



Audit of the U.S. Nuclear Regulatory Commission's Oversight of the Federally Funded Research and Development Center Contract

OIG-23-A-08

August 7, 2023



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MEMORANDUM

DATE: August 7, 2023

TO: Daniel H. Dorman
Executive Director for Operations

FROM: Hruta Virkar /RA/
Assistant Inspector General for Audits

SUBJECT: AUDIT OF THE U.S. NUCLEAR REGULATORY
COMMISSION'S OVERSIGHT OF THE FEDERALLY
FUNDED RESEARCH AND DEVELOPMENT CENTER
CONTRACT (OIG-23-A-08)

Attached is the Office of the Inspector General's (OIG) audit report titled *Audit of the U.S. Nuclear Regulatory Commission's (NRC) Oversight of the Federally Funded Research and Development Center Contract*.

The report presents the results of the subject audit. Following the June 1, 2023, exit conference, the NRC staff indicated that they had no formal comments for inclusion in this report.

Please provide information on actions taken or planned on each of the recommendations within 30 days of the date of this memorandum.

We appreciate the cooperation extended to us by members of your staff during the audit. If you have any questions or comments about our report, please contact me at 301.415.1982 or Terri Cooper, Team Leader, at 301.415.5965.

Attachment:
As stated

cc: M. Bailey, AO
M. Meyer, DAO
J. Jolicoeur, OEDO



Results in Brief

Why We Did This Review

In October 1987, the U.S. Nuclear Regulatory Commission (NRC) contracted with Southwest Research Institute (SwRI) to operate a Federally Funded Research and Development Center (FFRDC), with the principal focus to provide support for the NRC's activities in licensing a deep geologic repository for high level waste and spent nuclear fuel. The SwRI established the Center for Nuclear Waste Regulatory Analyses to serve as an FFRDC. The current contract is the NRC's seventh renewal of the FFRDC contract.

Federal Acquisition Regulation (FAR) Section 35.017-4 requires, prior to extending a contract for an FFRDC, a sponsoring agency must conduct a comprehensive review of the use and need for the facility.

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

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What We Found

The Office of the Inspector General (OIG) considers all FFRDC renewal FAR requirements to be satisfied. However, opportunities for improvement were identified in how the NRC oversees the administration of the contract. Specifically, opportunities for improvement were identified in the area of final invoice billing.

The OIG found that the NRC's administration of the FFRDC contract relating to the final invoice billing is inadequate. The NRC requested SwRI to delay sending final invoices until requested to do so by the Contracting Specialist. The SwRI claims that the NRC owes \$599,414 on tasks completed between fiscal years 2011 and 2021. This occurs primarily because the NRC lacks resources related to closeout of cost-reimbursement contracts. As a result, the NRC on its own initiative issued SwRI an extension of the 120-day period for submitting invoices covering that period, even though the relevant FAR section, 52.216-7(d)(5), does not provide clear authority for the agency to take such action without a request from the contractor. This increases the risk of claims that funds are subject to the Prompt Payment Act, potential billing discrepancies not being identified or corrected in a timely manner, and old contract funds being unavailable for payment.

What We Recommend

This report makes two recommendations to improve the final invoice billing and closeout process.

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ABBREVIATIONS AND ACRONYMS

CNWRA	Center for Nuclear Waste Regulatory Analyses
FAR	Federal Acquisition Regulation
FFRDC	Federally Funded Research and Development Center
FY	Fiscal Year
NRC	U.S. Nuclear Regulatory Commission
NWPA	Nuclear Waste Policy Act of 1982, as amended
OIG	Office of the Inspector General
PPA	Prompt Payment Act
SwRI	Southwest Research Institute

I. BACKGROUND

History of the NRC's Federally Funded Research and Development Center

In October 1987, the U.S. Nuclear Regulatory Commission (NRC) contracted with the Southwest Research Institute (SwRI) to operate a Federally Funded Research and Development Center (FFRDC). A principal focus of the FFRDC was to provide support for the NRC's activities in licensing a deep geologic repository for high-level waste and spent nuclear fuel at Yucca Mountain, Nevada, in accordance with the Nuclear Waste Policy Act of 1982, as amended (NWPA).

