STATEMENT OF
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BEFORE THE

ARMED SERVICES COMMITTEE
UNITED STATES SENATE

New START Treaty Hearing

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Chairman Levin, Ranking Member McCain, and Members of the Committee, thank you for the opportunity to testify on the Treaty between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms, known as "New START."

Last month, Secretary of Energy Chu testified before this committee on the New START Treaty. He described the Treaty's impact on Department of Energy (DOE) and National Nuclear Security Administration (NNSA) activities, and our ability to ensure the safety, security, and effectiveness of the U.S. nuclear weapons stockpile under the Treaty. I will reiterate the essential points made by Secretary Chu, and provide further information on NNSA activities to maintain the stockpile in the context of the New START Treaty and the policies contained in the Nuclear Posture Review (NPR). Our strength rests on ensuring that our nuclear weapons stockpile remains safe, secure, and effective for as long as it is needed. Modernization and investment in our nuclear infrastructure is essential to this objective, while allowing a reduced role for nuclear weapons in our national security strategy. I will also comment on NNSA's role in the development and evaluation of treaty verification technology.

First and foremost, I want to make clear that the New START Treaty will not affect NNSA's ability to maintain the safety, security, and effectiveness of the Nation's nuclear weapons stockpile. NNSA sites—to include our production, testing, and National Laboratory facilities—will not be subject to inspection, and none of our operations will be subject to limitation. Our plans for investment in and modernization of the Nuclear Security Enterprise – the collection of NNSA laboratories, production sites and experimental facilities that support our stockpile stewardship program, our nuclear nonproliferation agenda, our Naval nuclear propulsion programs, and a host of other nuclear security missions – are essential irrespective of whether or not New START is ratified. Treaty implementation will not affect our plans. Warheads removed from deployed delivery vehicles to meet New START limits will continue to remain available to support maintenance and surveillance activities. They may also be retained as inactive reserve weapons, available to support nuclear component reuse if needed as part of future warhead life extension program (LEP) activities.

Warhead Life Extension Activities and the NPR

Ensuring the safety, security and effectiveness of the Nation's nuclear weapons stockpile is one of NNSA's primary missions. Maintaining the weapons stockpile without nuclear testing has been national policy for nearly 20 years, and we will continue to support that policy in the future. In addition to our maintenance, surveillance and warhead certification activities, important life extension milestones include the following:

- Completing by 2017 the ongoing LEP for the W76 warhead, which will extend its life for an additional 30 years;

- Completing a full scope LEP study for the B61 bomb and beginning production in 2017 to extend its service life, enhance its safety and use control features, and ensure its compatibility with modern aircraft; and

- Completing, with the Nuclear Weapons Council, a study of LEP options for maintaining the W78 ICBM warhead.

With respect to life extension options, while the NPR is clear that the United States will give preference to nuclear component refurbishment or reuse, it is equally clear that the full range of options will be considered for each warhead LEP, to include replacement of nuclear components. The report on the "*New START Treaty Framework and Nuclear Force Structure Plans,*" submitted to Congress in response to Section 1251 of the Fiscal Year 2010 National Defense Authorization Act, further explains that "[w]hile the NPR expresses a policy preference for refurbishment and reuse in decisions to proceed from study to engineering development, the Laboratory Directors will be expected to provide findings associated with the full range of LEP approaches, and to make a set of recommendations based solely on their best technical assessments of the ability of each LEP approach to meet critical stockpile management goals (weapon system safety, security, and effectiveness)."

The directors of Los Alamos, Lawrence Livermore, and Sandia National Laboratories made their position on this approach clear in an April 9, 2010, joint statement. They assessed that "the approach outlined in the NPR, which excludes further nuclear testing and includes the consideration of the full range of life extension options (refurbishment of existing warheads, reuse of nuclear components from different warheads and replacement of nuclear components based on previously tested designs), provides the necessary technical flexibility to manage the nuclear stockpile into the future with an acceptable level of risk."

The Nuclear Posture Review also reinforced the necessity to maintain the capability of the most survivable leg of the triad with a sea-based strategic deterrent. Naval Reactors began reactor and propulsion plant design in fiscal year 2010 for the OHIO Replacement submarine to support the Navy's schedule. Reactor plant components will be procured in 2017 to allow for the long manufacturing spans and need for these components in submarine construction. Research, development and design efforts are underway for the development of reactor technologies to support the Navy's need for a reactor core that will last for the more-than-40-year life of the

submarine. These efforts directly support recapitalizing the sea-based leg of the triad within full compliance of the New START Treaty.

Priorities for NNSA's Nuclear Security Enterprise

The NPR concluded that the NNSA needed to recapitalize the aging infrastructure and renew our human capital base. The recently completed Stockpile Stewardship and Management Plan (SSMP) is the comprehensive resource plan to achieve this and to modernize NNSA's Nuclear Security Enterprise to support the objectives detailed in the Nuclear Posture Review. Implementation of the SSMP will allow us to accomplish the following:

- **Strengthen the science, technology, and engineering base**, including the computational and experimental capabilities, needed for conducting weapon system LEPs, weapons surety, surveillance, and annual certification without nuclear testing.

