



U.S. Department of Energy  
Office of Inspector General  
Office of Audits and Inspections

# Audit Report

## Lawrence Livermore National Laboratory's Use of Time and Materials Subcontracts

OAS-M-13-06

August 2013



**Department of Energy**  
Washington, DC 20585

August 8, 2013

MEMORANDUM FOR THE MANAGER, LIVERMORE FIELD OFFICE

A handwritten signature in cursive script that reads "George W. Collard".

FROM: George W. Collard  
Assistant Inspector General  
for Audits  
Office of Inspector General

SUBJECT: INFORMATION: Audit Report on "Lawrence Livermore National Laboratory's Use of Time and Materials Subcontracts"

BACKGROUND

The mission of Lawrence Livermore National Laboratory (Livermore) is to strengthen the United States' security through development and application of science and technology to enhance the Nation's defense, reduce the global threat from terrorism and weapons of mass destruction, and respond to scientific issues of national importance. Livermore is operated by Lawrence Livermore National Security, LLC, for the Department of Energy's (Department) National Nuclear Security Administration (NNSA).

In accomplishing its mission, Livermore uses a variety of subcontracting types, including time and materials subcontracts. As of January 1, 2010, the total contract value of Livermore's subcontracts greater than \$250,000 was approximately \$1.7 billion, of which about \$655 million were time and materials subcontracts. Time and materials subcontracts are contracting instruments based on direct labor hours at fixed hourly rates (comprised of wages, overhead, general and administrative expenses, and profit) and actual costs for materials. According to the Department's Acquisition Guide, one of the constraints associated with time and materials subcontracts is that there is no profit incentive for subcontractors to control costs.

Given the inherent risk associated with time and materials subcontracts and the extent to which these contracts are used at Livermore, we initiated this audit to determine if Livermore procured services through time and materials subcontracts in the most effective and efficient manner.

RESULTS OF AUDIT

We found that Livermore had not always procured services through time and materials subcontracts in the most effective and efficient manner. Our testing revealed that some sole

source<sup>1</sup> justifications were not fully supported as required by Federal regulations and internal policies and procedures. Specifically, we found that Livermore had not fully justified sole source selection for 6 of 7 subcontracts included in our judgmental sample of 12 time and materials subcontracts. We also found that in two of the sole source subcontracts, Livermore did not perform an adequate price analysis. As a consequence, we could not determine and Livermore did not demonstrate that the decision to award these particular time and materials subcontracts was in the best interest of NNSA.

### Sole Source Awards

Livermore awarded some time and materials subcontracts without fully justifying its sole source selection of subcontractors. Specifically, our testing revealed that seven (58 percent) of the actions we reviewed were awarded on a sole source basis. We noted that six of the sole source awards were not adequately justified, including the subcontract rates established for some cases. Livermore's procurement procedures for sole source awards require adequate justification, such as market research, and a price analysis to ensure that services are obtained at fair and reasonable prices. Livermore's contract also incorporates and requires compliance with certain Federal regulations regarding the development and maintenance of written documentation to support that purchasing transactions and prices paid are in the best interest of the Government. However, our review of the documentation for these subcontracts revealed that six lacked adequate market research and two of the six also lacked an adequate price analysis.

Livermore did not perform either market research or an adequate price analysis to support a subcontract award with an estimated total cost of \$2.7 million for a Chief of Staff position. According to Livermore officials, they awarded the subcontract on a sole source basis because they preferred the subcontractor's experience, gained through a sequence of prior Livermore subcontracts and prior Department employment. Livermore also stated that there was no other source for the Chief of Staff position. Livermore's sole source justification lacked market research documenting that there were no other sources with similar qualifications available to fill the Chief of Staff position.

We also found that Livermore had not performed an adequate price analysis of the Chief of Staff subcontract's rates. According to our calculations, the subcontractor's Fiscal Year (FY) 2011 fixed hourly rate of \$310 per hour was 51 percent higher than the average base hourly rate with fringe benefits of similar Livermore Chiefs of Staff. The statement of work referred to project assistance services of a Chief of Staff; however, Livermore compared the subcontractor's rate to program directors, subject matter experts and consultants rather than other Chiefs of Staff who were Livermore employees. We noted that the price comparison was questionable because the job descriptions used in the comparison exceeded the requirements identified in the subcontract statement of work. For example, the subcontract statement of work described duties for project level management whereas the consultant and program director's work descriptions focused on broader program oversight. By using the consultant and program director descriptions, the hourly rates were higher than a project manager. Further, Livermore stated in its original sole

