colliding Project in Texas in 1998, we know of no comparable single project termination in the Department's recent history as consequential as Yucca Mountain, given the importance of its intended mission, the massive investment in real and personal property and the development and compilation of huge quantities of Project-related, intellectual property.

On February 23, 2010, the OIG announced an audit to determine whether OCRWM had adequately planned for the Project's orderly shut down. On March 2, 2010, management informed us that it was in the process of preparing a master plan to manage the shut down process and that it would be completed by the end of March 2010. As described to us at the time, the master plan would have addressed many of the topics proposed for our audit. Management requested that the OIG defer its audit until the plan was completed.

We evaluated this request and, based on the circumstances, agreed to defer the audit until completion of the plan. However, given the importance of this matter, it was our intent to restart the audit once the plan was formulated. To that end, we monitored the progress of various judicial challenges to the license application withdrawal, including a court-imposed one month stay in shut down activities. On June 12, 2010, we met with OCRWM officials to determine the status of shut down planning in anticipation of restarting our audit. We were told that the plan was not complete and that events were moving so quickly that no further action on the master plan was contemplated. Instead, management described its strategy for meeting the September 2010 Project shut down date, essentially concentrating on various functional activities at the Project.

The Office of Inspector General issued a draft of this report for comment by Department management. Management responded on July 19, 2010, providing details on its commitment to close down the Project in a responsible and orderly manner. These comments, which are an integral part of this report, are provided in their entirety in the attachment.

SHUT DOWN OVERSIGHT

In our view, and as OCRWM officials readily acknowledged, the development, implementation and execution of an approved master plan or the equivalent for the shut down of Yucca Mountain, specifically, one that addressed the key issues in an analytical, coordinated and integrated manner would have been the preferred course of action given the magnitude of the

Project. Further, as virtually all parties recognized, such a planning framework would have increased the likelihood of overall success of the effort. OCRWM officials told us that shut down events had surpassed the planning initiative timeline and that the closing process was being expedited to meet the scheduled completion date of September 30, 2010. To help compensate for the lack of a master plan, OCRWM officials informed us that they had established focus groups to manage shut down activities organized along functional lines: contracts; records, including the Licensing Support Network; information technology; human relations; facilities and property; security; and, science. OCRWM officials also described the assistance being provided by Departmental organizations including the Office of General Counsel and the Office of Legacy Management. Taken together, these efforts were significant; although they did not, in our judgment, substitute for a master plan. Nonetheless, given the sequence of events and the timeline for shut down completion, we have decided not to restart our audit.

LESSONS LEARNED

In recent years, the OIG has been involved in a number of Departmental actions with attributes and characteristics similar to those that will be encountered during the Yucca Mountain shut down. In the interest of helping to assure an orderly Project termination, we are providing the Department's decision-makers with several of the most important lessons learned from these events.

Disposition of Personal Property

The Project's inventory included approximately \$6 million in personal property as of September 30, 2009. The Department is in the process of excessing or disposing of this inventory. Over time, the Department has experienced a number of instances in which both real and personal property were disposed of uneconomically or inefficiently. For example, the OIG reported in our audit report on "Property Disposals at the Yucca Mountain Project" (DOE/IG-0664, September 27, 2004) that the Project disposed of approximately 9,000 metric tons of property and the Government received no economic benefit from potentially reusable property.

Further, we have reported extensively on situations in which computers have been excessed without taking the steps necessary to ensure that hard drives have been sanitized to prevent the transfer of sensitive and/or personally identifiable data to new users. For example, we reported on the lack of controls over the proper clearing, sanitization, and destruction of memory devices (*Excessing of Computers Used for Unclassified Controlled Information at Lawrence Livermore National Laboratory*, DOE/IG-0759, March 2007; and, *Internal Controls for Excessing and Surplusing Unclassified Computers at Los Alamos National Laboratory*, DOE/IG-0734, July 2006). As noted in these reports, the Department has specific policies on how this is to be accomplished. As a preventative measure, it is important that OCRWM fully employ the appropriate computer disposition procedures.

The aggressive timeline for shut down of the Project makes it essential that the disposal of personal property be managed with care to minimize the inherent vulnerabilities associated with such an effort.

