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THE NEW START TREATY (TREATY DOC. 111–5)

HEARINGS

BEFORE THE

COMMITTEE ON FOREIGN RELATIONS UNITED STATES SENATE

ONE HUNDRED ELEVENTH CONGRESS

SECOND SESSION

APRIL 29, MAY 18, 19, 25, JUNE 10, 15, 16, 24, AND JULY 15, 2010

Printed for the use of the Committee on Foreign Relations

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THE HISTORICAL AND MODERN CONTEXT FOR U.S.-RUSSIAN ARMS CONTROL

THURSDAY, APRIL 29, 2010

U.S. SENATE,
COMMITTEE ON FOREIGN RELATIONS,
Washington, DC.

The committee met, pursuant to notice, at 2:37 p.m., in room SD–419, Dirksen Senate Office Building, Hon. John Kerry (chairman of the committee) presiding.

Present: Senators Kerry, Feingold, Casey, Shaheen, Lugar, Isakson, Risch, Barrasso, and Wicker.

OPENING STATEMENT OF HON. JOHN KERRY, U.S. SENATOR FROM MASSACHUSETTS

The CHAIRMAN. This hearing will come to order. Thank you all for coming. This afternoon we begin a series of hearings on the New START Treaty. In the coming weeks administration witnesses and outside experts from across the political spectrum will testify about this historic opportunity to reduce the threat posed by nuclear weapons. An honest and fair discussion will be an important part of building the kind of bipartisan support that the treaty requires and I believe deserves.

This treaty marks a significant step forward for both America and Russia, and I think the world, because of the marker it sets with respect to our efforts to reduce nuclear weapons globally. It will cut by nearly a third the maximum number of deployed strategic warheads. It puts in place a streamlined and effective new verification regime. Overall, it puts us firmly on the path toward reducing our reliance on nuclear weapons.

In the weeks and months ahead, we will hear differences of opinion on some of the specifics of the treaty, including missile defense, telemetry, and ICBMs. Personally, I welcome a thorough exploration of each of these issues. But at the outset I think we have to focus on a single overarching issue: Does this treaty make us safer? From everything that I have read and heard so far, the answer to that question is "Yes." This treaty improves our security because it increases certainty, stability, and transparency in the two countries that together hold 95 percent of the world's nuclear weapons, and it does so while retaining for America the flexibility to protect ourselves and our allies in Europe and around the world.

Day by day since the START Treaty and its verification measures expired last December, we have been increasingly losing crucial visibility into the Russian nuclear program. This new treaty will restore that visibility, that capacity, and in some ways it will

enhance it. The sooner we get that done, the better, because until then we don't have a formalized agreement with respect to verification.

This treaty also strengthens the global nonproliferation regime that is under threat today. Every step that America takes to honor our end of the NPT partnership makes it easy for others to partner with us, both in pressuring an Iran or North Korea to honor their own commitments and in preventing nuclear terrorism.

This treaty's benefits extend far beyond nuclear security. When Presidents Obama and Medvedev signed the accord in Prague earlier this month, they took a major step toward a better United States-Russian relationship. In the next few weeks we expect formal delivery of the treaty and the accompanying documents, the annexes, from the administration. That will permit us to get down to the details.

We already know that some are going to contend, as they always do, that any negotiated reduction in our nuclear arsenal somehow endangers our national security. As much as I disagree, Senator Lugar and I share a determination to work together to conduct a series of hearings that will explore and answer the full range of concerns from supporters and skeptics alike.

Next month we will hear from Secretary Clinton and Secretary Gates and Admiral Mullen. We will hear from the team that spent a year in the ultimately successful negotiations with the Russians, and we will hear from the intelligence officials charged with monitoring Russia's strategic forces. We will also hear from Henry Kissinger, James Baker, Madeleine Albright, and other officials who, like today's witnesses, can provide firsthand knowledge and perspective on the history of arms control.

On a matter that's vital to America's national security, it's more important than ever that we put aside politics and judge this treaty on its merits. This should not be a partisan issue. Some of the most important arms control treaties have been negotiated by Republican Presidents. Remember, it was Ronald Reagan who began negotiations on the original START Treaty, and George H.W. Bush completed them. That treaty was approved with the overwhelming support of Democrats.

In fact, the New START Treaty reflects concerns raised by Senators during the process as we have met with negotiators on a consistent basis, and it reflects concerns raised by Senators on both sides of the aisle. This treaty emphasizes verification. It will not inhibit our missile defense. It will not prevent us from fielding strategic conventional weapons. The START and SORT agreements with Russia were approved by large majorities of both parties, and I believe that we can do it again this year.

Few people know the history of arms control better than our two witnesses this afternoon. They have offered trusted strategic advice to Presidents for over 4 decades, and we are fortunate to have their guidance at this first hearing, at the outset of this journey. Dr. James Schlesinger has been called the "former Secretary of Everything." He has served Presidents Nixon, Ford, and Carter as Chairman of the Atomic Energy Commission, Secretary of Defense, Director of Central Intelligence, Secretary of Energy. He's been an important voice of caution regarding the limits of arms control

agreements as tools of U.S. foreign policy, and we are eager to hear his thoughts today.

Dr. William Perry served as Secretary of Defense during the Clinton administration. He's also, as we know, a long-time professor at Stanford University. In 2008 and 2009 Dr. Perry served as chairman of the Congressional Commission on the Strategic Posture of the United States, and his vice chairman was James Schlesinger.

So, gentlemen, welcome back. We've sought your guidance in the past. We're honored by your presence here today and we look forward to your insights as we begin our hearings on the New START Treaty.

Senator Lugar.

OPENING STATEMENT OF HON. RICHARD G. LUGAR, U.S. SENATOR FROM INDIANA

Senator LUGAR. As the chairman pointed out, the committee begins today to hear testimony regarding the New START Treaty and the historical context of United States-Russian arms control. I join the chairman in welcoming two very good friends to the committee, Jim Schlesinger and Bill Perry. They led the commission that wrote the "Report on America's Strategic Posture" that was mandated by Congress and released in 2009. We look forward both to their insights from this report and their personal observations based on decades of arms control and defense policy leadership.

Earlier this month, in Prague, the United States and Russia signed the new START Treaty. Formal transmission of the treaty to the Senate for advice and consent is expected in early May. Nevertheless, we are moving forward now to prepare members of this committee for action on the new accord and to build a thorough record for the full Senate.

Many Members of the Senate are new to the subject of strategic arms control. In fact, only 26 Members of today's Senate were present in 1992 for debate on the START I Treaty. Only six current members of the Foreign Relations Committee were Senators when we dealt with the Moscow Treaty in 2003. Senate consideration of the New START Treaty is an opportunity, not only to educate the Senators, but also to engage in a broader public dialogue on the fundamental questions of United States national security and diplomacy for all of our Members and for Americans who are witnessing these hearings.

Texts of the treaty and its protocol are available online, including on my Senate Web site. The treaty annexes, which are completed, may soon be publicly released. When they are, they will be placed on my Web site, as well. I look forward to the administration's provision of other key documents in the coming weeks, including a modernization plan for our weapons complex, a National Intelligence Estimate, and a verification assessment.

I support the New START Treaty, and believe that it will enhance the United States national security. It would reduce strategic nuclear launchers and warheads and replace the 1991 START I Treaty that expired last year. Equally important, it will provide forward momentum to our relationship with Moscow, which is vital to United States policy goals related to Iran's nuclear program,

nuclear nonproliferation, global energy security, and stability in Eurasia.

Further, because the verification procedures contained in START I expired last December 5th, without the New START Treaty, the United States lacks both the ability to carry out on-site inspection in Russia and the formal consultation mechanisms that monitor Russia's strategic nuclear program. It is essential that a verification system be in place so that we have a sufficient understanding of Russian nuclear forces and achieve a level of transparency that prevents miscalculations.

As our hearing today underscores, the task of evaluating a treaty requires more than a reading of the text. The administration must explain in detail how the treaty fits into our defense plans and how it will affect our relationships with Russia and other nations. Several issues are particularly important to address.

First, some Members have expressed concern about provisions in the New START Treaty that deal with missile defense. START I acknowledged a link between strategic offensive and strategic defensive systems. The preamble to the New START Treaty similarly acknowledges this link. But New START also contains limits on the deployment of U.S. interceptor missiles in existing strategic missile launchers. The administration must elaborate on how these provisions constitute no constraint on our missile defense plans, as it claims.

Second, the administration's Nuclear Posture Review defines a new, more limited role for nuclear weapons in our military strategy. It also says that new conventional weapons could replace nuclear weapons for certain missions. In light of the limits on conventional capabilities in the New START Treaty, the administration should explain how, and in what specific instances, conventional capability can replace nuclear capability.

Third, any treaty on strategic nuclear forces will be affected by continued safety, security, and reliability of our nuclear weapons. The Obama administration should explain how it plans to ensure that our weapons will perform their missions over the 10-year life of the treaty. The administration also must clarify an uncertainty over whether the Nuclear Posture Review's new, restrictive procedures for maintaining our industry stockpile will allow experts sufficient flexibility to keep our weapons safe, secure, and reliable.

Fourth, the administration should articulate clearly how it wants both American and Russian strategic forces to look at the end of the new treaty's lifetime. A major goal of the START I and the START II treaties was to move Soviet and Russian strategic systems away from destabilizing heavy, fixed ICBMs with many warheads on them. Today, we have largely achieved this goal. What are our goals for the future under the New START Treaty?

These are all important questions for our inquiry, but they are not partisan ones. Arms control treaties have traditionally enjoyed bipartisan backing. With 67 votes required for ratification, the Senate approved the START I Treaty in 1992 by a vote of 93 to 6, and the 1996 START II Treaty by a vote of 87 to 4. The Moscow Treaty, signed by President Bush and then-President Putin in 2003, was approved 95 to 0. Since the New START Treaty combines concepts

from START I and the Moscow Treaty, I believe a thorough and detailed debate can achieve similar levels of support.

We start on this project today. I appreciate especially the chairman's scheduling of this hearing and the opportunity to engage in a dialogue with our esteemed witnesses.

I thank the chair.

The CHAIRMAN. Thank you very much, Senator Lugar.

Secretary Schlesinger, if you will lead off we would appreciate it. Your full testimony will be placed in the record as if read if you would like, and if you want to summarize, or however you wish to proceed. Thank you.

STATEMENT OF HON. JAMES R. SCHLESINGER, PH.D., FORMER SECRETARY OF DEFENSE, FORMER SECRETARY OF ENERGY, FORMER DIRECTOR OF CENTRAL INTELLIGENCE, CHAIRMAN OF THE BOARD, MITRE CORPORATION, McLEAN, VA

Dr. SCHLESINGER. Thank you, Mr. Chairman, Senator Lugar, Senator Casey, Senator Shaheen. I thank the committee for its invitation to discuss the New START Treaty and its implications.

At the outset I want to make two general points. First, the Senate will wish to scrutinize the treaty carefully, as it has previous arms control agreements. This reflects the many changes that have occurred between START I and New START.

Second and perhaps even more important, as I shall develop, it will want to examine the treaty in a wider context of overall military relationships and our alliance responsibilities. In a way, this latter aspect is reminiscent of the clue in Sherlock Holmes' story of the dog that did not bark. While New START may be acceptable in the narrow context of strategic weapons, it also needs to be considered in a much larger context. In particular, as I shall come to later, it must be viewed in terms of the evolving Russian doctrine regarding tactical nuclear weapons and their use and on the balance between Russia's substantial stockpile of tactical nuclear weapons, which are not included in this treaty, and strategic weapons.

As to the stated context of strategic nuclear weapons, the numbers specified are quite adequate at the reduced level, in my judgment at least. To have gone further at this time, as some have urged, would not be prudent.

At the time of the committee review of the Moscow Treaty in 2002, criticism was sharp with respect to the failure to deal with tactical nuclear weapons, the failure further to reduce MIRVed missiles, and with respect to verification. Those criticisms—those questions, I should say, are still relevant today.

On specifics, the committee will wish to review the question of launchers, why did the United States come down from its preferred level of 900 to 700, when the Russians were already at this lower level, and whether or not we got something for this concession. The main effect of reducing launchers relative to weapons is to reduce the number of aim points for an attacker, thus hypothetically increasing instability.

Second, a heavy bomber constitutes only one count against the 700-launcher operational limit, even though bombers can carry many more weapons. A bomber can carry 16 to 20 ALCMs. A force

of 65 to 70 bombers could readily carry upward of 500 additional weapons, beyond the 1,550 limit. The official Russian press has already bragged that under New START, under the New START counting rules, Russia can maintain 2,100 strategic weapons rather than the 1,550 specified in the treaty.

