

Statement of John T. Mitchell

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Before the

**U.S. Senate Armed Services Committee
Subcommittee on Strategic Forces**

April 10, 2002

Written Testimony
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Mr. Chairman and Committee Members:

Thank you for the opportunity to update you on Defense Programs activities at the Y-12 National Security Complex in Oak Ridge and to provide you my views on our near-term and long-term ability to meet the challenges of the Stockpile Management Program. We have made considerable progress at Y-12 over the past year, but still face significant challenges in meeting the expectations of the National Nuclear Security Administration (NNSA) over the long-term.

Overview

The past year at Y-12 has been one of renewal and change. Many longstanding challenges have been met head-on and significant progress has been made. New management systems and processes have started to take effect and increased effectiveness and control are clearly visible. Our emphasis on Safety and Security as the cornerstones of our operations have resulted in satisfactorily completing both the Integrated Safety Management Phase II review and the security review performed by the NNSA/DOE Office of Assessments this fiscal year. Both in our response to the events of September 11th and the measurement of our safety performance, it is clear that the groundwork laid in 2001 has supported improved execution of these key responsibilities.

Aided by the funding identified through the Facilities and Infrastructure Initiative, we have commenced a long-term plan to consolidate the active functions of Y-12 into a reduced footprint through a balanced program. Our approach includes reducing the occupied building inventory, removing unoccupied buildings from the inventory, reusing major facilities where possible and the selective investment in re-capitalization where long-term efficiencies result.

We have re-energized the planning and execution of an aggressive technology infusion program at Y-12 to both optimize support for the upcoming defined workload and to assure long-term, safe, secure and efficient modern capabilities to meet the nations security needs. We have started the renewal of the dedicated Y-12 workforce through major increases in college-level recruiting, cooperative university programs and emphasis on increasing the technical and managerial competence level of our workforce. Throughout these focused efforts, we have placed great value on detailed program planning and a project management culture for execution effectiveness. Site-wide integration in resource planning and prioritization has assured a balance in investments and a clear definition of needs versus wants.

Infrastructure

BWXT Y-12 has been implementing its strategy for infrastructure improvement – intense planning focused on scientific and manufacturing needs, definition of equipment, facilities and skills, and alignment of technology development. Our goal is to create a consolidated manufacturing footprint, with a central hub of secure operations surrounded by the developmental, technical and other support functions needed to execute the mission.

Y-12 has begun the process of removing non-essential facilities. This removal will make room for beneficial upgrades to the plant and reduce cost for surveillance, analysis, maintenance and security. The Facilities and Infrastructure (F&I) Initiative has been pivotal to our demolition efforts, as well as providing critical support for much-needed maintenance and facility repairs.

Y-12 has also begun the first major steps in deploying key investments in the future of Y-12. We are beginning the Preliminary Design for High Enriched Uranium Materials Facility, the next major step in improving the storage of the nation's inventory of highly enriched uranium. We also have received approval to begin Preliminary Design of the Purification Prototype Facility, the first element of the Special Materials Capability Program. The Architect-Engineering contracts are in place for both these projects. In addition, Prototype development of a new Beryllium Manufacturing capability is underway and we are ready to begin Conceptual Design for a Production Utilities Project.

Following these projects, we need to move forward on plans to consolidate depleted uranium operations, upgrade enriched uranium operations, relocate Quality Evaluation operations, and upgrade Safeguards & Security systems by reducing the protected area of the plant. There will also be continued emphasis on use of F&I to make critical facility repairs and to continue the Infrastructure Reduction activities to consolidate and disposition excess facilities.

Achieving and sustaining infrastructure improvements within the NNSA funding forecasts continues to be a challenge. The cost to operate aging facilities increases as demands for maintenance and capital replacement expand. Sustainable support will be necessary for Y-12 to meet mission requirements while resolving problems caused by years of deterioration at Y-12. The trade-off between operations, maintenance and capital investments must continue to recognize the long-term interests of Y-12.

Technology

Y-12 has begun two important initiatives over the past year that will improve the way technology is introduced in the plant and its missions. The introduction of new technologies must be managed from a different perspective today than was the historic norm for the Production Complex. The stockpile stewardship paradigm may well require a higher level of technology for refurbishment than was required for the original build. When a flaw is identified, the resolution of that flaw will be reverse-engineered from test data. The tolerances for that new part can be much more exacting than was originally required. In addition, today's technology introduction may be based on the ability to

achieve substantial efficiencies in mission execution. These efficiencies may stem from the introduction of technologies that were not previously available or concepts that were previously discarded based on then-valid mission requirements that are no longer appropriate (e.g., stockpile size).