Maintaining Intellectual, Scientific and Technology Property

Since its inception, OCRWM has spent tens of millions of dollars on a wide variety of scientific and engineering studies, analyses, evaluations and reviews. These have addressed site characterization, topography, rock formation and water issues at Yucca Mountain itself, as well as related Project activities. Preservation of this information in a useful form may be critically important as the Department seeks the best path forward for resolving the U.S. nuclear waste disposition issue, a recognized challenge of major significance. We were told that the Department has proposed retaining data in the Licensing Support Network (which is the information system designed to compile data in support of the NRC licensing effort) for 100 years and core samples from characterization efforts for 25 years. While a formal system was in place to retain much of the information (specifically, the Licensing Support Network), we have identified past issues with the management of electronic and other records of which officials should be mindful. For example, we found that the Department had not developed methods for archiving e-mail and other electronic information and in planning for the schedule and disposition of records (*The Retention and Management of the Department's Records*, DOE/IG-0685, April 2005). This report, and our ongoing follow-up work in this same area, suggest that the Department needs to take special steps to ensure that the extraordinary documentary record of the Project be safeguarded for future use.

Prime Contractor and Subcontractor Management

The Project's management structure included a number of Federal personnel both in Washington and in Nevada. Consistent with the Department's general approach to mission activities, project effort has largely been the work of a significant number of contractors and subcontractors. Even in the normal course of government business, it is imperative that contracts and subcontracts be closed out in an analytical, thoughtful way to protect the interests of U.S. taxpayers. This includes the appropriate resolution of any contractor-incurred questioned or unallowed costs. In a situation such as the shut down of Yucca Mountain, where over \$10 billion has been spent and the process is proceeding on an expedited basis, employing a thorough, comprehensive and complete contract close out process takes on greater importance than normal. Related to this concern, the OIG will shortly issue a separate report on questioned Project contractor-incurred costs. These include:

- \$100 million in costs claimed by Bechtel SAIC, the former management and operating contractor for the Project, during FY 2001 through 2009. These costs were previously questioned during audits by internal auditors and the Defense Contract Audit Agency but have not been resolved by OCRWM; and,
- \$75 million in subcontract costs during FY 2004 through 2009 for which there is no evidence that Bechtel SAIC ever requested an audit of the incurred costs to determine allowability.

With at least \$175 million in costs to be resolved, the Department needs to ensure that the close out process is managed effectively and that all disallowed costs are settled and funds recouped; the remaining required audits of costs incurred are completed; and, that all excess funds are de-

obligated. As we have reported in the past, delays in the timely contract close out increase the risk that contractors and subcontractors will be unable to produce documentation to support previously submitted incurred cost claims. In a separate report to OCRWM management, the OIG is making specific recommendations for the resolution of the current issues at Yucca Mountain.

Contractor Employee Benefit Administration

The Department needs to exercise effective oversight of the administration of contractor employee pensions and post retirement health benefits associated with the Project. As of September 30, 2009, the Department's accumulated benefit obligation for Yucca Mountain employee pensions and post retirement health benefits was estimated at approximately \$20.1 million. Given the Department's significant overall unfunded liability for pensions and health benefits (most recently estimated at \$24.6 billion) and the negative impact contributions to those plans can have on operational tempo, the settlement with the Yucca Mountain contractors regarding pension and health benefits obligations needs intense scrutiny by OCRWM management.

Further, with regard to the general question of contractor employee benefits, at other Departmental sites, the OIG has raised recent concerns about the propriety of the severance payments made to contractor personnel and the consistency in the amounts of severance pay available to separated employees (*Contractor Severance Plans at the Department of Energy*, OAS-L-09-04, February 12, 2009) whose service at Departmental facilities or sites was no longer needed. Based on this experience, to the extent that the severance payments are utilized as the Project is terminating, the Department needs to ensure that such payments to separating contractor employees are consistent with existing contract provisions.

PATH FORWARD

The Department has taken a number of actions designed to bring the Project to closure. However, given the lack of an approved master plan to manage this process and the press of a very ambitious shut down schedule, special attention by senior level Department management will be necessary if the process is to be an orderly one. Although no recommendations are being made, we are hopeful that the consideration of reported past experiences will be helpful as this process moves forward.

cc: Assistant Secretary for Nuclear Energy
Chief of Staff
Acting Director, Office of Civilian Radioactive Waste Management
Director, Office of Legacy Management
Manager, Oak Ridge Office

Attachment



Department of Energy
Washington, DC 20585

July 19, 2010

MEMORANDUM FOR GREG FRIEDMAN
INSPECTOR GENERAL

FROM: OFFICE OF CIVILIAN RADIOACTIVE WASTE
MANAGEMENT

SUBJECT: Management Comments on Draft Office of Inspector
General Report on the Need for Enhanced Surveillance
During the Yucca Mountain Project Shut Down