If there is any advantage in this counting rule, it is that it makes a powerful case for the preservation of the triad and indeed for starting on the new development, in light of our own aging bomber fleet, of a follow-on strategic bomber.

Now let me change to what is not included under the strategic nuclear weapons, to wit, the dog that did not bark, the frustrating, vexatious, and increasingly worrisome issue of Russia's tactical weapons. Russian officials have acknowledged that the number of their nuclear weapons, nonstrategic nuclear weapons, is some 3,800 and the overall number is believed to be significantly higher. The United States has over the years reduced its tactical nuclear weapons in Europe by over 95 percent and the percentage reduction is even higher if one includes the weapons withdrawn from our aircraft carriers in the early 1990s.

In its hearings on the Moscow Treaty in 2002, this committee was quite critical on that issue, that that treaty had done nothing about tactical nuclear weapons. Then-Chairman Biden asked: "Why does this treaty not limit tactical nuclear weapons, which are the most susceptible to theft?"

Secretary Powell had, in his prepared statement, stated: "As we went about negotiating the Moscow Treaty, one of the questions foremost in my mind, as a former soldier and Chairman of the Joint Chiefs of Staff, was how will we address tactical nuclear weapons? We continue to be concerned about the uncertainties surrounding Russian nonstrategic nuclear weapons and I believe we should discuss inventory levels of NSNW with the Russians and press Moscow to complete the reductions it pledged" in 1991–92.

Later in the hearing, Mr. Powell also stated: "The President is still very interested in tactical nuclear weapons, so this is going to be an area of discussions with the Russian side."

That expression of intent to discuss tactical nuclear weapons with the Russian side was 8 years ago. It seems to go on interminably and still nothing has happened. While the Obama administration has repeatedly expressed an intent to deal with tactical nuclear weapons, up to this point the Russians have been deaf to our entreaties.

The point to bear in mind is that the ratio between tactical nuclear weapons and strategic tactical weapons continues to rise, one of the consequences of reducing the strategic nuclear weapons. The problem with tactical nuclear weapons is acknowledged in the preamble of the New START Treaty, though in relation to the balance between strategic offense and strategic defense: "This interrelationship becomes more important as strategic nuclear arms are reduced." Similarly, the significance of tactical nuclear weapons rises steadily as strategic nuclear weapons are reduced.

We must bear in mind that, with respect to tactical nuclear weapons, there is an inherent asymmetry between the United States and Russia that goes beyond the questions of mere numbers. While the United States is far away, Russia is cheek by jowl with

the countries on the Eurasian continent. To a Poland or a Czech Republic, both of which have been threatened by the Russians during an earlier period of missile defense deployment, it is hard to discern the difference between Russian tactical nuclear weapons—that is, short-range weapons—and strategic nuclear weapons.

As the plaintive comment of Secretary Powell did reveal, the Russians have steadfastly resisted any attempt on our part to deal with the imbalance in tactical nuclear weapons, and understandably do so. The likelihood of their being willing to do so in light of New START is sharply diminished, for we have now forfeited substantial leverage.

The Russians have indicated that they would not even discuss tactical nuclear weapons until the handful of weapons we still maintain in Europe are withdrawn. In this connection, Russian policy, like Soviet policy before it, is quite consistent. In the 1970s and the 1980s the Russians regularly demanded either that we should withdraw our forward-based systems in Europe or, at a minimum, count them against our total number of strategic weapons. In those days, however, they remained unsuccessful in achieving that goal.

The United States has made transparency a global initiative. The Strategic Posture Commission stated that: "The United States and Russia have a shared responsibility to increase nuclear transparency and to set a high standard in their own postures," as you mentioned in your opening statement, Mr. Chairman. In no nuclear area other than for proliferators like North Korea and Iran has transparency been as lacking as it has been with respect to Russian tactical nuclear weapons.

In the current political context, a premeditated attack on the United States by a major power like Russia or China has little credibility. Nevertheless, the role of a lopsided tactical nuclear posture is potentially important for intimidating our allies on the Eurasian continent. Extended deterrence remains central to formulating our own nuclear posture, offsetting potential tactical nuclear weapons. Intimidation of our allies remains a critical element in overall deterrence.

Thank you, Mr. Chairman.

[The prepared statement of Dr. Schlesinger follows:]

PREPARED STATEMENT OF DR. JAMES SCHLESINGER, CHAIRMAN OF THE BOARD, MITRE CORPORATION, MCLEAN, VA

Mr. Chairman, Senator Lugar, members of the committee, I thank the committee for its invitation to discuss the New START Treaty and its varied implications. At the outset I should like to make two general points. First, the Senate will wish to scrutinize the treaty carefully, as it has previous arms control agreements. This reflects the many changes as compared to START I. Second, and perhaps even more important, it will want to examine the treaty in a wider context of overall military relationships and our alliance responsibilities.

In a way that aspect is reminiscent of the clue in Sherlock Holmes' story of the dog that did not bark. While New START may be acceptable in the narrow context of strategic weapons, it also needs to be considered in a much larger context. In particular, as I shall come to later, it must be viewed in terms of the evolving Russian doctrine regarding tactical nuclear weapons use and on the balance between Russia's substantial stockpile of tactical nuclear weapons—which are excluded under this treaty—and strategic weapons.

As to the stated context of strategic nuclear weapons, the numbers specified are adequate, though barely so. To have gone further at this time, as some had urged, would not, in my judgment, have been prudent.

At the time of this committee's review of the Moscow Treaty in 2002, criticism was sharp with respect to the failure to deal with tactical nuclear weapons, the failure further to reduce MIRV missiles, and with respect to verification. Those criticisms are still relevant today.

On specifics, the committee will wish to review the question of launchers. First, why did the United States come down from its preferred number of 900 to 700, when the Russians were already at that lower level—and whether we got anything for this concession? The main effect of reducing launchers relative to weapons is to reduce the number of aim points for an attacker, thus hypothetically increasing instability.

Second, a heavy bomber constitutes only one count against the 700-launcher operational limit—even though bombers can carry many more weapons. Since a bomber can carry 16–20 ALCMs, a force of 65 to 70 bombers could readily carry upward of 500 additional strategic weapons. The official Russian press has already bragged that under the New START counting rules, Russia can maintain 2,100 strategic weapons rather than the 1,550 specified in the treaty. If there is any advantage in this counting rule, it is that it makes a powerful case for the preservation of the Triad—and indeed for starting on the development, in light of our own aging bomber fleet, of a follow-on strategic bomber.

Third, the committee will wish to examine specified limits in the START I Treaty that have now been removed. In contrast to START I, New START, for example, does not mention rail-mobile missiles. Does this mean that such missiles could be deployed and not count against New START limits? Clearly this implies for us that we must carefully monitor any activities outside the now reduced specific limits of New START.

Now let me change to what is not included under strategic nuclear weapons—i.e., the dog that did not bark—the frustrating, vexatious, and increasingly worrisome issue of Russia's tactical nuclear weapons. Russian officials have acknowledged that the number of their tactical nuclear weapons (nonstrategic nuclear weapons) is some 3,800—and the overall number is believed to be significantly larger. The United States has over the years reduced its tactical nuclear weapons in Europe by over 95 percent—and the percentage reduction is even higher if one includes the weapons withdrawn from our aircraft carriers in the early 1990s.

In its hearings on the Moscow Treaty in 2002, this committee was quite critical on this issue. That treaty had done nothing about tactical nuclear weapons. Then-chairman Biden asked "Why does the treaty not limit tactical nuclear weapons—which are the most susceptible to theft?" Secretary Powell had, in his prepared statement, stated:

> As we went about negotiating the Moscow Treaty, one of the questions foremost in my mind as a former soldier and Chairman of the Joint Chiefs of Staff, was how will we address tactical nuclear weapons?
>
> We continue to be concerned about the uncertainties surrounding Russian nonstrategic nuclear weapons (NSNW), and I believe we should discuss inventory levels of NSNW with the Russians and press Moscow to complete the reductions it pledged to make in 1991 and 1992.

Later in the hearing Powell also stated "the President is still very interested in tactical nuclear weapons. So this is going to be an area of discussion with the Russian side." That expression of intent to discuss tactical nuclear weapons with "the Russian side" was 8 years ago—it seems to go on interminably—and still nothing has been done. While the Obama administration has repeatedly expressed an intent to deal with tactical nuclear weapons, up to this point the Russians have been deaf to our entreaties. The point to bear in mind is that the ratio between tactical nuclear weapons and strategic nuclear weapons continues to rise.

Indirectly the problem with tactical nuclear weapons is acknowledged in the preamble of the New START Treaty though in relation to the balance between strategic offense and strategic defense: "This interrelationship becomes more important as strategic nuclear arms are reduced."

Similarly, the significance of tactical nuclear weapons rises steadily as strategic nuclear arms are reduced. We must bear in mind that with respect to tactical nuclear weapons there is an inherent asymmetry between the United States and Russia. While the United States is far away, Russia is cheek by jowl with the countries on the Eurasian continent. For a Poland, a Czech Republic, or a Lithuania, it is hard to discern the difference between Russian tactical nuclear and strategic nuclear. As the plaintive comments of Secretary Powell reveal, the Russians have steadfastly resisted any attempt on our part to deal with the imbalance in tactical nuclear weapons—and understandably so.

The likelihood of their being willing to do so in the wake of New START, is sharply diminished—for we have now forfeited substantial leverage. The Russians have indicated that they would not even discuss tactical nuclear weapons until the handful of weapons we still maintain in Europe are withdrawn. In this connection Russian policy, like Soviet policy before it, is quite consistent. In the 1970s and 1980s the Russians regularly demanded either that we should withdraw our "forward based systems" from Europe or, at a minimum, count them against our total number of strategic weapons. In those days, however, they remained unsuccessful in achieving that goal.

The United States has made transparency a global initiative. The Strategic Posture Commission stated that "the United States and Russia have a shared responsibility to increase nuclear transparency and to set a high standard in their own postures." In no nuclear area—other than for proliferators like North Korea and Iran—has transparency been as lacking as it has been with respect to Russian tactical nuclear weapons.

In the current political context a premeditated attack on the United States itself has little credibility. Nevertheless the role of a lopsided tactical nuclear posture is potentially important in intimidating our allies on the Eurasian continent. Extended deterrence remains central to formulating our nuclear posture. Offsetting potential tactical nuclear weapons intimidation of our allies remains a critical element in deterrence.

The CHAIRMAN. Thank you very much, Mr. Secretary.

Secretary Perry.

STATEMENT OF HON. WILLIAM J. PERRY, FORMER SECRETARY OF DEFENSE, MICHAEL AND BARBARA BERBERIAN PROFESSOR, CENTER FOR INTERNATIONAL SECURITY AND COOPERATION, STANFORD UNIVERSITY, STANFORD, CA

Dr. PERRY. Thank you, Mr. Chairman.

The CHAIRMAN. Pull the mike close.

Dr. PERRY. I'm honored to appear before this committee and its distinguished chairman and ranking member. I believe that few people in the Senate, or anywhere else for that matter, have more experience or better judgment on these critical nuclear issues than do the two of you. I think the Nation is fortunate to have you as chairman and ranking member for these deliberations.

I will submit my written statement for the record. I don't intend to read the statement, but I would like to highlight some of the points in it.

The CHAIRMAN. Absolutely, and the full statement will be placed in the record.

Dr. PERRY. I've organized my comments in two areas: what the treaty will not do and what the treaty will do. First of all, what it will not do. It will not make major reductions in our nuclear forces. Indeed, after all reductions are made the United States will still have deployed nuclear forces with the destructive power of more than 10,000—much more than 10,000 Hiroshima bombs.

Second, it will not impose meaningful restraints on our ability to develop or deploy ballistic missile defenses.

Third, it will not restrict our ability to modernize our nuclear deterrent force.

And fourth, it does not deal with tactical nuclear warheads or with the thousands of warheads in reserve, both in the United States and in Russian forces.

What will the treaty do, then? First of all, it gives a clear signal to the world that the United States is serious about carrying out its responsibilities under the Nuclear Nonproliferation Treaty. This will be welcomed as a positive step by all other members of the

NPT. So why is that important? I believe that the greatest threat we face today is the threat—the greatest nuclear threat we face today is from nuclear terrorism or proliferation. This is an international problem and it requires an international solution. None of our objectives in this field can be achieved without the cooperation of other nations of the world.

Second, it builds confidence between the United States and Russia by providing vitally important continuing dialogue on strategic nuclear issues. My hope is that this greater confidence will lead to constructive approaches to dealing with other problems between the United States and Russia, and it will lead to a follow-on treaty that entails much greater reductions and also deals with the tactical nuclear weapons and the reserve nuclear warheads not covered in this treaty.

Third, it does improve strategic stability between the United States and Russia by requiring both nations to provide transparency and accountability of their vast nuclear arsenals.