- **Modernize the infrastructure** necessary to fulfill stockpile stewardship requirements, including replacing outdated facilities with modern, efficient, cost-effective and properly-sized facilities. Key priorities are to:

  - Complete the design and begin building the Chemistry and Metallurgy Research Facility Replacement Nuclear Facility at the Los Alamos National Laboratory in order to complete construction by 2020, and ramp up to full operations by 2022;

  - Increase pit manufacturing capacity and capability at the Plutonium Facility at Los Alamos; and

  - Complete the design and begin building the Uranium Processing Facility at the Y-12 National Security Complex in order to complete construction by 2020, and ramp up to full operations by 2022.

- **Recruit, develop and retain the next generation of nuclear security professionals** responsible for stockpile stewardship. These individuals are today, and will be in the future, our greatest asset. They face critical and persistent scientific challenges as they implement our national policy to consider all life extension options to maintain the nuclear weapons stockpile without nuclear testing. I believe that these challenges, combined with a national-level commitment to transform NNSA from a nuclear weapons complex into a modern, world-class 21st century Nuclear Security Enterprise will provide the environment to attract and retain the best and brightest scientists and engineers available. In addition, defense initiatives beyond stockpile stewardship, such as nuclear forensics and attribution, and treaty verification activities, provide a broadened mission that will push the envelope of nuclear technology and further challenge and develop our nuclear security professionals.

Maintaining Warhead Reliability

U.S. nuclear warhead reliability has always been held to the highest standards – and these standards for warhead reliability will remain exacting and extremely high, regardless of stockpile size. Over the course of the past twenty years, the stockpile has been reduced from over 21,000 warheads to approximately 5,100 at the end of fiscal year 2009 within the context of science-based stockpile stewardship and the continuing moratorium on nuclear testing. During this time, the National Laboratories have assessed our weapon systems on an annual basis and the Secretaries of Defense and Energy have annually certified to the President the safety, security and reliability of our stockpile. However, as the size of the stockpile continues to decrease, our deterrent must rely even more on a strong capabilities-based infrastructure that can respond rapidly to technical and geopolitical challenges—and this is what we will achieve through the programs and plans described in the SSMP. To ensure this infrastructure is in place when we need it, sustained national-level support over the next decade is essential.

Accordingly, we have included a substantial increase in funding in the fiscal year 2011-2015 budget request, shaped by our requirements and the ability of the Nuclear Security Enterprise to efficiently "ramp up" within the constraints of time, capacity and capability to spend the increased funds. In this regard, the President's budget request for the NNSA for the fiscal year 2011-2015 Future Years Nuclear Security Program is exactly right—it reflects what is both necessary and executable. The request includes an increase of $624 million in fiscal year 2011, and scales to $1.64 billion in fiscal year 2015. The Administration's plan calls for sustained investments at these higher levels such that over the next decade the United States will have invested over $80 billion in modernizing the NNSA infrastructure. This represents a nearly 30 percent increase over the next decade as compared with the investments in these programs over the course of the past decade. Again, however, sustained commitment and support over the next decade is essential.

NNSA Support to Treaty Verification

The United States relies on NNSA and the National Laboratories for the development, evaluation and utilization of technologies for a number of treaty verification and nonproliferation initiatives. Our work in this area includes, for example: advanced safeguards technology development to support the International Atomic Energy Agency; equipment development for and monitoring of the conversion of highly enriched uranium (HEU) to low enriched uranium under the U.S.-Russia HEU Purchase Agreement; and monitoring the extraction of spent fuel rods at the Yongbyon reactor in North Korea and verifying that the removed fuel rods were actually spent fuel. For strategic arms control purposes, we leverage the expertise of our physicists and engineers to develop advanced radiation detection equipment, as well as analyze the impact of the use of this equipment on or near U.S. assets. With regard to New START, U.S. inspectors will use equipment developed by the NNSA National Laboratories to confirm that objects on deployed delivery vehicles that are declared to be non-nuclear are, in fact, non-nuclear. This equipment, which was originally developed for verification under the Intermediate-Range Nuclear Forces Treaty, was also used by U.S. inspectors for verification under the 1991 START Treaty. Should new radiation detection equipment be required,

specialists from throughout the Nuclear Security Enterprise will play an essential role in the development and evaluation process.

Conclusion

The New START Treaty, if ratified and entered into force, commits the United States and Russian Federation to further reduce our deployed strategic nuclear weapons in a transparent and verifiable manner, thereby increasing stability between our countries, while demonstrating in a concrete manner the U.S. and Russian commitment to our obligations under the Nuclear Nonproliferation Treaty. This, I believe, will provide positive momentum for future U.S.-Russian collaboration, and will provide further credibility for maintaining a strong leadership role for the United States in international nonproliferation initiatives. Most importantly, the New START Treaty accomplishes these objectives without jeopardizing U.S. national security, and specifically it will not jeopardize the ability of the United States to maintain the safety, security and effectiveness of its nuclear weapons stockpile. For these reasons, I urge this body to favorably consider the New START Treaty.

Thank you. I look forward to answering your questions.