

# AUDIT REPORT

Audit of NRC's Management of  
Agreements with Department of  
Energy Laboratories

OIG-10-A-12 April 23, 2010



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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

OFFICE OF THE  
INSPECTOR GENERAL

April 23, 2010

MEMORANDUM TO: R. William Borchardt  
Executive Director for Operations

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

SUBJECT: AUDIT OF NRC'S MANAGEMENT OF AGREEMENTS  
WITH DEPARTMENT OF ENERGY LABORATORIES  
(OIG-10-A-12)

Attached is the Office of the Inspector General's (OIG) audit report titled, *Audit of NRC's Management of Agreements With Department of Energy Laboratories*.

The report presents the results of the subject audit. Agency comments provided at the March 12, 2010, exit conference have been incorporated, as appropriate, into this report.

Please provide information on actions taken or planned on each of the recommendations within 30 days of the date of this memorandum. Actions taken or planned are subject to OIG followup as stated in Management Directive 6.1.

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 415-5915 or Kathleen Stetson, Team Leader, Financial and Administrative Audit Team, at 415-8175.

Attachment: As stated

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## **EXECUTIVE SUMMARY**

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### **BACKGROUND**

The Energy Reorganization Act of 1974 authorized the Nuclear Regulatory Commission (NRC) to use the Department of Energy's (DOE) research facilities and services to assist NRC in conducting its mission. In 1978, NRC and DOE executed a Memorandum of Understanding (MOU) that established the policy governing the relationship between NRC and DOE for NRC-funded research at DOE laboratories.

There are currently 17 DOE laboratories nationwide and all are managed and operated by non-Government entities under contract with DOE. As of July 13, 2009, NRC had 186 active agreements with DOE laboratories totaling approximately \$365 million.

NRC Management Directive (MD) 11.7, *NRC Procedures for Placement and Monitoring of Work with the U.S. Department of Energy*, specifies the interagency responsibilities, authorities, and procedures for placing and monitoring work at DOE laboratories.

The Division of Contracts is responsible for oversight of NRC work placed with DOE labs, though responsibility for awarding, administering, and managing DOE lab agreements is decentralized at NRC. The various program offices handle and track their own lab agreements with little involvement by other NRC offices.

Project managers manage the DOE lab agreements for their respective offices; this includes preparing the office's justification for placing work with DOE laboratories. The Office of the General Counsel reviews, provides advice and counsel, and makes recommendations regarding organizational conflict of interest (OCOI) concerns.

### **PURPOSE**

The audit objective was to determine whether NRC has established and implemented an effective system of internal control over the placement and monitoring of work with DOE laboratories. Appendix A contains information on the audit scope and methodology.

## **RESULTS IN BRIEF**

NRC complies with its OCOI requirements prescribed by Section 170A of the Atomic Energy Act of 1954, as amended, and is consistent in assessing and resolving potential OCOIs prior to and after awarding work to a DOE lab.

OIG identified opportunities for program improvements in the following areas:

- Source selection justifications.
- Audit coverage.
- Delegation of authority.

### **Source Selection Justification**

MD 11.7 requires that project managers develop convincing justifications for using a DOE lab rather than a commercial source. However, 20 of 38 lab agreement justifications reviewed by auditors did not effectively demonstrate why a DOE lab was preferred. Furthermore, 32 of the justifications lacked indication that commercial firm capabilities were assessed or considered as part of the decisionmaking process. Justifications were inadequate because (1) MD 11.7 guidance is unclear with regard to consideration of commercial sources, (2) offices typically do not include supporting background information and rationale in their DOE lab agreement files, and (3) NRC does not require independent review of all justifications by someone outside the originating office. Without adequately considering whether commercial firms can perform the work awarded to DOE labs, the agency cannot be certain that it is obtaining best value on these acquisitions.

### **Audit Coverage**

To ensure the propriety of payments to DOE laboratories, NRC should receive the results of audits performed on the laboratories. To date, NRC has not received results of audits of DOE labs because the MOU between DOE and NRC does not address audit coverage. Consequently, NRC lacks assurance regarding the propriety of amounts paid for work performed by DOE labs.

### **Delegation of Authority**

The NRC is authorized to use DOE research facilities and services to assist NRC in conducting its mission. Currently, the Office of International Programs (OIP) is one of the NRC offices that avails itself of this overall authority. Office of Management and Budget Circular A-123 states that

management must clearly define and appropriately delegate areas of authority and responsibility. Currently, OIP is operating without a signed delegation of authority to award and administer DOE lab agreements because MD 11.7 does not include OIP as having the authority. Consequently, the agency is not fully adhering to the delegation of authority requirements contained in MD 11.7, which creates the potential for ineffective management of certain agreements.