Based on these judgments, I believe that this treaty does advance American security objectives, particularly with respect to what I consider to be our greatest nuclear threats, nuclear proliferation and nuclear terrorism, and I look forward to seeing this treaty come into force.

Thank you.

[The prepared statement of Dr. Perry follows:]

PREPARED STATEMENT OF DR. WILLIAM J. PERRY, MICHAEL AND BARBARA BERBERIAN PROFESSOR, CENTER FOR INTERNATIONAL SECURITY AND COOPERATION, STANFORD UNIVERSITY, STANFORD, CA

Chairman Kerry and Ranking Member Lugar, thank you for this opportunity to appear before you and other members of this distinguished committee to discuss ratification for the New START Treaty.

I would like to start my testimony by offering you five judgments about the New START Treaty.

1. The reduction of deployed warheads entailed by the treaty is modest, but the treaty is a clear signal that the United States is serious about carrying out our responsibilities under the Nuclear Non-Proliferation Treaty, and will be welcomed as a positive step by the other members of that treaty.

2. The treaty imposes no meaningful restraints on our ability to develop and deploy ballistic missile defense systems, or our ability to modernize our nuclear deterrence forces.

3. The treaty does not affect our ability to maintain an effective nuclear deterrent, as specified by DOD planners in the 2010 Nuclear Posture Review.

4. The treaty is a valuable confidence-building measure in that it provides for a vitally important continuing dialogue between the United States and Russia on strategic nuclear weapons.

5. The treaty improves strategic stability between the United States and Russia by requiring both nations to provide transparency and accountability in the management of their strategic nuclear forces.

Based on these judgments, I recommend that the Senate consent to the ratification of this treaty.

I would like to add further comments concerning some details of the treaty.

The New START treaty limits deployed, strategic systems to an aggregate of 1,550 warheads. These include warheads on deployed ICBMs and SLBMs. Heavy bombers count as a single warhead toward these limits. Further, the treaty creates ceilings on the number of deployed and nondeployed strategic delivery platforms. Each nation retains the ability to determine the composition of their forces within these numbers. While the actual number of nuclear weapons available for upload on deployed bombers are not counted, this unusual "counting rule" is essentially equivalent between the United States and Russia. In my opinion, this aspect of the treaty would not put the United States at any disadvantage.

The focus of this treaty is on deployed warheads and it does not attempt to count or control nondeployed warheads. This continues in the tradition of prior arms control treaties. I would hope to see nondeployed and tactical systems included in future negotiations, but the absence of these systems should not detract from the merits of this treaty and the further advances in arms control which it represents.

The transparency and verification regime in this treaty builds upon the successful procedures and methods from the prior START Treaty. Declarations of the number and locale of deployed missiles will be made upon entry into force, and an inspection regime allows short-notice access to ensure compliance. Technical aspects of the treaty include establishment of unique identifiers for each missile and heavy bomber and their locations, an important advance, which further enhances inspection and verification. Missile tests continue to be monitored, and the exchange of telemetry data is provided. While telemetry is not necessary for verification of this treaty or for our security interests, the continued exchange of telemetry is in our joint interest as a further confidence-building measure.

Two important questions arise in the evaluation of this treaty. They are whether the treaty constrains the United States ability to modernize its nuclear deterrent and infrastructure and whether the treaty constrains ballistic missile defenses. The treaty directly addresses this first question. Article V of the treaty states "modernization and replacement of strategic offensive arms may be carried out." The Congressional Commission on Nuclear Forces noted that our nuclear weapons complex was in need of improvement. The President's FY11 budget submission proposes substantial increases to the nuclear weapons program for just this purpose. The 2010 Nuclear Posture Review elaborates upon this need in detail. The administration has been consistent in its statements and proposals on this point, all of which support upgrade and improvement of the nuclear weapons complex, including the replacement of key facilities for handling of nuclear materiels. The New START Treaty does not inhibit any of these plans or programs.

The development of Ballistic Missile Defense is similarly unconstrained by this treaty. The preamble notes an interrelation between strategic offensive and defensive arms and the importance of a balance between them, but imposes no limits on further development of missile defenses. Indeed, this treaty modestly enhances the ability to develop missile defenses, in that retired strategic missiles required for development of BMD are no longer constrained under the terms of New START. Further, ballistic missile interceptors are specifically excluded from the definition of ballistic missiles under this treaty. The treaty does prohibit the conversion of ICBM launchers for missile defense purposes. We do not, in fact, plan to do so, so this limitation will have no practical impact on our BMD systems.

Mr. Chairman, the New START Treaty is a positive step in United States-Russia arms negotiations. This treaty establishes a ceiling on strategic arms while allowing the United States to maintain a safe, secure, and effective nuclear deterrent. This treaty does not limit America's ability to structure its offensive arsenal to meet current or future threats, nor does it prevent the future modernization of the American nuclear arsenal. Additionally, the treaty puts no meaningful limits on our Anti-Ballistic Missile Defense program, and in fact it reduces restrictions that existed under the previous START Treaty. I recommend ratification.

Mr. Chairman, thank you for the opportunity to appear before you today. I welcome your questions regarding the New START Treaty.

The CHAIRMAN. Thank you very much, Secretary Perry and Secretary Schlesinger.

In your joint effort of the Strategic Posture Commission, you concluded that the United States and Russia should continue to pursue a step-by-step approach to arms control, with the objective being to "rejuvenate" or "achieve a 'robust' arms control process that survives the expiration of the START agreement." I assume you believe, from your comments, that this particular approach of this agreement, modest as it is described, does achieve that?

Dr. SCHLESINGER. Yes, sir.

The CHAIRMAN. Secretary Perry.

Dr. PERRY. Yes.

The CHAIRMAN. And, that said, you highlighted, Dr. Schlesinger, in your comments a moment ago, appropriately, the asymmetry between the United States and Russia with respect to the tactical

nuclear weapons. I agree with you, this committee did draw focus on that, and it is an ongoing concern and many of us believe it has to be brought into—there's a point where we've got to start counting them and putting them into this equation.

But in the Strategic Posture Commission you explicitly recommended that there's a first step, and the first step in reinvigorating the Russian arms control process is "modest and straightforward," and should not "strive for a bold new initiative." That is, is it fair to say that you did not anticipate that this particular step of moving to the next step of START, that that would in fact bring the tactical at this stage?

Dr. SCHLESINGER. No, I did not anticipate that.

The CHAIRMAN. But this is a——

Dr. SCHLESINGER. I think it's most unfortunate.

The CHAIRMAN. But this is a precursor, is it not? I mean, any effort to be able to get to that requires us to ratify this agreement?

Dr. SCHLESINGER. Yes. And I fervently hope that it's a precursor.

The CHAIRMAN. So do I. I think we all do.

Secretary Perry, do you want to comment on that?

Dr. PERRY. Yes. In my testimony I express the hope that the confidence-building that would develop from this treaty and the ongoing dialogues it would have would lead to improvements in many other areas, not just further nuclear treaties, but in the other areas of disagreement between the United States and Russia, but in particular it would lead to a follow-on treaty dealing with the tactical nukes and also dealing with the thousands of reserve warheads that we have.

I might mention that the asymmetry in tactical nuclear weapons is primarily in favor of the Soviet Union, but the asymmetry in strategic weapons in reserve is primarily in the favor of the United States and is a very sore issue with the Russians that I speak to. We have the capability of rapidly uploading thousands of nuclear weapons onto our strategic forces if we choose to do so.

The CHAIRMAN. That's a point that I wanted to get to and I appreciate very much your drawing that out. There is an asymmetry on the tactical, but the decision to begin withdrawing and continue to withdraw tactical from Europe that we controlled has been shared by Republican and Democrat administration alike, correct?

Dr. SCHLESINGER. Yes, indeed.

The CHAIRMAN. Secretary Perry.

Dr. PERRY. Yes.

The CHAIRMAN. And we have maintained a much more significant stockpile, that in fact the Russians fear we could break out at any moment; is that accurate?

Dr. PERRY. I believe that is accurate. It's not so much that we have the stockpile as we have the ability to rapidly upload it, for example on our *Trident* submarines.

The CHAIRMAN. I'm sorry. Secretary Schlesinger.

Dr. SCHLESINGER. The Russians have a live production base for their nuclear weapons. We do not. There is that asymmetry along with the asymmetry with regard to reserve weapons.

The CHAIRMAN. Drawing on your considerable experience in this field and then sort of making these evaluations about our national security leads you to make this conclusion that this step-by-step

process is critical because you have to get this treaty in place and build on it in order to begin to address this further asymmetry?

Dr. PERRY. That is my judgment, yes.

Dr. SCHLESINGER. I hope that you are right, Mr. Chairman.

The CHAIRMAN. What's the alternative, Secretary Schlesinger?

Dr. SCHLESINGER. Oh, there's no alternative. I hope that you're right that this——

The CHAIRMAN. That we will address it?

Dr. SCHLESINGER [continuing]. That we have a further step. I don't think that the incentives that the Russians have are very powerful at the moment.

Dr. PERRY. I would add to that. I think the next step will be very difficult, both for the Russians and for us, because it not only involves dealing with the tactical nuclear weapons, which they consider they have threats well beyond the United States that cause them to have tactical nuclear weapons, but it will require counting warheads in a verifiable way and that's a step we have never taken before.

The CHAIRMAN. Agreed. And I think we need to, and I suggested, frankly, at the outset of this effort that we have to figure out how to get to that counting, because that, in the end, is really the most salient feature of balance, if you will.

I wonder if you both would speak to this issue. Tell us, if you would, what is it about this treaty that leaves you confident that the numbers, both in launchers and warheads, are in fact adequate to address the question of this asymmetry as well as just the broad national security concerns of our country in the balance of our relationship with Russia and any threats we might or might not face?

Dr. PERRY. Mr. Chairman, it is simply that we have so many warheads and so many delivery vehicles that we can destroy Russia many times over with this capability. So we are not close yet to the point where the number of nuclear weapons we have is so low that that would become an issue.

Dr. SCHLESINGER. I think that the overall relationship and the general military relationships in this era for both Russia and China are such that there is little temptation on their part to launch an attack on the United States. I think it's the overall political relationship, part of which stems from what Bill has said, that can give us confidence in this area.

The CHAIRMAN. Thank you, gentlemen.

Senator Lugar.

Senator LUGAR. Gentlemen, the report of the Strategic Posture Commission observed: "The debate over the proposed Reliable Replacement Warhead revealed a lot of confusion about what was intended, what is needed, and what constitutes new, and believes that as the Nation moves forward we must be clear about what is being initiated and what is not, as well as what makes a weapon new and what does not."

My question: What do each of you consider the new developments the United States should undertake within the next 10 years in our nuclear stockpile? Second, there's considerable confusion over what "modernization" means for the current nuclear stockpile. Could each of you provide your views as to what the term means? Do we need new, modern warheads, bombers, missiles, or all of the above?

Dr. PERRY. In our commission report we discussed that issue in some detail and I still stand by what we said in that report. We basically have said that maintaining confidence in the stockpile as we go forward is multidimensional. It includes, among other things, maintaining a robust, science-based program, the so-called stockpile stewardship program, which had been on the decrease as we conducted the report. We felt it was very important to get that on an increasing level again. Second, it involved a robust stockpile surveillance program, which was also, we thought, declining and not adequate to the job. That had to be increased.

Finally, it involved maintaining a life extension program, and we offered the view that simply refurbishing existing warheads might not be sufficient in the future; we had to also consider replacing components on the missile and, if necessary, redesigns; and that which of these three approaches were to be used would be considered on a case-by-case basis.

As I read the Nuclear Posture Review, those judgments are echoed in the Nuclear Posture Review.

Dr. SCHLESINGER. I think that Bill has summarized the situation. We urged a case-by-case study of individual weapons and that, if necessary, we have replacement. The Nuclear Posture Review allows for that with the permission of the President and the Congress. But it is somewhat narrower than what was recommended by the commission, in that it is beyond the case-by-case review of the weapons in the stockpile.

May I add that it is essential that we augment the money that has been allocated for the labs, for the science program, in particular that the add-on for next year looks to be significant, but I hope in the out years that it continues to be appropriate. We don't know yet. Within a few weeks at least, we should have the 10-year program recommended by the administration, which will I think influence strongly the decisions of Senators.

Senator LUGAR. It appears that Secretary Gates agrees with both of you and is apparently asking for approximately $5 billion in additional funds to achieve these ends. I just wonder whether either of you have been in consultation with Secretary Gates, if you believe you're on the same wavelength, and what confidence you have in his leadership in this area?

Dr. SCHLESINGER. I have great confidence in Secretary Gates.

Dr. PERRY. I do, too.

