

**Senate Armed Services Committee**  
**Strategic Subcommittee**  
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**Dr. Everet H. Beckner**  
**Deputy Administrator for Defense Programs**  
**National Nuclear Security Administration**

Mr. Chairman and members of the committee it is a pleasure to be here this morning to review the Moscow Treaty on Strategic Offensive Reductions and its implications for the National Nuclear Security Administration (NNSA) and its vital work to support a safe, secure and reliable nuclear weapons stockpile. The NNSA fully supports the terms of the "Moscow Treaty" because it enhances the U.S. national security and international stability by making dramatic reductions in the number of deployed strategic nuclear warheads. The Treaty requires both the U.S. and the Russian Federation to reduce their strategic nuclear warheads to a level between 1,700 and 2,200 by December 31, 2012. This represents nearly a two-thirds cut in the deployed U.S. strategic arsenal. This reduction is consistent with the conclusions reached by the Administration in the recent Nuclear Posture Review (NPR). The Treaty provides the United States with the flexibility to maintain an important hedge against unforeseen changes in the international environment or technical issues in the smaller, enduring nuclear weapon stockpile. The NNSA strongly endorses Senate advice and consent to ratification of the Treaty as submitted.

**Policy Overview**

NNSA's Stockpile Stewardship Program is working today to ensure that the Nation's nuclear deterrent is safe, secure, and reliable. NNSA was an active participant in the Department of Defense's Nuclear Posture Review. Several conclusions of the NPR are of particular relevance to the NNSA.

First, nuclear weapons, for the foreseeable future, remain a key element of U.S. national security strategy. The NPR reaffirms that NNSA's science-based Stockpile Stewardship Program is necessary to ensure the safety and reliability of the smaller, less diverse nuclear stockpile in the absence of nuclear testing. This includes surveillance of our aging weapons, weapons refurbishment, chemistry and metallurgy of materials aging, detailed understanding of weapons physics, and development of additional diagnostic and predictive tools for long-term stewardship. It also includes refurbishments and life extension programs for the current stockpile, as required and coordinated with the DoD. Several NNSA initiatives endorsed by the NPR include enhanced test readiness and revitalization of advanced concepts work.

Second, more than any previous review, the NPR's concept of a New Triad emphasizes the importance of a robust, responsive research and development and industrial base. This calls for a modern nuclear weapons complex, including planning for a Modern Pit

Facility, and new tritium production to provide the Nation with the means to respond to new, unexpected, or emerging threats to U.S. national security in a timely manner.

NNSA sees this as recognition of the importance of its mission, facilities and personnel. It is an enormous responsibility to maintain the enduring stockpile and to dismantle warheads determined to be excess to national security requirements. The NNSA and the DoD have developed a credible, realistic plan to meet the President's direction for a safe, secure, and reliable stockpile, all while reducing the numbers of strategic warheads consistent with the NPR and the Moscow Treaty.

### **Life Extension Programs (LEP)**

A key element of ensuring a safe and reliable stockpile for the next 30 years is the Life Extension Program for selected elements of the nuclear stockpile. The NNSA has validated requirements from the President through the joint NNSA/DoD Nuclear Weapons Council to extend the service life of the W87, W76, and W80 warheads and the B61 strategic bomb. These requirements were revalidated by the Nuclear Posture Review. The life extension work will involve the entire weapons complex. The Kansas City Plant will manufacture the non-nuclear components; Y-12 National Security Complex will refurbish the secondaries; Savannah River Tritium Facility will supply the gas transfer systems; Sandia National Laboratory will produce the neutron generators and certify all non nuclear components; Pantex Plant will serve as the central point for all assembly and disassembly operations in support of the refurbishment work; and Los Alamos and Lawrence Livermore will continue to certify nuclear warhead design performance.

The W87 refurbishment is well underway, with over 60% of the planned quantity complete and delivered to the Air Force. The program achieved First Production Unit (FPU) in the second quarter of FY 1999. The ongoing work at Pantex enhances the structural rigidity of the warhead. The warhead will be mated to the Minuteman III missile following deactivation of the Peacekeeper missile. Life Extension for the W76 involves a comprehensive overhaul of the warhead, including replacement of the arming, firing and fuzing set. We will also be requalifying the weapon primary. For the W80, we will be replacing the trajectory sensing signal and neutron generators, the tritium bottles and incorporating surety upgrades. For the B61 we will be refurbishing the secondary.

