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The Comprehensive Test Ban Treaty

Before the Senate Foreign Relations Committee

September 7, 2016

Chairman Corker, Ranking Minority Member Cardin, Members of this Committee: Thank you for inviting me to testify.

I know that you and other Senators hold strong feelings about protecting the Senate's prerogatives, especially regarding the Senate's advice and consent to treaty ratification.

My understanding is that nothing in the administration's proposed United Nations Security Council resolution on the Comprehensive Test Ban Treaty impinges on Senate prerogatives.

The Obama Administration has stated that this will be a non-binding resolution.

The administration has stated that this resolution will not invoke Chapter Seven of the UN Charter to mandate new obligations on the United States. Instead, this resolution will reaffirm existing obligations.

The administration has stated that this resolution will not be a substitute to or an end-around for the Senate's advice and consent to treaty ratification.

I don't expect you to take this on faith from the Obama Administration or from me.

A drafting process has been underway. When it is concluded, we will be able to check the words of the UNSC resolution against the Obama Administration's assurances. I doubt that there will be any basis to conclude that the Senate's prerogatives have been circumvented.

If this UNSC resolution is not legally binding, if it simply reaffirms, but adds no new obligations on the United States and everyone else, why take this step, along with a companion statement by the five Permanent Members of the Security Council?

In my view, there are three very important reasons to support this initiative.

First, A U.N. Security Council resolution *will reaffirm and strengthen national moratoria on nuclear testing*. This resolution provides an opportunity for the Permanent Five members of the Security Council to reaffirm a global ban on testing. It also provides an opportunity for India and Pakistan – two states that seek membership in the Nuclear Suppliers Group -- to reaffirm their national moratoria on testing. And it will reaffirm North Korea's outlier status as the only state that has tested nuclear explosive devices in the Twenty-First Century. This resolution can facilitate new penalties if North Korea continues to test.

It is in the U.S. national security interest that Russia not test again. And China. And Pakistan. And North Korea. And India. Support for this resolution can reaffirm and extend national moratoria. Opposition to this resolution and to the CTBT weakens national moratoria.

Second, this resolution *will reaffirm national commitments in support of the Comprehensive Test Ban Treaty's entry into force*. Reaffirmation is necessary because the Treaty has been in limbo for twenty years. As a result of a generously funded stockpile stewardship program, and due to extreme diligence by the U.S. nuclear laboratories, the United States has no need to test nuclear weapons. We are in a better position than any other country to extend national moratoria on testing.

The CTBT's entry into force would make America stronger because U.S. national and international security is strengthened by the absence of nuclear testing by others, and weakened by the resumption of testing by others.

Reaffirmation of support for the CTBT's entry into force by means of a U.N. Security Council resolution is clearly in the interest of the United States and our allies. Our allies don't want a resumption of testing by anyone. Support for this resolution will strengthen alliance ties. Opposition to this resolution and the CTBT will weaken alliance ties.

Third, a U.N. Security Council Resolution *will recommit states to support the Test Ban Treaty Organization's international monitoring system* that detects covert, low-yield testing. This monitoring system also provides a global early warning system for tsunamis. Detection and disaster relief are worth investing in.

Concerns over covert, very low yield testing can be addressed by continued funding for the Test Ban Treaty Organization's global monitoring network. Withholding funds for treaty monitoring weakens deterrence of covert, very low yield testing which, in turn, damages U.S. national security.

The Comprehensive Test Ban Treaty has 183 signatories and 164 ratifications. The Treaty establishes a global norm against testing nuclear explosive devices. The negotiating record of the CTBT clarifies that is a zero yield treaty. The Organization created to prepare for the Treaty's entry into force has established an international monitoring network consisting on 282 certified stations employing four different and mutually reinforcing technologies, situated in 80 countries, including all permanent members of the UN Security Council.