The Federal Acquisition Regulation (FAR) Part 2.101 defines an FFRDC as "activities that are sponsored under a broad charter by a Government agency (or agencies) for the purpose of performing, analyzing, integrating, supporting, and/or managing basic or applied research and/or development, and that receive 70 percent or more of their financial support from the Government; and

- (1) A long-term relationship is contemplated;
- (2) Most or all of the facilities are owned or funded by the Government; and,
- (3) The FFRDC has access to Government and supplier data, employees, and facilities beyond that common in a normal contractual relationship."

The SwRI established the Center for Nuclear Waste Regulatory Analyses (CNWRA) to serve as the FFRDC and assist the NRC in addressing issues related to implementation of the NWPA. The issues, as stated in SECY-85-388, are: "the long duration of the [NWPA] developmental, pre-licensing, and licensing processes (estimated to be 20 years or more) poses special problems to NRC in two critical areas: (1) the need for NRC contractors to be free from conflict of interest with any party to NRC licensing hearings and (2) the need to maintain long term continuity in technical assistance and research programs supporting NRC's NWPA program."

The primary funding for the CNWRA derived from the NRC's annual appropriations from the Nuclear Waste Fund. However, the NRC received its last appropriation from the Nuclear Waste Fund in fiscal year (FY) 2011. The focus of the CNWRA is governed by the CNWRA Charter, which states that

the mission of the CNWRA is to “provide sustained high quality technical assistance and research in support of NRC’s high-level waste management program under the NWPA.” Because NRC activities related to the Yucca Mountain application have ceased, the principal focus of the CNWRA has been other NRC high-level waste and spent fuel storage and transportation activities, supported from the NRC’s general appropriations.

The NRC’s Office of the General Counsel determined the CNWRA could perform fee-based projects for NRC offices under the FAR Industrial Mobilization Exception to competitive acquisition. Under the Industrial Mobilization Exception, non-competitive work may be placed with an FFRDC to establish or maintain essential research, development, and engineering capabilities.

In 2014, to facilitate placement of Industrial Mobilization Exception work, the NRC implemented an enterprise-wide contract¹ authorizing non-charter² work if the work falls within the CNWRA’s special competencies. Specific tasks include seismic safety reviews of U.S. facilities following the Fukushima accident, environmental reviews of uranium recovery and mill tailings sites, fire safety risk assessments and inspection procedure development, and support for license amendments of nuclear power plants.

In October 2021, SwRI informed the NRC that it had operated the CNWRA at a loss for several years. From October 2021 through February 2022, the NRC staff negotiated with SwRI to reorganize the CNWRA and implement cost reductions aimed at restoring its viability. The negotiations included restructuring the Management and Infrastructure task order,³ which was created in June of 2018 to support the FFRDC’s managerial and information technology costs, including monthly project manager reports, training, and quality assurance. The Management and Infrastructure task order was created to accommodate the restructuring of the CNWRA’s overhead in accordance with that of SwRI. The CNWRA and NRC staff are coordinating to restructure the Management and Infrastructure task order to leverage new, advanced information technologies and to streamline quality assurance processes and procedures.

¹ Enterprise-wide contracts are flexible contracts awarded to one or more vendors to meet NRC-wide requirements through the issuance of task orders.

² Non-charter work is work that is outside of the charter scope. The charter scope is not strictly Yucca Mountain or Nuclear Waste Policy Act but has a broader application to waste management.

³ A task order is an order for services placed against an established contract.

The NRC's Contracts with the FFRDC

Since 1987, the NRC has renewed the SwRI contract seven times. In SECY-22-0054, dated June 10, 2022, the NRC recommended continued sponsorship of the FFRDC as an agency asset by renewing the contract as a 1-year base contract, plus four option years. The Commission approved the staff's recommendation on July 21, 2022, with all three Commissioners in place at that time voting to approve the recommendation.