#### RECOMMENDATIONS

This report makes recommendations to improve the agency's management of agreements with DOE laboratories. A consolidated list of these recommendations appears in Section V of this report.

#### AGENCY COMMENTS

At an exit conference on March 12, 2010, agency management stated their agreement with the findings and recommendations in this report. Management also provided information that has been incorporated into this report as appropriate.

## **ABBREVIATIONS AND ACRONYMS**

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DOE	Department of Energy
DC	Division of Contracts
FSME	Office of Federal and State Materials and Environmental Management Programs
MD	NRC Management Directive
MOU	Memorandum of Understanding
NMSS	Office of Nuclear Material Safety and Safeguards
NRC	Nuclear Regulatory Commission
NRO	Office of New Reactors
NRR	Office of Nuclear Reactor Regulation
NSIR	Office of Nuclear Security and Incident Response
OCOI	Organizational Conflict of Interest
OIG	Office of the Inspector General
OIP	Office of International Programs
RES	Office of Nuclear Regulatory Research

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## I. BACKGROUND

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The Energy Reorganization Act of 1974 authorized the Nuclear Regulatory Commission (NRC) to use the Department of Energy's (DOE) research facilities and services to assist NRC in conducting its mission. In 1978, NRC and DOE executed a Memorandum of Understanding (MOU) that established the policy governing the relationship between NRC and DOE for NRC-funded research at DOE laboratories. The MOU, last updated in 1998, states that NRC may order and pay for services from DOE laboratories and includes an amended organizational conflict of interest (OCOI) provision. In this report, such arrangements are referred to as DOE lab agreements.

There are currently 17 DOE laboratories nationwide and all are managed and operated by non-Government entities under contract with DOE.

### Management Directive 11.7

NRC Management Directive (MD) 11.7, *NRC Procedures for Placement and Monitoring of Work with the U.S. Department of Energy*, specifies the interagency responsibilities, authorities, and procedures for placing and monitoring work at DOE laboratories. MD 11.7 objectives are to ensure that:

- Procedures for negotiating and managing agreements with DOE are consistent with sound business practices and contracting principles.
- An agencywide standard of contract management is uniformly applied to projects placed with DOE.
- A framework exists for program management control, administration, monitoring, and closeout of projects placed with DOE.

As of July 13, 2009, NRC had 186 active agreements with DOE laboratories totaling approximately \$365 million. Table 1 presents a breakdown of the active agreements by office.

<b>Table 1. Distribution by Office</b>		
Program Office <sup>1</sup>	No. of Agreements	Total Value
FSME	8	17,284,100
NMSS	4	9,172,000
NRO	11	147,159,010
NRR	31	28,317,500
NSIR	10	9,408,999
OIP	3	2,300,000
RES	119	151,490,290
<b>Total</b>	<b>186</b>	<b>\$365,131,899</b>

Most of NRC's DOE lab agreements are for work 5 years or less in duration (see Table 2). The longest agreement, an umbrella agreement with multiple task orders, has been active since 1997. Under that agreement, Pacific Northwest Laboratory performs environmental review and other activities for license renewal applications submitted to NRC.

<b>Table 2. Duration of Agreements</b>	
Agreement Length	No. of Agreements
> 10 years	1
> 5 years, ≤ 10 years	20
>1 year, ≤ 5 years	158
≤ 1 year	7
<b>Total</b>	<b>186</b>

<sup>1</sup> See "Acronyms and Abbreviations" section of this report for full program office names.

## Managing DOE Lab Agreements

Responsibility for awarding, administering, and managing DOE lab agreements is decentralized at NRC. The various program offices handle and track their own lab agreements with little, if any, involvement by other NRC offices. Offices manage their agreements through a collaborative effort among project managers, associate competition advocates, technical assistant project managers, and office directors.

Project managers manage the DOE lab agreements for their respective offices. This includes preparing the office's justification for placing work with DOE laboratories and providing oversight for technical and administrative aspects of the agreement, including the budget. Project managers maintain "agreement files" that contain relevant documentation for each lab agreement.

The associate competition advocate performs an independent review of both the project manager's justification and the project statement of work to determine whether the facts and rationale presented support the criteria for placement of work with DOE. Based on the review, the associate competition advocate recommends that the office director or designee approve or disapprove the proposed agreement.

