

September 14, 2007

MEMORANDUM TO: Luis A. Reyes
Executive Director for Operations

FROM: Stephen D. Dingbaum/**RA**/
Assistant Inspector General for Audits

SUBJECT: MEMORANDUM REPORT: AUDIT OF NRC
OVERSIGHT OF ITS FEDERALLY FUNDED
RESEARCH AND DEVELOPMENT CENTER
(OIG-07-A-17)

The Office of the Inspector General (OIG) conducted this audit to determine if the Nuclear Regulatory Commission (NRC) properly considered all Federal Acquisition Regulation (FAR) requirements for a Federally Funded Research and Development Center (FFRDC) review in preparing its renewal justification. Additionally, OIG examined the adequacy of NRC's technical oversight and contract administration of the FFRDC. OIG found that the agency's renewal justification, dated June 6, 2007, for continued use of the FFRDC satisfactorily addressed the FAR criteria. Furthermore, NRC's oversight and administration of the FFRDC contract are adequate. Therefore, OIG makes no recommendations.

BACKGROUND

In October 1987, NRC contracted with Southwest Research Institute (SwRI) to operate a Federally Funded Research and Development Center. SwRI (shown right) established the Center for Nuclear Waste Regulatory Analyses (the Center) to provide long-term technical assistance and research related to NRC's High-Level Waste (HLW) Program authorized under the Nuclear Waste Policy Act of 1982, as amended.

The agency sponsored the Center to (1) avoid potential conflict-of-interest situations caused by hiring contractors who worked on or were competing for Department of Energy contracts, and (2) establish long-term continuity in



An aerial view of the SwRI in San Antonio, TX

technical assistance and research. The Nuclear Waste Policy Act of 1982, as amended, assigns responsibility for licensing HLW storage and disposal facilities to NRC. The Department of Energy, the licensee, is responsible for the construction and operation of any HLW storage and disposal facility after receiving a license from the NRC. Due to the nature of this relationship, it was and is critical that NRC's technical evaluations of the Department of Energy license application be free of any potential conflict-of-interest. The Department of Energy announced that it plans to submit a license application for the HLW repository to NRC by June 30, 2008.

In October 1992, September 1997, and again in September 2002, the agency extended its contract with the Center for an additional 5 years. The current contract, with a ceiling of \$86.2 million, expires on September 28, 2007. FAR Section 35.017 sets forth the policy regarding establishment, review, and termination of FFRDCs and related sponsoring agreements. FAR Section 35.017-4 requires that, prior to extending a contract for an FFRDC, a sponsor must conduct a comprehensive review of the use of and need for the Center. The review must:

1. Examine the continuing need for the Center;
2. Consider alternative sources;
3. Assess the Center's efficiency and effectiveness;
4. Determine if Center operation is cost-effective;
5. Determine agreement compliance with FAR Section 35.017-1.

If the review determines that the need for the Center still exists and that the Center has met the agency's needs, NRC may extend the contract for an additional 5-year period.

RESULTS

NRC's Renewal Justification Fulfills the Requirements of FAR 35.017-4

The justification for renewal satisfactorily addressed the five FAR criteria set forth in FAR 35.017-4 and complied with agency requirements for documenting the review. The results of the review are summarized below.

Continuing Need for the Center

The first FAR criterion requires the agency to determine if the special technical needs and mission requirements performed by the Center continue to exist and if so, at what level. The agency adequately justified its continued need for the Center.

Special Technical Needs and Mission Requirements



The tunnel boring machine is shown prior to entering a starter tunnel at Yucca Mountain

NRC determined that the Center was still needed to support the agency's special technical needs and mission. Prior to establishing the Center, the agency's contractors had some association with the Department of Energy, thus creating a potential conflict-of-interest situation. The Center has made it possible to retain qualified experts and avoid conflict-of-interest situations. Depending on program priorities, NRC needs

access to expertise and experience in 26 technical disciplines¹ at various times, and for various durations. Since 1987, the Center's technical support has provided the continuous and independent expertise needed by NRC. This expertise will be important for the adjudicatory licensing hearings for Department of Energy proposed HLW long-term storage and disposal facilities.

