

Testimony on “Governance, Oversight, and Management of the Nuclear Security Enterprise” before the House Armed Service Committee

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Mr. Chairman and esteemed members of the Committee thank you for the opportunity to discuss the critical matters associated with the continued improvement of the governance, oversight and management of the United States Nuclear Security Enterprise. Recent international events have made the efforts associated with maintaining a viable nuclear deterrent and strong nonproliferation enterprise increasingly important. The execution of the New START Treaty, coupled with recommendations of the 2010 Nuclear Posture Review and the 2010 Quadrennial Defense Review Report, have provided important elements that drive the configurations, stewardship and investment in our nuclear stockpile. A key element of each of these important guiding documents is the commitment to modernize the aged infrastructure associated with the production, stewardship and dismantlement of our nuclear stockpile. As we speak many countries around the world, some not so friendly, continue to invest at an incredible pace to either modernize their existing infrastructure, or establish nuclear programs that present a direct threat to the United States and our many allies. Adding to our efforts to maintain a modern and responsive deterrent is the enormous budget challenge we face; demanding that we efficiently and effectively execute initiatives that assure the viability of our stockpile, maintain vital stewardship activities and assure delivery of our dismantlement commitments.

It should be noted that the current National Nuclear Security Administrator (NNSA), the Honorable Thomas P. D'Agostino, has made significant transformational progress through initiatives resulting in a smaller, safer, more secure, and less expensive enterprise. However, there is much more that must be done to complete the transformation and performance improvement activities that have been directed by the Administrator. In fact, it is fair to say ongoing efforts to enhance performance will not be sufficient to meet the budgetary challenges facing the Department of Defense and Energy. Further the commitments to modernize the cold war production infrastructure, maintain the essential stockpile stewardship initiatives, and needed scientific and technological advances for Life Extension Programs (LEP), increase NNSA fiscal and programmatic hurdles. As a result, it is imperative to seek out further improvements in contractor oversight and governance, large-scale capital project management, planning and execution of LEPs are essential to assure the future health and viability NNSA.

Mr. Chairman a change in the approach and operating culture of the NNSA and the contractors will be necessary to meet the present and future operating and budgetary challenges. Specifically, when one attempts to simultaneously deliver

more than \$14 billion in modernized infrastructure, successfully execute LEPs that require hundreds of millions of dollars, maintain aggressive dismantlement schedules, and continue stewardship work necessary to assure the stockpile, then continuing to improve the NNSA operating culture becomes vitally important.

The remainder of my testimony will present a series of recommendations that enhance the ongoing transformational initiatives. These recommendations are not new or unproven concepts. In fact, NNSA, DoD and DOE have applied many of these suggested successfully in similar programs. They do require a heightened level of leadership, more disciplined project management delivery tools and improved government/contractor partnership, interface and oversight. They also require the establishment of strict performance expectations, proper allocation of risks and with appropriate rewards. A select few objective metrics to accurately monitor, measure, forecast and evaluate performance will assist in providing transparency to progress and results.

Specific recommendations are:

- ***Establish an Oversight Model that Relies on a Select Few Meaningful Performance Metrics:*** Currently performance is measured by an inordinate number of performance metrics that are often intertwined, redundant and subjective. In fact, an entire Federal and contractor bureaucracy has been created to support the development, monitoring and reporting of literally hundreds of metrics that provide little, if any value. Create a select few measurers that are objective, measurable and results oriented. These should include safety (nuclear and industrial), as well as program objectives such as, LEP deliverables; dismantlements, project management (cost & schedule), and stewardship requirements should serve as primary metrics.

What cannot be quantified and cannot be aligned with program or project results should not be measured. By aligning these metrics with an appropriate incentive program, NNSA will foster a strong results oriented operating and project delivery culture. This type of performance metric architecture provides NNSA with a tool that will incentivize safety, reduce costly, unnecessary and burdensome oversight bureaucracy, and provide an objective and transparent mechanism to report and reward performance.

- ***Create an Integrated Laboratory and Production Enterprise:*** Restructure the Production and Laboratory interface to closely mirror the interface and product delivery approach used in another element of the NNSA organization, Naval Reactors. In its simplest form the Production Operations and the Laboratories work closely through all phases of reactor product development and manufacturing. Key to this relationship is early, frequent, and in depth interaction during the design and development phase of any new or modified product. Constant interaction between the Production and

Laboratory programmatic teams yields tremendous cost, manufacturability, and schedule control dividends.

Often NNSA programs (LEPs or specification modifications) are heavily Laboratory centric and do not engage the Production base early enough or consistently enough to surface items such as manufacturability and supply chain/material availability issues. As a result, these programs are frequently plagued by specifications that are expensive and nearly impossible to replicate in the existing NNSA production and manufacturing infrastructure. In addition they do not engage the practical engineering and scientific experience housed inside the Production Operations.