Technical assistant project managers assist the project managers in administering agreements, and office directors are responsible for ensuring that DOE laboratory projects are properly executed, monitored, and closed out.

Non-program office entities that are sometimes involved in the process include NRC's Procurement Oversight Committee, the Office of the General Counsel, and the Division of Contracts (DC).

The Procurement Oversight Committee – composed of seven individuals representing the Offices of the Chief Financial Officer, Executive Director for Operations, General Counsel, and Administration – reviews proposed lab agreement projects exceeding \$1 million to facilitate streamlining the Chairman review process.<sup>2</sup>

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<sup>2</sup> A project or project modification with a value equal to or greater than \$1 million, or a modification that will result in a project with a total value equal to or greater than \$1 million, requires preparation of a Chairman paper. These papers are submitted to the Chairman for a written response, and the Chairman's written approval is required prior to initiating procurement action. The Chairman paper review process was directed by the Commission in 2005 to keep the Chairman informed of program activities supported through the use of procurements. To facilitate the process, the Procurement Oversight Committee reviews Chairman papers for all proposed procurements, including lab agreements.

The Office of the General Counsel reviews, provides advice and counsel, and makes recommendations regarding organizational conflict of interest (OCOI) concerns. An OCOI may occur when a laboratory or an operator of a DOE facility has past, present, or planned interests or work that either directly or indirectly relates to the proposed work to be performed under an NRC project. For example, if a laboratory or an operator of a laboratory provides advice and recommendations to NRC in the same technical area where it is also providing consulting assistance to any organization regulated by NRC, this is a circumstance that may give rise to an OCOI.

MD 11.7, states that DC is responsible for oversight of NRC work placed with DOE labs. As part of the oversight, DC conducts periodic reviews of selected agreement files maintained by project managers in the NRC program offices. In 2008, a DC contractor reviewed agreement files using a file review checklist from MD 11.7. The contractor reviewed 80 agreement files and produced separate reports containing recommendations pertaining to information clarity, documentation adequacy, and adherence to sound contract management practices for each NRC program office. NRC's DOE Users Group<sup>3</sup> is responsible for resolution of the recommendations.

## **II. PURPOSE**

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The audit objective was to determine whether NRC has established and implemented an effective system of internal control over the placement and monitoring of work with DOE laboratories. Appendix A contains information on the audit scope and methodology.

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<sup>3</sup> The DOE Users Group consists of representatives from DC and the program offices that award and administer DOE lab agreements. The DOE Users Group was established to keep program offices informed of new issues and to assist the offices in sharing information.

### **III. FINDINGS**

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NRC complies with its OCOI requirements prescribed by Section 170A of the Atomic Energy Act of 1954, as amended, and is consistent in assessing and resolving potential OCOIs prior to and after awarding work to a DOE lab.

OIG identified opportunities for program improvements in the following areas:

- Source selection justifications.
- Audit coverage.
- Delegation of authority.

Addressing these areas will improve the effectiveness of internal control over the award and administration of agreements with DOE laboratories.

#### **A. NRC Assesses and Resolves Potential OCOIs for Lab Agreements**

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NRC complies with its OCOI requirements prescribed by Section 170A of the Atomic Energy Act of 1954, as amended, and is consistent in assessing and resolving potential OCOI issues relative to DOE lab agreements.

MD 11.7 requires that prior to awarding DOE lab work, NRC must determine whether an OCOI exists between a DOE laboratory and the NRC. To accomplish this, project managers must first identify, from the lab's proposal and other information sources, whether the potential for an OCOI exists in conjunction with an NRC project placed at a DOE lab. If the project manager becomes aware of a potential conflict, the project manager is expected to discuss the matter with their managers, DC, and the Office of the General Counsel to determine steps to eliminate or mitigate the OCOI. If NRC determines that an OCOI cannot be mitigated, but the DOE lab is the only available source, the Executive Director for Operations may approve a waiver, prepared by the cognizant office, to allow the lab to perform the work.<sup>4</sup>

OIG auditors selected and reviewed a random sample of 37 agreement files (representing approximately 20 percent of the 186 NRC active agreements as of July 13, 2009), to determine:

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<sup>4</sup> The Energy Policy Act of 2005 proposes that should a project reflecting extraordinary circumstances require placement at a DOE lab under circumstances where an OCOI cannot be mitigated, the project may be placed nonetheless at the lab, provided a determination of adequate justification is executed.