The CTBT's biggest weakness is its entry-into-force provision, which requires the deposit of an instrument of ratification by North Korea, among others. Two other key states have yet to sign, let alone ratify the CTBT: India and Pakistan. The United States, China, Israel, Egypt and Iran have signed the Treaty, but have not deposited instruments of ratification. All of this must happen before entry into force.

If the Senate sees fit to consent to the CTBT's ratification, China is likely to follow suit. If China ratifies, India can ratify. If India ratifies, Pakistan can ratify. This progression would make it easier for Israel's leadership, which has expressed an interest in ratification, to act on its stated intention. Then the international focus on ratification would fall heavily, and usefully, on Iran and Egypt.

In other words, nuclear dangers can be reduced in East Asia, South Asia and the Middle East if the Senate sees fit to consent to the CTBT's ratification. If the Senate refuses to consent to ratification, nuclear dangers will be compounded in East Asia, South Asia, and the Middle East.

Without U.S. ratification, the Treaty will remain in limbo. The CTBT's Organization (or "Preparatory Commission"), its "Provisional" Technical Secretariat, and its International Monitoring System created to prepare for entry into force are now functioning well, but limbo is not an equilibrium state.

The longer the CTBT remains stuck in limbo, the more its essential monitoring system is likely to atrophy. Champions of the Treaty will continue to pay their dues and maintain their monitoring stations; others will, over time, short-change international institutions that provide essential global services.

Why should we be bothered, when we have our own "National Technical Means" to monitor extremely low yield nuclear tests? Our NTM is better than the Treaty Organization's International Monitoring System. But our NTM, while exceptional, is not in almost 300 places around the world, like the Treaty Organization's International Monitoring System. And two monitoring systems are better than one. And because our system is secret, and our pronouncements based on secret data will be challenged by some.

When the monitoring systems of the United States and the Treaty Organization work separately but in parallel, deterrence against extremely low-yield, covert testing is reinforced. And rebuttals to those who challenge data will be far more effective.

Opposing this Treaty will not address concerns about monitoring very low-yield, covert testing. Indeed, opposing this Treaty makes it easier for other states to resume testing, without easing the significant challenges to resume testing nearby Las Vegas. What we once called the Nevada Test Site is now called the Nevada National Security Site.

A 2012 National Academy of Sciences Report concluded that, “Substantial improvements in the U.S. and international ability to monitor underground nuclear-explosion testing have been made” since its earlier Report in 2002. Moreover, the 2012 National Academies of Science Report goes on to say, “Seismic technologies for nuclear monitoring have the potential to improve event detection, location, and identification substantially over the next years to decades.”

The Congress can continue to improve detection capabilities by continuing to fund the Treaty Organization’s International Monitoring System and U.S. NTM. The Treaty’s entry into force would add another important mechanism – on-site inspections -- to verify compliance. Opposing ratification means foreclosing on-site inspections. Transparency measures at test sites can also help, as might joint verification experiments at or near test sites.

There is precedent for this step. The George H.W. Bush administrations pursued joint verification experiments with the Soviet Union to address verification and compliance issues related to the 1974 Threshold Test Ban Treaty negotiated by President Nixon. Precise yields were hard to control and hard to measure, and some asserted that the Soviet Union tested above this threshold. Joint U.S. and Soviet teams carried out verification experiments close to test sites to better calibrate yields. These experiments strongly indicated that assertions of Soviet violations in this case were unfounded. The United States Senate then proceeded to provide its consent to ratification.

We’ve come a long way since the dark days of the Cold War, when countries tested in the open air and in the atmosphere. There were a great many tests. The United States tested over 1,000 times, including over 200 atmospheric tests. The Soviet Union tested over 700 times, including more than 200 tests in the

atmosphere.

By the early 1960s, the human and environmental consequences of open air and atmospheric nuclear testing came to be clearly understood. We learned of terrible public health hazards, especially with regard to Strontium 90 levels in bones and in breast milk.

After the chastening experience of the Cuban Missile crisis, the United States and the Soviet Union negotiated the Limited Test Ban Treaty which banned tests in the atmospheric and everywhere else except underground.