Senator LUGAR. Your commission's report noted that existing alternatives to stockpile stewardship and life extension involve varying degrees of reuse and/or redesign. You noted further that the decision on which approach should be best is to be made on a type-by-type basis, as you've just said, Secretary Schlesinger.

The Nuclear Posture Review stated that in its decision to proceed to engineering development for warhead lifetime extension the United States will give strong preference to options for refurbishment or reuse. Replacement of nuclear components would be undertaken only if the critical stockpile management program could not otherwise be met and is specifically authorized by the President and the Congress.

Now, do you both believe that the NPR provides sufficient flexibility to our weapons designers when it comes to replacing certain

components in our nuclear weapons, and is the NPR's guidance inconsistent with your commission's broad recommendations which I cited earlier?

Dr. SCHLESINGER. It is somewhat inconsistent, but there is a political reality, which the administration—the Congress has fought off new weapons, such as the RRW, over the years. What we have is a step forward, a major step forward, given the attitudes that have been taken, particularly on the Hill, with regard to upgrading the nuclear weapons stockpile.

We have made a significant advance. It will depend, of course, on whether the House is prepared to provide the funds, due to the peculiar jurisdiction. That remains an open question.

Dr. PERRY. I think the Nuclear Posture Review is a major step forward in this respect. It explicitly authorizes reuse, which the laboratories have felt reluctant to use before, and it gives the condition under which redesign can be achieved. I think this is a major step forward from where we are before. But whether this all plays out appropriately does depend on the level of the funding given to the laboratories. As I have seen this year's budget proposal and the 5-year plan, I think these are moving in the right direction.

The Congress has requested a 10-year plan in this regard. I support that request and I think—because the issues we're looking at here really span over more like 10 years than 5 years. So I would encourage you to proceed in that direction.

Dr. SCHLESINGER. May I mention a worry in that connection. There is in the plan money for the new facilities at Los Alamos and at Y–12. The problem is that if we have cost overruns at those new facilities we do not want to see the consequence of taking it out of the laboratories' budget.

Dr. PERRY. I agree with that.

Senator LUGAR. Gentlemen, I have some additional questions. If I submit these to you, could you reply for the record so that the record of our hearing and your views will be more complete?

Dr. PERRY. Yes.

Senator LUGAR. Thank you very much.

The CHAIRMAN. Thank you very much, Senator Lugar.

Senator Feingold.

Senator FEINGOLD. Mr. Chairman, thank you very much for holding the hearing. I intend to carefully review this treaty. The treaty would reduce the size of our nuclear arsenal without constraining our ability to defend our Nation, while fostering the international cooperation needed to stop the spread of nuclear weapons and materiels. The treaty also works to reduce and secure Russia's nuclear stockpile, which has noted vulnerabilities.

At the same time, we must ensure that the treaty is verifiable and does not compromise our ability to monitor nuclear weapons and materiels in Russia. As a member of the Senate Select Committee on Intelligence, I intend to carefully review the inspection regime under this treaty to ensure that on balance it adds to our understanding of the Russian arsenal.

Meanwhile, I thank our distinguished witnesses for being here. The Congressional Commission on the Strategic Posture of the United States, which they chaired, concluded that: "Terrorist use

of a nuclear weapon against the United States or its friends and allies is more likely than deliberate use by a state." To me this underscores what I have long believed, that to best secure our Nation we must move beyond a cold-war mindset and focus on the threat that terrorists could gain access to nuclear weapons or materiels, and I do think that this treaty represents a step in that direction.

Secretary Perry, you've recently written that this administration's plan for modernizing our nuclear complex and arsenal is consistent with the recommendations of the Strategic Posture Commission that you two chaired. You've also testified that this treaty "imposes no meaningful constraints on our ability to modernize our nuclear deterrence forces." In fact, is it true that the administration's plans to expand the infrastructure of our nuclear complex at Los Alamos would actually increase our capacity to produce plutonium pits beyond the level that your commission's final report found was necessary to maintain our nuclear arsenal?

Dr. PERRY. The proposed—the administration's plans for both the plutonium and the uranium facility restoration will in my judgment provide adequate and maybe even more than adequate capability for the needs which I can imagine. As it stands right now, Los Alamos is capable of producing plutonium pits, but at a rather low level. This will modernize and expand that capability.

Senator FEINGOLD. Secretary Schlesinger, there has been a lot of discussion about the ways in which ratifying this treaty will enhance our national security. Could you say a little bit about the ways in which failure to ratify this treaty may be detrimental to our national security, especially in light of the fact that without the treaty we cannot continue inspections of the Russian arsenal?

Dr. SCHLESINGER. I think that the principal defect if the Senate does not ratify lies in the political area, in some of the points that have already been made by Secretary Perry. To wit, for the United States at this juncture to fail to ratify the treaty in the due course of the Senate's deliberation would have a detrimental effect on our ability to influence others with regard to particularly the nonproliferation issue.

Senator FEINGOLD. Secretary Perry, you wrote in an op-ed that this treaty is the first tangible product of the administration's promise to "press the reset button on the United States-Russian relations." Should we be concerned about the kind of message we'd send to other nations, for example Iran, about the United States-Russian ability to work together on nonproliferation concerns if we failed to ratify a treaty that brings mutual security benefits?

Dr. PERRY. Senator Feingold, I believe that our inability to control or to limit or restrain nuclear arsenals of either North Korea or Iran has been largely the result of our inability to work effectively with the other nations that we need, whose cooperation we need. That includes not only Russia, but China as well. Put in a positive way, to adequately deal with North Korea's and Iran's nuclear aspirations, we need full cooperation of other nations, particularly Russia and China.

This treaty will not guarantee that, but this treaty is moving us in that direction of a much better understanding of the relationship with Russia in these vital matters.

Senator FEINGOLD. Secretary Perry, you stated that it will be important in future agreements to secure commitments to dismantle weapons; dismantle weapons and not simply put them in reserve. I note that the United States already has a backlog of weapons waiting to be dismantled. In order to secure commitments on dismantling excess weapons, how important is it that we reduce our existing backlog?

Dr. PERRY. I think we are dismantling weapons at a rate compatible with our facilities for doing that, and I think that should be continued. But beyond the weapons that we're planning to dismantle, we have many weapons in reserve that we don't plan to dismantle. Both categories, both weapons waiting for dismantlement and weapons in reserve, both of those categories have to be considered in future treaties, I think, along with the consideration of the tactical nuclear weapons that Russia has.

Senator FEINGOLD. Mr. Secretary.

Dr. SCHLESINGER. Again, I repeat that the Russians have a live production base. They turn over their inventory of nuclear weapons every 10 years. We do not. And therefore the weapons in reserve are, in effect, a substitute—a partial substitute—for a live production base.

Senator FEINGOLD. I thank both of you.

Thank you, Mr. Chairman.

The CHAIRMAN. Senator Isakson.

Senator ISAKSON. Thank you, Mr. Chairman.

Thanks to both of you distinguished Americans for being here today. Both of you expressed a frustration or a concern with the ability to count nondeployable warheads and tactical warheads, I think equally so. But both of you said that this treaty is absolutely essential to get to the point where we can do that, or at least that's the inference that I received.

You also, I think, both said in one way or another in your testimony that the Russians' lack of ability to want to be able to be accountable for tactical weapons is because they are much more threatened at their border or in proximity than we are. Am I correct in what I said?

Dr. PERRY. Yes.

Dr. SCHLESINGER. To the Poles, a short-range tactical, so-called, missile or weapon is hard to distinguish from a strategic weapon.

Senator ISAKSON. My question then—and I think—is it "Dr. Perry" and "Dr. Schlesinger"? Is that—I want to be respectful.

Dr. SCHLESINGER. I beg your pardon?

Senator ISAKSON. You're both doctors, correct? OK, I always want to be respectful of that.

Dr. Perry, you expressed concern—and I think you did, too, Dr. Schlesinger—with dirty bombs or the terrorist threat being the greater threat than a state attack on the United States. It seems to me like the easiest access for a terrorist to nuclear materiel would be in a tactical weapon or one of these nondeployable weapons; is that correct?

Dr. PERRY. I'd like to clarify that point. At least from my point of view, when I was speaking about the terrorist nuclear threat I was considering the possibility that terrorists would get a real nuclear bomb, not just a dirty bomb. That's the major concern I have.

Beyond that, there's a possibility that a terrorist could make a dirty bomb, but I do not put that in the same ballpark at all in terms of the catastrophes that it could cause. That could be done without having access to uranium or plutonium. That could be done with medical radioactive materiel, for example.

So that is an issue which I hold separate from the issue. The dirty bomb issue I'm treating separately from that. My comments all applied to a terrorist getting a real nuclear bomb, one that goes off with a nuclear explosion.

Dr. SCHLESINGER. The greatest threat remains the possibility, however remote, of a major missile exchange with the Russians or with China. The most probable threat is, of course, the use of a weapon by terrorists, but that is a much lower order of destruction that could be visited on the United States.

Senator ISAKSON. Is there anything in this treaty that helps us with regard to some degree of comfort that a terrorist is not going to get a weapon? Is there anything in the treaty that helps us with that?

Dr. PERRY. I believe only indirectly, but in an important way indirectly.

Senator ISAKSON. Would you elaborate on that?

Dr. PERRY. There are two different things we can do, two fundamentally different things that can be done. One is to keep nuclear weapons from proliferating. To the extent that North Korea builds up a nuclear arsenal, to the extent that Iran gets nuclear weapons, to the extent that other nations follow their lead, this increases the probability that a terror group could get a nuclear weapon.

So nuclear proliferation is one danger that could lead to a terror group getting a nuclear weapon. The other has to do with better controlling access to fissile materiel, for example in research reactors. That's what the nuclear summit was all about last month, trying to get nations to deal with that problem.

In both of those cases, these are international problems and they require support and cooperation from other international nations. I think this treaty is one modest step in the direction of getting that support from other nations. But it by no means solves the problem.

Dr. SCHLESINGER. To this point, Senator Isakson, even though both Russia and China are privileged under the NPT as nuclear weapons states, they have given us precious little aid with regard to the proliferation problem, quite notably in North Korea or in Iran. I hope that they change, but I don't have a great deal of confidence. Therefore, it's not clear to me as a practical matter whether or not we are going to be able to get any more aid from either of them on these issues.

However, while I'm more pessimistic than Secretary Perry, I think that we ought to make the attempt.

Senator ISAKSON. So I take that to mean, given your feelings about China and Russia regarding help on proliferation, you still believe that this treaty does not compromise us and gives us a platform to improve that? Is that what I heard you say?

Dr. SCHLESINGER. That is indeed correct. It provides us with a platform. Whether or not that platform turns out to be particularly useful in the final event is the question.

Dr. PERRY. I would put it slightly differently. I would say this treaty is a necessary but not a sufficient condition for such cooperation.

Senator ISAKSON. Well, I think from my standpoint and responsibility as a Senator from the State of Georgia, and having been here on 9/11 and having seen the change of our world vis-a-vis the growth of terrorism, the single most important issue I think to my constituents in Georgia, and to me personally, is the goal that you both have stated in terms of removing or reducing the accessibility of fissionable materiel to terrorists. That's going to be one of the major things I weigh my decision on in terms of whether or not we ratify any treaty, because that's got to be our ultimate goal.

I really appreciate both of your attendance today. Thank you.

The CHAIRMAN. Senator Casey.

Senator CASEY. Thank you, Mr. Chairman.

Secretary Perry, Secretary Schlesinger, we're honored by your presence and commend you and thank you for your public service, which I guess you could say was before, during, and after your service in the U.S. Government.

I wanted to touch on two or three areas, first of all on missile defense. Secretary Perry, I wanted to refer to your statement and in particular on page 2 you said that there are two important questions that arise upon evaluation of the treaty. The first was whether the treaty—and I'm quoting from your testimony: "whether the treaty constrains the United States ability to modernize its nuclear deterrent and infrastructure." At the end—you did some analysis after that.

At the end of the paragraph you say: "The New START Treaty does not inhibit any of these plans or programs." Is that correct?

Dr. PERRY. It does not inhibit any plans or programs that we actually plan to pursue, as General O'Reilly has testified. It does inhibit our ability to use ICBM launchers for ballistic missile launchers, but that's something we had not planned to do anyway.

Senator CASEY. The second question you raised on that page was "whether the treaty constrains ballistic missile defenses." Then you go through analysis of that, and you say, and I'm quoting, that it "imposes no limits on further development of missile defenses." Is that correct?

Dr. PERRY. That's correct.

Senator CASEY. I wanted to have you elaborate on that, and invite Secretary Schlesinger as well, because that's become a point of contention and it's important that we, even prior to formal debate, that we examine and explore that question. I think it's pretty clear, but I think it's important that we highlight it.

