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

Audit Report

Cost Transfers at the Department's Sodium Bearing Waste Treatment Facility Construction Project

OAS-M-13-03

August 2013

Department of Energy
Washington, DC 20585

August 8, 2013

MEMORANDUM FOR THE SENIOR ADVISOR FOR ENVIRONMENTAL MANAGEMENT

FROM: Rickey R. Hass
Deputy Inspector General
for Audits and Inspections
Office of Inspector General

SUBJECT: INFORMATION: Audit Report on "Cost Transfers at the Department's Sodium Bearing Waste Treatment Facility Construction Project"

BACKGROUND

In 2005, the Department of Energy (Department) awarded the Idaho Cleanup Project contract to CH2M ♦ WG Idaho, LLC (CWI) to remediate the Idaho National Laboratory. The Sodium Bearing Waste Treatment Facility construction project was included in the contract scope. The primary mission of this facility was to treat approximately 900,000 gallons of radioactive sodium bearing liquid waste at a Federal baseline construction cost of $461 million, which was approved in December 2006. This facility was constructed to treat the liquid waste for ultimate disposal at the Waste Isolation Pilot Plant and was also designed to treat high-level radioactive waste, referred to as calcine waste, at an unspecified future point in time. Due to significant cost escalation, the Department approved a revised Federal project baseline in January 2009, to a cost of $571 million and a completion date of August 2011.

Between April and November 2010, CWI made seven funding determinations, transferring $13.1 million to other non-project operational accounts from the $571 million approved project cost. In January 2011, the Department approved a revision to the project baseline that delayed project completion to December 2011, but did not change the project's estimated costs. As part of its approval of additional revisions to the project baseline, the Department required further review of the transfers by the Office of Environmental Management and the Department's Office of Acquisition and Project Management. Although the Office of Environmental Management agreed with the transfers, the Office of Acquisition and Project Management questioned the appropriateness of the transfers. Subsequently, the Department requested that the Office of Inspector General determine whether the transferred costs were direct project costs that should have remained with the project.

RESULTS OF AUDIT

We found that three of the seven cost transfers totaling $7.9 million represented direct costs of the project as defined by Cost Accounting Standards, CWI's normal charging practices, and the

Department's Financial Management Handbook. As such, we concluded that the costs should not have been transferred. Specifically, the three cost transfers that should have been classified as direct project costs included:

- $3.8 million for a waste transfer line and tie-in that was one of the technical and functional requirements for the facility.

- $4 million for mineralization testing, a design study required for permitting the treatment process. According to CWI policy, the Total Estimated Cost of an asset includes design studies such as the mineralization testing studies.

- $107,000 for portable bathrooms because the facilities were directly related to the facility construction and would not have been necessary without the project.

We found that four of the seven cost transfers, valued at $5.2 million, were for activities that were not direct project costs or had been appropriately shared pro rata with other projects in accordance with Department and CWI accounting and project management principles.

With respect to the three inappropriate cost transfers, we found that these costs were not appropriately charged to the project because CWI did not consider all pertinent facts. For example, CWI did not fully consider the fact that the previously mentioned mineralization testing study was required to gather information needed to scale the size of the facility, mitigate project risk and to collect data for environmental approvals – all elements that we concluded were essential to the construction of the facility. CWI had the costs reviewed by its Internal Audit and an external legal team; however, Internal Audit focused its review primarily on procedural and documentation issues and relied upon the opinion of the external legal team for determining the legality and appropriateness of the transfers. While the legal team concluded that the transfers did not violate applicable regulations and standards, those conclusions were based on a limited set of data. In particular, CWI concluded that the waste transfer line operability was not part of the Operational Readiness Review conducted for the startup of the facility. However, the review actually included the transfer of simulated waste that required the completion of the transfer lines. As a result, the project costs, in our view, were understated by $7.9 million.

Because the contractor's reimbursements for the project costs were limited by a cost cap, management informed us that these cost transfers reduced the contractor's liability for costs above the cost cap. Additionally, management officials told us that the inappropriate cost allocation issues would be considered during contract closeout negotiations and could impact the fee determination made by the contracting officer.

We made recommendations designed to help ensure that the cost transfers were reversed into the line item construction project account and that all project cost transfers were consistent with Cost Accounting Standards and the Department's Financial Management Handbook.

<u>MANAGEMENT REACTION</u>

Management concurred with the report's recommendations and identified actions it had taken to address the issues we reported. Management comments are included in Appendix 3.