The first initiative, Technology Roadmapping, has the goal of modernizing the processes, equipment and supporting systems (e.g., computing and information management systems). The roadmap would identify the strategies and direction of the technology program. These strategies would be screened against the time to bring them to the shop floor, cradle-to-grave cost estimate, potential for success and return on investment.

In a second initiative, BWXT-Y12 has begun a technology partnership with the Oak Ridge National Laboratory (ORNL). The technical needs of Y-12 are heavily weighted toward ORNL's R&D agenda (i.e., materials science, modeling/computational science, and instrumentation and control). In these key areas, ORNL provides access to state-of-the-art facilities, leverage for Y-12's development funds and a pathway to the broader technical community – private industry, the science laboratories and academia.

The introduction of technology into Y-12 will be critical to the future economical execution of our mission. Again, the trade-off between operations, technology introduction and capital improvement will require a sustained commitment to the long-term interests of Y-12 and its mission.

Management Systems

BWXT Y-12 is bringing fiscal discipline to Y-12. We have established a centralized planning function to include estimating, schedule planning, resource budgeting, strategic baseline planning, performance measurement & reporting, and systems management. A common tool-set has been established to provide the planners consistent planning software across the Y-12 site.

Using these tools, we have developed schedules and resource requirements for all work activities, including Work Breakdown Structure (WBS) elements, and the estimated costs, schedule, duration, resource loading, and the required earned value protocols for each element. The 10-year baseline is complete covering all major projects planned at Y-12, including future weapons programs, modernization programs, infrastructure reduction projects, and technology development activities.

Currently, we are focusing on several key upgrades to our process. While standard estimating procedures and formats have been established for all work done across the site, we are working to improve the accuracy of our estimates. Also, we are working to improve our production control systems, including the recent completion of a pilot project. The resulting schedules will provide the required integrated planning for preventative maintenance, operations, inventory, and facility maintenance efforts.

These initiatives provide managers the visibility to effectively manage cost, control scope and maintain schedule commitments. We are working hard to assure that the resources placed in our care are well spent on activities of highest importance to our mission.

Workforce

Y-12 is taking action to assure the technical base is available to carryout its mission in the future. We have defined our critical skill needs and initiated the hiring of entry level, technical talent to prepare them to be tomorrow's leaders. In order to attract the best talent, we have initiated cooperative education programs, including the establishment of internal mentors to maximize the benefit of their time at Y-12. We are now developing a program of partnerships with universities in the region and preliminary response to the concept of these partnerships has been enthusiastic. Our objective is to assure the best people are attracted to Y-12 as a vibrant workplace whose mission is important to national security.

Safety is the responsibility of all employees and important to everyone. BWXT Y-12 has been working to bring the commitment to safety to be a first principle at Y-12. All supervisors and mangers completed safety leadership training followed by rolling safety focus meetings with all employees. The routine employee interaction on safety issues has begun to show improvement in our safety metrics for the plant.

Mission Performance

Y-12 continues to meet the direct needs of the nuclear weapons program with timely delivery of products and execution of a wide variety of supporting activities. Shipments of fuel for the nuclear navy have been accomplished on time. Planning for the near-term needs has resulted in restarting several needed capabilities as well as the introduction of several new technical capabilities. Y-12 has also participated with ORNL to provide centralized and integrated capabilities critical to the success of our national commitment to non-proliferation. A strong and refocused capability to perform work for the full range of government and commercial customers supportive of base Y-12 mission needs has been initiated in partnership with ORNL. This growing and diversified work mix is vital to the retention of critical capabilities and the development of those required for the future.

Summary

While Y-12 has made major steps forward in the past year, there is still a long road ahead to achieve long-term, sustainable capabilities to meet national security needs with confidence, including management leadership and execution effectiveness. Consistent, balanced funding support for operations, technology introduction and infrastructure re-capitalization will be required. Consistent, timely and visible definition of program requirements will be needed as well as commitment to stand behind initiatives and investments until they are completed and have produced the expected results. Y-12 must continue to be fully supported in all areas for it to continue to meet long-term national security needs.