I don't know if there's anything you wanted to add to that or highlight about that question about missile defense?

Dr. PERRY. I've read the treaty and its protocols, but I've not read the annexes yet because they're not available yet. And I see nothing in the treaty or its protocol that limits our development or deployment of ballistic missile defenses in any way that we plan to do.

Dr. SCHLESINGER. I think, Secretary Casey, that, if I may say so, there's some overstatement on the part of the administration in presenting this treaty, in that it says that it limits missile defense in no way. The answer is we have limited the capacity to insert missile defenses in Minuteman silos or in tubes that are empty in our submarine fleet. As Bill Perry has just indicated, we had no plans to do that. But it is an overstatement to say that nothing in the treaty inhibits missile defense. I don't think that it inhibits missile defense in a serious way, however.

Senator CASEY. Well, it's important that we incorporate by reference that fuller answer to that question. I appreciate that.

Second, with regard to one of the benefits of this treaty, we could make a list, but one of them that I think a lot of not just Members of the U.S. Senate, but I think the American people, will have, I think, after a debate have more of an appreciation for is this question of verification. I just want to see if you could speak to that in terms of the elements of it, what we gain in terms of verification, especially with respect to the passage of time and how both the passage of time as well as new technology, in addition to the provisions in the treaty, allow us to amplify or enlarge our ability to have stronger verification.

Dr. PERRY. I think the inspection provisions considerably enhance our ability to verify the treaty. But we should understand that they are supplementary to our national technical means, which are quite considerable. The treaty also provides a noninterference clause, that is a clause that says both parties agree not to interfere with the national technical means, which I think is important.

So I would look at the verification both from the point of view of what it permits us to do and from the point of view of what it restricts the Russians from doing relative to national technical means.

Dr. SCHLESINGER. As compared to START I, our verification capabilities are restricted. However, as compared to the period since December of last year when START I lapsed, this is a resurrection, as it were, of some degree of verification capacity. Under START I we had total access to telemetry on the part of Russia, previously the Soviet Union. Now we have considerably more restricted access. I trust that it will still be adequate. We have more limited inspection possibilities. We have been obliged to limit our monitoring at the perimeter of Votkinsk to know how many missiles come out. That is some limitation.

I think all in all that the verification possibilities under this treaty, though much more limited than START I, are still adequate.

Dr. PERRY. I would add to that, Senator Casey, that the primary restriction relative to START I has to do with telemetry, but that is because the telemetry was necessary to monitor START I. START I had technical features in it for which telemetry was necessary for verification. Those features are not in the New START Treaty. In fact, I would make a stronger statement: There is no need for telemetry at all in order to verify this treaty.

I'm grateful that we have the telemetry because I think it's a useful confidence-building measure, but it is not needed to verify the treaty.

Dr. SCHLESINGER. That is correct, but the reason is that we have given up on limits on throw weight and on MIRVing of Russian missiles.

Senator CASEY. I'm out of time. Thank you very much.

The CHAIRMAN. Thank you, Senator Casey.

Senator Risch.

Senator RISCH. Thank you, Mr. Chairman.

Gentlemen, Senator Casey has already raised what he knows is an important issue to me and I think probably himself and other members on the committee, and that is the defensive posture of the United States with regard to developing various defensive systems. As we know, different administrations have had a different view of the appropriateness of doing so. So I've got a number of questions about that.

I would start with this: What in the world is that doing in here in the first place? Why—you say, well, we weren't planning on using the old tubes in either the submarines or land-based. Why—why is this in the treaty in the first place? I mean, this is supposed to be, as I understand it, an offensive weapons treaty. I know the Russians—this has always bothered them, about us trying to defend ourselves.

To me, the most important function of a government is to defend itself, and I'm very, very troubled by this. Could I get your comments?

Dr. PERRY. I don't know why this is in the treaty. I'm confident it in no way—it restricts us in no way from doing anything that we plan to do. So it does not bother me. I'm not concerned about it.

Dr. SCHLESINGER. The question is better addressed to the negotiators. I think this was regarded as a throwaway on their part because we were not planning to use the Minuteman silos, et cetera, for defensive missiles.

Senator RISCH. I understand that whoever it is that's speaking right now for the administration doesn't plan that, but administrations change and it is entirely possible, I would think, that in the future these apparatus will be considered to be used for defensive purposes. So again, I just can't understand why they would have incorporated that in there.

Dr. SCHLESINGER. I can understand your expression of concern, Senator. I think that the reality is that there is nothing in the treaty that is problematic. I think that the problem will exist of the continued Russian pressure on us with regard to missile defense, as reflected in the preamble.

Senator RISCH. The issue to me becomes more complex as we go forward and attempt to guard ourselves from an attack from Iran or North Korea, which of course is an entirely different proposition than our relationship with the Russians, which relies on a mutual destruction sort of philosophy. Not so with the Iranians and the North Koreans, and they don't think the same way that the Russians do and so we're going to have to think about defending ourselves differently.

So you can understand why I'm concerned about that issue being raised in any way in this treaty. Is that a legitimate concern?

Dr. SCHLESINGER. I think that it's a legitimate concern. I do not think that we will be inhibited by this treaty or even by the Russian pressure with respect to defending ourselves against North Korea and ultimately against Iran, because those deployments are much lower. In the case of Iran, we are dealing primarily with regional missile defenses and they are in no way inhibited by this treaty.

Senator RISCH. However, during the course of this treaty, if you believe those that are trying to predict forward, they believe that the Iranians and the North Koreans will develop sufficient missile technology to reach substantially further than what they do now. Would that be a fair statement?

Dr. SCHLESINGER. I think there's no question about that, that we have evidence of the North Koreans reaching in that direction. We have flimsier evidence with regard to Iran, but ultimately they are going to go in that direction. And we will need to take protection against them as modest nuclear powers, as opposed to China or Russia, which will be major nuclear powers.

Senator RISCH. Finally—and I'll wrap up, Mr. Chairman. But finally, I'm assuming that you gentlemen have read the unilateral statements from each of the parties. In regards to my concerns about our defensive posture, the unilateral statement by the Russians is problematic and certainly doesn't help resolve the questions that I have. In my judgment, it would seem to me that the Russians need to be straightened out on this issue, because we obviously view it differently than they do.

Have you got any suggestions as to how we do this as we go forward if we are to ratify this treaty?

Dr. SCHLESINGER. On this particular issue, we've been trying to straighten out the Russians for many years. We have been unsuccessful to this point. If you go back and look at the discussions under the SORT Treaty, for example, and the runup to the SORT Treaty, you have exactly the same line from the Russians that you have today. I think that it is likely to remain a perennial issue for them and that our position will have to be that we will resist those pressures from Russia.

Dr. PERRY. I think the issue, as Dr. Schlesinger says, has been a disagreement between the two of our countries for a long time. I think going into the future the best way of dealing with this issue, of confronting this issue, would be through the consultative commission which is set up under this treaty. This at least gives us a forum in which we can meaningfully discuss these issues. It gives us some better chance at arriving at a mutual understanding than we now have.

It's not an issue that we will be able to deal with through trading press releases, but we might be able to get some progress on it through this consultative forum.

Dr. SCHLESINGER. For the Russians, it is not only a serious issue in their minds, but, more than that, it is a political battering ram that they have been using against us over the years, and I don't think that we will persuade them to give it up.

Senator RISCH. Gentlemen, my time is up and I thank you for your candid answers.

I thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Risch.

Senator Shaheen.

Senator SHAHEEN. Thank you, Mr. Chairman and Senator Lugar, for holding the hearing today. Thank you, gentlemen, for being kind enough to appear. I have limited time because I actually have to go preside over the Senate and I can't be late for that.

But I wanted to follow up on a couple of issues that have been raised by my colleagues. Secretary Perry, you suggested in your testimony that the new treaty's transparency and verification regime could be valuable in building confidence and improving our strategic stability between—with Russia. Can you talk a little bit more on why you think this is important as we look at some of the issues that have been raised in the testimony today about tactical nuclear weapons and about dealing with Iran and some of the other challenges we face with respect to nuclear proliferation?

Dr. PERRY. I have had a good many discussions with Russian officials, both in government and also Russian think-tank people, about these issues, and the level of misunderstanding, mistrust, between our two countries in this field has been rather high. So the best thing that has happened in the last—so far on this treaty, has been the dialogue that's already taken place in the last year. Just the negotiations of the treaty have brought our two sides together seriously discussing these issues of disagreement.

Assuming the treaty is ratified and enters into force, then the consultative commission set up by that is a vehicle for continuing that dialogue. This I think gives us the best chance of dealing with these misunderstandings.

In addition to that, I would hope that after this treaty goes into force that, even beyond the consultative commission, we have bilateral talks on how to deal with the Iranian nuclear threat, first of all how to prevent it from developing, on which, as Dr. Schlesinger said, the Russians have been very little help so far, and then, if it does develop, how to counter it effectively. That can be done much more effectively as a multilateral effort than a unilateral effort.

Senator SHAHEEN. Thank you.

Dr. Schlesinger, back in 1991 when the hearings were going on on the original START Treaty, you testified that: "Arms control can't transform a relationship of hostility, but it is the transformation of the relationship that makes serious arms control possible." Can you talk about how you would apply that same logic to the treaty before us today?

Dr. SCHLESINGER. The change that takes place is only in the area in which both sides agree. In this case the Russians, as I have indicated, have been quite resistant to any discussion of the tactical nuclear weapons. This is not a problem of this administration. It goes on from administration to administration.

We have common interests in reducing strategic weapons if they are not reduced to the point that they entice, for example, the Chinese to get into the competition, and that we do not reduce strategic weapons to the point that the tactical nuclear weapons posture of the Russians becomes overwhelming in numerical terms,

which would frighten our allies, although I don't think we are going to get into a missile exchange with the Russians.

The upshot is that only in those areas in which there is some degree of initial agreement can one proceed effectively with arms control. The irony is that in those areas in which there is no agreement and might benefit from arms control, such as tactical nuclear weapons, that we have so far seen such subjects elude is in the arms control process.

Senator SHAHEEN. You both testified on START I and the SORT Treaty acknowledging shortcomings in both of those, I think just as you have today, acknowledging that there are things that you might like to see differently, done differently. But you still recommended ratification of those two treaties. Do you have a recommendation relative to what we should do with this treaty?

Dr. PERRY. My written statement did recommend ratification, yes.

Dr. SCHLESINGER. I think that it is obligatory for the United States to ratify. And any treaty is going to have limitations, questionable areas. There are some in this treaty. We need to watch them for the future, but that does not mean that the treaty should be rejected.

Senator SHAHEEN. Do you have thoughts about what ratification or failure to ratify might—what signals that might send to the other NPT signatories?

Dr. PERRY. Most certainly, if we fail to ratify this treaty the United States will have forfeited any right to provide any leadership in this field throughout the world. I mean, that's pretty clear.

Senator SHAHEEN. Thank you.

Dr. SCHLESINGER. I think that that's essentially right. I wouldn't use the word "forfeit" myself.

Senator SHAHEEN. Thank you both.

The CHAIRMAN. "Loss," is that a good word?

Gentlemen, we are very, very appreciative for your appearance here today. I have some questions for the record, and I appreciate your willingness to entertain those.

Let me just say one word with respect to the issue raised by Senator Risch, which—I don't recall, were you at the breakfast with Secretary Clinton with us?

Senator RISCH. Mr. Chairman, I raised, as you recall, the exact same issues with Secretary Clinton and her team. I left there less than satisfied and I'm continuing to——

The CHAIRMAN. Well, it's important to probe it. Obviously, that's the purpose. I just hadn't recalled whether—I knew that the question had been raised and I knew it was answered there very specifically.

But I do think—and just maybe we can wrap up on this area. What has sustained us throughout the elaborate arms race that we went through over the course of whatever, 50-plus years, and saw us rise to a level of some 50,000 warheads, et cetera—and we're now moving in the opposite direction, gratefully, under both Republican and Democratic Presidents—has been this essential need to have a balance of the deterrent, the power between us, the perception of threat each to each other.

I think it's fair to say that the Russians—and I think this will come out in the course of the record—consistently pressed hard at a number of different levels to try to put missile defense four-square within the framework of this treaty. It is not. The preamble language, which is the only real reference—I think Secretary Schlesinger used the term "throwaway"—is effectively throwaway language that simply acknowledges what most people believe is a reality, that offense is affected by defense.

The truth is that if you build a sufficient level of defense and the other side's just sitting there and it's unmatched, you can effectively destroy their deterrent, their capacity to believe they have a sufficient level of offense to do anything. The result is that you then have the possibility of setting off another arms race, et cetera, which is why, while many of us are supporting the research and development of defense and we have to have the ability to have it, we also believe it has to be done in a very responsible, perhaps even shared and multilateral way, so that people don't misinterpret what you're doing, because if you take it too far you can undo all of the benefits that you do otherwise.