The renewed Charter Contract was executed for the base year only, with the period of performance from March 30, 2023, through March 29, 2024.⁴ If the four, 1-year options are exercised, the period of performance of the entire contract would be March 30, 2023, through March 29, 2028.⁵

FAR Criteria

FAR Section 35.017 sets forth the policy regarding establishment, use, 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 and need for the facility. The review should include the following:

- (1) An examination of the sponsor's special technical needs and mission requirements that are performed by the FFRDC to determine if and at what level they continue to exist.
- (2) Consideration of alternative sources to meet the sponsor's needs.
- (3) An assessment of the efficiency and effectiveness of the FFRDC in meeting the sponsor's needs, including the FFRDC's ability to maintain its objectivity, independence, quick response capability, currency in its field(s) of expertise, and familiarity with the needs of its sponsor.
- (4) An assessment of the adequacy of the FFRDC management in ensuring a cost-effective operation.
- (5) A determination that the criteria for establishing the FFRDC continue to be satisfied and that the sponsoring agreement is in compliance with FAR Section 35.017-1.

⁴ The audit fieldwork ended on February 27, 2023, and the new charter contract was awarded on March 29, 2023.

⁵ Previously, in March 2018, the agency awarded a 1-year base contract with four 1-year options, in accordance with Commission approval. In 2016, the NRC staff recommended continued sponsorship of the CNWRA, specifically to renew the contract as a 1-year base contract, plus 4 option years, and the Commission approved this recommendation in June 2016.

Agency Guidance

Management Directive and Handbook 11.1, *NRC Acquisition of Supplies and Services*, dated May 9, 2014, provides NRC staff with guidance regarding contract administration. It also provides roles and responsibilities for contracting officers, contracting officer's representatives, and contract specialists for the various stages of contracts through contract closeout.

II. OBJECTIVES

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

III. FINDING

The OIG considers all FFRDC renewal FAR requirements to be satisfied. However, opportunities for improvement were identified in the NRC's administration of the FFRDC contract related to final invoice billings.

1. Inadequate Contract Administration

Agency contract administration could be strengthened in the final invoice billing area. Federal and NRC requirements provide instruction on final contract invoices and billing; however, the NRC could improve its oversight related to FFRDC contract administration. The NRC requested the SwRI delay sending their final invoices until requested to do so by the Contract Specialist. SwRI claims the agency owes \$599,414 on 89 task orders⁶ that were completed between FY 2011 through FY 2021. This happened primarily because the NRC lacks resources to close out cost reimbursement contracts. As a result, the NRC on its own initiative issued SwRI an extension of the 120-day period for submitting invoices covering that period, even though the relevant FAR section, 52.216-7(d)(5), does not provide clear authority for the agency to take such action without a request from the contractor. Inadequate

⁶ The cost and number of open task orders is based on information provided by the SwRI. The NRC has not verified the amount for each invoice.

contract administration increases the risk of (1) claims that funds are subject to the Prompt Payment Act (PPA); (2) potential billing discrepancies by the contractor not being identified or corrected in a timely manner; and, (3) old contract funds being unavailable for payment to the contractor.

What Is Required

Federal and NRC Requirements on Contract Administration

FAR Section 52.216-7(d)(5) states that: “within 120 days (or longer period if approved in writing by the Contracting Officer) after settlement of the final annual indirect cost rates for all years of a physically complete contract, the Contractor shall submit a completion invoice or voucher to reflect the settled amounts and rates.”

The PPA provides that the due date for payment of an invoice is the date payment is due under the contract, or 30 days after a proper invoice.

The Government Accountability Office *Standards for Internal Control in the Federal Government* states that: “Transactions are promptly recorded to maintain their relevance and value to management in controlling operations and making decisions. This applies to the entire process or life cycle of a transaction or event from its initiation and authorization through its final classification in summary records. In addition, management designs control activities so that all transactions are completely and accurately recorded.”

NRC Management Directive and Handbook 11.1 states that a contract is not closed until it has been administratively completed, that is, all activities leading to completion and final payment have been completed. These activities include settling interim or disallowed costs, settling prior year indirect costs, completing contract audits, and submitting the contractor’s final invoice. Also, Management Directive and Handbook 11.1 notes that the Contracting Officer ensures all necessary contracting actions are performed in a timely manner and must identify needed resources for accomplishing contracting responsibilities while ensuring full compliance with statutory and regulatory requirements.

