

Statement of Dr. Paul J. Hommert
President and Director
Sandia National Laboratories

Committee on Armed Services
Subcommittee on Strategic Forces
United States Senate

May 7, 2013

Introduction

Chairman Udall, Ranking Member Sessions, and distinguished members of the Strategic Forces Subcommittee, thank you for the opportunity to testify today on the Administration's request to Congress for the FY 2014 budget. I am Paul Hommert, President and Director of Sandia National Laboratories. I am pleased to join Charlie McMillan, Parney Albright, and Chuck Shank, who are here today for this discussion.

Sandia is a multiprogram national security laboratory owned by the United States Government and operated by Sandia Corporation¹ for the National Nuclear Security Administration (NNSA). Sandia is one of the three NNSA laboratories with responsibility for stockpile stewardship and annual assessment of the nation's nuclear weapons. Within the U.S. nuclear weapons enterprise, Sandia is uniquely responsible for the systems engineering and integration of the nuclear weapons in the stockpile and for the design, development, qualification, sustainment, and retirement of nonnuclear components of nuclear weapons. While nuclear weapons represent Sandia's core mission, the science, technology, engineering, and business professional capabilities required to support this mission position us to support other aspects of national security as well. Indeed, there is natural, increasingly significant synergy between our core mission and our broader national security work. This broader role involves research and development in nonproliferation, counterterrorism, energy security, defense, and homeland security.

My statement today will provide an update since my testimony of April 18, 2012, before this subcommittee. Starting from an overall perspective of the nuclear weapons program and the challenges facing us since the end of the Cold War, I will refer to the following major topics: (1) Sandia's modernization programs with emphasis on the B61 Life Extension Program (LEP); (2) technical execution of the programs; (3) schedule, staffing, and overall cost and performance to

¹ Sandia Corporation is a subsidiary of the Lockheed Martin Corporation under Department of Energy prime contract no. DE-AC04-94AL85000.

date; (4) the scientific and technical basis for long-term surveillance and annual assessment; (5) status of the capability base needed to support our mission; (6) nonproliferation; (7) broader national security work; and (8) governance. These issues will be viewed within the context of the Administration's request to Congress for the FY 2014 budget and of the FY 2013 continuing resolution (CR), coupled with sequestration.

Major Points of This Testimony

1. The current scope for the B61 LEP is the minimum necessary to meet the threshold requirements for the B61 provided by the Department of Defense and NNSA.
2. Sandia is executing its responsibilities on the B61 LEP on schedule and on budget.
3. Based on the budgetary impacts of sequestration and current FY 2014 budget guidance, we expect there will be schedule and attendant cost impacts on the modernization programs beginning in FY 2014.
4. Sandia's ability to deliver with excellence on its nuclear weapons mission both now and into the future critically depends on the effective interplay between the nuclear weapons mission and our broader national security work.

Perspective of the Nuclear Weapons Program

It is my view that the nation's nuclear deterrent is now in a new era, which is characterized by three major imperatives: (1) Modernize and reshape our nuclear deterrent as national policies evolve and ensure that we have staff and infrastructure requisite to this task; (2) sustain a smaller and increasingly older legacy stockpile for many years to come; and (3) continue to advance and utilize the tools of stewardship, which are critically important to the successful execution of the first two imperatives and to mitigating the long-term risk of technology surprise.

We cannot pick and choose among these imperatives; rather, we must simultaneously make progress on all three in support of national policy. The combination of the three imperatives creates challenges in technology development and program planning and funding not experienced before by the program. Risk-based prioritization of the program is needed, along with continued emphasis on strong program management and cost-effectiveness.

Sandia has key responsibilities in the areas described by each of the three imperatives, which I will discuss in the context of the Administration's *FY 2014 Budget Request*. Let me begin with a discussion of the modernization activities.

Modernization Activities

Modernizing the nuclear deterrent is guided by the strategic framework for U.S. nuclear weapons policy outlined in the 2010 *Nuclear Posture Review*. The challenge has been to translate that framework into an executable plan. We must have a clear understanding of and a broad agreement about the plan for our stockpile 20 years from now. That plan must be robust in the face of current and future treaty obligations, evolving policy direction, stockpile technical realities, our infrastructure

capabilities, and realities of the fiscal environment. I believe such a plan has taken shape as a result of a series of decisions taken by the Nuclear Weapons Council over the past six to twelve months.