Is that a fair statement of sort of what's contained within this simple sentence, Secretaries?

Dr. SCHLESINGER. If I may go back in history——

The CHAIRMAN. Please. We invite you to. That's why we have you here.

Dr. SCHLESINGER. Secretary McNamara, when the Russians deployed the Galosh system around Moscow, said: We are not going to build a missile defense ourselves. He was opposed to it. But, he said, we are going to overwhelm the Russians. And he developed MIRV capabilities in order to fulfill that, what we called the Moscow package.

When we passed the ABM Treaty in 1972, both sides recognized the inadequacy at that time of ABM defenses. They have been improved substantially. The technology has been improved substantially. But once again, our attitude and their attitude was, if the ABM defenses begin to threaten our capability to retaliate, we shall expand our offensive forces.

So in dealing with the major powers, China and Russia, we must be careful, I think, not to convey to them that we are threatening their retaliatory capability. At the same time, as Senator Risch says, we are obliged to have a deployment of defenses adequate to deal with the newcomers in this business, Iran, North Korea, and so forth. It's not because we would not like to have an impenetrable defense, as President Reagan had hoped for. It's just beyond our capability. They can always beat us with the offensive capabilities.

Senator RISCH. Mr. Chairman, may I just respond briefly?

The CHAIRMAN. Absolutely.

Senator RISCH. First of all, I have the highest respect for your view of that situation, and of course I have the highest respect for the history. But I think where we are here is conditions have changed. As the Secretary points out, conditions are very different today. At that time, we were focused solely on the Russian threat. Today we have a much, much broader threat than the Russian threat.

I appreciate the distinction that you made about how much more serious an exchange of missiles would be with Russia than if we got into it with either Iran or North Korea. In either event, the American people would consider it devastating in any event.

As we move forward and as conditions change, I think we need to move forward and protect ourselves differently. And my point is, is I don't want to just do this and go through the motions of doing this and pretend that conditions are the same as they were when we started and, if you would, cave to the Russians in that regard. I would rather they had a very, very clear understanding that we are going to do what is necessary to protect the American people, not only from Russians, using the old theory of "We're going to overwhelm you with our offense," but also that we are going to do everything we can to defensively protect ourselves from rogue nations who would do a demonstration shot or who would do a singular shot.

So that's where I'm coming from on this, Mr. Chairman.

The CHAIRMAN. I completely agree and I don't think there's any disagreement on any side of the aisle here. Three principal reasons——

Dr. SCHLESINGER. This issue goes back to the Eisenhower administration and over the course of the last half century we have steadily adjusted our position with regard to missile defenses, and we should, as you say, continue to do so.

The CHAIRMAN. I think, Senator, that here is the issue. The three principal reasons for having a defense, which I support for those reasons, would be a rogue state shot, a terrorist event, or an accidental launch. It is critical that, in whatever we do, the perceptions—all of this is driven by perceptions, the perception of threat. The other side has a perception of what we're doing. We have a perception of them.

For years, the perceptions kind of wildly drove it. We've worked hard to try to control those perceptions. That's the key here. So if the Russians think, as they did and have—and there are some old-time players there who still see this very much in the old way—if they think that our deployment unilaterally is done in a way that is geared to affect their retaliation, as the Secretary has said, then you can ignite something.

But if you're proceeding in a thoughtful, multilateral way where people can share in that protection, which is what we hope ultimately can happen, then you can do this very responsibly. I think that this reference that the Russians have put in this treaty is a real throwaway to say: "Hey, guys, don't forget there is this relationship and we have perceptions; don't lose track of them." That's really what they're saying.

Senator Wicker.

Senator WICKER. Well, thank you very much.

Following up on the chair's statement about sharing the development of this defense, you know, President Reagan famously talked about this in the debate about this when he was running for President in—I think it was for reelection in 1984. But we've come a long way in this debate since then. As Secretary Schlesinger says, we've modified the debate as circumstances changed.

I asked Secretary Gates last year about the concept of developing a joint missile system with Russia. He said it was a concept that might be worth pursuing. Other officials from the Department of Defense confirmed just last week that indeed conversations are ongoing with Russia to pursue such an arrangement.

Secretary Perry, you wrote an op-ed on April 11 in the New York Times saying the United States should pursue such an arrangement. What are the benefits of a joint United States-Russia missile defense program and how realistic is that, and what are the stumbling blocks? And then we'll let Secretary Schlesinger answer also.

Dr. PERRY. About a year ago, I had a track two meeting with senior Russians, including discussions with some Russian officials, about that very idea specifically pointed at the Iran threat. We agreed that the first step ought to be a joint threat assessment, and that really is moving along very well. I believe that in fact if Iran does get nuclear missiles they pose a greater threat to Russia than they do to the United States. So the joint threat assessment is a very important first step in this, and that's already well under way in unofficial circles, track two circles, and some discussion of it in official circles as well.

The next step would be to find a way of technology-sharing. That's moderately difficult to do that, but it could be done, I think.

Then the third step would be a joint system, which has very difficult problems that are associated with who makes the decision about when it's fired and under what conditions. I see those, both the second and the third steps, as being somewhere between difficult and very difficult, but not beyond reach.

But I also believe that even discussing it seriously is a good step forward in helping to build confidence between the two nations. But I do believe it's important to move forward in those serious discussions and I think both countries are prepared to do so now.

Senator WICKER. Meanwhile, the Iranians do not tarry on their side of it, do they? They're not waiting for us.

Dr. PERRY. The Iranians are moving full speed ahead, as nearly as I can determine. And I must say that, aside from ballistic missile defense against the Iranians, my own view is that we should be increasing our efforts to try to stop them from getting the nuclear bomb in the first place.

Senator WICKER. Indeed, indeed.

Do you have any idea on the timetable on that first component, the assessment, when that assessment might be ready?

Dr. PERRY. Well, in the unofficial or track-two level that has already been done. The group that I described that I was working on last year completed that about 6 months ago. So there is an unofficial joint assessment of the joint threat to Russia and America. The official assessment I think—this has yet to be agreed to officially, to move forward in this way. I just express some hope and probably some confidence that it will be done.

Senator WICKER. Mr. Schlesinger, would you like to comment?

Dr. SCHLESINGER. The area in which interest might be expressed is with respect to radar and warning particularly of what is going on south of the Russian border in Iran. What the Russians contribute—you ask what benefit this might be. They have important geography, which we lack. I think that that's one aspect.

I think that also, that part of this discussion is intended to reduce Russian—hopefully to reduce Russian concerns about ballistic missiles which have been ongoing for almost 40 years.

Senator WICKER. Finally, let me ask you, Secretary Schlesinger. You wrote an op-ed April 13 expressing concern over the departure from our policy of calculated ambiguity. You said that by stating that we will only use nuclear weapons against nuclear-armed states we provide incentives for other states, such as Syria, to focus on biological weapons as their WMD of choice.

Can you tell a little more about the importance of that policy, and did calculated ambiguity play a part during your tenure? And is the threat posed by biological attack—what is the level of that?

Dr. SCHLESINGER. At the time of my tenure we had a decidedly inferior conventional forces posture and for that reason calculated ambiguity lay behind our threat of nuclear retaliation. That no longer drives us. It would seem to me that you want to be very careful about moving away from calculated ambiguity because of the incentives and the concerns that it may develop.

It is ironical perhaps that the new policy seems directed against states with nuclear weapons, to wit North Korea, prospectively Iran and Israel. I don't think that the likelihood of our actually retaliating against Israel is very high, but they are implicitly specified when we say nuclear-armed states as our way of attempting to back away from countries that have aspirations for nuclear weapons.

Senator WICKER. Did I characterize your opinion correctly as saying that we seem to be providing an unintended incentive for biological WMD being the weapon of choice?

Dr. SCHLESINGER. Well, of course Secretary Baker, during the first gulf war, did convey that we would respond to the use of weapons of mass destruction on the part of Saddam Hussein with overwhelming force. It was inferred that he was referring to nuclear weapons. We never stated that. It was calculated ambiguity.

Similarly, if I may go back, Secretary Perry did hint at some such development at the time that Qadafi was moving toward chemical weapons. But I'll let Bill discuss what he said at that time.

Dr. PERRY. What I said was, when I was the Secretary and Qadafi was moving toward a chemical weapon, I said that if they went ahead with chemical weapons we would respond with overwhelming force. And he could have interpreted that in many different ways. In a later discussion I went on to say that we would not need nuclear weapons to use overwhelming force against Libya. We had quite substantial conventional capability to provide overwhelming force. So whether or not "overwhelming force" means nuclear depends on the context.

Senator WICKER. Thank you.

Dr. SCHLESINGER. It is, of course, calculated ambiguity. [Laughter.]

The CHAIRMAN. We like calculated ambiguity.

Senator WICKER. Yes, we do.

The CHAIRMAN. Senator Wicker, thank you very much.

As we wrap up, I want to note the fact, though we will have expert testimony on this later on from the Defense Department and

elsewhere, that one of the principal reasons that we don't think about using those ICBM silos for missile defense is very simply that it would cost, according to every estimate, a lot more to actually convert them than just to build a new missile defense structure, which is I believe the accurate reason why we're not contemplating using them. Is that fair, gentlemen?

Dr. SCHLESINGER. That is correct.

Dr. PERRY. Yes.

The CHAIRMAN. Yes, Senator Lugar.

Senator LUGAR. Because this point has been raised several times, some critics of the treaty have said that missile defense or defensive mechanisms occurs in the preamble and the preparatory sentence. But in addition, you have these five silos at Vandenberg, for example. These are platforms for missile defense and we've pledged not to use the five at Vandenberg. There may be others, but those come to mind as ones that are pointed to.

Now, when we've raised this question specifically with Secretary Clinton and the group that she gathered with the Foreign Relations Committee, they said this would be an inferior way to launch missile defense. Not only don't we need it, but we would not want or use it.

Unless somebody has a vested interest in keeping five silos at Vandenberg, I'm not able to see the logic of our defending something that our military people say we do not want and will not use because we want to have a better missile defense from platforms that will actually get the job done. Now, they didn't use those terms, but I'm using them as an inference that we will be involved in missile defense and we do want the very best platforms, modern ones that might get the job done.

But I mention this because it keeps weaving through our conversations, and I just ask for your further comment. Is this your understanding of the statement we got from the Secretary?

Dr. SCHLESINGER. Yes, Senator. The advantage of using the silos at Vandenberg would be a shorter time than construction. Obviously, new construction would be cheaper.

Senator LUGAR. Thank you.

The CHAIRMAN. Gentlemen, I think you know this, but I want to, as I say "thank you" to you, I want to really thank you on behalf of all the committee and the Senators for your remarkable careers and the way in which you both give unbelievable life to the concept of public citizenship, both your stewardship in official positions and the way you both continue to contribute to the dialogue of our country. We're really very, very grateful to you. Thank you for being here today.

Dr. SCHLESINGER. Thank you, Senator.

The CHAIRMAN. Thank you.

We stand adjourned.

[Whereupon, at 4:17 p., the hearing was adjourned.]

ADDITIONAL MATERIAL SUBMITTED FOR THE RECORD

RESPONSES OF DR. JAMES SCHLESINGER TO QUESTIONS SUBMITTED BY SENATOR KERRY

Question. What were the key benefits to the United States from the years of implementation of the original START Treaty? How did it help us navigate the post-cold-war relationship with Russia?

- Were there mistakes or miscalculations that you think we or the Russians might have made if we had not had START in place over those years?

Answer. Even in a time of deep antagonism, such as existed in the early 1970s, arms control can set useful limits on needless production or deployment of armaments. In a period like 1991, at the time of the original START Treaty, when relations are much less antagonistic, arms control can help to stabilize relationships. The original START Treaty came at a time of growing rapprochement between the United States and the Soviet Union. By itself arms control cannot engineer a change in the overall relationship, but it can underscore a change.

All in all the relationship between the United States and Russia has been quite stable, so that a turn toward nuclear threats was not likely. Nonetheless, the improved relationship may have helped at a time of deep political differences such as over the treatment and future of Serbia in the mid-1990s when the Russians moved into Pristina. That was a moment of tension that could have led to something more.

Question. On April 10, you published a joint op-ed with Dr. Perry in which you said that the 2010 Nuclear Posture Review "makes important strides in charting a sustainable bipartisan path forward for the United States," and that "healthy disagreements over some NPR specifics should not obscure the valuable contribution it makes to advancing U.S. national security interests." You added: "Themes from our report run through the Nuclear Posture Review and are embodied in the new START agreement."

- Could you elaborate on those comments?

