



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

# Audit Report

Management Controls Over  
Subcontract Administration by  
the National Renewable Energy  
Laboratory



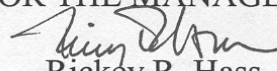
## Department of Energy

Washington, DC 20585

March 19, 2004

MEMORANDUM FOR THE MANAGER, GOLDEN FIELD OFFICE

FROM:

  
Rickey R. Hass, Director  
Science, Energy, Technology, and Financial Audits  
Office of Audit Services  
Office of Inspector General

SUBJECT:

INFORMATION: Audit Report on "Management Controls Over Subcontract Administration by the National Renewable Energy Laboratory"

### BACKGROUND

The National Renewable Energy Laboratory (NREL) is the primary contributor to the Department of Energy's Energy Efficiency and Renewable Energy mission. This program emphasizes the advancement and adoption of renewable energy technologies and practices and seeks to decrease the nation's dependence on foreign energy sources. The current NREL contract, awarded in Fiscal Year (FY) 1998, is performance based and provides certain flexibilities in managing and operating the laboratory. NREL funding for FY 2002 totaled \$292 million, with about \$93.8 million devoted to subcontracting.

Since the early 1990's, the Department has taken steps to improve its major contractors' procurement systems. However, as we observed in our recent report on *University of California's Costs Claimed and Related Internal Controls for Operation of Los Alamos National Laboratory* (DOE/IG-0596, April 16, 2003), problems relating to subcontract administration continue to surface at the Department's management contractors. Based on the extent and value of subcontracting, the Office of Inspector General initiated this audit to determine whether NREL was procuring goods and services in accordance with Department policies and best business practices.

### RESULTS OF AUDIT

NREL had not always effectively managed aspects of its subcontract procurement cycle. Specifically, we observed that:

- For 8 of the 24 contracts we reviewed, subcontractor acquired property with an original acquisition value of about \$1 million could not be located;
- Experimental property fabricated by subcontractors valued at about \$15 million had not been included in inventory and was not properly safeguarded; and,



- NREL had not de-obligated as much as \$3 million of unexpended funds that may be available or recovered at least \$2.9 million in property associated with completed or expired contracts.

Problems with management of the Laboratory's procurement cycle occurred because NREL had not always adhered to property management requirements or best business practices. Additionally, the Golden Field Office had not developed focused performance measures for contract closeout. As a result, taxpayer provided property purchased or fabricated by subcontractors may have been at risk of loss, diversion or obsolescence because it was not adequately controlled or recovered in a timely manner. The Government may also have been deprived of the opportunity to use as much as \$3 million in unexpended funds to satisfy budgetary shortfalls in critical mission areas.

While the Golden Field Office and NREL have taken some actions such as increasing the number of staff to work on contracts awaiting closeout and are seeking to increase the use of accelerated closeout procedures, additional action is necessary to resolve the substantial closeout backlog. We made several recommendations intended to help the Golden Field Office improve subcontract administration at the Laboratory.

This audit is one in a series on subcontract administration by management contractors. We recently issued a report on *Management Controls over Subcontract Administration at Argonne National Laboratory* (OAS-M-04-01, March 2004). Additionally, the OIG is conducting audit work at a number of other Departmental sites.

#### MANAGEMENT REACTION

Management generally concurred with our recommendations, but disagreed with our facts and conclusions in areas such as the number of contracts awaiting closeout, accountability for certain property, and funds and property available for recovery. While we made certain technical changes to our report, we believe that our basic premise remains valid – that a number of opportunities exist to improve subcontract administration at NREL. Management's comments and our response are more fully discussed in the report. Management's verbatim comments are included in Appendix 3.

Attachment

cc: Assistant Secretary for Energy Efficiency and Renewable Energy  
Director, Office of Procurement and Assistance Management

# MANAGEMENT CONTROLS OVER SUBCONTRACT ADMINISTRATION BY THE NATIONAL RENEWABLE ENERGY LABORATORY

---

## TABLE OF CONTENTS

### **Subcontract Administration**

Details of Finding ..... 1

Recommendations ..... 3

Comments ..... 4

### **Appendices**

1. Objective, Scope, and Methodology ..... 6

2. Prior Reports ..... 8

3. Management Comments ..... 10

# SUBCONTRACT ADMINISTRATION

---

## Procurement Cycle Management

The National Renewable Energy Laboratory (NREL) did not always adequately protect Government property in the hands of its subcontractors, and did not ensure that the Government's financial position was protected by closing out subcontracts in a timely manner.