Sandia's Modernization Programs: Execution, Overall Cost and Performance, and Staffing

At present, Sandia is engaged in a broad modernization effort. The W76-1 is in full-scale production. The B61 LEP and the W88 Alteration (Alt) 370, each with a first production unit (FPU) scheduled for FY 2019, are in full-scale engineering development. We are also working on the Mk21 Fuze Replacement program (also known as the W87 Fuze Replacement), which is in the late study phase and preparing to go to full-scale engineering development. The life extension for a first interoperable warhead, the W78/88-1 LEP, is in the early study phase. These programs touch each of the three legs of the nation's nuclear triad, and today we are successfully executing against the plans and integrated master schedules for the programs.

The B61 LEP. The B61 LEP is essential to meeting the U.S. Strategic Command's requirements and the extended deterrence objectives of the *2010 Nuclear Posture Review*. The current scope of this life extension maximizes the reuse of nuclear and nonnuclear components while still meeting military requirements for service life extension and consolidation of multiple versions of the B61 into the B61-12, which is the name for the version of the weapon after modernization. The scope of the B61 LEP is fundamentally related to issues that have been documented in annual assessment letters by Sandia National Laboratories directors for a number of years. That a number of age-related aspects have been identified in surveillance of various B61 modifications (or Mods) is not surprising, given that some components in the B61 family are now older than 40 years. But there are also other factors, such as future lifetime, compatibility with delivery platforms, Mod consolidation, and technology obsolescence, all of which serve to define in detail the technical scope that must be executed for the life extension program. **It is my strongly held view that the current scope for the B61 LEP is the minimum necessary to meet the threshold requirements for the B61 provided by the Department of Defense and NNSA.**

It is this scope that the Nuclear Weapons Council endorsed in December 2011 as the recommendation for the B61 LEP with an FPU in 2019. It should be noted that this threshold scope resulted in a 40% reduction in the B61 LEP costs at Sandia over those associated with an earlier "full scope" LEP. Only one definitive cost estimate has been generated for the current scope of the B61 LEP, and the associated data were integrated across the nuclear security enterprise to derive a single, Complex-wide estimate. The lower costs were achieved by narrowing the technical scope of the program through the judicious reuse of certain components, coupled with robust top-down cost management principles that resulted in a reduced number of development builds and qualification testing. The overall cost of the B61 LEP includes approximately \$3B for Sandia over a 12-year period. While the cost of the Complex-wide B61 modernization program is significant, over the next decade it represents less than 10% of NNSA's nuclear weapons budget. When complete, this life extension will provide the Department of Defense with a consolidated B61 representing a major element of one leg of the nuclear triad that will have reduced surveillance and maintenance costs and a lifetime to span decades to come. However, we recognize that all the work we do is occurring in a time of significant national budget challenge. Thus, we must ensure our utmost effort to deliver these programs on cost and schedule. To this end, we have stood up an organization to

manage schedule and risks, staffed with professionals who have successfully managed large programs at Sandia involving high standards of rigor. The B61 LEP is currently within budget and on schedule with respect to the critical path.

To date, we have not missed a single milestone in the program. Thus, we have successfully completed all the component gate reviews (or programmatic reviews) and all the component conceptual design reviews (or technical reviews). We delivered required parts for mechanical environments testing, and the first test body has been assembled and is being tested; we begin initial system-level electrical compatibility testing this year; and we are actively engaged with Boeing on tail kit assembly integration.

I have brought with me today actual hardware of the joint radar module designed at Sandia and built by NNSA's Kansas City Plant as it will give you a sense of how far along we are in the design and development of this life extension. Interestingly, this module replaces the vacuum tube radars in a number of our legacy B61 radars. Through the use of advanced technology, this radar achieves a tenfold reduction in volume, greater capability, and resistance to countermeasures. As an example of one of the numerous components for the B61 LEP that are moving toward final design maturity, this particular component also illustrates our joint radar module concept. Similar hardware will undergo flight testing at the Tonopah Test Range for the B61 LEP and will be flown on a Navy Submarine Launched Ballistic Missile test for the W88 Alt 370 program to support our design and qualification process.

Designing and utilizing this joint module for the B61 LEP, W88 Alt 370, and Mk21 Fuze Replacement programs are estimated to save approximately \$170 million over three separate development efforts. More detail on the joint radar module concept will be provided in the next section.

