



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

Audit Report

Management of the Plutonium Finishing Plant Closure Project



OAS-RA-L-11-01

November 2010

Memorandum

DATE: November 10, 2010

Audit Report Number: OAS-RA-L-11-01

REPLY TO

ATTN OF: IG-34 (A10RA040)

SUBJECT: Report on "Management of the Plutonium Finishing Plant Closure Project"

TO: Manager, Richland Operations Office

INTRODUCTION AND OBJECTIVE

The Department of Energy's (Department) Richland Operations Office (Richland) awarded a contract, effective October 1, 2008, to CH2M HILL Plateau Remediation Company (CHPRC) to remediate the Hanford Site's Central Plateau. Part of the contract's scope includes completion of the Plutonium Finishing Plant (PFP) Closure Project – a major decontamination and demolition project of an industrial complex consisting of more than 60 buildings. CHPRC's contract included expectations to:

- Provide safe and compliant storage of special nuclear material at PFP until it has been removed from the PFP complex;
- Operate and maintain the PFP facilities and associated waste sites, structures, systems and equipment in a safe, compliant and energy-efficient manner;
- Maintain radiological and access control to ensure personnel safety;
- Remove special nuclear material from PFP and transport it to an assigned location;
- Demolish PFP complex facilities to slab-on-grade condition; and,
- Prepare, package, and disposition waste streams, as required.

CHPRC began work on the PFP Closure Project on October 1, 2008, and is scheduled to complete the work by the end of Fiscal Year (FY) 2013. According to its contract, CHPRC's planned cost for the PFP Closure Project is \$528 million for FYs 2009-2013, which includes fee and closure services costs. However, in April 2009, Richland provided \$330 million of the \$1.6 billion it received under the American Recovery and Reinvestment Act of 2009 (Recovery Act) to CHPRC to apply towards the PFP Closure Project for FYs 2009-2011. During the course of our review, CHPRC's baseline for the PFP Closure Project had a total project cost of approximately \$718 million, an increase of about \$189 million or 36 percent over the adjusted contract cost¹.

¹ Adjusted contract cost totaled \$528 million and was calculated using the FY 2009-2013 contract price of \$385 million and adding \$60.9 million in fee and \$82.8 million in Closure Services costs directly attributable to the PFP Closure Project.

The Department's goals for Recovery Act funds for the Office of Environmental Management (EM) are to accelerate cleanup, reduce life-cycle project costs, and provide jobs to stimulate the economy. We initiated this audit to determine the effectiveness of the Department's use of Recovery Act funding to achieve the Recovery Act goals and objectives at the Plutonium Finishing Plant Closure Project.

CONCLUSION AND OBSERVATIONS

While the Department met several of EM's Recovery Act goals, we identified some risks to maintaining the PFP Closure Project on schedule and within budget. Specifically, the Department met the goals of creating jobs and accurately tracking and reporting costs. However, we noted that as of September 30, 2010, the PFP Closure Project was behind schedule, despite receiving an additional \$330 million of Recovery Act funds in April 2009.

Recovery Act Goals Met

The Recovery Act goal of creating jobs was achieved. Specifically, Recovery Act funds were used to hire an additional 300 employees, beyond the 400 workers originally identified in CHPRC's contract to complete this work. The Department was able to accomplish this goal by obligating funds to the existing CHPRC contract and the PFP Closure Project in a very short period of time after the Recovery Act was implemented. Additionally, for the specific items we tested, the Recovery Act goals of accurately tracking and reporting costs were being met.

Schedule and Cost Concerns

However, we identified one area of concern that, absent improvements within the next 12 months, may result in the PFP Closure Project not being completed by 2013, as planned. Specifically, CHPRC is significantly behind schedule in decontaminating gloveboxes, a key activity on the critical path to completing the project on time. As of August 31, 2010, or nearly 2 years into its contract, CHPRC had decontaminated 88 of the 174 gloveboxes (51 percent), with only about 12 months left to decontaminate, remove, and ship the remaining 86 gloveboxes from PFP. Further, the PFP Closure Project was more than \$11 million behind schedule in its Recovery Act scope of work as September 30, 2010.