Attachment

cc: Deputy Secretary
Acting Under Secretary for Nuclear Security
Chief of Staff
Deputy Chief Financial Officer
Director, Office of Management
Manager, Idaho Operations Office

REPORT ON COST TRANSFERS AT THE DEPARTMENT'S SODIUM BEARING WASTE TREATMENT FACILITY CONSTRUCTION PROJECT

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PROJECT COST TRANSFERS

Background

The Department of Energy (Department) awarded the Idaho Cleanup Project contract to CH2M ♦ WG Idaho, LLC (CWI) in 2005. The contract scope primarily included environmental cleanup at Idaho National Laboratory, and also included the construction of the Sodium Bearing Waste Treatment Facility. The primary mission of this facility was to treat approximately 900,000 gallons of radioactive liquid sodium bearing waste. This facility had a Federal baseline construction cost of $461 million and was approved in December 2006, with a planned start of operations in July 2010. The facility was to treat the liquid waste for ultimate disposal at the Waste Isolation Pilot Plant. It was also to be designed to treat high-level radioactive waste, referred to as calcine waste, at an unspecified future point in time. Due to significant cost escalations, the Department revised the Federal project baseline to increase the total cost to $571 million with a completion date of August 2011.

To minimize project costs charged to the line item project account, CWI reviewed its costs incurred on the project to determine whether the costs were appropriate. CWI identified a number of costs that it concluded were not directly attributable to the facility and ultimately decided to transfer approximately $13.1 million in costs for seven items to other operations accounts within the contract, reducing the amount charged to the line item project. The funding determinations for these cost transfers were made between April and November 2010. To ensure the cost transfers were in compliance with the Federal Acquisition Regulation (FAR), Cost Accounting Standards, Department Orders, and internal procedures, CWI had the transfers reviewed by an external legal team, Internal Audit and corporate managers, all of whom concurred with the transfers.

In January 2011, the Energy Systems Acquisition Advisory Board agreed to make further changes to the project, and extended the estimated project completion date to December 2011, but kept the approved total project cost for the facility at $571 million. At that time, the Advisory Board stipulated that the Office of Environmental Management and the Office of Acquisition and Project Management[1] would review the cost transfers. Upon review, the Office of Environmental Management considered the issue closed based on the Idaho Operation Office's conclusion that the cost transfers did not violate any laws, regulations or applicable accounting standards. However, the Office of Acquisition and Project Management questioned the appropriateness of the cost transfers stating that the transfers were contrary to project management best practices. The Office of the Chief Financial Officer then determined that an independent audit should be performed to determine whether the costs should have remained within the project based on the original project baseline established at Critical Decision 2, Approve Performance Baseline. Subsequently, the Department requested that the Office of

[1] The Advisory Board actually requested that the Department's Office of Engineering and Construction Management review the cost transfers. However, soon afterward, the Department changed the name of this organization to the Office of Acquisition and Project Management. Therefore, all references in this report are made to the current organization.

Inspector General determine whether the transferred costs were direct project costs that should have remained with the project.

Detailed Analysis of Questioned Cost Transfers

Based on Cost Accounting Standards, CWI normal charging practices, and the Department's Financial Management Handbook, we determined that three of the seven cost transfers valued at $7.9 million were legitimate project costs that should have remained within the project. According to 48 CFR Part 9904*, Cost Accounting Standards, Section 404 Capitalization of Tangible Assets,* acquisition of tangible assets are capitalized in the construction of an asset, and all properly allocable costs must be included. Specifically, these standards define a direct cost as any cost that is identified specifically with a final cost objective. The three costs that were allocated from the construction project were direct costs of the facility under this definition. Further, we found the transfers to be inconsistent with the Department's accounting guidelines. Specifically, Chapter 10 of the Department's Financial Management Handbook, *Property, Plant and Equipment,* states that when an entity constructs a depreciable asset for its own use, all direct costs are included in the total cost of the asset. Each of the three transfers identified were directly attributable to the project and therefore, should have been included in the total capitalized cost. These three costs include:

- $3.8 million for waste transfer and tie-in. These cost were transferred to operations funding based on the funding determination made in November 2010. CWI transferred the waste transfer line and tie-in costs from the facility project to the Sodium Bearing Waste Miscellaneous Support Activities account after concluding that the transfer line and tie-in did not need to be in place to complete the construction of the facility, and that it was a component of the treatment process as opposed to the construction of the facility. However, the facility was originally planned to include the transfer line and tie-in as part of the project. In particular, we found that the transfer line and tie-in was listed as one of the technical and functional requirements for the facility.