Answer. We have made a great deal of progress, at least conceptually, in resolving some of the differences over our nuclear posture. It is now accepted, I believe, that we should go forward with refurbishment and life extension measures for weapons in our stockpile. That ends a long period of domestic disagreement. We should take advantage of ending that dispute over the future of our nuclear posture by embracing what we have agreed upon. Disagreements will remain over some specifics. For example, there is no agreement with regard to the replacement of weapons in the stockpile. We should not allow such remaining differences to interfere with what is a major step forward.

I believe that the nuclear posture review very closely, though not slavishly, followed the recommendations of the Commission. In addition, the Commission indicated that we could reduce our strategic nuclear armaments, provided that reductions were parallel to those of Russia. The Commission's recommendation that the United States not be inferior in strategic arms to other nations—in light of our responsibilities under extended deterrence have indeed been carried out.

Question. In your 1992 testimony on the original START Treaty, you pointed out that any evaluation of a verification regime for a treaty needs to take account of the political context of the time. So the way we looked at the verification regime of the START Treaty in 1992—with the Warsaw Pact already broken up and the Soviet Union itself in the process of doing so—was different than we might have looked at it right after the Soviet invasion of Afghanistan. How should we think about the role of verification in the current era?

Answer. The verification regime under New START is less demanding than it was under the original START Treaty. In part, that reflects the relaxation with respect to rules on throw weights and MIRVs—so that the needs of verification, given these standards, are reduced. Given the overall political relationship between the United States and Russia we believe that verification is adequate at this time. I regret, of course, along with others, that we no longer have observers at Voktinsk. That is regrettable. Yet, one must recognize that, since the United States is not producing new missiles, the Russians regard the observers at Voktinsk as a one-sided concession on their part.

Question. The Strategic Posture Commission endorsed having the United States and Russia explore moving the arms control process beyond a first agreement on modest reductions, but cautioned that there are numerous challenges that await

that effort. Could you describe what you see as the most important opportunities to move beyond modest reductions, and the most important challenges?

- What does this tell us, more broadly, about what really can be achieved through arms control?

Answer. The most important challenge, and simultaneously we may hope the most important opportunity, is to deal with the issue of tactical nuclear weapons. The Russians still maintain a disproportionately large inventory of tactical nuclear weapons, while the United States has radically reduced its own inventory. Not only is the Russian position numerically lopsided, but because of geography it is inherently asymmetrical. We have failed to grapple with this issue since the agreed reductions in the 1990s of tactical nuclear weapons. Over the last decade we have failed to face up to this issue. In my judgment, until such time as the Russians are prepared seriously to negotiate on the issue of tactical nuclear weapons, it would be imprudent to move beyond the reductions of the current agreement.

More broadly, what it tells us is that this era any further actions with regard to a single category of weapons such as strategic missiles, cannot be examined in isolation. It must be examined in an overall context would include, not only tactical nuclear weapons, but overall conventional capabilities as well. Such further reductions would imply, however, a greater demand on both verification and compliance.

RESPONSES OF DR. JAMES SCHLESINGER TO QUESTIONS SUBMITTED BY SENATOR RISCH

Question. In your statement to the Senate Foreign Relations Committee, you stated that prior to ratification of new START, the Senate will wish to carefully scrutinize the treaty in more than the narrow context of strategic weapons, specifically: (a) The balance between Russian tactical nuclear weapons and strategic weapons; (b) a unilateral reduction in the number of launchers (no Russian reductions) and the effect of reduced launchers on increasing instability due to reduced targets; (c) the effect of the bomber counting rules on stability; and (d) the effect of the treaty in terms of extended deterrence (and Russian tactical superiority). Is it still your recommendation that the Senate examine the answers to these questions and on that basis determine whether to ratify this treaty?

Answer. Indeed it remains my strong recommendation that the Senate examine all these questions, as it deliberates on whether or not to ratify the New Start Treaty. Additional questions to be pondered, such as the decision to ban the Navy's nuclear land attack missile (TLAM–N), would focus particularly on the Russian stockpile of tactical nuclear weapons. It would seem to me that until we get a grasp on the latter issue, the administration should not consider any further reductions in our strategic posture.

Question. The Congressional Commission on the Strategic Posture of the United States, which you cochaired, concluded that, "[a]s the United States proceeds with stockpile refurbishment and modernization, it must ensure that the design, assessment, and engineering processes remain sufficiently intellectually competitive to result in a stockpile of weapons that meet the highest standards of safety, security, and reliability." And you also noted in your recent testimony, "[a]gain, I repeat that the Russians have a live production base. They turn over their inventory of nuclear weapons every 10 years. We do not." As you know, section 1251 of the FY 2010 NDAA requires the President to provide a 10-year plan for the modernization of the U.S. nuclear deterrent when the administration submits the START follow-on treaty to the Senate.

- How important do you consider it that the Senate ensures a robust plan with serious prospects for its support over the full 10 years, prior to deciding whether or not to consent to the ratification of the START follow-on treaty?
- If the administration's 1251 plan is not robust and is not accompanied by a clear commitment to fund it over the life of the treaty, should Senators take that into account when deciding whether to support the treaty?

I believe that it is immensely important for the Senate to ensure, what the administration has stated as its intent; i.e., that there be a robust plan with a continuation of its support over the full 10 years, before it proceeds to ratify this START follow-on treaty. Included in this is a clear, continuous, and successful effort to prod the Appropriations Committee of the House to provide the funding, which it has been reluctant to do over recent years.

I reiterate that the administration will have made a commitment with its 1251 plan. It would be obligatory for the administration to see to it that it is carried out,

and it is certainly appropriate for Senators to take that into account, when deciding whether or not to support the treaty.

Question. Obviously this is a bilateral treaty between the United States and Russia, however, the United States has numerous security commitments with other nations, both bilaterally as well as through the North Atlantic Treaty and other agreements. In the broader security context, do you believe this treaty helps or hinders America's ability to provide deterrence and guarantee the security of our allies?

Answer. The treaty is intended to generate diplomatic support and to indicate that the United States is fulfilling its obligation to reduce its nuclear forces under the NPT. It may be successful in terms of generating such diplomatic support. However, for those countries which may feel themselves subject to pressures from major powers, the reduction in U.S. forces under the treaty, to some extent unilateral, will not help to build confidence in U.S. deterrence. This is particularly true for our allies in Central Europe who have been subject to at least hints of military pressure from Russia—as well as to many observers in Japan.

Question. In your testimony in 1991, you referenced the "limitations of arms control." Can you describe for us what you mean by limitations? Are we quickly reaching these limitations?

Answer. To some people arms control is a panacea, if not a religion. Arms control cannot transform relationships of antagonism. Arms control only can work when both sides recognize that by using constraints, on either the production or deployment of weapons, they can enhance strategic stability and their own security. Maintaining overall strategic stability is always required. Those who think that arms control should be focused primarily or solely on reducing the number of weapons can endanger strategic stability. As indicated in response to a previous question, the U.S. failure over many years to come to grips with the issue of tactical nuclear weapons (which is asymmetrically advantageous to the Russians) suggests that we have reached the limits available at this time.

Question. Drs. Perry and Schlesinger, your Commission stated that the laboratories and military should be free to look at the full "spectrum of options" (i.e., refurbishment, reuse, and replacement) on a case-by-case basis as it looks to ensure the safety, security, and reliability of its current stockpile into the future. Specifically, your report mentioned modernization programs range from simple life extension through component redesign and replacement up to and including full redesign, whichever NNSA thinks makes the greatest technical and strategic sense." However, the recently released NPR states that "the United States will give strong preference to options for refurbishment or reuse. Last week, before the Senate Armed Services Committee, the Commander of U.S. Strategic Command, General Chilton, stated: "We should not constrain our engineers and scientists in developing options on what it will take to achieve the objectives of the Stockpile Management Program, and let them bring forward their best recommendations as to what is the best way forward." Do you agree with General Chilton? Do you think the NPR should be clarified to ensure, as General Chilton suggested, "we should not constrain our engineers and scientists"?

Answer. I happen to agree with General Chilton that we should not constrain our engineers and scientists. However, we have happily reached a national consensus that we should proceed with refurbishment and life extension programs. The Commission did recommend that weapons be looked at on a case-by-case basis, including replacement. I would prefer that that be the national policy. One fears that the bias against replacement would have a chilling effect on laboratory scientists and sustaining their intellectual capacity for weapons development.

However, the NPR is what it is—and is not likely to be modified. The NPR does reveal the national consensus. We should proceed with refurbishment; that is a major step forward compared with where we have been. Also, there is an option in the NPR that if replacement is necessary it could conceivably proceed with the approval of the President and the Congress.

THE NEW START TREATY

TUESDAY, MAY 18, 2010

U.S. SENATE,
COMMITTEE ON FOREIGN RELATIONS,
Washington, DC.

The committee met, pursuant to notice, at 10:05 a.m., in room SD–106, Dirksen Senate Office Building, Hon. John F. Kerry (chairman of the committee) presiding.

Present: Senators Kerry, Dodd, Feingold, Boxer, Cardin, Casey, Shaheen, Kaufman, Gillibrand, Lugar, Corker, Isakson, Risch, DeMint, Barrasso, and Wicker.

OPENING STATEMENT OF HON. JOHN F. KERRY, U.S. SENATOR FROM MASSACHUSETTS

The CHAIRMAN. The hearing will come to order. Thank you all for coming today.

This is a terrific lineup for any hearing, but obviously particularly for this hearing on the START Treaty—our top diplomat, our top defense official, and our top military official. It's a lineup that underscores the Obama administration's commitment not just to the ratification of New START, but to having an open and honest, thorough debate that moves beyond partisanship and sound bites.

The administration's commitment is well placed, because at stake is the future of over 90 percent of the world's nuclear weapons and our credibility in the eyes of more than 180 states that are party to the Nuclear Non-Proliferation Treaty.

As the panel knows, I believe—and I think Senator Lugar shares this—that the New START agreement will make America safer, because the day that this treaty enters into force, the United States will strengthen its fight against nuclear terrorism and nuclear proliferation, gain a fuller understanding of Russia's nuclear forces, and revitalize our relations with Moscow.

What's more, I have no doubt that the administration's plan to maintain and modernize our nuclear weapons infrastructure demonstrates a firm commitment to keeping our nuclear deterrent safe and effective for as long as is needed.

This committee will continue to give the New START Treaty the full and careful consideration that it deserves. We have already heard from Secretaries Perry and Schlesinger. And in the coming days, we will hear from Secretaries Baker and Kissinger, as well. When our review is complete, I'm confident that we can reach a strong bipartisan consensus on advice and consent to ratification, just as we did on START I and the Moscow Treaty.

I believe the case for the treaty is powerful. Most immediately, New START significantly reduces the number of warheads, missiles, and launchers that the United States and Russia can deploy, eliminating surplus cold-war armaments as we turn to face the threats of the 21st century.

It eliminates those weapons in a transparent manner. The original START Treaty had verification mechanisms that enabled us to see what the Russians were doing with their missiles and bombers. But that treaty expired on December 5 of last year. Since then, we have, daily, been losing visibility into Russia's nuclear activities. The New START Treaty restores that visibility, providing valuable information about Russian weapons and allowing us to inspect Russian military facilities.

By verifiably reducing the number of United States and Russian weapons, we're strengthening the stability and predictability of our nuclear relationship. More than that, we are strengthening our diplomatic relationship, making it more likely that we can secure Moscow's cooperation on key priorities, like stopping Iran's nuclear program.

But, the implications of this treaty extend far beyond United States-Russian relations. As we hold this hearing, diplomats from dozens of nations are meeting in New York to review implementation of the Nuclear Non-Proliferation Treaty, a crucial barrier against the spread of nuclear weapons to rogue states and terrorists.

Today, far more than in recent years, those nations are rallying behind the United States and its efforts to lessen the nuclear threat. New START has already helped us to isolate Iran and deflect its efforts to cast the United States as the threat to the NPT.

For all that it accomplishes, this treaty is only the first step in a more far-reaching effort. In announcing the negotiation of New START, Presidents Obama and Medvedev said that they were trying to move beyond cold war mentalities. By giving its advice and consent to ratification, the Senate will speed up that evolution and lay the groundwork for further arms control efforts.

Likewise, the original START Treaty provided a foundation for the Nunn-Lugar program, a signature effort led by our friend Dick Lugar, which has dismantled and secured strategic nuclear weapons in the former Soviet Union. New START builds on that foundation so that we may continue to cooperatively secure nuclear materiels in Russia and beyond.

If we do not approve New START, there will be serious consequences for America's vital nonproliferation efforts. As James Schlesinger testified to this committee, "For the United States at this juncture to fail to ratify the treaty in the course of the Senate's deliberation would have a detrimental effect on our ability to influence others with regard to, particularly, the nonproliferation issue."

