

United States Mission to International Organizations in Vienna

STATEMENTS

The Last U.S. Nuclear Test - 20 Years Later: Status and Prospects for the Comprehensive Test Ban Treaty

Remarks

Rose Gottemoeller
Acting Under Secretary for Arms Control and International Security

Washington, DC
September 26, 2012

Thanks for having me here today. This is an auspicious time for such an event.

Twenty years ago - this past Sunday - the United States conducted its last underground nuclear explosive test. The test, called "Divider", was followed by an official moratorium on explosive testing less than ten days later. Over the past two decades, the United States has developed the capability to ensure the safety, security, and reliability of its stockpile through the use of state-of-the-art technology and research while maintaining a moratorium on nuclear explosive testing.

NNSA Administrator Thomas D'Agostino commented on the anniversary saying: "In April 2009, President Obama shared his vision of a world without nuclear weapons. As we work toward that goal, we have the world's leading scientific facilities, the world's fastest computers, and the world's brightest minds working to ensure that we never again have to perform nuclear explosive testing on U.S. nuclear weapons."

The effort that D'Agostino describes entails a number of programs and tools that work together to maintain a safe, secure, and effective nuclear stockpile in the absence of underground nuclear explosive testing. They include:

The Stockpile Stewardship Program (SSP), run by the National Nuclear Security Administration (NNSA), maintains the continued safety, security and reliability of the nation's nuclear weapons in the absence of nuclear explosive testing. A key goal of the SSP is to increase scientific understanding of nuclear device performance, as well as the aging behavior of weapon materials and components to ensure a safe and effective nuclear deterrent.

Life Extension Programs (LEPs) extend the service life of the current weapons in the stockpile by using only nuclear components based on previously tested designs, thereby eliminating the need to conduct nuclear explosive tests. NNSA, in coordination with the Department of Defense (DoD), also performs alterations and modifications to the stockpile in order to sustain the warheads that underpin the U.S. nuclear deterrent.

Advanced simulation and computing capabilities provide greatly increased confidence in the ability to model and evaluate the performance and safety of nuclear weapons without nuclear explosive testing. Computers have become at least a hundred-thousand times more powerful, and modern integrated design codes now more realistically capture the behavior of real nuclear devices.

Enhanced surveillance tools and models play critical roles in providing information essential to assessing weapon safety, security, and performance changes that would affect military effectiveness. The use of data from surveillance of our nuclear weapons enables us to predict how the weapons will perform over time without using underground nuclear explosive testing.

The Annual Assessment process of the U.S. Nuclear Weapons Stockpile is the authoritative method for the DoD and NNSA to evaluate the safety, reliability, performance and military effectiveness of the nuclear weapons stockpile, and it is a principal tool in our ability to maintain a credible nuclear deterrent without nuclear explosive testing.

Finally, infrastructure modernization is being conducted in accordance with the Nuclear Posture Review. NNSA has identified a path for sustaining the nuclear deterrent while modernizing the supporting infrastructure without nuclear explosive testing. This modernization is implemented by focusing on recapitalization and refurbishment of existing infrastructure for plutonium, uranium, tritium, high-explosive production, non-nuclear component production, high-fidelity testing and waste disposition

All of these programs will be described in greater length in fact sheets that the State Department and the NNSA produced together. The first fact sheet with these overview details will be available today. I'll pass around an advance copy now.

The last U.S. explosive nuclear test is not the only anniversary happening this week. Sixteen years ago, this Monday, the Comprehensive Nuclear Test-Ban Treaty (CTBT) was opened for signature. The United States signed the Treaty that same day.

U.S. ratification of the CTBT is in our national security interest. As stated in the April 2010 U.S. Nuclear Posture Review: "Ratification of the CTBT is central to leading other nuclear weapons states toward a world of diminished reliance on nuclear weapons, reduced nuclear competition, and eventual nuclear disarmament."