- (1) Whether the proposals addressed OCOI.
- (2) If actual or potential OCOIs were resolved.

Of the 37 files reviewed, 35 files (95 percent) indicated that OCOIs had been addressed.<sup>5</sup> Of these 35 files, 6 files (16 percent) were identified as having a potential OCOI and the paperwork in the agreement folder identified that the project managers took the appropriate steps to resolve the OCOI or obtain a waiver signed by the Executive Director for Operations. Of the six files identified as having a potential OCOI, three had a waiver.

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<sup>5</sup> Of the 37 files reviews, 2 did not contain documentation indicating that OCOI was addressed. The first file contained template language found in MD 11.7, requesting the DOE laboratory to identify whether there is a conflict or not. However, there was no response from the lab documented in the file. The second file did not contain the DOE lab proposal, which would have addressed OCOI. Therefore, auditors were unable to assess OCOI for this file.

## B. Source Selection Justifications

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MD 11.7 requires that project managers develop convincing justifications for using a DOE lab rather than a commercial source. However, 20 of 38<sup>6</sup> lab agreement justifications reviewed by auditors did not effectively demonstrate why a DOE lab was preferred. Furthermore, 32 of the justifications lacked indication that commercial firm capabilities were assessed or considered as part of the decisionmaking process. Justifications were inadequate because (1) MD 11.7 guidance is unclear with regard to consideration of commercial sources, (2) offices typically do not include supporting background information and rationale in their DOE lab agreement files, and (3) NRC does not require independent review of all justifications by someone outside the originating office. Without adequately considering whether commercial firms can perform the work awarded to DOE labs, the agency cannot be certain that it is obtaining best value on these acquisitions.

### Criteria for Award to a DOE Lab

MD 11.7 requires offices to develop convincing justifications for using a DOE lab instead of a commercial firm to perform work for NRC. The MD directs project managers to prepare justifications that cite and support one or more of the following five criteria for using a DOE lab as opposed to a commercial source:

- ***“Unique technical disciplines or combinations of disciplines.”*** Only a laboratory possessing the unique technical capabilities or a unique combination of technical skills and highly specialized experience can undertake and successfully complete the project.
- ***“Specialized facilities or equipment”*** may be required to complete the project.
- ***“Use of patents, copyrights, proprietary information, or secret processes.”*** Sometimes, one or a combination of these items is essential to the project and the requirement cannot be revised to permit competition and open disclosure in the commercial sector.
- ***“Accrued knowledge and equipment or facilities”*** may necessitate timely placement of work with DOE when another source cannot realistically perform the necessary work without expending significant time and effort to understand previous work and achieve results.

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<sup>6</sup> The Office of the Inspector General (OIG) reviewed a random sample of 37 agreement files. One of the files contained two justifications, both of which OIG reviewed, for a total of 38 justifications reviewed.

- **“Urgent requirements”** may necessitate immediate initiation of work under a project to fulfill the office mission.

Additionally, MD 11.7 requires that when reasonable doubt remains as to whether a commercial firm can perform the work, a “sources-sought announcement”<sup>7</sup> should be initiated. This requirement aligns with the prudent business practice of exploring all available options before making a purchase decision.

### **Inadequate Justifications and Documentation of Consideration of Commercial Sources**

More than half of the DOE lab agreement justifications reviewed did not effectively demonstrate why work was placed with DOE labs instead of a commercial firm. Furthermore, most of the justifications lacked indication that commercial firm capabilities were assessed or considered as part of the decisionmaking process.

#### **Inadequate Justifications**

Auditors reviewed 38 justifications for using a DOE lab. More than half of the justifications – 20 of 38 – were weak or inadequate and did not effectively demonstrate why a DOE lab was more qualified to perform the work than a commercial firm. In addition, the agreement files contained little indication that commercial sources had been considered. Some justifications stated that DOE labs had unique capabilities when it appeared that there was a strong likelihood that organizations other than DOE labs also had the capabilities to perform the work. For example, one justification stated that a particular DOE laboratory should receive an award because the DOE lab has a radiologically protected hot shop and machining and metallurgical analysis capabilities.<sup>8</sup> However, these capabilities exist in organizations other than DOE labs.<sup>9</sup> Another justification for a non-competitive award to a DOE lab stated that the lab had the unique ability to perform a state-of-the-art survey in technology areas within the instrumentation and control discipline as well as identify

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<sup>7</sup> A sources-sought announcement is a tool for surveying the market to determine if there are potential contractors that can satisfy Government requirements. NRC publishes these announcements on FedBizOpps, a Web site that publicizes Federal Government procurement opportunities.