### Property Accountability

Although required by Department of Energy Acquisition Regulations, NREL did not track the location of approximately \$15 million of experimental and other property that had been purchased or fabricated by its subcontractors. Of this amount, approximately \$8.3 million was being used on active contracts, while the remainder was allocated to completed or expired tasks. In one example, we observed that NREL had not included in the inventory a major item of experimental equipment valued at approximately \$990,000. In another example, one subcontractor told us that it had held experimental wind turbines valued at \$151,000 whose fabrication had been completed at least 6 years earlier on a contract that has since expired.

Even when included in property management records, we observed that NREL did not periodically verify the location or condition of subcontractor held property. Despite repeated attempts, we were unable to locate or verify the existence of Government provided property for 8 of 24 subcontracts we reviewed. According to NREL property records, these subcontractors held a total of about \$1 million in Government property. Five subcontractors we contacted that held property valued at \$881,000 would not verify their holdings, two subcontractors with property valued at \$33,000 could not be reached and one subcontractor told us that it could not locate equipment valued at over \$42,000. Although we did not validate its assertion, NREL officials told us that subsequent to our audit and after renewed efforts, they were able to obtain verification of the existence of potentially missing property from subcontractors.

### Subcontract Closeout

Our testing also revealed that NREL had not acted in a timely manner to reclaim excess funds or Government property associated with completed contracts. As of November 2003, NREL had 635 subcontracts, with as much as \$3 million that could potentially be de-obligated, had it taken timely actions to closeout the contracts. Additionally, approximately \$2.9 million in Government provided or subcontractor fabricated property associated with completed or expired

---

contracts had not been recovered. Despite recent efforts to decrease backlogs, since Fiscal Year (FY) 2000, NREL's backlog of subcontracts requiring closeout had grown by over 25 percent. Additionally, 10 subcontracts had not been closed out after 15 or more years. NREL officials told us that it had satisfied its performance measure related to contract closeout in recent years; however, we concluded that it had done so by focusing its efforts primarily on fixed price or other contracts not requiring significant effort.

## **Property and Performance Management**

Issues with management of the procurement cycle occurred because NREL did not follow Departmental regulations or best practices related to property management. The Golden Field Office (Golden) also had not established performance measures focused on the timely closeout of contracts, and the recovery of excess funds and property. For example, NREL:

- Incorrectly applied accounting capitalization requirements instead of inventorying experimental property as required by the Department's Property Management Regulations;
- Did not ensure that subcontractors submitted annual inventories and did not perform required physical inventories of subcontractor held property; and,
- Did not always coordinate information related to the acquisition and disposition of property by subcontractors.

According to a Golden official, problems in identifying, tracking and controlling personal property in the possession of subcontractors is a long-standing issue and was identified in a Contractor Personal Property System Review in 1994. In 1999, Golden closed this finding based on completion of NREL's corrective action plan. However, Golden did not verify that NREL had actually implemented the corrective actions.

Additionally, we found that although Golden had established a performance measure to monitor progress in closing completed subcontracts, the measure required only that NREL closeout 600 contracts and did not address timeliness. As a result, NREL closed out those awards that took the least amount of time and did not consider items such as expediting contracts that had large amounts of unexpended funds that could be de-obligated or perishable property that

---

could be recovered. As evidenced by its growing backlog, the measure was not effective in reducing the overall number of contracts requiring closeout. During discussions related to the status of closeout efforts, an NREL official told us that the laboratory is developing a plan to reduce the backlog.

## **Maximizing Returns**

Inefficiencies in the management of the NREL procurement cycle may have left valuable property vulnerable to loss or diversion, and deprived the Government of the benefit of funds and property valued at nearly \$22 million. Without an accurate and effective property control system, NREL may have lost control of Government property that, while devalued due to use or the passage of time, could have been reclaimed and put to other uses. Absent prompt action, perishable items of equipment such as computers or other technology related items are subject to obsolescence. The lack of a prompt contract closeout function has also had other adverse budgetary impacts. For example, as much as \$3 million in potentially excess funds have not been reclaimed and used to address budgetary shortfalls or complete high priority projects. Furthermore, the lack of timely closeout did not permit NREL to promptly identify a \$1 million obligation to a subcontractor that resulted in FY 2004 budget problems.