CHPRC's plans to ready the PFP complex for demolition rely heavily on decontamination of the majority of gloveboxes and hoods to low-level waste requirements, allowing for direct disposal at the Environmental Restoration Disposal Facility at the Hanford Site. This avoids the more costly, hazardous, and time consuming processes needed to size reduce the equipment, package it for disposal as transuranic waste, and transfer it for final disposition to the Waste Isolation Pilot Plant in New Mexico. If CHPRC is unable to attain its goal of 90 percent of the gloveboxes being disposed of at Hanford as low-level waste, the negative schedule and cost trends are at risk of continuing.

The Department stated that CHPRC is working towards bringing a size reduction station online as a mitigating action to alleviate schedule delays, hopefully in the first part of

FY 2011. This equipment will help cut up gloveboxes that cannot be decontaminated to low-level waste so that they can be packaged for offsite disposal. Additionally, CHPRC has asserted that it might be able to mitigate its schedule delays for decontaminating gloveboxes if it is successful in its plan to use a commercial inorganic-based gel in decontaminating gloveboxes to low-level waste limits. CHPRC planned to get approval to use the commercial inorganic-based gel by July 2010, but approval had not been received at the time we completed our review.

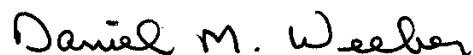
If CHPRC cannot decontaminate and remove all 174 gloveboxes and hoods at the PFP Closure Project by September 30, 2011, it will risk not being able to achieve slab-on-grade status for the entire PFP complex by September 30, 2013. This would adversely impact the ability to meet the goals of accelerating the work scope and reducing overall project costs. It would also adversely impact meeting the Hanford Site's key Recovery Act objective of contributing to life-cycle cost savings/avoidance of more than \$2 billion.

SUGGESTED ACTIONS

To ensure that necessary contingencies are in place to keep the project on track, the Department should make certain that alternative plans are expeditiously developed and implemented, as necessary, to mitigate the effects of any schedule delays at the PFP Closure Project.

No recommendations are being made in this report therefore a formal response is not required. However, in the near future we will be initiating an audit of the Department's management of the Plateau Remediation Contract, which will provide a more comprehensive review of the contract.

We appreciate the cooperation of your staff and the various Departmental elements that provided information or assistance.



Daniel M. Weeber, Director
Environment, Technology, Corporate
and Financial Audits Division
Office of Inspector General

Attachment

cc: Assistant Director, Office of Risk Management, CF-80
Team Leader, Office of Risk Management, CF-80
Audit Resolution Specialist, Office of Risk Management, CF-80
Audit Liaison, Office of Environmental Management, EM-4.1
Audit Liaison, Richland Operations Office

SCOPE AND METHODOLOGY

This review was performed between March 23, 2010, and September 22, 2010, at the Department of Energy's (Department) Richland Operations Office (Richland) in Richland, Washington. The scope of our audit included a review of Richland's Plutonium Finishing Plant (PFP) Closure Project. To accomplish the objective of this audit, we:

- Obtained and reviewed laws and regulations relevant to the American Reinvestment and Recovery Act of 2009 (Recovery Act);
- Obtained and reviewed the Department's Office of Management and Budget and Richland's implementing procedures concerning Recovery Act requirements;
- Reviewed findings from prior audits regarding Recovery Act activities;
- Reviewed the CH2M HILL Plateau Remediation Company contract with Richland;
- Held discussions with Department and contractor officials regarding Recovery Act activities at the PFP Closure Project; and,
- Performed transaction testing for PFP Closure Project Recovery Act transactions.

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 based for our findings and conclusions based on our audit objective. 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 also assessed performance measures in accordance with the *Government Performance and Results Act of 1993* and found that the Department had established performance measures related to the use of Recovery Act funds for environmental management projects. We did not rely upon computer processed data to accomplish our audit objective.

An exit conference was held on November 4, 2010.

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