What We Found

The SwRI Claims the NRC Owes \$599,414 on Final Invoices

During a site visit to SwRI, the OIG learned that the SwRI claims the NRC owes \$599,414. SwRI indicates this money is due on 7 contracts for time periods between FY 2011 and FY 2021 and relates to 89 task orders that should have been closed. However, the SwRI did not submit final invoices for the completed work because the NRC requested the invoices to be held until prompted by the agency's contract specialist. In an email dated February 23, 2022, the NRC wrote, "As the NRC is requesting that the final invoices not be submitted until the assigned contract specialist for each closeout requests submission, you have our request (and contracting officer approval) that the final invoices be submitted longer than the 120 days period for the following contracts..."

Table 1: Amount the SwRI Claims the NRC Owes

FY Completed	Number of task orders	Amount The NRC Owes
2011	1	\$ 618.44
2012	5	\$ 15.27
2013	5	\$ 1,701.45
2014	3	\$ 117.91
2015	2	\$ 12,455.46
2016	21	\$ 143,041.78
2017	8	\$ 14,928.97
2018	14	\$ 211,400.65
2019	19	\$ 185,831.79
2020	4	\$ 10,714.93
2021	7	\$ 18,587.50
TOTAL	89	\$ 599,414.15

Source: OIG generated based on SwRI information

Why This Occurred

Management Oversight is Inadequate for Cost Reimbursement Contract Closeout

The NRC does not have adequate management oversight of cost reimbursement contract closeouts.⁷ The CNWRA contract closeout process does not seem to be a priority since the final rate determination letters for 45 task orders completed between 2011 and 2017, were issued between June 2017 and December 2019, and no closeout action had been taken as of October 18, 2022.⁸ NRC officials explained that the backlog of closeouts is common at federal agencies because the priority is to obligate money on new contracts. Further, the NRC lacks the resources to close out cost reimbursement contracts in a timely manner.⁹ Without management making contract closeout a priority and providing the requisite resources, the average days CNWRA final invoices are overdue is 1,182 days, or 3 years and 87 days.

Why This Is Important

Inadequate Contract Closeout Increases Risk

Inadequate contract closeout increases the risk of (1) claims that funds are subject to the PPA; (2) potential billing discrepancies by the contractor not being identified or corrected in a timely manner; and, (3) old contract funds being unavailable for payment to the contractor.

According to the PPA, the due date for payment is the date payment is due under the contract, or 30 days after a proper invoice. Each federal agency which acquires property or services from a business concern but does not make payment for each complete delivered item of property or service by the

⁷ The closeout of cost reimbursement contracts tends to be more technically complicated and labor-intensive than other types of contract closeouts.

⁸ In the second quarter of FY 2023, 4 task orders under contract # NRC-03-10-081 were closed. Two task orders will be closed upon receipt of a refund due to the agency from SwRI, and the last task order under this contract will be closed when funds are received from the program office in order to pay the final invoice.

⁹ There are multiple steps that need to be performed prior to final invoice submission and payment that align to the closeout (such as, incorporation of final indirect cost rates, reconciliation of funds, potential obligation of additional funds, identification of contracting officer representatives to process invoice approvals [in cases where contracting officer representative is no longer with the agency], and potential identification of cost activity codes to process the payments.)

required payment date shall pay an interest penalty on the amount of the payment which is due. Interest penalties are paid beginning on the day after the required payment date and ending on the date on which payment of the amount due is made. Any interest penalty that remains unpaid at the end of a 30-day period is added to the principal amount of the debt.

FAR section 52.216-7, “Allowable Cost and Payments,” subsection (d)(5), requires that agencies include a clause in their contracts stating that: “[w]ithin 120 days (or longer period if approved in writing by the Contracting Officer) after settlement of the final annual indirect cost rates for all years of a physically complete contract, the Contractor shall submit a completion invoice or voucher to reflect the settled amounts and rates.” Although subsection (d)(5) allows the Contracting Officer to approve a contractor’s request for an extension of time to submit an invoice, this subsection does not clearly authorize the Contracting Officer to request that the contractor delay submitting invoices and concomitantly issue such an extension on his or her own initiative. Accordingly, extensions issued in this manner could create a risk of claims under the PPA.

SwRI stated the CNWRA lost \$600,000 in FY 2021 and \$1.5 million in FY 2022. Although the money that the NRC has not paid will not make up for these losses, it is important that the NRC be prompt with payments to its FFRDC.