## **RECOMMENDATIONS**

We recommend that the Manager of the Golden Field Office:

1. Include controllable Government-owned experimental equipment procured or fabricated by subcontractors in the property management system;
2. Ensure that subcontractors track controllable Government-owned property, that periodic inventories of such property are performed, and that results are reconciled with NREL property records;
3. Direct NREL to coordinate procurement and property management functions to identify controllable Government-owned property purchased by or for subcontractors;
4. Verify that corrective actions have been taken by NREL before closing out findings;

- 
5. Develop performance measures for NREL focused on the timely completion of subcontract closeouts and safeguarding controllable Government property held by subcontractors; and,
  6. Complete development of and implement plans to decrease the NREL backlog of subcontracts awaiting closeout.

## **MANAGEMENT REACTION**

The Manager of the Golden Field Office concurred with all of the report's recommendations and agreed to implement corrective actions. The Manager however, disagreed with certain data and conclusions, and requested that we delete certain statements in the report. For a variety of reasons, management believed that:

- The unpaid balance potentially available for de-obligation amounted only to about \$425,000 using Federal Acquisition Regulation criteria for contract closeout;
- NREL did not focus its closeout efforts on fixed price contracts and other contracts that did not require significant effort, and had closed out a significant number of cost-type contracts;
- References to \$14.6 million of experimental property being at risk should be deleted from the report because there was no expectation of residual value for such property and much of the property is not easily subject to diversion or substantially at risk; and,
- Expenditures of \$1 million associated with the closeout of a subcontract had not caused budget problems.

## **AUDITOR COMMENTS**

Management's proposed actions are generally responsive to our recommendations. While we have made a number of technical modifications to the report, we do not concur with management's suggestions that we delete or significantly modify certain statements in the report. For example, although we recognize that NREL is not subject to them, at the urging of management we used the FAR as a benchmark for calculating the amount of funds potentially available for de-obligation. Based on this standard, we reduced our estimate of available funds to as much as \$3 million attributable to 635 subcontracts that exceeded FAR contract closeout guidelines.



---

Regarding our conclusion that NREL had focused on closing out fixed-price contracts, we reached that conclusion based on our review of available contract closeout data.

We also disagree that references to property accountability problems should be removed from the report. The observed weaknesses demonstrate that NREL, as required by its contract, needs to comply with the Department's Property Management Regulations regarding control of subcontractor held property. While we acknowledge that subcontractors were eventually able to verify items that could not be located during the audit, significant time and effort was required to obtain subcontractor representations because the items were not routinely inventoried or physically verified. We also continue to believe that various types of property, including experimental items, may have residual value if recovered in a timely manner. For example, one subcontract continued to use equipment on subsequent non-Government funded research. In addition, wind turbines fabricated under one subcontract are still in use in the field. We continue to believe that some property such as computer equipment was at risk of loss or diversion, and that the lack of strong inventory controls increases the risk that property will not be reclaimed at closeout and put to other uses.

The information regarding the \$1 million obligation affecting NREL's budget was provided by the Acting Program Manager of the Freedom Car Program during a meeting with the Energy Efficiency and Renewable Energy Office Deputy Assistant Secretary for Operations. The Acting Program Manager disagreed with NREL's contention that no budget problems resulted from the \$1 million owed to a subcontractor. He explained that this item was not included in the FY 2004 budget and has created a problem.

In spite of management's assertion in its comments that we deemed performance to be acceptable in nine procurement related areas, we made no such determination. Rather, we decided to focus our attention on areas that we believed had the highest control risk. The purpose of our audit was not to express an opinion regarding performance in those areas and we did not render such an opinion. As specifically noted in Appendix I, our review was limited and would not necessarily disclose all internal control deficiencies that may have existed at the time of our audit.

## Appendix 1

---

### OBJECTIVE

The objective of the audit was to determine whether the National Renewable Energy Laboratory (NREL) was procuring goods and services in accordance with Department policies and best business practices.