Level of Support Required

The first criterion also requires the agency to assess the resources needed to support NRC programs at the Center. The agency adequately assessed both the resources needed to support NRC programs and the Center's ability to provide those resources.

Consideration of Alternate Sources

FAR requires that the agency consider alternative sources to meet its technical needs. The agency adequately addressed this requirement by conducting a survey of technical staff familiar with the contract to determine if another contractor could meet the agency's needs. The Office of Federal Procurement Policy previously said that this method was acceptable. The agency identified 36 alternate contractors, but concluded that the problems originally encountered in using private-sector contractors and Department of Energy National Laboratories still existed. Specifically, the main problems continue to be the inability to provide long-term continuity and conflict-of-interest free technical assistance and research. Some contractors could not fully support NRC's HLW program, while others had some association with the Department of Energy.

¹ Technical disciplines include, but are not limited to, geology, geochemistry/physical chemistry, and seismology.

Finally, NRC compared the cost of operating the Center's technical assistance function to the in-house cost of the same body of work. The analysis, which covered FYs 2008 through 2010, showed that performing the Center's function in-house would cost approximately \$5.3 million less over the 3-year period. The renewal justification noted that there are unquantifiable costs such as start-up costs for staff learning new jobs, contract costs to replace laboratory services that the Center currently performs at SwRI laboratories, and signing bonuses for individuals in certain disciplines that are difficult to recruit. The agency concluded that the time to acquire and develop the required level of expertise could result in substantial costs and program impacts. Additionally, the analysis could not capture the cost of phasing out the contract. The agency's Consideration of Alternative Sources asserts that the need for technical expertise that is long-term and conflict-of-interest free continues to be the primary consideration for maintaining the Center.

Efficiency and Effectiveness of the Center

The third criterion requires that the agency assess the Center's efficiency and effectiveness in meeting the agency's needs. The agency adequately addressed this criterion. The Center Review Group (CRG), which consists primarily of senior NRC managers, oversees the Center's activities and performance. This group meets semiannually to review and evaluate the Center's performance. Since renewal of the contract in September 2002, the Center has received "excellent" ratings for its performance in the "Technical" and "Management and Staffing" areas.

The CRG's ratings indicated that the Center has demonstrated the ability to maintain objectivity, independence, quick-response capability, and currency in its fields of expertise. The CRG determined that the Center's level of support exceeds normal expectations and that deliverables are of high quality.

Cost Effective Operation

The fourth criterion requires that the agency assess the adequacy of the Center's management in ensuring a cost-effective operation. The CRG's semiannual evaluation of the Center, discussed in the previous section, addressed this criterion. The CRG evaluated the Center's performance against the "Cost Control and Contract Administration" Award-Fee criteria, which include the adequacy of Center management in ensuring a cost-effective operation. The overall evaluations resulted in "excellent" to "high-excellent" ratings for the Center in this area. The Center developed detailed spending plans and provided information that substantiated certain proposed costs. The CRG rated the Center's cost control, measured by actual cost expenditures compared to the spending plan, as "excellent" during this period.

Sponsoring Agreement Compliance with FAR Section 35.017-1

Finally, FAR requires that the agency determine that the guidelines for establishing the Center continue to be satisfied and that the contract is in compliance with FAR 35.017-1. NRC concluded that the criteria for establishing the Center continue to be satisfied because the agency's mission in the HLW area has not changed. The agency still needs long-term, conflict-of-interest free technical support. According to Section 35.017 of the FAR, an FFRDC is established to meet special long-term research or development needs that cannot be met as effectively by existing in-house or contractor resources. FFRDCs enable agencies to accomplish tasks that are integral to the mission and operation of the sponsoring agency through an organization that is required to conduct its business free from organizational conflicts of interest. NRC determined that its HLW program requires this type of support.

