

Statement of Robert Raines
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National Nuclear Security Administration
U.S. Department of Energy
on
Department of Energy's Major System Capital Asset Projects
before the
Subcommittee on Energy & Water Development
House Committee on Appropriations
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INTRODUCTION

Chairman Frelinghuysen, Ranking Member Kaptur, and distinguished members of the Subcommittee, thank you for having me here today to discuss the National Nuclear Security Administration's (NNSA) portfolio of major projects and the steps we have taken to improve acquisition and project management performance of our capital asset construction program. More importantly, thank you for your continued support of the Department and the National Nuclear Security Administration's vital nuclear security mission. We could not do this work without strong, bipartisan support and engaged leadership from Congress.

The National Nuclear Security Administration's Office of Acquisition and Project Management (APM) was established in February 2011 to provide integrated acquisition and project management services for the NNSA Enterprise in an effort to change the way NNSA does business and to ensure that we are making smart, responsible use of taxpayer dollars. Responsible to the Administrator for delivering capital work at the approved baseline, APM is similar to project management organizations in other federal and private agencies. APM is independent from the requirements owner, is fully integrated with the acquisition organization to ensure that best value acquisition plans are developed, and performs the necessary critical evaluation of a project's cost estimating, design and technical maturity, requirements definition, and change control for the Program Offices and Administrator. This new organization addresses the needs of NNSA – and needs that were also identified by Congress,

the GAO, and the Department – to strengthen and improve contract and project management by providing independent dedicated acquisition, project management, and oversight that aligns contract incentives with taxpayer interests; provides clear lines of authority and accountability for federal and contractor personnel; manages assigned projects within the original scope and cost baselines, ensuring completed projects meet mission requirements; improves cost and schedule performance; strengthens cost estimating, and alternative assessments and evaluation. We have drawn clear distinctions between Government and contractor employee responsibilities focusing on developing essential project requirements that are clearly delineated in contract documents and project execution plans, have strengthened change control procedures and authorities, and will perform as much construction work as possible via fixed price prime contracts or subcontracts.

Our efforts are paying off. Building on improvements in front end planning, estimating, and oversight, every NNSA project completed between 2010 and 2012 that was baselined after 2006 met the Department’s success metric of completing within 10% of the original budget. Even better, 87% of them were completed at or under the original budget. Others have noticed our progress. In February 2013, the GAO changed their High Risk List focus for the NNSA to our major systems projects which have a total project cost of \$750 Million or greater. All NNSA projects with costs under \$750 Million were removed from the High Risk List. This shift is a direct result of our improved performance on delivering the smaller projects in our portfolio.

In another move to strengthen project management, NNSA’s Federal Project Directors (FPD) were assigned to APM. We have committed to assigning certified FPD’s to all projects at the point where the important planning and design work leading to baseline development is accomplished, known as Critical Decision One. We have also revised change control procedures to prevent scope creep. As the project progresses to the construction phase, we ensure the FPDs have the appropriate training, experience, and certification level to lead the project through successful execution. In those rare cases where they do not, we provide staff augmentation from the US Army Corps of Engineers and for technical support such as project

controls and cost estimating, from our Enterprise Construction Management Services support contractor. We have also adopted a peer review process to provide critical independent assessments of our work throughout the project life cycle, similar to the process that has been successfully used by the Department of Energy's Office of Science.

In addition, our federal project directors are also certified Contracting Officer Representatives. This ensures they have a sound understanding of the Federal Acquisition Regulations and have a broad knowledge base with which to communicate performance expectations under the contract with our contracting officers and contractors to ensure we deliver on the expectations identified in our contracts and work authorizations.

As the Acting Administrator has said, hiring the right people and giving them the tools they need to do their jobs well is one of the most important things we can do to improve management practices at NNSA.

Finally, through our better alignment with the acquisition organization in the NNSA, we have improved accountability to the taxpayer by utilizing the terms and conditions of the contract to the greatest extent practicable if our contracting partners do not deliver the expected results. Our contractor partners are the largest and most successful design and construction companies in the world, and we have selected them to work on our projects because of their performance in delivering difficult state of the art facilities on time and on budget. But by more clearly defining our expectations, strengthening our contract deliverables, and appropriately sharing risk and accountability, we are seeing more focused leadership attention from the parent companies of the contractors who perform our construction work. They are utilizing corporate reach-back and have brought in more experienced talent to replace or supplement their staff on projects that are not performing well.