While we are off to a strong start on the B61 LEP, fiscal years 2014, 2015, and 2016 are crucial for maintaining the cost, schedule, and performance of the overall program. In this regard, we are pleased to see the strong support for the program in the *FY 2014 Budget Request* to Congress. However, as a result of sequestration impacts in FY 2013 and FY 2014 budget guidance below baseline funding requirements, it is my view that, unless this situation is reversed, schedule will likely be affected. I want to emphasize that our baseline requirements have remained essentially unchanged since June 2012. We continue to work with NNSA to close this gap while simultaneously working to minimize schedule impacts. **Reductions from the baseline funding requirements are, in my view, the most significant risk to maintaining schedule and therefore the overall program cost.**

Further Modernization Efforts. The B61 LEP is one in a series of programs that have been documented in the *FY 2012 Stockpile Stewardship and Management Plan*. Among them are the W88 Alt 370 and a W78/88-1 LEP. Sandia is also engaged in the Mk21 Fuze Replacement program, which is entirely funded by the U.S. Air Force.

Our successful record of using common technologies and components across multiple systems that have been deployed in the U.S. stockpile has helped reduce development risk and manage development costs. We are extending this approach to development of the Arming, Fuzing, and Firing (AF&F) system. Today, a modular AF&F design is being developed for the W88 Alt 370, the

Mk21 Fuze Replacement, and potentially for the W78/88-1 LEP. By capitalizing on work we have done over the past decade on modular warhead architectures and adaptable nonnuclear components, Sandia is supporting the Nuclear Weapons Council's plan for stockpile modernization cost-efficiently and with reduced risk. Although not directly interchangeable to accommodate missile interface differences, the underlying technologies and components are eminently adaptable to each of these warhead applications and thus result in cost savings and reduced risk. In addition to the ballistic missile warhead applications, these same technologies and, in some cases, nearly identical components are being used in the B61 LEP. As in the past, rigorous performance testing in qualification, production, and surveillance mitigates the common-mode failure risks attendant to this approach. In addition, the silicon fabrication complex at Sandia and the Kansas City Responsive Infrastructure Manufacturing and Sourcing (known as KCRIMS) facility provide the nation with a secure, responsive infrastructure for addressing production or design issues if they arise.

W88 Alt 370. Sandia is currently executing the W88 Alt 370, which involves replacing the Arming, Fuzing, and Firing (AF&F) system. The FY 2019 FPU schedule for the W88 Alt 370 is driven by the overall Navy program and schedule, components reaching their end of life, and the need for additional surveillance quantities. This program is aligned with the Mk21 Fuze Replacement program. In order to determine any schedule impacts, we are currently assessing jointly with the NNSA and the Navy the post-sequestration FY 2013 funding, the FY 2014 budget request, and the out-year outlook.

Mk21 Fuze Replacement. The W87 Arming and Fuzing Assembly, an Air Force subsystem, requires replacement with a first production unit in FY 2019. Alignment of this program with the B61 LEP and W88 Alt 370 allows the Air Force to receive approximately \$85 million in savings as a result of using the common radar module, the hardware I have shown you today. This program is funded entirely by the Air Force. Funding shortfalls in FY 2013 are being worked directly with the Air Force. The Mk21 Fuze Replacement and the W88 Alt 370 programs are highly interdependent: A slip to one program will affect schedule and cost for the other.

Preparing the Laboratory to execute the B61 LEP, W88 Alt 370, and Mk21 Fuze Replacement modernization efforts has been a major focus of our leadership over the past several years. Our efforts have included collocation of the core design teams, enhancements to our classified networks reflective of the volume of work, and most significantly, staffing and training of the workforce. The staffing requirement for these modernization efforts exceeds 1,000 people. I am pleased to report that, despite numerous periods of budget uncertainty over the past 18 months, we have been extremely successful at staffing the program against a very aggressive staffing plan. Two staffing approaches have allowed us to achieve the required staffing levels for the modernization programs: (1) internal staff movements from other Sandia programs that require skills synergistic with those for the nuclear weapons program and (2) external hiring. Since 2010, we have hired some 500 advanced-degree scientists and engineers. The overall members of the workforce at the Laboratory remained essentially flat through this period. Of those we hired new to Sandia, approximately 58% are early in their professional careers. The modernization program provides opportunities for these new technical staff to work closely with our experienced designers: from advanced concept development to component design and qualification, and ultimately to the production and fielding of nuclear

weapon systems. It is very important that we provide individuals such as these with an environment where they can undertake the multiyear learning it takes to technically steward the nation's nuclear stockpile now and into the future, after the modernized warheads are in the stockpile. We have a new and strong contingent of scientists and engineers prepared to take on that challenge, and we must strive to provide the stability, focus, and national commitment that will enable their success.