It is important to assure that what great science can create, will be feasible and economical to manufacture. Naval Reactors also practices a strict change condition management approach. It involves a rigorous analysis of the cost benefit associated with all proposed design changes. There is also a strict change control process that the Laboratories and Production Operations employ to forecast and track cost and schedule impacts. The NNSA weapons program could benefit from a similar integrated Laboratory and Production change control management system. For any design modifications the program should require that clear benefits be demonstrated and approved by the Administrator. This should be accomplished by exhibiting significant improvement to performance and reliability, as well as enhancement to production cost and manufacturability prior to execution. Simple changes to design when manufacturing complex technological devices can produce uncertainty and sizable cost impacts, while yielding minimum performance improvement.

- ***Alternative Structure for Delivery of Significant Capital Projects:*** Unless there is substantial change to the delivery of the modernization projects (UPF CMRR), then more than likely these projects will continue to experience delays, cost growth, funding obstacles and execution uncertainty. More important, these projects are critical to the commitments made during the negotiations for the New START agreement, and the safe and efficient delivery of the NNSA mission. Again we only need to look at similar programs being executed within NNSA and the Department of Defense that will reduce project execution risk and provide cost certainty.

Specifically these tools include multi-year funding of capital projects and alternative financing through public/private sector partnerships. If properly structured both have a place within the NNSA weapons enterprise. In fact, the Naval Reactors approach to capital investment and material purchases within its production infrastructure may provide a mechanism, if properly applied, which will resolve cost and delivery uncertainty for projects like UPF. Considerations should be given to public/private sector financing of certain aspects of the UPF project. Through the public/private financing arrangement return for the private sector investment would be made

through payment for delivery of LEP and dismantlement campaigns on a fixed unit price per unit delivered. This approach would incentivize the efficient delivery of the capital projects and establishes a disciplined change control culture. This is the same approach the NNSA Naval Reactors uses for the production of its propulsion units. Of course, all financing structures must be subject to anti-deficiency act requirements. Nothing stiffens the spine and enhances performance than having skin in the game.

- ***Independent Congressional Oversight:*** Since NNSA does not have an independent programmatic oversight advisory panel (not DNFSB safety oversight) other than Congress it is recommended that a congressionally established advisory committee be formed. This advisory group would independently evaluate initiatives directed towards improvements in operations, enterprise transformation and project management and give the Administrator and Congress information on what policies and practices are working and which ones are not working. The panel would report annually on specific subject areas as requested by the Administrator and Congress. The clear objective of the advisory panel would be to ensure that Congress and Administrator had available to them an independent assessment of transformational, governance and oversight initiatives.
- ***Enterprise Integration and Transformational Initiatives:*** Since the formation of the NNSA in 2000 several initiatives have been initiated to assure that the mission is delivered efficiently and effectively. As you are aware the NNSA incorporates three defense related National Laboratories, two Propulsion Laboratories, four Production Operations, one Range and an extensive Management and Operations contractor and supply chain network. Combined, the operating budget for the NNSA exceeds more than \$11 Billion and tens of thousands of Federal and contractor employees.

This is a large and geographically dispersed enterprise that has high consequence manufacturing operations, complex technology development responsibilities for an array of customers, support for classified national security missions, stewardship of our nuclear deterrent, and safeguard of large amounts of nuclear materials. Integrating an enterprise this large and diverse presents significant challenges and requires diligent work. It also requires operational culture change focused on efficient and effective delivery of projects and product, combined with a willingness to reduce and eliminate redundant functions and capabilities.

The first step in creating a program that will stand the test of time is to assure buy in of management, employees and key stakeholders. NNSA and its contractors should require rotational assignments for their key technical, management and support personnel. Through rotation of the leadership NNSA and its contractors will assure that there is a transfer and cross

pollination of the enterprise operating best practices and operating cultural. Individuals that have rotated will serve as the platform for ideas and actions that will assure successful integration.

Today, there are several actions that on the surface appear to be low hanging transformation and integration fruit. They include: consolidating back office services into single delivery contracts or programs (informational technology, a common enterprise wide benefits and retirement program, a single security/pro-force contractor). Redundant and overlapping program support and product manufacturing capabilities need to be eliminated or rapidly consolidated; these can be identified and rationalized rather quickly. It should be understood that there will be significant resistance change, politically and internal to NNSA and its contracting partners, when the actions infringe on site budgets, require employee right sizing and forfeiture of coveted capabilities or benefits. An independent panel should be established to identify integration and consolidation initiatives. They should then provide specific actions for implementation with objective, measurable and incentivized metrics to foster results. This panel should operate immune from the political process and the recommendations should be endorsed and acted on by the Administrator.

Many of these recommendations have been previously discussed, debated, developed and to some extend implemented. More importantly, there are many in the NNSA and the contractor community that are prepared to move to the next step and assure that action is taken on transformational efforts found in this testimony and those recommended by testimony provided today.