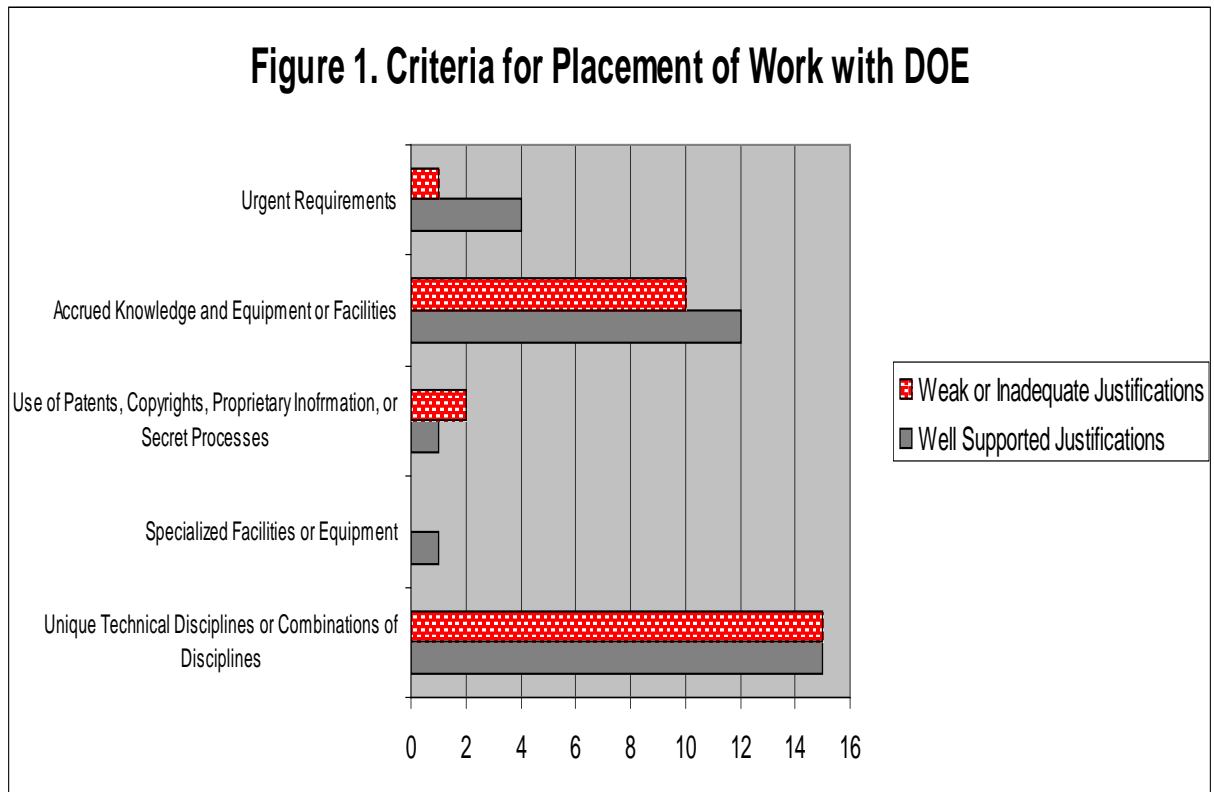
<sup>8</sup> This work involved the metallurgical examination of a radioactive metallic specimen from a salvaged nuclear power plant reactor vessel head. Special facilities were needed due to the radioactivity of the head and to perform the metallurgical tests.

<sup>9</sup> Organizations that have the capability to perform the analysis in this example include private research and development companies, non-profit research and development companies, and private sector companies.



emerging technologies applicable to the nuclear industry when, in fact, many organizations could have performed the same tasks. Other justifications stated that the work should be awarded to a DOE lab because proprietary information was required to perform some of the work. However, auditors learned that companies routinely establish confidentiality agreements with other companies to allow them to release proprietary information to other companies without fear it will be improperly disclosed.

Figure 1 illustrates which criteria NRC offices used (for the 38 justifications reviewed) to justify selection of a DOE laboratory to perform work for the agency. In many cases, more than one criterion was used. The red bars reflect the number of times a criterion was used but did not, in OIG's view, justify placement of the work with a DOE lab. The grey bars indicate the number of times a criterion was effective in justifying placement of work with a DOE lab.