At the end of this decade, upon completion of the B61 LEP, W88 Alt 370, Mk21 Fuze Replacement, and W76-1 production, the nation will have modernized at least one element of each leg of the triad.

W78/88-1 LEP. Last year, I testified that the results of the W78 LEP Phase 6.1 concept assessment study were planned for briefing to the Nuclear Weapons Council Standing and Safety Committee later in the year. I am pleased to report that the study was well received and a Phase 6.2 was authorized by the Nuclear Weapons Council in June 2012 for an interoperable warhead feasibility study, called the W78/88-1 LEP, supporting both the Air Force ICBM and Navy SLBM systems. The work we are currently doing on the previously discussed modernization efforts will position Sandia to effectively support the W78/88-1 LEP study.

Sustaining the Current Stockpile

Sandia, together with the other two NNSA national security laboratories, has key responsibilities in ensuring the safety, security, and effectiveness of the nation's nuclear deterrent. The stockpile surveillance and assessment program plays a crucial role in establishing that required confidence in our nuclear deterrent. It is through stockpile surveillance that nuclear weapons are taken apart to test the components. Test results provide the necessary data to help us assess the safety, security, and reliability of the stockpile.

Stockpile Surveillance and Assessment

Findings from conducting this program provide the technical basis for our annual stockpile assessment reported to the President of the United States and inform decisions about required elements of the life extension programs and their timelines.

Multiple drivers heighten the importance of the surveillance program. Among them are the following: an unprecedented age of the stockpile, which includes many subsystems that were not originally designed for extended life; smaller stockpile numbers, which heighten the importance of individual warhead reliability; scoping decisions for stockpile life extensions; and for at least the next twenty years, surveillance of a stockpile that will contain simultaneously both our oldest weapons and life-extended weapons. The latter group must be examined for possible birth defects and for further aging of reused components.

Although FY 2012 surveillance funding at Sandia was seen as a positive indicator, the FY 2013 funding allocation after sequestration impacts has required that we constrain surveillance efforts; initial indications are that the FY 2014 proposed funding for Sandia will be, at best, flat compared with FY 2013 levels. Despite funding constraints, Sandia is committed to fully support the flight test program with the Department of Defense. However, we cannot provide annual laboratory testing, as historically we have done, for each system in the stockpile. The testing period will have to be stretched out. At the same time, our efforts to implement the component testing and new

diagnostics and models fall further behind. These capabilities provide understanding of margins, uncertainties, and trends needed to (1) ensure the stockpile is safe, secure, and effective, (2) understand the lead times necessary to respond to aging issues that would have the potential to reduce stockpile safety, security, or reliability, and (3) support decisions on scoping for stockpile life extensions. Furthermore, several of our key surveillance facilities located in New Mexico, California, Texas, and Nevada are being operated with minimal investments in spare parts and preventative maintenance; as such, we are at risk for extended test outages due to equipment failures. To minimize the risk to the stockpile, given the realities of the current fiscal environment, we continue to apply a risk-based prioritization of our surveillance activities. A reduction in the number of systems requiring surveillance can also mitigate the pressure on the surveillance budget. Successfully completing the current modernization efforts should enable decisions regarding any reductions in stockpile types or numbers.

Advancing the Tools of Stewardship

During the stewardship era, the quintessential challenge was the elimination of underground testing. The sustained support received for stewardship has allowed us to make enormous progress in our understanding of nuclear weapons function in the absence of underground testing and has enabled us to attract talented staff. We must continue to advance and apply the tools of stewardship during today's modernization era.

Science-Based Infrastructure and Capabilities

Sandia's capabilities are essential to its full life cycle responsibilities for the stockpile: from exploratory concept definition to design, development, qualification, testing, and ultimately to ongoing stockpile surveillance and assessment.

I am pleased that the FY 2014 budget request continues to address the recapitalization program for our silicon fabrication facility, the requirements for which I have addressed in prior testimony. Funding in FY 2013 enabled us to replace the single most-expensive and highest-risk item in the facility. The FY 2014 budget request continues the recapitalization program at the planned level, but I would note that for program completion, commitment to multiyear funding is required.

I will restate that Sandia stewards for the nuclear weapons program, as well as for the DOE's nonproliferation payloads, the microelectronics research and fabrication facility, where we design and fabricate an array of unique microelectronics, specialty optical components, and microelectromechanical system devices. Recapitalization will reduce the risk for delivering the B61 LEP and ensure production of the radiation-hardened components required by the W88 Alt 370 and all future reentry system life extension programs. As we go forward on modernization, our microelectronics fabrication facilities, which form the basis of our trusted foundry, will be critical to ensuring the integrity of our supply chain.

