UNITED STATES
NUCLEAR REGULATORY COMMISSION
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OFFICE OF THE
INSPECTOR GENERAL

September 26, 2012

MEMORANDUM TO: R. William Borchardt
Executive Director for Operations

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

SUBJECT: MEMORANDUM REPORT: AUDIT OF NRC'S OVERSIGHT OF THE AGENCY'S FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTER (OIG-12-A-20)

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 in preparing the renewal justification for its Federally Funded Research and Development Center (FFRDC) in San Antonio, Texas. Additionally, OIG examined the adequacy of NRC's technical oversight and contract administration of the FFRDC. OIG found that the agency's renewal justification 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 an FFRDC. SwRI established the Center for Nuclear Waste Regulatory Analyses (the Center) to provide long-term technical assistance and research related to NRC programs authorized under the Nuclear Waste Policy Act of 1982, as amended.

Aerial View of the SwRI in San Antonio, Texas

Source: OIG

The agency sponsored the Center to: (1) avoid conflict of interest with regard to NRC's technical assistance and regulatory analysis support program related to the Nuclear Waste Policy Act and NRC's Waste Management Program, and (2) establish long-term continuity in technical assistance and research. In October 1992, September 1997, September 2002, and again in September 2007, the agency extended its contract with the Center for an additional 5 years. The current contract, with a ceiling of approximately $123.3 million, expires on September 28, 2012.

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 facility. The review must:

1. Examine the continuing need for the FFRDC.

2. Consider alternative sources.

3. Assess the FFRDC's efficiency and effectiveness.

4. Assess the adequacy of FFRDC management in ensuring that the operation is cost-effective.

5. Determine agreement compliance with FAR Section 35.017-1.

If NRC 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.

OBJECTIVE

The audit objectives were to determine if (1) NRC is properly considering all FAR requirements for an FFRDC review in preparing its renewal justification, and (2) NRC is adequately fulfilling its oversight responsibilities for the FFRDC.

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 Section 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 NRC to determine if the special technical needs and mission requirements performed by the Center continue to exist and, if so, at what level. NRC adequately justified its continued need for the Center.

Special Technical Needs and Mission Requirements

NRC determined that the Center is still needed to support the agency's special technical needs and mission. The agency continues to have a long-term need for contractors who are free from organizational conflicts of interest and who can maintain long-term continuity in technical support for NRC's integrated spent nuclear fuel regulatory activities and other topics related to NRC's evolving waste management program. However, because of program uncertainties, the 5-year contract renewal will be structured as a 2-year base contract with three 1-year option periods.

To explore whether to maintain the Center as NRC's high-level waste (HLW) program asset, agency staff considered the current status of this program. Over the past few years, a series of events have impacted the HLW program as follows:

- June 2008, the U.S. Department of Energy (DOE) submitted a license application to NRC for authorization to construct a HLW repository at Yucca Mountain in Nevada.

- January 2010, DOE established a Blue Ribbon Commission on America's Nuclear Future to conduct a comprehensive review of policies for managing the back end of the nuclear fuel cycle, including all alternatives for the storage, processing, and disposal of civilian and defense used nuclear fuel, HLW, and materials derived from

nuclear activities.

- March 2010, DOE filed a motion with the NRC Atomic Safety and Licensing Board Panel (Panel) seeking permission to withdraw the Yucca Mountain license application.

- June 2010, the Panel denied DOE's motion to withdraw the license application.

- October 2010, NRC began an orderly closure of the agency's HLW program related to Yucca Mountain.

- On September 30, 2011, the Panel, citing fiscal constraints, suspended the adjudicatory proceeding.

To determine the scope, technical needs, and mission requirements required for the fifth renewal of the Center's contract, the agency made several assumptions. Three major assumptions requiring the Center's technical assistance to NRC were the (1) implementation of the current administration's guidance on the national program for managing spent fuel and HLW, (2) U.S. Court of Appeals for the District of Columbia Circuit ruling may order the resumption of the review of DOE's application for a license for a HLW repository at Yucca Mountain, and (3) DOE and/or DOE laboratories are likely to remain involved in the development of any revised national waste management strategy.

In its justification, NRC stated that the nature of the waste management program requires long-term technical support from an organization that is free from organizational conflict of interest, is multidisciplinary, and has the capability to integrate activities across a broad range of disciplines. NRC added that the Center has made it possible for the agency to access contractors that are free from potential organizational conflicts of interest and that have a long-term continuity in providing technical support. Depending on program priorities, the agency needs access to expertise and experience in more than 15 technical disciplines[1] at various times and durations. Since 1987, the Center's technical support has provided continuous and independent expertise needed by NRC.