OIG interviewed executives of a private organization with capabilities to conduct research in engineering and physical sciences and presented 18 categories of work that NRC has awarded to DOE laboratories based on "unique abilities" of the laboratories. The executives confidently

represented that their organization has the capability to perform the work in 12 of the 18 areas discussed. See Appendix B for a listing of the 12 areas. OIG notes that the executives' confidence does not prove that their organizations could fulfill NRC's specific needs. It does, however, indicate that other organizations warrant serious consideration as part of the decisionmaking process.

### Consideration of Commercial Sources Inadequately Documented

Most of the justifications reviewed by OIG lacked documentation that NRC considered capabilities of commercial firms. Specifically, during OIG's review of agreement files, auditors determined that 32 of the 37 files reviewed (86 percent) lacked documentation demonstrating why the agency selected a DOE laboratory over a commercial contractor. References to commercial organizations simply asserted, without analysis or other basis, that an entity other than a DOE lab would expend greater time and effort than the selected DOE lab. However, the files lacked detailed documentation to indicate that commercial sources were considered or explored as a possible option.

### **Causes of Inadequate Justifications**

Justifications were inadequate because (1) MD 11.7 guidance is unclear with regard to consideration of commercial sources, (2) office DOE lab agreement files typically do not include supporting background information and rationale, and (3) NRC does not require independent review of all justifications by someone outside the originating offices.

#### Unclear Guidance

Although MD 11.7 states that one of five criteria must be used to support choosing a DOE lab over a commercial source, the guidance does not specify what such support should include.

Last year, DC attempted to implement a sources-sought initiative to encourage consideration of commercial sources, but the effort has stalled. As part of this initiative, DC asked program offices to identify projects that would normally be awarded directly to DOE. DC's plan was to assist program offices in preparing a sources-sought announcement to post on FedBizOpps to help ensure that offices obtained information on commercial options before choosing a DOE lab to perform the work. While many of the program offices have not actively participated in identifying work to initiate sources-sought notices, three offices have recently posted sources-sought announcements.

### Justifications Lack Supporting Background Information and Rationale

MD 11.7 specifically assigns responsibility for preparing and reviewing the justifications to the office project managers and associate competition advocates. The project managers are responsible for developing and writing the justification, and gathering the necessary supporting background information. The associate competition advocate is responsible for reviewing the project manager's written justification to determine whether the facts and rationale presented by the project manager support the criteria for placement of work with DOE. Despite these requirements, offices typically do not include in their DOE lab agreement files supporting background information and rationale. Instead, in many cases there is simply a statement identifying one of the five criteria without any background information or rationale provided.

### Not All Justifications Are Reviewed Outside Originating Office

NRC does not require all lab agreement justifications to be reviewed outside of the originating office. Only agreements that are greater than \$1 million are reviewed by other NRC entities. As noted in the Background section of this report, the Procurement Oversight Committee and DC review all proposed agreements exceeding \$1 million as part of the Chairman Paper review process, but there is no similar, independent review of justifications for agreements below \$1 million.

Nearly 80 percent (146) of the 186 lab agreements active as of July 2009 did not receive an independent review prior to award. OIG contends that an independent review for all agreements, including those costing less than \$1 million, would help to ensure the appropriateness of placing work with a DOE lab.

### **NRC May Not Be Obtaining Best Value**

The majority of work assigned to DOE laboratories results from a non-competitive process, foregoing tools such as a sources-sought announcement to allow for a competitive bid process. Without a more thorough process that includes issuing a sources-sought announcement and independent review of justifications, NRC may be missing out on cost savings opportunities and may not be obtaining best value.

## **Recommendations**

OIG recommends that the Executive Director for Operations:

1. Revise MD 11.7 to require NRC offices to consider the use of commercial sources through market research (e.g., sources-sought announcements, procurement history, expert knowledge) as part of the decisionmaking process in choosing to use a lab, and fully document the results/conclusions in the agreement files.
2. Clarify MD 11.7 to emphasize the requirement to fully document the rationale and basis for using a DOE lab.
3. Revise MD 11.7 to require independent review of justifications by DC personnel to ensure that commercial sources were fully considered.
4. Issue interim guidance to address recommendations 1 - 3 pending revision of MD 11.7.
5. Direct DC to work with agency program and support offices to develop and implement milestones for more robust market research requirements prior to awarding DOE lab agreements.

## **C. Audit Coverage**

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To ensure the propriety of payments to DOE laboratories, NRC should receive the results of audits performed on the laboratories. To date, NRC has not received results of audits of DOE labs because the MOU between DOE and NRC does not address audit coverage. Consequently, NRC lacks assurance regarding the propriety of amounts paid for work performed by DOE labs.