In addition to the silicon fabrication facility, we have significant recapitalization needs at various experimental and test facilities critical to B61 LEP, W88 Alt 370, and future LEP success, particularly at the Tonopah Test Range. The FY 2014 budget request supports our ability to reduce risk to the modernization program through investments in those capabilities as well.

In addition to these fabrication, experimental, and test facilities, Sandia's high-performance computing capabilities are vital tools for our mission responsibilities in stockpile surveillance, certification, and qualification, and they continue to prove to be indispensable to our broader national security work.

I am very pleased to report that FY 2013 funding enables us to finish renovating our suite of mechanical environment test facilities, which are essential to supporting the design and qualification of the B61 and other life extensions.

I want to emphasize that the investments in our stewardship tools over the past 15 years enable cost reductions in our modernization efforts through increased use of computational simulation, which reduces the amount of qualification testing; allows, for the first time, confident qualification of some components without either nuclear testing or expensive aboveground facilities; and affords important insights into the challenge of predictive aging for our older stockpile.

Technology Surprise

Continued scientific and technological advances around the world remind us that the nation must be aware of those advances in order to prevent a technological surprise. One example is the area of high energy density physics and inertial confinement fusion, which is experiencing rapid advances and growing worldwide interest. While achieving inertial confinement fusion ignition is a tremendous technical challenge, we must continue to pursue a national effort to achieve ignition for its importance to our long-term understanding of the stockpile and confidence in our deterrent position. At Sandia National Laboratories, we utilize the Z pulsed-power facility, the world's most-energetic high energy density physics driver, to study high energy density physics and inertial confinement fusion for the stockpile stewardship program. I believe that a robust research program on the Z facility is essential to the nation for it provides risk mitigation for achieving inertial confinement fusion consistent with the recent NNSA "Path Forward" document; is complementary to the activities at the National Ignition Facility and Omega laser at the University of Rochester; and is important to preventing technological surprise. Beyond the considerations of ignition, I believe it is important for all three laboratories to conduct limited exploratory studies on weapon concepts to ensure that staff stay current in this area and that significant asymmetries cannot impact the position of our deterrent.

Synergy between Our Nuclear Weapons Mission and Broader National Security Work

Today's national security challenges are complex and highly diverse. The NNSA laboratories are contributing solutions to those challenges. To energize and sharpen its nuclear weapons competencies, Sandia relies on its broader national security work. The symbiotic relationship between the nuclear weapons mission and broader national security missions prevents insularity and creates a challenging, vigorous scientific and engineering environment that has helped us attract and retain the new talent we need. Such an environment is essential to succeed against the challenges we now face. Let me give you two examples that highlight the way in which this symbiotic relationship works at Sandia.

First, I will give a technology example. Sandia has led the development of real-time processing and high performance-to-volume ratio technologies for synthetic aperture radar (SAR). Both technologies were made possible by our extensive radar design and development work for nuclear weapon fuzing. The technologies have been leveraged and are currently used by the Department of Defense. The extensive SAR work has sharpened our radar design competencies and kept Sandia aligned with advances in radar technology, such as radio-frequency integrated circuits. We are now applying these modern technologies to the design of the replacement radar for the B61 LEP, the W88 Alt 370, and the Mk21 Fuze Replacement with a high degree of commonality, which leads to cost savings.

My second example is Sandia's satellite program, which spans about five decades and has grown steadily with numerous customers. This program, which provides our nation with critical national security capabilities, has brought with it a very rigorous program-management environment for moving advanced technology within tight schedule requirements. We have leveraged the knowledge accumulated in these areas to our nuclear weapons program.

I strongly believe that today it is not possible that my Laboratory could deliver consistently on the commitments to the nuclear weapons program without the synergistic interagency work that attracts top talent, hones our skills, and provides stability through the cycles of the nuclear weapons program.

Government commitment to the broad national security work of the laboratories is essential for the United States to ensure the preeminence of our nuclear weapons and to enable multidisciplinary technical solutions to other complex and high-risk national security challenges. In no way does our interagency work detract from our focus to execute our core nuclear weapons mission.