  Additionally, CWI determined that because the waste transfer line and tie-in did not need to be completed until after Critical Decision 4, Approve Start of Operations or Project Completion (CD-4), which signaled the end of construction, it should not be considered part of the facility construction project. However, our review found that the transfer line and tie-in was completed prior to CD-4 and was part of the Operational Readiness Review the Department conducted as part of approving CD-4, an additional factor indicating that it should have been included in the line item project.

  Finally, CWI contended that the waste transfer line and tie-in was not a capital asset because the Department's capitalization criteria required an asset to have a 2-year useful life but the transfer line and tie-in would only be used for 10 months. This point, although accurate, must be balanced against the Cost Accounting Standards, which state that the initial complement of equipment necessary to complete the facility includes making the facility ready and available for normal operations. Because the waste transfer line and tie-in were necessary for the facility's normal operations, and the facility as a whole had an expected life beyond 2 years, in our opinion, it should have been included in the capitalized cost of the asset, per the standards.

- $4 million for mineralization testing. These costs were also transferred to the operations funding based on the funding determination made in April 2010. CWI's funding determination concluded that the mineralization testing was done to evaluate waste form performance and was not necessary for the construction of the facility and treatment of the liquid sodium bearing waste. However, we found that the scope and cost of the testing was part of the facility asset design study. According to the baseline document, the purpose of the testing was to gather information for the production scale of the facility, mitigate project risk, and collect data for environmental approvals. The mineralization study facilitated the transition from a pilot system to the production scale facility and the environmental permitting necessary to operate. As part of the design of the facility and consistent with Cost Accounting Standards, it should have been included as a direct cost of the facility.

- $107,000 for portable bathrooms. In this case, the costs were transferred to area Utilities and Operations based on the funding determination made in July 2010. CWI's funding determination concluded that bathrooms were included in the landlord account and should not be charged directly to projects. However, we found that these facilities were brought in specifically for the facility construction because the existing bathrooms were inconveniently located for the construction personnel. These bathrooms were inaccessible to the non-facility personnel and we concluded that the bathrooms would not have been necessary absent the facility construction. Therefore, we concluded that this project cost should have been allocated to the facility. Finally, the Cost Accounting Standards specify that all direct costs and the allocable portion of indirect costs should be included in the costs of the capitalized asset.

We concluded that four of the seven cost transfers were consistent with accounting and project management principles. These costs included:

- $4.2 million for Request for Equitable Adjustment (REA) preparation. These costs were transferred to the area operating account. CWI's funding determination concluded that this cost was incurred to negotiate its cleanup contract and fee, and was not exclusive to or part of the project. CWI asserted that, in many cases, the REAs are not approved and the costs are not directly attributable to a specific project. When approved, CWI charges the costs to implement the REA to the project, but not the costs to prepare the REA. Based on our assessment of CWI's charging practices and the lack of Department guidance on charging REA costs, we concluded that this was an appropriate treatment for this cost.

  The Office of Acquisition and Project Management concluded that because the REA was specifically tied to the changes in the scope of the facility, costs were allocable to the project based on the FAR's definition of allocability. This section of the FAR states that a cost is allocable if it is assignable or chargeable to one or more of the cost objectives on the basis of relative benefits received or other equitable relationship. We agree that the regulations could be applied in this case to support including the REA as a direct cost of the project. However, in reaching our conclusion we relied on the fact that CWI charging practices recognize that not all REAs are approved and that the cost of preparing the REAs should be distributed across the organization. We concluded that CWI's charging practice was consistent with 48 CFR Part 9904, *Cost Accounting Standards, Section 402 Consistency in Allocating Costs Incurred for the Same Purpose.*

- $442,000 for decontamination of the valve cubicle. These costs were transferred to area Utilities and Operations. The funding determination explained that decontamination of the valve cubicle, which had been contaminated during prior operations at the site, was required by regulation and would have been performed under the CWI cleanup scope. We found that because the valve cubicle had been contaminated during prior operations and that the possibility of future contamination from facility operations was speculative, treating the decontamination costs as an operating expense was consistent with CWI's approved charging practices. Therefore, we concurred with transferring this cost out of the project.

- $417,000 for hiring and relocation costs. These costs were transferred to operations. The contractor's Charging Practices Standard indicates that hiring and relocation costs should be charged to the respective project. CWI's funding determination concluded that the hiring and relocation costs supported the Sodium Bearing Waste Operations account, not the construction of the facility and were not necessary to complete the construction of the facility. This was consistent with project management and Cost Accounting Standards because the hiring and relocation of the operators did not contribute to the completion of the facility. According to Department personnel, this was also consistent with past CWI actions.