The Moscow Treaty does not alter our schedule to begin key LEPs later this decade, although it will likely affect the total number of warheads to be refurbished. Indeed, maintaining the First Production Unit schedule is vital to fulfill NNSA commitments to the Department of Defense, to fix known areas of concern; to drive the nuclear weapons complex to restore lost manufacturing capabilities, and recruit and retain technical expertise needed for the long term.

### **Pantex Plant Overview**

Located in the Texas panhandle, NNSA's Pantex Plant is the nation's only facility for the assembly and disassembly of nuclear weapons. Over the years Pantex has disassembled over 50,000 warheads in a safe, secure, efficient and environmentally sound manner. The plant covers some 16,000 acres and employs some 3000 people. For FY 2003 the Administration has requested a total of \$367 million for stockpile stewardship related activities at the facility. Having a dedicated facility like Pantex allows us to meet our responsibilities to maintain the enduring nuclear weapons stockpile and dismantle excess nuclear warheads while concentrating our efforts in areas such as nuclear explosive safety and assembly/disassembly operations, but it does present us with some capacity and infrastructure issues which we are aggressively working to resolve.

The current approved work plan of Life Extensions, surveillance and dismantlements at Pantex, requires facility upgrades. Seventeen bays where weapons with Insensitive High Explosives are worked on and five cells where weapons with the more sensitive Conventional High Explosives are worked on, will be refurbished in the next decade. Bays differ from cells in that bays are designed to vent an explosion to the atmosphere while protecting adjacent facilities from the blast, while cells are designed to filter the explosion products through a collapsing gravel bed, while also protecting the adjacent facilities from the blast. To accomplish the workload, the plant will go to a two shift operation, a third shift is impractical for most operations due to the need for facility maintenance.

In addition to the facilities upgrades, over 100 new Production Technicians, the people who do hands-on weapons work, will augment the current force in the next decade. Employee training is an integral part of operations at Pantex. Each technician must receive over 1,000 hours of training in nuclear explosives safety and emergency procedures, weapons certification and radiation safety before being certified to work on nuclear explosives.

Pantex does not have any excess storage capacity now or in the foreseeable future, and has no plans to store any warheads on a long-term basis for the Department of Defense. Of the 60 storage magazines at Pantex, 36 are filled with plutonium pits. Most of these pits are excess to national security needs and await further disposition. The remaining magazines are mostly filled with warheads in the process of evaluation, refurbishment, repair, or dismantlement. The DoD has determined that it can accommodate storage for the warheads no longer deployed, and does not need to rely on NNSA for long-term warhead storage.

### **Retirement/Dismantlement Process**

Weapon retirements are directed in the annual Nuclear Weapons Stockpile Memorandum (NWSM) which is approved by the President on the recommendations of the Secretaries of Defense and Energy. The NWSM is prepared by the Nuclear Weapons Council, through which the Navy and Air Force express their nuclear stockpile needs and the DOE/NNSA and the Department of Defense reach agreement on the nuclear stockpile to

recommend to the President. When a weapon system is retired it is removed from the stockpile. The decision to retire is separate from a decision to dismantle - retired weapons can be held indefinitely should that be consistent with national priorities. The normal practice, however, has been for the NWSM to authorize dismantlement after a weapon is retired.

Planning for a dismantlement campaign typically takes several years. The industrial processes at the Pantex and Y-12 plants need to be defined, their hazards analyzed, and an NNSA-approved safety authorization basis must be prepared. Transportation, storage, and disposition must be arranged, both for the weapons prior to dismantlement and for the waste streams resulting from dismantlement activities.

The dismantlement process begins with the arrival of the weapon at the Pantex Plant. Due to the limited storage space at the Pantex Plant weapons normally remain at a DoD facility in the custody of the Navy or Air Force until just before they are to be dismantled. Upon arrival at the Pantex Plant the weapon undergoes a receipt inspection and is placed into interim storage. Just prior to dismantlement it is verified to be in a safe configuration through radiography of its critical safety components. If the weapon has Insensitive High Explosive (IHE) the entire dismantlement will take place in the bay. If the weapon has Conventional High Explosive (CHE) the bay process will disassemble the weapon to a point defined by safety considerations, and then the partial assembly will be taken to a cell. Whether in a bay or cell, the dismantlement is complete when the weapon's primary high explosive is separated from the Special Nuclear Material (SNM). The High Explosive is disposed of at the Pantex Plant by burning, and the SNM is disposed of through the Materials Disposition Program. Some SNM components may be retained for possible reuse in future warheads and some subassemblies containing Highly Enriched Uranium are returned to the Y-12 plant for further disassembly.