Nonproliferation

U.S. policy articulated in the *2010 National Security Strategy* and reflected in recent events in the United States and around the world demonstrates the growing complexity of today's threat environment arising from weapons of mass destruction (WMDs). Sandia has a broad portfolio of nonproliferation activities containing a full array of programs aimed at combating the proliferation of WMDs. Working collaboratively with Los Alamos and Lawrence Livermore national laboratories and several other DOE laboratories, we are

- developing technologies to “convert, remove, and protect” nuclear and radiological materials that could be used in nuclear and radiological weapons,
- conducting international work for material protection,
- increasing effectiveness in large-scale field experimentation for nonproliferation test monitoring and arms control,
- ensuring that the on-orbit satellite program meets current requirements and adapts to future monitoring challenges,
- developing ground-based systems for more effective seismic monitoring,
- enabling other countries to develop nuclear security centers of excellence,

- enhancing the safety and security of biological and chemical laboratories and facilities around the world to reduce the risk that terrorists can acquire biological or chemical capabilities, and
- conducting international work in support of cooperative threat reduction programs.

In addition to working with other laboratories, we are engaging globally with international partners in more than 100 countries to reduce the threat of proliferation.

Our primary customers for this work are the NNSA, Department of State, and Department of Defense. We know that Congress will continue to support our customers' programs aimed at assessing the risks from WMD, evaluating technologies, and implementing safety and security programs that will protect us from the extreme dangers presented by nuclear, biological, and chemical threats.

With respect to the *FY 2014 Budget Request to Congress*, I will make three points: (1) We strongly recommend that the U.S. Nuclear Detonation Detection System be funded as proposed in the *FY 2014 Budget Request to Congress*. The FY 2013 CR, coupled with sequestration, severely hampered the ability of Sandia and Los Alamos national laboratories to deliver the satellite payloads. Indeed, for the first time in decades, future payload deliveries are in jeopardy. Without the increase proposed in the FY 2014 budget request, the nation runs the risk of damaging its capability for important nonproliferation programs. (2) It is important to support technologies that develop transparent and verifiable capabilities for future treaties. (3) Considering the significance and increasing complexity of worldwide nuclear material developments, it is important to ensure funding for programs focused on securing nuclear materials, such as the Global Threat Reduction Initiative, and programs that support international cooperation on related aspects of science and technology.

Governance

At the time of my testimony last year, the National Academy of Sciences had recently released its report of national laboratory governance by the NNSA. That report and a subsequent study by the National Academy of Public Administration indicated that there were areas where improvements in the governance and oversight of the laboratories are possible and recommended. The FY 2013 National Defense Authorization Act, recently signed into law, called for the creation of a Congressional Advisory Panel on the Governance of the Nuclear Security Enterprise to study this area and make recommendations to the Congress. From my perspective, all these examinations are warranted as I believe the effectiveness of the somewhat unique government-owned contractor-operated model employed by the DOE and NNSA to manage the laboratories as FFRDCs has eroded under the current DOE–NNSA governance arrangement. We look forward to engaging with the Congressional Advisory Panel on this topic. Based on its exceptional members and expansive charter, I am confident that the panel will bring the careful, comprehensive examination needed by this complex but very important topic.

Conclusions

The new era of our nation's nuclear deterrent is characterized by three major imperatives: modernizing the nuclear deterrent, sustaining a smaller and increasingly older stockpile, and continuing to advance the tools of stewardship. It is important that the nuclear weapons enterprise be engaged in these three imperatives simultaneously, maintaining a balance across them.

Sandia is conducting work in all three areas referenced above, and it is responsible for a large portion of the modernization activities. To that end, we have been extremely successful at staffing the modernization programs against an aggressive staffing plan. We are currently executing the programs. We are committed. We are confident that our in-depth scientific, engineering, and technical expertise will enable successful completion of the programs.

We are off to a strong start on the modernization programs, particularly the B61 LEP. In this regard, we are pleased to see the strong support for the programs in the *FY 2014 Budget Request* to Congress. I want to emphasize that the current technical scope for the B61 LEP is the minimum scope necessary to meet the U.S. Strategic Command's requirements and the extended deterrence objectives of the *2010 Nuclear Posture Review*. We are actively working with the NNSA to ensure that funding requirements are met in order to maintain schedule and cost performance on these vital modernization programs.

I will restate that Sandia's ability to deliver with excellence on its nuclear weapons mission both now and into the future critically depends on the effective interplay between the nuclear weapons mission and our broader national security work. Sandia is committed to fulfilling its service to the nation with excellence and judicious cost management. And the fact that the three national security laboratory directors were invited to speak before you today and answer your questions is a clear indication of the leadership role of Congress in authorizing a sound path forward for U.S. nuclear deterrence.