The Cooperative Audit Strategy implemented by DOE OIG in 1992 supports DOE's Acquisition Guide that requires labs to maintain an internal audit function. DOE OIG, in turn, is required to provide guidance on the sufficiency of the design and operation of the internal audit activities. DOE OIG provides oversight of the DOE laboratories' internal audit activities.

OIG reviewed eight DOE OIG reports pertaining to DOE laboratories' internal control structure and its impact on cost allowability. The eight reports covered various periods during FYs 2004 through 2007 and revealed a total of \$11,149,319<sup>10</sup> in questioned and unresolved costs. Of these costs, \$2,719,875 has been recovered or resolved and \$8,429,444 remains outstanding. Some of these questioned and unresolved costs could be applicable to NRC agreements, which NRC could potentially recover.

NRC does not receive DOE lab audit results because the MOU between NRC and DOE, last updated in 1998, does not provide for this to occur. Without access to audit information, NRC cannot assure the propriety of amounts paid for work performed by the DOE laboratories. The lack of audit coverage limits NRC's ability to effectively monitor and make decisions regarding agency funding of work at DOE labs.

### **Recommendation**

OIG recommends that the Executive Director for Operations:

6. Initiate efforts with the Department of Energy to update the MOU to provide NRC with timely audit reports.

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<sup>10</sup> The portion of this total that pertains to NRC work is unclear based on the level of detail contained in the reports.

## **D. Delegation of Authority**

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As previously indicated, the NRC is authorized to use DOE research facilities and services to assist NRC in conducting its mission. Currently, the Office of International Programs (OIP) is one of the NRC offices that avails itself of this overall authority. OMB Circular A-123 states that management must clearly define and appropriately delegate areas of authority and responsibility. Currently, OIP is operating without a signed delegation of authority<sup>11</sup> to award and administer DOE lab agreements because MD 11.7 does not include OIP as having the authority. Consequently, the agency is not fully adhering to the delegation of authority requirements contained in MD 11.7, which creates the potential for ineffective management of certain agreements.

OIP has been awarding and managing DOE lab agreements for the past 15 years; prior to 2007, the office had the appropriate delegation of authority to do so based on wording in the then-current version of MD 11.7. That version of MD 11.7 generally delegated to all NRC office directors, regional administrators, and their designees the authority to enter into such agreements. However, in March 2007, NRC issued a revised MD 11.7, which did not provide for a general delegation of this function, but instead listed specific offices to which the function was delegated. OIP was not included in the list; however, the revised MD 11.7 states that other specific delegations may be issued at the discretion of the Chairman and the Executive Director for Operations.

OIP managers recognized this change, and in March 2008 contacted the previous Chairman's office to point out the omission and request that a delegation of authority be granted to them. A member of the then-Chairman's staff responded to OIP that the revised MD did not limit an office's authority if the office had already placed work with DOE labs and informed the office that a signed delegation of authority was not needed. Consequently, a delegation of authority was never signed.

OIG contends that to avoid confusion and achieve full compliance with the MD, a written delegation of authority is necessary. Without agency staff successfully following all agency guidance, the NRC cannot be assured that all offices are taking appropriate and consistent actions with regard to the administration of agreements. Potentially, this could lead to inconsistencies and confusion among staff.

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<sup>11</sup> A delegation of authority gives authority to offices to award, extend, modify, and terminate DOE laboratory agreements.

**Recommendation**

OIG recommends that the Chairman:

7. Issue a delegation of authority to OIP to award, extend, modify, and terminate DOE lab agreements.

#### **IV. AGENCY COMMENTS**

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At an exit conference on March 12, 2010, agency management stated their agreement with the findings and recommendations in this report. Management also provided information that has been incorporated into this report as appropriate.



## **V. CONSOLIDATED LIST OF RECOMMENDATIONS**

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OIG recommends that the Executive Director for Operations:

1. Revise MD 11.7 to require NRC offices to consider the use of commercial sources through market research (e.g., sources-sought announcements, procurement history, expert knowledge) as part of the decisionmaking process in choosing to use a lab, and fully document the results/conclusions in the agreement files.
2. Clarify MD 11.7 to emphasize the requirement to fully document the rationale and basis for using a DOE lab.
3. Revise MD 11.7 to require independent review of justifications by DC personnel to ensure that commercial sources were fully considered.
4. Issue interim guidance to address recommendations 1 through 3 pending revision of MD 11.7.
5. Direct DC to work with agency program and support offices to develop and implement milestones for more robust market research requirements prior to awarding DOE lab agreements.
6. Initiate efforts with the Department of Energy to update the MOU to provide NRC with timely audit reports.