Recommendations

The OIG recommends that the Executive Director for Operations direct the Office of Administration to:

- 1.1 Develop a strategy to address the backlog of closeout of CNWRA contracts/tasks orders, to include the payment of all final invoices; and,
- 1.2 Allocate resources with cost reimbursement contract knowledge, as necessary, to eliminate the backlog of CNWRA final invoice billings and closeouts in a timely manner.

IV. NRC COMMENTS

The OIG held an exit conference with the agency on June 1, 2023. Before the exit conference, agency management reviewed and provided comments on the discussion draft version of this report, and the OIG discussed these comments with the agency during the conference. Following the exit conference, agency management stated their general agreement with the findings and recommendations in this report and opted not to provide formal comments. The OIG has incorporated the agency's comments into this report, as appropriate.

OBJECTIVES, SCOPE, AND METHODOLOGY

Objectives

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

Scope

This audit focused on the NRC's renewal justification and related enclosures, and the NRC's oversight of the FFRDC contract. We conducted this performance audit at NRC headquarters in Rockville, Maryland, and in San Antonio, Texas, from September 2022 to February 2023.

Internal controls related to the audit objective were reviewed and analyzed. Specifically, the OIG reviewed the components of control activities. Within this component, the OIG reviewed the principles of establishing structure and responsibility; and, designing control activities, including policies for achieving management objectives and responding to risks.

Methodology

The OIG reviewed relevant criteria for this audit, including, but not limited to:

- Federal Acquisition Regulation Part 35-017, *Federally Funded Research and Development Centers*;
- *The Economy Act*, 31 U.S.C. 1535;
- The Government Accountability Office *Standards for Internal Control in the Federal Government*; and,
- The Nuclear Waste Policy Act of 1982.

The OIG reviewed Management Directive 11.1, *NRC Acquisition of Supplies and Services*. In addition, the OIG analyzed prior FFRDC Charter and non-Charter Contract documents and task orders. The OIG analyzed the current justification for renewal of the FFRDC contract. The OIG interviewed

relevant NRC staff in the Office of Nuclear Materials Safety and Safeguards, the Office of Administration, and the Office of the General Counsel. The OIG also traveled to the FFRDC and interviewed CNWRA staff.

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.

Throughout the audit, auditors considered the possibility of fraud, waste, and abuse in the program.

The audit was conducted by Terri Cooper, Team Leader; Felicia Silver, Audit Manager; George Gusack, Audit Manager; and Curtis Browne, Senior Auditor.

TO REPORT FRAUD, WASTE, OR ABUSE

Please Contact:

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COMMENTS AND SUGGESTIONS

If you wish to provide comments on this report, please email the OIG using this [link](#).

In addition, if you have suggestions for future OIG audits, please provide them using this [link](#).

NOTICE TO NON-GOVERNMENTAL ORGANIZATIONS AND BUSINESS ENTITIES SPECIFICALLY MENTIONED IN THIS REPORT

Section 5274 of the James M. Inhofe National Defense Authorization Act for Fiscal Year 2023, Pub. L. No. 117-263, amended the Inspector General Act of 1978 to require OIGs to notify certain entities of OIG reports. In particular, section 5274 requires that, if an OIG specifically identifies any non-governmental organization (NGO) or business entity (BE) in an audit or other non-investigative report, the OIG must notify the NGO or BE that it has 30 days from the date of the report's publication to review the report and, if it chooses, submit a written response that clarifies or provides additional context for each instance within the report in which the NGO or BE is specifically identified.

If you are an NGO or BE that has been specifically identified in this report and you believe you have not been otherwise notified of the report's availability, please be aware that under section 5274 such an NGO or BE may provide a written response to this report no later than 30 days from the report's publication date. Any response you provide will be appended to the published report as it appears on our public website, assuming your response is within the scope of section 5274. Please note, however, that the OIG may decline to append to the report any response, or portion of a response, that goes beyond the scope of the response provided for by section 5274. Additionally, the OIG will review each response to determine whether it should be redacted in accordance with applicable laws, rules, and policies before we post the response to our public website.

Please send any response via email using this [link](#). Questions regarding the opportunity to respond should also be directed to this same address.