This wasn't easy to do in 1963. Some prominent U.S. scientists, Members of Congress, and strategic thinkers were convinced that the Soviet Union would cheat and that the United States would be disadvantaged. One scenario postulated Soviet cheating by testing behind the Moon.

The United States and the world benefitted greatly from the Limited Test Ban Treaty, but the superpower nuclear competition continued unabated after testing was driven underground. There was, on average, one nuclear test per week from 1955 to 1989.

The goal of a Comprehensive Test Ban Treaty was a bridge too far for President Nixon, who instead negotiated the aforementioned Threshold Test Ban Treaty in 1974 limiting the yield of underground tests to 150 kilotons. (The atomic bombs that destroyed Hiroshima and Nagasaki had yields of about 15 kilotons.) The Nixon Administration also negotiated a detailed Protocol to help verify compliance. Nonetheless, both superpowers acknowledged that a strict threshold of 150 kilotons would be hard to adhere to and monitor. They anticipated that some would be quick to assert purposeful violations of tests above this threshold – as was, indeed, the case. President Ford nonetheless sent this Treaty to the Senate for its advice and consent in 1976.

President Reagan decided to pursue negotiations with the Soviet Union on additional measures to monitor compliance with the Threshold Test Ban Treaty, and President George H.W. Bush negotiated new procedures to better assess the yield of underground nuclear tests. The Senate then consented to ratify the Threshold Test Ban Treaty, which entered into force in 1990.

In 1995, the Nuclear Non-proliferation Treaty was indefinitely extended. Nuclear weapon states promised that, in return for the NPT's indefinite extension, they would pursue in good faith negotiations to complete a Comprehensive Test Ban Treaty. The following year, President Bill Clinton and the leaders of Russia, China, Great Britain and France made good on this promise.

The fates of the NPT and the CTBT have always been intertwined. Continued testing facilitates horizontal and vertical nuclear proliferation. The absence of testing supports nuclear non-proliferation and makes it difficult for states to pursue advanced nuclear weapon designs. It's hard to strengthen the NPT by opposing the CTBT.

The negotiation of the Comprehensive Test Ban Treaty came as unwelcome news to those who were accustomed to and expected more advanced warhead designs.

China had tested less than 50 times, and was reluctant to close this door. Great Britain and France were reluctant to, as well – even though their options to test nuclear weapons within their borders had reached a dead end.

India and Pakistan hadn't conducted any hot tests – and were upset that nuclear weapon states negotiated the CTBT, especially after the Non-proliferation Treaty's indefinite extension.

And some in the United States and Russia wanted to continue testing, believing that nuclear deterrence and war-fighting capabilities depended on it.

The result of all of this ambivalence was the CTBT's entry-into-force provision, which requires no less than 44 states to deposit their instruments of ratification before entry into force.

While the CTBT remains in limbo, the norm against nuclear testing grows stronger every year that major powers and regional powers do not test. But this norm cannot be taken for granted.

The Treaty's Organization in Vienna, its International Monitoring System, and its Technical Secretariat work just fine. But the global services they provide cannot be taken for granted, either.

The UN Security Council resolution now under consideration does not take the CTBT or the Treaty Organization's International Monitoring System for granted. On the twentieth anniversary of the Treaty's signing, this resolution reaffirms the Treaty's central object and purpose of banning nuclear tests, strengthens national moratoria on testing, and supports monitoring to deter extremely low yield nuclear test explosions.

The reasons for this resolution are straightforward: The world will be safer without renewed nuclear testing. Nuclear non-proliferation will be advanced in a world without testing, and set back by the resumption of testing

The American public and our allies do not want to resume nuclear testing. The U.S. stockpile stewardship program is a significant success story. Advances in monitoring extremely low yield, covert nuclear testing is a significant success story. This UN Security Council resolution builds on these successes. Reaffirming the global norm against nuclear testing serves U.S. national and international security interests. This resolution and the companion P-5 statement are worthy of your support.