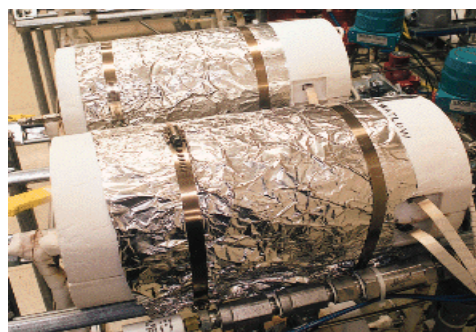
Additionally, NRC's contract for the operation of the Center contains provisions required under FAR Section 35.017-1. For example, the contract contains a statement of the purpose and mission of the Center; provisions for the orderly termination or non-renewal of the agreement, disposal of assets, and settlement of liabilities; a provision for the identification of retained earnings and the development of a plan for their use and disposition; a prohibition against the Center competing with any non-Center concern in response to a Federal agency request for proposal for other than the operation of a Center; and a delineation of procedures to be followed in accepting work from other than a sponsor.

NRC's Oversight of the Center is Adequate

NRC's technical oversight and administration of the contract are adequate.

Technical Oversight

NRC staff provided adequate oversight of the technical areas. Under the terms of the contract, NRC Performance Monitors (PM) are the NRC Contracting Officer's (CO) authorized representatives for the 24 Program Elements². The contract stipulates PM oversight responsibilities.



High-temperature, high-pressure corrosion tests are conducted in the SwRI-developed pipe flow loop system.

² A Program Element is a technical area such as radionuclide release rates and solubility limits, volcanic disruption of waste package, and quantity and chemistry of water contacting engineered barriers and wasteforms.

During this review, OIG interviewed seven NRC PMs, representing 37 percent of the total staff assigned to technical areas. The PMs provided a general overview of the procedures used to monitor assigned technical areas and explained how they tracked contract deliverables. Some PMs said that the most effective control was the operations plan that is drafted annually. The plan, which contains milestones and deliverables, is drafted through a cooperative effort between NRC PMs and Center staff.

Further, before authorizing payment of an invoice, PMs reviewed monthly Center program manager progress reports to ensure that resources expended by the Center were commensurate with work accomplished and in accordance with the terms of the contract. Some PMs prepared extended comments to support their evaluations. Additional oversight measures included frequent telephone and e-mail contact with Center staff, periodic visits to the Center, and semiannual evaluations of Center performance which PMs provided to the Center Review Group.

Contract Administration

Contract administration by the Division of Contracts meets the criteria in NRC Management Directive 11.1 for invoice payment procedures, and Part 11.5.2, which assigns specific responsibilities to the Division of Contracts, the Program Office, and the Division of Financial Services. The contract specialist reviewed invoices to ensure that (1) costs were within the spending plan for each program element and (2) invoices were approved in a timely manner so that payment was made within the required 30 days. OIG reviewed 21 invoices submitted by the Center for the period October 2004 through September 2006, and found that all invoices reviewed were processed within the required times. The contract specialist also received and reviewed the Defense Contract Audit Agency's (DCAA) annual report on the results of its audit of contract costs.

The contract specialist, in coordination with HLW program staff and Office of the General Counsel (OGC), evaluated Center requests for authorization to accept work from entities other than NRC. Further, the contract specialist received notification of conflict-of-interest issues related to accepting work for others that may result in a potential conflict-of-interest situation. The contract specialist, along with HLW program staff and OGC, performed the agency review and decision process, and issued letters notifying the Center that the work for others did or did not represent a potential conflict-of-interest. Other contract administration measures included maintaining frequent contact with the Center and ensuring that Center contract files were adequately maintained.

CONCLUSION

The NRC's renewal justification adequately addresses the FAR criteria. The agency also provides effective technical oversight and administration of the agency's contract with the Center.

AGENCY COMMENTS

At an exit conference on September 6, 2007, NRC officials agreed with the report contents and had no suggested changes.

SCOPE/CONTRIBUTORS

OIG audited management controls related to NRC oversight of its FFRDC. We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Kathleen Stetson, Audit Manager and Robert Woodward, Auditor, conducted this audit from April 2007 to August 2007. We performed the audit work at NRC Headquarters in Rockville, Maryland and at the Center for Nuclear Waste Regulatory Analyses in San Antonio, Texas.

If you have any questions or concerns regarding this report, please contact Steven Zane, Team Leader at 415-5912 or me at 415-5915.

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