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"Contract Management by the Department of Energy"

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Madam Chairman and Members of the Subcommittee, I am pleased to be here at your request to testify on the Office of Inspector General's perspective on contract management by the Department of Energy's Office of Environmental Management (EM).

With the end of the Cold War, the Department's environmental remediation mission has taken on great importance. The agency is responsible for disposing of large volumes of radioactive, hazardous and mixed waste resulting from more than 50 years of nuclear defense and energy research work. Although largely centered at sites that were essential components of the U.S. nuclear weapons program – such as Richland, Washington; Savannah River, South Carolina; and Oak Ridge, Tennessee – the effort involves 2 million acres of land located in 13 states and employs more than 30,000 individuals, including scientists, engineers, and hazardous waste technicians. Cleanup activities range from addressing contamination at uranium processing sites to safely disposing of millions of gallons of extremely hazardous nuclear and chemical waste generated through decades of weapons production activities. The aggregate disposal and cleanup costs associated with these efforts currently represent an unfunded liability of over $266 billion. The associated tasks are scheduled to continue for decades.

The Department almost exclusively relies on contractors to meet its mission needs, even for its most sensitive national security efforts. The environmental remediation program is no exception. To put this in perspective, according to the Department, EM activities are being conducted through more than 40 prime contracts having a total value of over $90 billion.

Office of Inspector General Activities

Since 2003, the Office of Inspector General has identified both Contract Management and Environmental Cleanup as key Department of Energy Management Challenges. Consequently, we have focused a considerable amount of our resources on evaluating the Department's performance in these areas. Our reviews have recognized significant contract administration, project management, cost and schedule estimating, and quality assurance problems – concerns that have undermined the effectiveness and efficiency of the EM effort.

I want to highlight four recent reviews that identified opportunities to improve the management of cleanup projects across the complex.

K Basins Sludge Treatment

In February 2011, we reported that the Department had not effectively managed the sludge treatment phase of its Spent Nuclear Fuel project located at the Hanford Site.[1] In particular, we reported that largely due to project management issues, the Department found it necessary to abandon a contractor-developed approach to retrieving, oxidizing and assaying sludge that had accumulated in spent nuclear fuel storage basins. This action was taken after approximately 3 years of effort and the expenditure of $43 million. We found that the Department had not required an alternative analysis of potential solutions to determine the best means of meeting mission goals and mitigating cost, schedule, environmental, safety and health risks related to this project. The Department also permitted the contractor to proceed with design, long-lead

[1] *The Department of Energy's K Basins Sludge Treatment Project at the Hanford Site*, DOE/IG-0848, available at: http://energy.gov/sites/prod/files/igprod/documents/IG-0848.pdf.

procurements, and construction before approving the preliminary safety and hazard analysis. After completion of that analysis and during acceptance testing, the Department finally determined that the system had been designed without important safety features necessary to protect workers from radiation contamination.

K-25 Environmental Cleanup

In July 2011, we noted that the original $622 million baseline for the decontamination and decommissioning of the K-25 building in Oak Ridge, Tennessee, had not been updated, despite projections that total costs could increase to as much as $1.2 billion.[2] Notably, we found that due to contract and project management weaknesses the Department was not in a position to fully grasp the ultimate cost and time required to complete the project. In fact, as early as 2010, contractors responsible for completing the project had exceeded the original baseline, even though the effort was far from completion. We found the Department had not:

- Confirmed that contractor reports on cost and schedule performance were accurate and reliable;
- Performed timely analyses to evaluate the merit of outstanding issues described in contractor requests to increase the contract award, and as a result, the Department may not have fully understood the scope and severity of the outstanding technical challenges;
- Organized the management of the K-25 effort as a stand-alone project to give it the necessary management visibility;

[2] *The Department of Energy's K-25 Building Decontamination and Decommissioning Project*, DOE/IG-0854, available at: http://energy.gov/sites/prod/files/igprod/documents/IG-0854.pdf.

- Periodically adjusted its approach to managing the K-25 cleanup effort despite numerous events that should have prompted such a reassessment; and,
- Ensured consistent Federal leadership to oversee the Project.