- $129,000 for a concrete batch plant. These costs were allocated to the projects using the concrete. CWI leased a concrete batch plant that supplied concrete to other users but was charged entirely to the facility project. CWI transferred a pro rata share of the batch plant lease to the other projects based on usage. Cost Accounting Standards specify that shared costs should be allocated among users. Therefore, this was an appropriate project charging practice and we concurred with transferring a portion of the lease costs to other projects. However, tests of the actual allocation were not included within the scope of our audit.

Departmental Review of Cost Transfers

Project costs were not always appropriately charged to the project because CWI did not consider all pertinent facts. CWI had the costs reviewed by its Internal Audit and an external legal team. We determined, however, that the reviews by Internal Audit focused primarily on procedural and documentation issues but relied upon the opinion of the external legal team for determining the legality and appropriateness of the transfers.

While the legal team concluded that the transfers did not violate applicable regulations and standards, we found that those conclusions were based on a limited set of data. For example, the legal team based its conclusion on the mineralization study on verbal communications from CWI that the testing was not related to the construction of the facility. This conflicted with the description of the mineralization study in the project baseline that was not referenced in the legal team's report. Additionally, the legal team partially based its conclusion on the waste transfer line on the assumption that the line operability was not part of the facility's Operational Readiness Reviews. However, both CWI's and the Department's reviews included the simulation of the transfer of the waste, which necessitated the completion of the transfer line. Further, the legal team concluded that the bathroom costs could be allocated to either the project or landlord accounts. Finally, the legal team also determined that only costs leading to the completion of the facility should be charged to the line item project, and therefore CWI's cost transfers were consistent with guidelines. However, we concluded that the three inappropriate transfers were legitimate costs that did contribute to the completion of the facility.

Project Measurement and Performance

As a result, the Sodium Bearing Waste Treatment Facility construction project was undercharged $7.9 million. The inclusion of all project costs was necessary for accurate project measurement, and to ensure that the line item project was charged for the appropriate amount. The objective of successful project management is to deliver a project within the performance baseline and cost and schedule estimates. According to the Office of Acquisition and Project Management, it is important that all costs of a project be included for transparency and to know the true cost of a project.

Because the contractor's reimbursements for the project costs were limited by a cost cap, management informed us that these cost transfers reduced the contractor's liability for costs above the cost cap. Additionally, management officials told us that cost allocation would be considered during contract closeout negotiations and could impact the fee determination by the contracting officer.

RECOMMENDATIONS

To address the issues identified in this report, we recommend that the Senior Advisor for the Office of Environmental Management work with the Office of Acquisition and Project Management to:

1. Reconsider transferring the $7.9 million in costs addressed in by this report to the Sodium Bearing Waste Treatment Facility line item project;

2. Consider whether these cost transfers impact fee during final control closeout and fee determination proceedings; and

3. Ensure that cost allocations are consistent with Cost Accounting Standards and the Department Financial Management Handbook.

MANAGEMENT REACTION

The Office of Environmental Management agreed with our recommendations and has taken actions to address the weaknesses we identified in the report. Management agreed that the costs identified in the report were in excess of the cost cap and were considered unallowable. Further, management indicated that the costs were considered during the final project closeout and fee determination proceedings. Finally, management evaluated project cost allocations and determined that the allocations complied with Cost Accounting Standards and the Department's financial policies. Management comments are included in Appendix 3.

AUDITOR COMMENTS

Management's corrective actions are responsive to our recommendations.

OBJECTIVE, SCOPE AND METHODOLOGY

OBJECTIVE

The objective of the audit was to determine whether the transferred costs of the Sodium Bearing Waste Treatment Facility were direct project costs that should have remained within the project.

SCOPE

We conducted the audit from August 2012 to February 2013, at the Idaho Operations Office and CH2M ♦ WG Idaho, LLC (CWI) offices in Idaho Falls, Idaho, as well as Headquarters Offices.

METHODOLOGY

To accomplish the audit objective, we:

- Reviewed the contract between the Department of Energy (Department) and CWI;
- Evaluated the Department's actions taken in response to CWI's cost transfers;
- Analyzed Cost Accounting Standards, Project Management Requirements, and CWI charging practices;
- Evaluated CWI's approval process for the cost transfers;
- Assessed the baseline and performance metrics of the facility; and
- Interviewed key Department and contractor personnel.