OIG recommends that the Chairman:

7. Issue a delegation of authority to OIP to award, extend, modify, and terminate DOE lab agreements.

## SCOPE AND METHODOLOGY

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Auditors evaluated NRC's management of agreements with the DOE laboratories to determine whether NRC has established and implemented an effective system of internal control over the placement and monitoring of work with DOE.

The audit team reviewed the following documents and others to identify criteria for managing DOE lab agreements:

- Management Directive (MD) 11.7, *NRC Procedures for Placement and Monitoring of Work With the U.S. Department of Energy (DOE)*, March 2, 2007.
- The *Energy Reorganization Act of 1974*, NUREG-0980, Volume 1, No. 6.
- The 1998 Memorandum of Understanding between NRC and DOE governing NRC funded work performed at the DOE Laboratories.

Auditors conducted interviews with NRC staff and managers from DC, OIP, the Office of the General Counsel, the Office of Nuclear Security and Incident Response, the Office of Federal and State Materials and Environmental Management Programs, the Office of Nuclear Regulatory Research, the Office of New Reactors, the Office of Nuclear Material Safety and Safeguards, and the Office of Nuclear Reactor Regulation. Auditors also interviewed the DOE Office of the Assistant Inspector General for Audit Services to determine audit coverage of DOE laboratories.

Auditors reviewed a random sample of agency agreement files representing 20 percent of active agreements as of July 13, 2009, for compliance with applicable requirements.

This audit did not cover the closeout of DOE lab agreements; this area will be addressed in an audit planned for initiation during FY 2010.

This work was conducted from March 2009 through December 2009 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. The work was conducted at NRC headquarters in Rockville, MD, by Steven Zane, Team Leader; Kathleen Stetson, Audit Manager; Kevin Nietmann, Technical Advisor; Andrea Ferkile, Analyst; and Jason Brodsky, Summer Intern.

**SOURCE JUSTIFICATION ANALYSIS**

OIG audit team members interviewed executives of an organization that appeared to have the capability to perform work similar to that reviewed in the lab agreement justifications for non-competitive work awards to DOE laboratories described in the "Inadequate Justifications" section of this audit report. OIG reviewed 18 different types of work with the executives. The executives had responsibility for those divisions of their organization that would perform the work disciplines reviewed. OIG asked them if they felt their organization had the facilities, experience, and expertise to perform the work. OIG found that the executives expressed confidence that they could perform the work successfully in 12 of the 18 work areas. The 12 work areas and the executives' comments are listed below.

<b>Work Area</b>	<b>Executives' Comments</b>
Examination of nozzles and J groove welds (destructive and nondestructive examination (NDE)) of salvaged reactor vessel head sections to better characterize cracking.	Have broad NDE expertise and have done pre- and in-service reactor pressure vessel inspection for critical welds.
Time Domain Soil-Structure-Interaction Modeling.	Have done such work for a private spent fuel storage facility and NRC.
Evaluation of severe accident mitigation effectiveness.	Have technical expertise to do this work.
Probabilistic Risk Assessment (PRA), dose, and risk calculations for radiation from low level waste.	Have done lots of PRA dose calculation work.
Survey of state of the art technology in the instrumentation and control (I&C) field.	Have done analog and digital work in the I&C field.
Validate residual weld stress models for stress corrosion cracking flaw evaluation in pressurizer nozzle dissimilar metal butt welds.	This was an area of strength and they could do this kind of work.
Input Equipment Performance and Information Exchange data into the Reactor Operating Experience Database (RxOpED) and maintain the RxOpED.	Have a division that works on databases and that they could not only do the work, but probably improve the input and output code.

Thermal and structural analysis of spent fuel storage (SFS) and transportation casks using COBRA SFS code.	A "strong yes."
Provide technical support for NRC to advise the Department of Transportation on international transportation of radioactive materials.	Have done lots of calculations for radioactive material transport, domestic and international.
Technical support of new reactor design certification.	Yes, they could do this work.
Maintain Nuclear Power Plant effluent database per reporting requirements in Regulatory Guide 1.21.	Could do this database work and also have the ability to do effluent plume modeling.
Develop annual report to Congress on statistically adverse trends.	Yes, could do this work.