I believe that our new organizational alignment, focus on improving the skill sets of our staff, more rigorous implementation of front end planning, risk management, construction oversight,

and accountability that led to the improved performance on these smaller projects are applicable and scalable to our major systems projects. We have also partnered with DoD's Cost Analysis and Program Evaluation group for cost estimating expertise.

For example, the Uranium Processing Facility and the Mixed Oxide Fuel (MOX) Fabrication Facility are both major NNSA construction projects that would be viewed very differently if they had been started today using our current approach. They will certainly benefit moving forward, but the issues we see today are issues that would not be replicated moving forward.

As the Acting Administrator testified, the MOX project was baselined and construction was started utilizing methodologies that we have since rejected. Specifically, the design for the facility was not sufficiently complete to develop an accurate and credible cost estimate. As has happened many times in large scale projects both public and private there was a tendency towards optimism in developing project estimates, assessing and assigning risks, identifying and locking in project requirements, and evaluating and monetizing the cost and schedule impacts of building a first of a kind hazard category 1 nuclear facility under NRC requirements, when such a facility had not been designed or constructed in the United States in over 30 years. Finally, we did not assign it to a project management and acquisition professionals organization and perform periodic independent oversight of the work utilizing the best talent available across the enterprise.

Such over optimism would be much more difficult today. We have worked hard to address these issues as we move forward with the Uranium Processing Facility. We challenged our optimistic assessments by looking at the lessons learned across the complex in cost estimating and risk management requiring our project team to use actual commodity installation rates, more realistic escalation rates, appropriate quality control and project management costs, and reasonable risk models based on our recent experience unless there is a credible, substantive reason to use more optimistic estimates. These processes led us to see that the cost range established in August 2007 was no longer achievable. Working with the National Laboratories,

Office of Defense Programs, and our Management and Operating Contractor we reviewed the original project requirements and developed a new scope and cost range that focused on our critical mission.

The Acting Administrator has committed to ensuring that the necessary front end planning for UPF is accomplished and design of the nuclear facility is 90% complete before establishing a project baseline. To better manage the important design phase of the project, we have required development and approval of a complete design baseline that we are managing with our project controls system. We carefully evaluated the full suite of work in the UPF project and have developed several infrastructure sub-projects that can be fully designed, baselined, and started this year to take advantage of today's favorable construction market, allowing us to ramp-up our project management work force efficiently and use the Army Corps of Engineers as our construction agent at a better value to the Department. We have reviewed and improved our risk management process to more critically understand potential risks, and are updating their cost and impact as the project design continues to mature. We are aware that with the large number of staff working on a project of this size, decision making must be streamlined. We have instituted a weekly call among the key project team members to raise high impact issues that require leadership decisions, have instituted a monthly senior Integrated Project Team in which the executives for all functional areas are briefed by the federal project director, where issues requiring resolution by their staffs are highlighted and managed. We have worked with the federal and contractor workforce to reemphasize the principles of the safety-based work culture, encouraging issues to be raised early so they can be resolved as quickly and economically as possible.

Lastly and most importantly, we have clearly articulated our expectations to our contractor partners and are using the contract to hold them accountable for deficient work. In FY 12, the UPF project team did not meet its commitment to deliver the 90% design on schedule, primarily due to the process systems requiring more floor space and building height than anticipated, necessitating a significant redesign effort. The NNSA paid zero fee for this design deliverable in

FY 12 and we have notified the contractor that we are reviewing other areas of potential cost recovery. Additionally, we clawed back \$4 million in fee paid in FY 11 on the WSB project at Savannah River, and negotiated a bilateral cost reduction of \$10 Million on the NMSUPP project in Los Alamos.

We are at the beginning of instituting our new organizational construct and are committed to developing credible project baselines, reviewing projects progress, interacting with our contractor partners, and delivering on our cost and schedule commitments. I believe we are making good progress, and look forward to answering your questions.