Since we have maintained a 20-year moratorium on explosive nuclear testing, our policies and practices are consistent with the central prohibition of the Treaty. But ratification of the CTBT would be a significant affirmation of the importance the United States attributes to the international nonproliferation regime. More importantly, by hastening the day the Treaty enters into force, U.S. ratification would concretely contribute to reducing the role of nuclear weapons in international security.

With a global ban on nuclear explosive tests, states interested in pursuing nuclear weapons programs would have to either risk deploying weapons uncertain of their effectiveness, or face international condemnation for conducting nuclear tests. The CTBT would also subject suspected violators to the threat of intrusive on-site inspections - a further deterrent to those states tempted to carry out a nuclear test in the hope that it can be covered up.

It has been 12 years since the Senate voted against ratification of the Treaty. This Administration has been reviewing the lessons learned and it is clear the lack of support stemmed from concerns regarding the verifiability of the Treaty and our ability to ensure the continuing safety and reliability of America's nuclear deterrent without nuclear explosive testing.

As I have already outlined with regard to our nuclear deterrent, our extensive surveillance methods and computational modeling developed under the Stockpile Stewardship Program over the last 15 years have allowed our nuclear experts to understand how nuclear weapons work and age even better than when nuclear explosive testing was conducted, as our national laboratory directors themselves affirmed to the Vice President.

The Treaty's verification regime has also grown exponentially over the last decade. Today, the International Monitoring System (IMS) is roughly 85 percent complete and when fully completed, there will be IMS facilities in 89 countries spanning the globe. At entry into force, the full body of technical data gathered via the International Monitoring System will be available for verification purposes to all States Parties.

This system is already at work. It detected the two nuclear explosive tests announced by North Korea, and its capabilities will continue to improve as the system is completed. In addition, with the Fukushima nuclear crisis, we have seen the utility of the IMS for non-verification related purposes, such as tsunami warnings and tracking radioactivity from reactor accidents.

Entry into force also will bring to bear the option for an on-site inspection, which will help clarify ambiguities regarding a possible nuclear test.

Taken as a whole, the Treaty's robust verification regime, which supplements our own state-of-the-art capabilities for monitoring, our national technical means, will severely challenge any state trying to conduct militarily significant explosive nuclear tests that escape detection.

As we look towards ratification of the CTBT, we acknowledge that the process will not be easy.

That said, the New START ratification process reinvigorated interest in the topic of nuclear weapons and arms control on Capitol Hill. I am optimistic that interest will continue as we engage with Members and staff on this Treaty.

I like to think of our efforts thus far as an "information exchange." We are working to get the facts out to Members and staff, many of whom have never dealt with this Treaty. We know that the key underlying issues are very technical in nature and we want people to absorb and understand the rationale behind it, that the Treaty is in the U.S. national security interest. There are no set timeframes to bring the Treaty to a vote, and we are going to be patient, but we will also be persistent.

To aid in further understanding of the Treaty, the Administration commissioned a number of classified and unclassified reports, including an updated National Intelligence Estimate and an independent National Academy of Sciences report, to assess the ability of the United States to monitor compliance with the treaty and the ability of the United States to maintain, in the absence of nuclear explosive testing, a safe, secure and effective nuclear arsenal so long as these weapons exist. Those reports and related materials will provide a wealth of information as the Senate

considers the merits of ratification of the CTBT.

Of course, we do not expect people to be in receive-only mode - we anticipate and look forward to many substantive questions that will undoubtedly come from the Hill.

Looking outward, the Administration has been calling on the remaining Annex 2 States to join us in moving forward toward ratification. There is no reason for them to delay their own ratification processes because the U.S. has not yet ratified.

This Administration realizes that this will be a difficult task on many levels, but it is nonetheless committed to moving this Treaty forward, since the national security of the United States, and all states, will be enhanced when CTBT enters into force.

Thank you again for having me here and I am happy to take some questions.