### SCOPE

The audit was performed from May to November 2003 at the NREL located in Golden, CO. Additional audit work was performed at the Department's Golden Field Office (Golden), and at Headquarters in Washington, D.C. The scope of the audit included a review of subcontracts that were in various stages of the procurement cycle, e.g. active, completed, and closed.

### METHODOLOGY

To accomplish our objective, we:

- Reviewed laws, regulations, contractual requirements, as well as policies and procedures relevant to NREL's subcontracting, property management, and subcontract closeout activities;
- Reviewed NREL's annual plan, related performance measures, and Golden's evaluations of subcontractor performance;
- Selected a judgmental sample of 40 active subcontracts and conducted a limited review of related subcontract files to determine whether documentation existed to support NREL's subcontract award procedures; whether work performed and costs incurred by subcontractors were monitored; and how and/or whether NREL controlled and tracked Government property;
- Selected an additional judgmental sample of 10 completed subcontracts, and 10 closed subcontracts to determine whether closeout procedures were followed and if closeout activities were timely;
- Reviewed 43 subcontracts to determine whether Government-furnished property is controlled and accounted for at the subcontract level, and attempted to contact the subcontractors to request confirmation of all property items in their possession;

## Appendix 1 (continued)

---

- Interviewed NREL management and personnel from various laboratory departments;
- Interviewed Departmental officials from Headquarters and Golden; and,
- Used Federal Acquisition Regulation criteria and historical data provided by NREL to calculate potential amount of de-obligations.

The audit was conducted in accordance with generally accepted Government auditing standards for performance audits and included tests of internal controls and compliance with laws and regulations to the extent necessary to satisfy the audit objective. Accordingly, we assessed internal controls with regard to procurement administration and the management of Government property. Because our review was limited, it would not necessarily disclose all internal control deficiencies that may have existed at the time of our audit. We only used computer generated data to select our samples, therefore, we did not test for data reliability.

We held an exit conference with management on March 11, 2004.

### PRIOR REPORTS

- *University of California's Costs Claimed and Related Internal Controls for Operation of Los Alamos National Laboratory* (DOE/IG-0596, April 2003). The audit found internal control weaknesses in the Los Alamos National Laboratory (Los Alamos) audit function, its financial system reconciliation, payroll and travel approval processes, financial management personnel turnover and financial system review and approval. Further, the audit identified a significant backlog in the completion of required audits of laboratory contracts. The report included recommendations to require the University to realign its audit function, to take action to review and approve the Los Alamos financial systems and to establish as a project the overhaul of Los Alamos financial systems.
- *Management Controls Over Subcontract Administration by the Argonne National Laboratory* (OAS-M-04-01), March 2004). The audit disclosed that Argonne had not always ensured adequate competition when procuring goods and services, awarded contracts to sources that lacked necessary credentials or experience that would justify sole source selections, and did not adequately protect Government property in the hands of subcontractors. As a result, the Department lacked assurance that it received the lowest price or highest quality goods and services and that qualified vendors had access to Federally-funded contracts. Also, taxpayer-provided property purchased by subcontractors may have been at risk of loss or diversion.
- *Special Inquiry: Operations at Los Alamos National Laboratory* (DOE/IG-0584, January 2003). The inquiry disclosed a series of actions by Los Alamos officials that had the effect of obscuring serious property and procurement management problems and weakened or overrode relevant internal controls. Specifically, there was inadequate or untimely analysis of, and inquiry into, property loss or theft and security issues; a lack of personal accountability for property; a substantial degree of dysfunction in the Laboratory's communication and assignment of responsibilities for the handling of property loss and theft concerns; and, inadequate controls over procurement and property systems. The report also noted that the National Nuclear Security Administration had completed an assessment of the Laboratory's "Personal Property Management" and "Procurement Management," in December 2002, and rated Los Alamos as "excellent" in both categories. The facts disclosed during the inquiry suggested that the Department's process for arriving at such ratings warranted review by appropriate Department officials.
- *Special Report on Management Challenges at the Department of Energy* (DOE/IG-0580, December 2002). Based on ongoing work at Los Alamos, the Office of Inspector General (OIG) observed a substantial degree of dysfunction in the Laboratory's

## Appendix 2 (continued)

---

handling of property loss and theft. The OIG and other reviewers identified significant weaknesses in internal controls over property and the use of purchase cards.