Waste Treatment and Immobilization

In April 2012, we reported on problems with the Department's $12.2 billion construction of the Waste Treatment and Immobilization Plant (WTP) in Hanford, Washington, a project that the U.S. Government Accountability Office (GAO) recently identified as having a projected cost three times larger than its original budget. We found that contractor management of this project, one of the largest undertakings of its kind, did not always meet quality assurance and contract requirements.[3] To shield plant workers from intense radiation during WTP operations, processing vessels would be located in sealed compartments called black cells. Because there is no engineered access to black cells once operation begins, it is critical that processing vessels last for the WTP's 40-year expected design life without in-service inspection and maintenance. However, the contractor procured black cell vessels that were missing required records of examinations, which are intended to provide evidence that welds to the vessels met specifications. As we reported, this was inconsistent with the project's quality assurance process.

We also found that the Department paid the WTP contractor a $15 million incentive fee for production of a vessel that was later determined to be defective. Our review disclosed that

[3] *The Department of Energy's $12.2 Billion Waste Treatment and Immobilization Plant-Quality Assurance Issues—Black Cell Vessels*, DOE/IG-0863, available at: http://energy.gov/sites/prod/files/IG-0863_0.pdf.

although the Department demanded return of the fee, it was never actually reimbursed. Department management told us the $15 million incentive fee payment issue was included as consideration as part of the WTP contract restructuring; however, management could not furnish documentation to explain or support the rationale for its decision to forego recovery of the fee.

Plateau Remediation

We reported in December 2012 that according to the contractor projections, the cost of the Plateau Remediation contract at Hanford, originally awarded in 2008 for $5.6 billion, had grown by $1.1 billion.[4] We found that the contractor had not always met contract and Federal Acquisition Regulation requirements for submitting timely and/or well supported contract change proposals. Specifically, the contractor was unable to prepare properly supported projections necessary for Federal officials to evaluate recommended contract cost and scope changes, despite several attempts. As such, the Department was not always able to effectively measure the contractor's performance because it did not have reliable estimates to measure against actual cost performance. This matter was complicated by the fact that the Department had not always formally notified the contractor of needed changes to the work scope in a prompt manner. In the absence of timely and reliable cost information, management lacked a basic tool necessary for making sound decisions regarding tradeoffs in funding of numerous project alternatives.

[4] *The Management of the Plateau Remediation Contract*, OAS-L-13-03, available at: http://energy.gov/sites/prod/files/OAS-L-13-03.pdf.

Improvements Needed

Over the years, there have been a number of successful remediation efforts at certain Department sites and facilities, most notably the closure of the Rocky Flats Plant in Colorado.

However, significant problems with contract administration and project management have adversely impacted the Department's ability to achieve program goals and to effectively manage the many issues confronting its multi-billion dollar environmental cleanup effort. The frequency and recurring character of many of these concerns, as has been reported by my office, GAO, the Defense Nuclear Facilities Safety Board and other internal and external review bodies, leads to the inescapable conclusion that they are systemic in nature.

The Department's environmental remediation effort faces significant technological challenges. Its size is unprecedented and the maze of contracts, contract types, contractor teaming relationships, subcontracts, and consulting agreements is extremely complex. Yet, there are several "common threads" that appear central to the contract and project management problems facing the program. Improvements are needed to ensure that:

- Project scopes are realistic and manageable, recognizing the technical challenges facing many Department environmental remediation efforts;
- Change control management is adequate and project baselines are updated on a real time basis to maintain effectiveness as a primary management tool;
- Contract terms are kept current to track with project events;
- Contractor performance is measured against established metrics, including realistic and reliable cost estimates;

- Federal staffing is sufficient, in terms of size and expertise, to provide effective contract and project oversight and ensure that crucial safety requirements are adhered to; and,
- Projects have focused, empowered and consistent Federal Project Manager leadership throughout their lifecycle.

When problems arise, early detection is key. Prompt and candid reporting by contractors, and timely and responsive actions by Federal officials, allow for: (1) thoughtful consideration of alternative courses of action; (2) expedited implementation of corrective measures; and (3) maintenance of effective project baseline against which contractor performance and requests for changes to the contract scope and costs can be evaluated.

Our audit, inspection, and investigation strategies are risk-based. Consequently, the Department's EM efforts continue to be a prime focus of the Office of Inspector General. Notably, we are nearing completion on a review of alleged design quality problems at the Waste Treatment Plant.

Madam Chairman and Members of the Subcommittee, that concludes my statement and I will be happy to answer any questions you may have.