NNSA has been working with Department of Defense to develop plans for the size and composition of the future nuclear weapons stockpile. The Moscow Treaty does not limit the size of the stockpile. Moreover, within the overall warhead limits imposed by the Moscow Treaty, both the U.S and Russia can determine for themselves the composition and structure of their respective strategic forces.

Any plan to increase dismantlements prior to at least FY 2014 would compete for resources with critical refurbishment or evaluation work. Since reductions to the 1,700-2,200 level are up to each country under the Moscow Treaty, so long as these levels are achieved by December 31, 2012, NNSA prefers to retain flexibility in setting any resulting disassembly schedules so as not to interfere with ongoing refurbishments and surveillance activities.

Previous arms control treaties have not included a requirement to specifically dismantle warheads, nor does the Moscow Treaty. Disassembly of warheads is something the U.S. has always done on its own terms, based on national security requirements and as resources permit. While the pace of disassemblies at Pantex has slowed because we have

completed dismantlement of the majority of retired warheads, we still have a busy dismantlement program. The W79 (Artillery-Fired Atomic Projectile) disassembly will be complete next year. The W56 (Minuteman II) disassembly is underway and will continue at least through FY 2005. Disassembly of the B53 (strategic bomb) and some excess B61 non-strategic bombs will begin soon. The NPR reaffirmed that the W62 (Minuteman III) will be retired by FY 2009.

As we deploy fewer strategic nuclear warheads, some may be deemed excess to national security needs. It would then be NNSA's responsibility to disassemble the excess warheads as resources and workload priorities permit. Any decision to retire and dismantle warheads would be made by the President, in the context of an NNSA nuclear weapons complex that is fully engaged with warhead refurbishments and that cannot make new warheads if needed until at least the end of this decade.

### **Nuclear Weapon Transportation**

NNSA is also responsible for the transportation of nuclear weapons and weapons-grade nuclear material within the U.S. Our transportation system of SafeGuards Transporters, manned by federal agents who also guard the cargo, is fully engaged for the next decade. We are trying to minimize the impact to the weapons program, but with limited assets and extensive agent training requirements, and plans by DOE's Office of Environmental Management to consolidate nuclear material from Rocky Flats, Hanford, and Idaho Falls, any additional moves will cause a disruption in existing transportation plans.

### **Device Assembly Facility**

The Device Assembly Facility (DAF) is an NNSA facility at the Nevada Test Site which was originally envisioned for underground nuclear test support, and for potential receipt and processing of damaged nuclear weapons or improvised nuclear devices. With the halt of underground nuclear testing in 1992, the primary mission for the Device Assembly Facility is subcritical experiment support. NNSA, in the coming weeks will issue a final Environmental Impact Statement relating to a proposal to relocate the TA-18 criticality experiment activity from the Los Alamos National Laboratory to the Device Assembly Facility. This capability must be located in a relatively remote and highly secure area. While warhead dismantlement at the Device Assembly Facility is a possibility, the time and cost of starting up nuclear explosive operations at what is essentially a new facility are not easily predicted and would be substantial.

### **Tritium Supply**

While the NPR will result in a smaller active stockpile of both operationally deployed and augmentation forces, the future U.S. nuclear stockpile—by warhead type, by year, and by readiness state—has not yet been determined. This will be done in detail as part of the Nuclear Weapons Council process and will enable NNSA to plan for the delivery of sufficient tritium to meet all military requirements. Because stockpile reductions will

not be accomplished for several years, we do know that there will be no near-term reduction in the immediate demand for tritium. Thus, NNSA is continuing with its plan to begin tritium production in commercial reactors in Fall 2003, and to complete construction and begin operations of a new Tritium Extraction Facility (TEF) at the Savannah River Site so that tritium can be delivered to the stockpile in advance of need.

### **Conclusion**

In conclusion, NNSA recommends Senate advice and consent to ratification of the proposed Treaty on Strategic Offensive Reductions. The Moscow Treaty stands as an example of the emerging relationship between the United States and the Russian Federation- a relationship based on trust and cooperation rather than Cold War competition.

With the Congress' continued strong support for the NNSA Stockpile Stewardship program we expect to be able to provide the Nation with a safe, secure and reliable nuclear weapons stockpile