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<sup>1</sup>"Sole source" refers to a subcontract for the purchase of services that is entered into after soliciting and negotiating with only one source.

source justification that there were no other sources available for comparison because the subcontractor had a unique capability and was a subject matter expert in his field. However, there was no documentation to support that this individual was a recognized expert in the industry. In our view, due to the lack of competition and a sufficient price analysis, Livermore may have paid rates that were not in the best interest of NNSA. In fact, we determined that if Livermore had hired the Chief of Staff as an employee at a rate similar to the highest rate of another Livermore Chief of Staff, it could have saved about \$533,423.

Livermore did not agree with our comparison of subcontractor labor rates with Livermore employee rates for the potential savings because the decision to hire an employee or subcontract the work is an institutional decision often made by the program prior to procurement's preparation of the sole source justification or the market price analysis. We agree it is not exclusively procurement's responsibility to hire or subcontract work and it may not have access to human resource information. However, in our view, procurement should have access to all applicable information so it can provide the best analysis for management decisions to ensure that goods and services are obtained at fair and reasonable prices.

In another sole source subcontract, we found that Livermore did not perform an adequate price analysis. Specifically, Livermore did not adequately justify the labor rates for a construction subcontract because Livermore performed an inadequate price analysis. When Livermore initially analyzed the subcontract's non-trade labor rates, it did not acknowledge that some of the proposed rates were 17 to 75 percent higher than comparable subcontract rates. The lack of price reasonableness was eventually identified by management at Livermore's National Ignition Facility, who expressed concerns to Livermore procurement that the subcontract labor rates were not comparable to other construction subcontractors' rates. A subsequent analysis of craft labor rates by a Livermore cost/price analyst showed that the rates were 25 to 34 percent higher than comparable FY 2011 rates. When the Livermore contract administrator challenged the subcontractor's rates based on the updated analysis, the subcontractor agreed to decrease the labor rates by about 14 percent. While it is commendable that Livermore eventually took action to reduce the labor rates to a reasonable amount, we estimated that, had Livermore performed a more thorough price analysis and reached an agreement for the lower rates at the beginning of the most recent subcontract, it could have saved about \$390,739.

Livermore asserted that the original price analysis for the subcontract was appropriate and supported that the rates paid to the subcontractor were fair and reasonable. We consider this assertion to be inconsistent with the concerns subsequently raised by program officials and the fact that a subsequent analysis actually led to a significant decrease in the labor rates charged by the subcontractor.

Finally, we noted that neither Livermore's Performance Evaluation Plan nor its Contractor Assurance System contained performance measures that required Livermore to improve its rate of competitively awarded time and materials subcontracts. In discussions with the NNSA officials, we determined that implementing such measures could help Livermore achieve a better value for services obtained on behalf of NNSA.

This report is one in a series of reports that the Office of Inspector General has issued highlighting concerns with subcontracting by the Department's management and operating contractors. Most recently, our report *Concerns with Consulting Contract Administration at Various Department Sites* (DOE/IG-0889, June, 2013), identified serious concerns with the administration and management of agreements with a consulting contractor for advice and consultation provided to senior managers at four Department contractor-operated sites, not including Livermore. In fact, our testing revealed that the four facility contractors paid approximately \$450,000 to the consulting contractor even though they did not receive evidence that work performed under the agreements had been completed.

## RECOMMENDATIONS

The use of time and materials subcontracts helps Livermore fulfill its mission. To improve Livermore's procurement of services through this type of contracting instrument and ensure that the subcontracts are in NNSA's best interest, we recommend that the Manager, Livermore Field Office, direct the Field Office Contracting Officers to:

1. Ensure Livermore prepares adequate justifications for sole source subcontracts, including documentation of market research as appropriate, and that Livermore supports subcontract rates with adequate price analyses; and
2. Consider establishing a performance measure that requires Livermore to reduce the rate of non-competitive awards for time and materials subcontracts.

## MANAGEMENT REACTION

Management concurred with the report's recommendations and indicated that corrective actions would be initiated. Management's proposed corrective actions are responsive to our recommendations. We appreciate management's recognition that additional action is needed to mitigate potential risks and that corrective actions are underway. Management's comments are included in Attachment 2.