We conducted this performance audit in accordance with generally accepted Government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our conclusions based on our audit objectives. The audit included tests of controls and compliance with laws and regulations to the extent necessary to satisfy the audit objectives. In particular, we assessed the implementation of the *GPRA Modernization Act of 2010* and found that the Department had established performance measures related to the construction of the Sodium Bearing Waste Treatment Facility. 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 did not rely on computer-processed data to satisfy our audit objective.

Management waived the exit conference.

PRIOR REPORTS

- Audit Report on *Processing of Sodium-Bearing Waste at the Idaho National Laboratory* (OAS-L-10-03, February 2010) found that the Department of Energy (Department) had not always effectively managed construction of the Sodium Bearing Waste Treatment Facility. Specifically, the Department did not ensure the project was managed under a sufficiently developed performance baseline. As a result, costs were greater than anticipated and the schedule for completing work may not have sufficient schedule contingency to deal with unforeseen occurrences and delays. The Department made significant design changes to the facility in 2006; however, it did not approve the revised baseline until January, 2009. The revised baseline showed an increase of approximately $109 million. The Office of Inspector General did not make formal recommendations, but suggested that the Office of Environmental Management officials continue to focus attention on the status of the project.

- *Management Controls over Changes to the Idaho Cleanup Project Contract Baseline* (OAS-M-08-10, July 2008). The report noted that in Fiscal Year 2005, the Department awarded a Cost Plus Incentive Fee contract to CH2M ♦ WG Idaho, LLC (CWI) for cleanup work and that there were changes in the work scope between the Request for Proposal and the start of the contract. CWI and the Department negotiated the changes between the anticipated and actual status of cleanup work and modified the contract in January, 2007. Most of the changes reflected fair and reasonable cost adjustments, however three changes were made that were not reasonable. Two of the changes removed work for processing two waste streams but did not remove the $6.2 million in cost associated with those tasks and one change reduced the amount of work associated with constructing a containment building without a commensurate reduction of $5.9 million. Management concurred with both recommendations to address cost baseline changes relating to the issues identified in the report at the next available negotiation, and develop and formalize processes to address scope of work reductions related to the CWI contractual baseline.

MANAGEMENT COMMENTS

Department of Energy
Washington, DC 20585

July 22, 2013

MEMORANDUM FOR RICKEY R. HASS
DEPUTY INSPECTOR GENERAL
FOR AUDITS AND INSPECTIONS

FROM: DAVID HUIZENGA
SENIOR ADVISOR
FOR ENVIRONMENTAL MANAGEMENT

SUBJECT: Draft Audit Report, "Cost Transfers at the Department's Sodium Bearing Waste Treatment Facility Construction Project" (OAS-M-13-XX)

This memorandum responds to the Office of Inspector General (OIG) May 31, 2013, memorandum requesting review and comments on the subject draft audit report. The Office of Environmental Management (EM) appreciates the opportunity to review the report and provide comments to the OIG.

EM agrees with the draft OIG report recommendations and has already taken corrective actions that are responsive to them. The EM comments provided during the courtesy review of this report were satisfactorily incorporated. Therefore, EM has no further comments on the draft report.

My office welcomes the recommendations provided by the OIG, as they are facilitating project closeout and fee determination activities. Having carefully evaluated the OIG draft report, EM's responses to the draft recommendations are as follows:

Recommendation 1: Reconsider transferring the $7.9 million in costs addressed in this report to Sodium Bearing Waste Treatment Facility line item project.

EM Response: Agree and completed. These costs are in excess of the Project cost cap and are considered non-allowable costs. The subject cost transfers were incorporated within the final project closeout and fee determination proceedings, which are in the process of being finalized.

Recommendation 2: Consider whether these cost transfers impact fee during final control closeout and fee determination proceedings.

EM Response: Agree and completed. The subject cost transfers were incorporated within the final project closeout and fee determination proceedings, which are in the process of being finalized. The Contracting Officer's final fee determination will be issued in July 2013.

Recommendation 3: Ensure that cost allocations are consistent with Cost Accounting Standards and the Department's Financial Management Handbook.

EM Response: Agree and completed. EM evaluated project cost allocations and determined they complied with Cost Accounting Standards and the Department's financial policies.

If you have any questions, please feel free to contact me or Mr. Frank Marcinowski, Deputy Assistant Secretary for Waste Management, at (202) 586-0370.

cc: James Cooper, ID
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Kenneth Picha, Jr., EM-20
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