The Department of Energy (DOE) appreciates the Office of Inspector General's (OIG) review of the Yucca Mountain Project shut down activities. The Department is committed to closing down the Program in a responsible and orderly manner, and has undertaken a significant effort to achieve this goal. The Office of Civilian Radioactive Waste Management (OCRWM) has been closely collaborating with relevant offices throughout the Department to ensure that scientific and Program records are appropriately preserved and maintained, and that all project property and contract requirements are properly disposed of prior to the closure of OCRWM. As the report notes, OCRWM has developed working groups organized around functional areas that are based on the draft master plan. The Department believes that it has maintained a strong and coordinated focus during the shut down process, ensuring that the records, property, and contracts are appropriately addressed, and personnel are provided the resources they need. Responses to the specific areas mentioned in the OIG report are discussed below.

Disposition of Personal Property:

OCRWM is focused on disposing all excess property, both real and personal, in accordance with current DOE orders and good business practices. We have successfully transferred property to other DOE sites and organizations, including the transfer of equipment, desks, cubicles, printers, supplies, and other office items from more than 900 offices at the Yucca Mountain location to the Hanford site, saving Hanford over \$2 million in acquisition costs. The Yucca Mountain project also successfully transferred equipment to the Nevada Site Office, the WIPP site in Carlsbad, the Tonopah Test Range, and several other DOE sites and Federal agencies. Some capital equipment items with remaining residual value were re-stocked to the original vendors or transferred to other DOE sites, with any recovered funds returned to the Nuclear Waste Fund, in accordance with Chapter 19 of the DOE Accounting Handbook. Surplus emergency vehicles have also been transferred to Nye County. For real property, facility leases are being terminated as expeditiously as possible, including facilities in Las Vegas and Washington, D.C. Site facilities have been shut down and are awaiting transfer of ownership to a successor program in DOE.

OCRWM is aware of, and takes seriously, the requirement to ensure that excess computer hard drives are sanitized to prevent the transfer of sensitive and/or personally identifiable information to new users. Other than the systems that will be transferred to the Office of Legacy



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Management with the data intact, OCRWM is and will continue to comply with the sanitization requirement, including sanitizing other devices such as network printers and copiers. Computers, printers and other electronic devices are being transferred to other DOE programs that need them. The remaining excess computers and associated equipment, after they have been sanitized, are being donated to Nevada county schools (Clark, Nye and Lincoln counties) under the Computers for Learning program.

Maintaining Intellectual, Scientific, and Technology Property

The Department will take all necessary actions to preserve the scientific record developed during the Yucca Mountain project. The Program has provided written direction to all participants to ensure that all records are properly archived and maintained. And, the Program has initiated discussions with the Nuclear Waste Technical Review Board to solicit the Board's assistance in helping the Department ensure that these records are maintained. We are committed to maintaining key intellectual, scientific, and technology property, and have developed plans to transition the management and maintenance of the License Support Network and other records to the Office of Legacy Management (OLM).

Prime Contractor and Subcontractor Management

OCRWM is in the process of reviewing the subcontracts that the OIG identified as requiring an audit. OCRWM will request an appropriate audit for those subcontracts that it determines require an incurred cost audit or a close-out audit. OCRWM is also in the process of reviewing other costs identified in the report and the Contracting Officer will make a determination of allowability for those costs. For unallowable costs, we plan to send a Contracting Officer determination letter to Bechtel requesting reimbursement of those costs.

Contractor Employee Benefits Administration

OCRWM is working with the Office of Management, the Office of Legacy Management, and the Office of General Counsel to determine the best approach to address Yucca Mountain employee pensions and post retirement health benefits and will ensure that the Department meets its obligations. Further, OCRWM is ensuring that contractor severance payments are being made consistent with existing contract provisions.

Contrary to the \$37M accumulated benefit obligation (ABO) number for Yucca Mountain cited on page 5 of the OIG report, our records indicate (FY09 FAS87 and FAS106 financial reports) a pension ABO of \$17.1M and a post-retirement medical ABO of \$3M (\$20.1M combined). Similarly, for the entire Department, our records indicate an unfunded pension liability of \$12.7B and an unfunded post-retirement medical liability of \$11.9B (\$24.6B combined).

We appreciate this opportunity to comment on the draft report and remain available to discuss these issues further.

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