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.

[1] Technical disciplines include, but are not limited to, geology, geochemistry, mining engineering, and volcanology.

Consideration of Alternative Sources

The second criterion requires that NRC 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. NRC identified multiple alternative contractors, including DOE National Laboratories, private organizations, and academic institutions, and concluded that the problems originally encountered in using private-sector contractors and DOE National Laboratories still existed. The main problem continues 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 DOE.

Finally, NRC compared the cost of operating the Center's technical assistance function to the in-house cost of performing the same type of work. According to the analysis, which covered fiscal years 2012 through 2014, having NRC perform the Center's function would cost approximately $3.1 million less over the 3-year period. However, NRC's cost comparison did not capture startup costs for the agency staff to learn new work and the cost of contracts needed to perform laboratory work. Additionally, the cost comparison did not capture signing bonuses for individuals in certain disciplines who are difficult to recruit. The agency concluded that the time expended to acquire and develop the required level of expertise could result in substantial costs and program impacts. Further, the analysis could not capture the cost of phasing out the contract. The agency 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 (Review Group), 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 2007, the Center has received "excellent" ratings for its performance in the "Technical" and "Management and Staffing" areas.

The Review Group'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 Review Group 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 Review Group's semiannual evaluation of the Center, discussed in the previous section of this report, addressed this criterion. The Review Group 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. The Center developed detailed spending plans and provided information that substantiated certain proposed costs. The Review Group 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

The fifth criterion requires that the agency determine that 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 continued to be satisfied because the agency's mission in the waste management program has not changed. The agency still needs long-term, conflict-of-interest free technical support. According to FAR Section 35.017, an FFRDC is established to meet special long-term research or development needs that cannot be met as effectively through 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 waste management program requires this type of support.

Finally, NRC's contract for the operation of the Center contains provisions required under FAR Section 35.017-1. For example, the contract contains the following items: 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 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 are the agency contracting officer's authorized representatives for approximately 15 program elements.[2] The FFRDC contract stipulates performance monitor oversight responsibilities.

During this review, OIG interviewed six NRC performance monitors, representing 40 percent of the total staff assigned to technical areas. The performance monitors provided a general overview of the procedures used to monitor assigned technical areas and explained how they tracked contract deliverables. Further, before authorizing payment of an invoice, performance monitors reviewed monthly Center program manager progress reports to ensure that resources expended by the Center were commensurate with work accomplished in accordance with the terms of the contract. Some performance monitors prepared extensive 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 that performance monitors provided to the Center Review Group.

Contract Administration

Contract administration by NRC's Division of Contracts meets the criteria in NRC Management Directive 11.1, *NRC Acquisition of Supplies and Services*. This guidance provides for invoice payment procedures and assigns specific responsibilities to the Division of Contracts, the program offices, and the Office of the Chief Financial Officer. 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 13 invoices submitted by the Center for the period October 2010 through September 2011 and found that these invoices were processed within the required times. The contract specialist also received and reviewed the Defense Contract Audit Agency's annual report on the results of its audit of contract costs.[3]

The contract specialist, in coordination with agency program staff and the Office of the General Counsel, evaluated Center requests for authorization to accept work from entities other than NRC. Further, the contract specialist received initial notification of potential conflict-of-interest issues related to accepting work for others. The contract specialist, along with staff from NRC's Office of Nuclear Material Safety and Safeguards and Office of the General Counsel, performed the agency review and decision process, and issued letters notifying the Center

[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.
[3] The most recent Defense Contract Audit Agency report, issued on May 4, 2012, covered SwRI's fiscal year 2008.

whether 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.

AGENCY COMMENTS

OIG held an exit conference with the agency on September 20, 2012. Agency management stated their agreement with the report, and opted not to provide formal comments.

SCOPE/CONTRIBUTORS

OIG audited the internal controls related to NRC's oversight of its FFRDC, and conducted our work at NRC headquarters from May 2012 through September 2012. Throughout the audit, auditors were aware of the possibility or existence of fraud, waste, or misuse in the program.

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.

This audit was conducted by Kathleen Stetson, Team Leader; Eric Rivera, Audit Manager; and Michael Steinberg, Senior Auditor.