- *Audit Report on Procurement Administration at Brookhaven National Laboratory* (CR-B-02-02, August 2002). Brookhaven did not always properly administer procurements. Specifically, Brookhaven did not always provide the Department with required advance notice for certain procurement actions; prepare adequate justification for non-competitive procurements or exemptions from the Buy American Act; and accurately maintain procurement data on small business contracting and small purchases.



**Department of Energy**  
Washington, DC 20585

January 21, 2004

MEMORANDUM FOR RICKEY R. HASS  
DIRECTOR, SCIENCE, ENERGY, TECHNOLOGY,  
AND FINANCIAL AUDITS

FROM: JOHN H. KERSTEN   
MANAGER

SUBJECT: Management Comments on the 12/23/2003 Draft Audit  
Report: "Management Controls Over Subcontract  
Administration by the National Renewable Energy  
Laboratory"

The Golden Field Office (Golden) appreciates the opportunity to review the Inspector General's (IG) draft audit report, "Management Controls Over Subcontract Administration by the National Renewable Energy Laboratory." We understand that the objective of the audit was to determine whether the National Renewable Energy Laboratory (NREL) is procuring goods and services in accordance with Departmental policies and prudent business practices.

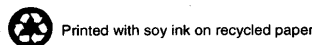
We are pleased that, following your review, you found acceptable performance in nine of the eleven areas. These areas were: competition, cost price analysis, pre-negotiation memorandums, pre-award audits, allowability of costs, ES&H, security, adequacy of staff, and fraud.

We concur with the recommendations, with minor wording changes, and acknowledge the need to clearly define performance expectations in the areas of subcontract closeouts and tracking subcontractor property.

However, the data presented and resultant conclusions in the report are incorrect. We highlight several of these issues in this memorandum and are providing specifics in the attachment and request this information be considered in the final report.

Subcontract Closeout

The IG assumed that the required closeout date for NREL subcontracts is the day after the period of performance. This is an incorrect assumption; it should be the end of the period of performance plus up to 36 months, per the Federal Acquisition Regulations (FAR). Therefore, the 1,147 subcontracts and \$9.6 million unexpended amounts referenced throughout the report as being available



for de-obligation is a mischaracterization of the data. If the FAR criteria are used, the backlog of NREL subcontracts is reduced to 454 with an unpaid amount of \$2.1 million. Of this \$2.1 million, \$400,000 is an invoice in dispute.

Of the remaining \$1.7 million, the conclusion that the unpaid amount is available for de-obligation is incorrect. The unpaid amount does not reflect reductions resulting from outstanding unpaid invoices, adjustments as a result of indirect rate audits, subcontract holdbacks being paid, paying final invoices, and funding under expired appropriations. Typically, as a result of final indirect audits and invoicing, roughly 25% of the unpaid balance remains after closeout of a subcontract. This is the unpaid balance that we concur could potentially be available for de-obligation. Using the figures above, the unpaid balance potentially available for de-obligation that should be referenced throughout the report is \$425,000, not the "\$9.6 million" and "approximately \$10 million" listed.

### Property Accountability

The auditor attempted to verify location of subcontractor property. Subsequent to the auditor's field work and testing, the NREL subcontract administrators contacted the subcontractors to obtain verification of the property that the auditor was unable to obtain. Verification of this property has been obtained and can be found in the attachment. Therefore, we request any statements regarding the inability to locate or verify this property be deleted from the report.

### Maximizing Returns

The statements that the Government was deprived of the benefit of funds and property valued at over \$24.6 million at acquisition and that valuable Government property was vulnerable to loss or diversion are incorrect conclusions and should be deleted in their entirety. Of this amount, \$10 million should be changed to \$425,000 per previous discussion of amounts potentially available for de-obligation. The majority of the remaining \$14.6 million is experimental equipment and is not considered sensitive equipment easily subject to diversion or substantially at risk. There is no expectation of residual value of this equipment after the experiment. Thus, the conclusions that valuable Government property was vulnerable to loss or diversion and the Government was deprived of the benefits of these funds are incorrect and should be deleted in their entirety.

Finally, the statement that the lack of timely closeout did not permit NREL to promptly identify a \$1 million obligation to a subcontractor that resulted in FY 2004 budget problems is factually inaccurate; we dispute this statement in its entirety. There are no FY 2004 budget issues regarding this subject as this \$1 million is an estimate for final indirect rate billings for lower-tier subcontracts for the Hybrid Vehicle program for which funds are obligated and available on the NREL contract to absorb/cover.