Attachment

cc: Deputy Secretary  
Acting Administrator, National Nuclear Security Administration  
Chief of Staff

## **OBJECTIVE, SCOPE AND METHODOLOGY**

### **OBJECTIVE**

The objective of this audit was to determine if Lawrence Livermore National Laboratory (Livermore) procured services through time and materials subcontracts in the most effective and efficient manner.

### **SCOPE**

This review was performed between July 2012 and July 2013, at Livermore and the Livermore Field Office, located in Livermore, California.

### **METHODOLOGY**

Our methodology aimed to identify subcontracts and associated subcontract modifications that were likely to represent time and materials subcontracts awarded to companies likely to perform services similar to what employees could provide at Livermore. To accomplish the audit objective, we:

- Identified a population of subcontract modifications dated between Fiscal Years 2008 through 2012, with a dollar amount between \$250,000 and \$750,000, and with two or more subcontract modifications. This resulted in 24 subcontracts, from which we judgmentally selected 12 for detailed testing and analysis. Because our selection was a judgmental sample, results and overall conclusions are limited to the items tested and cannot be projected to the entire subcontract population subject to audit.
- Compared subcontract labor costs to similar Livermore employee costs.
- Analyzed documentation contained in the sampled Livermore subcontract files.
- Reviewed Livermore procurement policies and procedures including its indirect cost distribution model.
- Held discussions with Department of Energy (Department) and Livermore officials regarding price analyses and sole source justifications.
- Interviewed subcontractor personnel regarding prior subcontract procedures and policy.

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 objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective. Accordingly, the audit included tests of controls and compliance with laws and regulations to the extent necessary to satisfy the objective. In particular, we assessed the implementation of the *GPRA Modernization Act of 2010*

and found that the Department had not established performance measures related to administration of time and materials subcontracts. Because our review was limited, it would not necessarily have disclosed all internal control deficiencies that may have existed at the time of our audit. We conducted an assessment of computer-processed data and determined that it was sufficiently reliable to satisfy the audit objective.

Management waived an exit conference.



Department of Energy  
National Nuclear Security Administration  
Washington, DC 20585



July 31, 2013

MEMORANDUM FOR GEORGE W. COLLARD  
ASSISTANT INSPECTOR GENERAL  
FOR AUDITS  
OFFICE OF INSPECTOR GENERAL

FROM: CYNTHIA A. LERSTEN  
ASSOCIATE ADMINISTRATOR  
FOR MANAGEMENT AND BUDGET

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SUBJECT: Comments on the Office of Inspector General Draft Report Titled  
*"Lawrence Livermore National Laboratory's Use of Time and  
Materials Subcontract"* (A12LL044/ 2012-01751)

Thank you for the opportunity to review the subject draft report. The report identifies two recommendations to help ensure the use of time and materials sub-contracts is effectively managed to support the needs of the NNSA enterprise.

NNSA appreciates the auditors' efforts and agrees with the report's recommendations. The attachment to this memorandum provides the specific actions and timelines for resolving each recommendation, as well as general comments for the IG's consideration to improve the clarity of the report. If you have any questions regarding this response, please contact Dean Childs, Director, Audit Coordination and Internal Affairs, at (301) 903-1341.

Attachment



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**National Nuclear Security Administration (NNSA)  
Response to Inspector General Draft Report Recommendations to the  
IG's Draft Report on Livermore's Use of Time and Materials Subcontracts**

**Recommendation 1:** Ensure Livermore prepares adequate justifications for sole source subcontracts, including documentation of market research as appropriate, and that Livermore supports subcontract rates with adequate price analyses.

***Management Response: Concur***

NNSA will require Livermore to strengthen its policies, procedures, and documentation packages and follow-up by performing self-assessments to ensure that the corrective actions are effective. In addition, with regard to the construction related sole source subcontract work referenced on page 3 of the report, Livermore is re-evaluating the rates and will determine if any adjustments are appropriate and feasible in consideration of the IG's observations. The contracting office will also review the costs identified by the IG under each of the subcontracts. The estimated completion date for these actions is June 30, 2014.

**Recommendation 2:** Consider establishing a performance measure that requires Livermore to reduce the rate of non-competitive awards for time and materials subcontracts.

***Management Response: Concur***

NNSA will evaluate and make a decision as to whether it is appropriate to establish a performance measure regarding the rate of non-competitive awards for time and materials subcontracts. The estimated completion date for this action is October 1, 2013.

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2. What additional information related to findings and recommendations could have been included in the 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 that would have been helpful?
5. Please include your name and telephone number so that we may contact you should we have any questions about your comments.

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