### Recommendations

Golden requests clarifications in the wording to recommendation numbers 1, 2, 3, 5, and 6 as shown in *italics* below. Specific comments related to the recommendations follow:

1. Include *controllable Government-owned* experimental equipment procured or fabricated by subcontractors in the property management system;

Concur. Golden will direct NREL to include controllable Government-owned experimental equipment procured or fabricated by subcontractors in the Property Management System.

2. Ensure that *NREL requires its subcontractors to track controllable Government-owned* property, that periodic inventories of *such property* are performed, and that results are reconciled with NREL property records;

Concur. Golden will ensure that NREL will require its subcontractors to track controllable Government-owned property, that periodic inventories of such property will be performed, and that results are reconciled with NREL property records.

3. Direct NREL to coordinate procurement and property management functions to identify *controllable Government-owned* property purchased by or for its subcontractors;

Concur. Golden will ensure NREL coordinates its procurement and property management functions to identify controllable Government-owned property purchased by or for its subcontractors.

4. Verify that corrective actions have been taken by NREL before closing out findings;

Concur. We are aware of the requirements contained in DOE Order 2300.1B, *Audit Resolution and Follow-up*, which requires an audit follow-up assessment or review to ensure corrective actions have been completed before an audit recommendation is closed and we are committed to following these requirements.

5. Develop performance measures for NREL focused on the timely completion of subcontract close-outs *based upon FAR standards* and safeguarding *controllable* Government property held by subcontractors;

Concur. The Contracting Officer will ensure that performance measures are negotiated that focus on the timely completion of subcontract close-outs based



## Appendix 3 (continued)

---

4

upon FAR standards and safeguarding controllable Government property held by subcontractors. The performance measure will help to ensure that NREL is in compliance with the FAR standards while emphasizing the importance of cost type contract closeouts.

6. Complete development and implement plan to decrease NREL's backlog of *subcontracts* awaiting closeout *based upon FAR standards*.

Concur. Golden will ensure that NREL completes the development and implements a plan to decrease NREL's backlog of subcontracts awaiting closeout. The plan will help to ensure that NREL is in compliance with the FAR standards while emphasizing the importance of cost type contract closeouts.

With regard to your final report, we respectfully request that you include these written comments.

Attachment

cc: Dreda Perry, Audit Liaison  
John Sullivan, Deputy Assistant Secretary for Business Administration  
Richard Moorer, Deputy Assistant Secretary for Technology Development

**CUSTOMER RESPONSE FORM**

The Office of Inspector General has a continuing interest in improving the usefulness of its products. We wish to make our reports as responsive as possible to our customers' requirements, and, therefore, ask that you consider sharing your thoughts with us. On the back of this form, you may suggest improvements to enhance the effectiveness of future reports. Please include answers to the following questions if they are applicable to you:

1. What additional background information about the selection, scheduling, scope, or procedures of the audit would have been helpful to the reader in understanding this report?
2. What additional information related to findings and recommendations could have been included in this report to assist management in implementing corrective actions?
3. What format, stylistic, or organizational changes might have made this report's overall message more clear to the reader?
4. What additional actions could the Office of Inspector General have taken on the issues discussed in this report which would have been helpful?

Please include your name and telephone number so that we may contact you should we have any questions about your comments.

Name \_\_\_\_\_ Date \_\_\_\_\_

Telephone \_\_\_\_\_ Organization \_\_\_\_\_

When you have completed this form, you may telefax it to the Office of Inspector General at (202) 586-0948, or you may mail it to:

Office of Inspector General (IG-1)  
Department of Energy  
Washington, DC 20585

ATTN: Customer Relations

If you wish to discuss this report or your comments with a staff member of the Office of Inspector General, please contact Wilma Slaughter at (202) 586-1924.

The Office of Inspector General wants to make the distribution of its reports as customer friendly and cost effective as possible. Therefore, this report will be available electronically through the Internet at the following address:

U.S. Department of Energy, Office of Inspector General, Home Page  
<http://www.ig.doe.gov>

Your comments would be appreciated and can be provided on the Customer Response Form attached to the report.