We all understand that questions have been raised about New START. And it is this committee's responsibility to give those concerns a fair hearing. We will.

Some have alleged that it will constrain our missile defense plan, which it will not. In fact, it allows us to proceed with all of our planned testing and deployments.

Some have charged that it will narrow our conventional strike options, which it will not. We will still be able to deploy conventional warheads to promptly target enemy sites around the globe.

Others have argued that we cannot eliminate surplus weapons, because our nuclear infrastructure is aging. But, the administration's plan to spend $80 billion to improve that infrastructure should lay those questions properly to rest.

To explain the contours of this treaty, we are fortunate to have three very distinguished witnesses with us. As Secretary of State, Hillary Clinton has worked tirelessly to leverage America's progress on strategic arms control in our fight against nuclear proliferation and nuclear terrorism. Secretary of Defense Robert Gates has served Presidents of both parties with great distinction in a remarkable range of roles. He is one of our Nation's most respected voices on national security. ADM Mike Mullen, the Chairman of the Joint Chiefs of Staff, is providing farsighted leadership to our military at a time of great challenge and transition, as we fight two wars and face the diffused threats of the post-9/11 world.

Both Admiral Mullen and Secretary Gates were originally appointed to their current positions by the last administration and their support for New START is a sign that the treaty is consistent with our long tradition of bipartisanship on strategic arms control.

So, we thank you all for being here today. We look forward to your testimony and the opportunity to discuss this important treaty.

Senator Lugar.

OPENING STATEMENT OF HON. RICHARD G. LUGAR, U.S. SENATOR FROM INDIANA

Senator LUGAR. Well, thank you very much, Mr. Chairman.

I join you in welcoming Secretary Clinton, Secretary Gates, and Admiral Mullen to the Foreign Relations Committee once again.

We are very pleased that our national security leadership is with us to present the New START Treaty and to answer the questions of Senators.

Our witnesses have been deeply involved in the negotiation of the New START Treaty, as well as the formation of the broader context of nuclear weapons policy. Secretary Clinton undertook many discussions on the treaty with her counterpart, Foreign Minister Lavrov. Secretary Gates has a long association with this treaty, going back to the meetings he attended in Moscow in 2008 with Secretary of State Rice. Admiral Mullen undertook several important meetings on the treaty and related issues with General Makarov, the Russian chief of the general staff, as well as other Russian officials. Consequently, each of our leaders today comes to the treaty with unique experiences that can inform Senate consideration of the pact. Their personal involvement and commitment to this process underscores the consensus within the administration and the military leadership of our country that the New START Treaty will benefit United States national security.

As the Foreign Relations Committee and the Senate begins to examine the New START Treaty in greater detail, I would urge the three of you, as our witnesses today, to devote personal energy to accelerating the timetable for producing the National Intelligence

Estimate and a formal verification assessment related to the treaty.

The President has declared the New START Treaty to be a top legislative objective, has called for Senate approval this year. Failing to deliver these reviews related to the START Treaty in expedited fashion would diminish perceptions of the priority of the treaty and complicate the Senate debate timetable.

On April 29, our committee heard from former Secretaries of Defense William Perry and James Schlesinger, who voiced their support for ratifying the treaty.

Secretary Schlesinger stated, "I think that it is obligatory for the United States to ratify." He continued, "Any treaty is going to have limitations, questionable areas. There are some in this treaty. We need to watch them for the future. But, that does not mean that this it should be rejected."

Now, Secretary Perry underscored the importance of treaty ratification to broader U.S. arms-control objectives, asserting, "If we fail to ratify this treaty, the United States will have forfeited any right to provide leadership in this field throughout the world."

Secretary Schlesinger concurred, saying, "For the United States at this juncture to fail to ratify the treaty in the due course of the Senate deliberation would have a detrimental effect on our ability to influence others with regard to, particularly, the nonproliferation issues."

In my view, even as we carefully examine individual provisions of the treaty, the United States choice to deliberately forgo a strategic nuclear arms control regime with Russia would be an extremely precarious strategy. Distancing ourselves from nuclear engagement with Russia would greatly reduce our knowledge of what is happening in Russia, hinder our ability to consult with Moscow in a timely manner on nuclear and other national security issues, further strain our own defense resources, weaken our nonproliferation diplomacy worldwide, and potentially heighten arms competition.

During the post-cold-war era, the United States security has been helped immeasurably by the existence of the START Treaty and related arms control endeavors.

As an author of the Nunn-Lugar program, I've traveled to the former Soviet Union on numerous occasions to encourage and to witness the safeguarding and destruction of weapons covered by START and other initiatives. The destruction of thousands of weapons is a monumental achievement for our countries. But, the process surrounding this joint effort is as important as the numbers of weapons eliminated.

The United States-Russian relationship has been through numerous highs and lows in the post-cold-war era. Throughout this period, START inspections and consultations, and the corresponding threat reduction activities of the Nunn-Lugar program, have been a constant that have served to reduce miscalculations and, finally, to build respect.

This has not prevented highly contentious disagreements with Moscow, but it has meant that we have not had to wonder about the makeup and the disposition of Russian nuclear forces during periods of tension.

It's also reduced, though not eliminated, the proliferation threat posed by the nuclear arsenal of the former Soviet Union.

In my judgment, the question before us is not whether we should have a strategic nuclear arms agreement with Russia, but, rather, whether the New START Treaty's provisions meet our objectives, and how they'll be implemented in the context of our broader national security strategy.

Arms control is not a static enterprise governed solely by words on a treaty document. The success or failure of a treaty also depends on the determination to which it is verified and enforced. It depends on the rationality of the defense programs backing up the treaty. And it depends on the international atmosphere in which it contributes.

For these reasons, Senators are interested in numerous questions peripheral to the treaty, including our plans for warhead modernization and missile defense. We are eager to hear the administration's perspectives on these elements of our defense policy, as well as the witnesses' views on the New START Treaty and our relationship with Russia.

I appreciate that our top national security leadership is personally invested in the Senate ratification process. And I look forward to working with you and members of this committee to achieve a timely treaty review that will fully inform Senate consideration.

Thank you very much, Mr. Chairman.

The CHAIRMAN. Thank you very much, Senator Lugar.

Madam Secretary and Mr. Secretary and Admiral Mullen, as I ask for your testimony, I would like to ask you each—if each of you wants to, but certainly, at least one of you—to address a question that is much in the news this morning. The deal brokered by Brazil and Turkey with Iran is a deal that, at first blush, one might interpret as a swap of the 3-percent low-enriched uranium for the 20-percent medical-isotope uranium. But, as we know, during the course of the months since that original deal was put on the table, Iran has gone from about 1,800 kilograms to 2,300 kilograms. And so, it is not the same deal. And it is our understanding that the potential for a breakout to one nuclear weapon would exist during the time of this swap, absent further ingredients of a deal; i.e., the IAEA oversight, the answering of questions, an agreement not to enrich to 20 percent, et cetera.

So, we would ask you if you might, at the top of your testimony, address the question of the administration's attitude toward this at this point, and whether or not it's your understanding that it is indeed a swap in exchange for not going up to 20 percent enrichment, or that would have to be a demand.

So, Madam Secretary, we recognize you first, and then Secretary Gates and Admiral Mullen.

STATEMENT OF HON. HILLARY CLINTON, SECRETARY OF STATE, DEPARTMENT OF STATE, WASHINGTON, DC

Secretary CLINTON. Well, Chairman Kerry and Senator Lugar and members of the committee, thank you for calling several hearings on the New START Treaty, and for this invitation to appear before you. We deeply appreciate your commitment to this critical issue. And I think both the chairman and the ranking member's

opening statements made very clear what is at stake and how we must proceed in the consideration of this treaty in expeditious manner.

It's a pleasure to testify along with Secretary Gates and Admiral Mullen, because we share a strong belief that the New START Treaty will make our country more secure.

This treaty also reflects our growing cooperation with Russia on matters of mutual interest, and it will aid us in advancing our broader nonproliferation agenda. To that end, we have been working closely with our P5+1 partners for several weeks on the draft of a new sanctions resolution on Iran. And today, I am pleased to announce to this committee, we have reached agreement on a strong draft, with the cooperation of both Russia and China. We plan to circulate that draft resolution to the entire Security Council today.

And let me say, Mr. Chairman, that I think this announcement is as convincing an answer to the efforts undertaken in Tehran, over the last few days, as any we could provide.

There are a number of unanswered questions regarding the announcement coming from Tehran. And although we acknowledge the sincere efforts of both Turkey and Brazil to find a solution regarding Iran's standoff with the international community over its nuclear program, the P5+1, which consists, of course, of Russia, China, the United States, the United Kingdom, France, and Germany, along with the High Representative of the EU, are proceeding to rally the international community on behalf of a strong sanctions resolution that will, in our view, send an unmistakable message about what is expected from Iran.

We can certainly go into more detail about that during the Q&A, but let me turn to the matter at hand, because I think, as convincingly as I can make the case for the many reasons why this New START Treaty is in the interests of the national security of the United States of America, the relationship with Russia is a key part of that kind of security. And as Senator Lugar said in his opening remarks, during all the ups and downs, during the heights and the depths of the cold war, one constant was our continuing efforts to work toward the elimination of, and the curtailment of, strategic arms in a way that built confidence and avoided miscalculation.

Now, some may argue that we don't need the New START Treaty, but the choice before us is between this treaty and no treaty governing our nuclear security relationship with Russia; between this treaty and no agreed verification mechanisms on Russia's strategic nuclear forces; between this treaty and no legal obligation for Russia to maintain its strategic nuclear forces below an agreed level.

And as Secretary Gates has pointed out, every previous President who faced this choice has found that the United States is better off with a treaty than without one. And the United States Senate has always agreed. The 2002 Moscow Treaty was approved by a vote of 95 to nothing. The 1991 START Treaty was approved by 93 to 6.

More than 2 years ago, President Bush began the process that has led to the New START Treaty that we are discussing today.

Now, it, too, has already received bipartisan support in testimony before this committee. And as the chairman and the ranking member acknowledged, former Secretary James Schlesinger, Secretary of Defense for Presidents Nixon and Ford, Secretary of Energy for President Carter, declared that it is obligatory for the United States to ratify it.

Today I'd like to discuss what the New START Treaty is and what it isn't. It is a treaty that, if ratified, will provide stability, transparency, and predictability for the two countries with more than 90 percent of the world's nuclear weapons. It is a treaty that will reduce the permissible number of Russian and United States deployed strategic warheads to 1,550. This is a level we have not reached since the 1950s.

In addition, each country will be limited to 700 deployed strategic delivery vehicles and 800 deployed and nondeployed strategic missile launchers and heavy bombers.

These targets will help the United States and Russia bring our deployed strategic arsenals, which were sized for the cold war, to levels that are appropriate for today's threats.

This is a treaty that will help us track remaining weapons, with an extensive verification regime. This regime draws upon our experience over the last 15 years in implementing the original START Treaty, which expired in December.

The verification measures reflect today's realities, including the fewer number of facilities in Russia, compared with the former Soviet Union. And for the first time ever, we will be monitoring the actual numbers of warheads on deployed strategic missiles.

Moreover, by bringing the New START Treaty into force, we will strengthen our national security more broadly, including by creating greater leverage to tackle a core national security challenge: nuclear proliferation.

Now, I am not suggesting that this treaty alone will convince Iran or North Korea to change their behavior. But, it does demonstrate our leadership and strengthens our hand as we seek to hold these and other governments accountable, whether that means further isolating Iran and enforcing the rules against violators or convincing other countries to get a better handle on their own nuclear materiels. And it conveys to other nations that we are committed to real reductions, and to holding up our end of the bargain under the Non-Proliferation Treaty.

In my discussions with many foreign leaders, including earlier this month in New York at the beginning of the Non-Proliferation Treaty Review Conference, I have already seen how this New START Treaty, and the fact that the United States and Russia could agree, has made it more difficult for other countries to shift the conversation back to the United States. We are seeing an increasing willingness both to be held accountable and to hold others accountable.

A ratified New START Treaty would also continue our progress toward broader United States-Russia cooperation. We believe this is critical to other foreign policy priorities, including dealing with Iran's nuclear program, cooperating on Afghanistan, and pursuing trade and investment.

Already, the negotiations over this treaty have advanced our efforts to reset the United States-Russian relationship. There is renewed vigor in our discussion, on every level, including those between our Presidents, our military leaders, and between me and my counterpart, Foreign Minister Lavrov.

Now, our approach to this relationship is pragmatic and clear-eyed. And our efforts, including this treaty, are producing tangible benefits for U.S. national security.

At the same time, we are deepening and broadening our partnerships with allies. In my recent meetings in Tallinn, Estonia, with our other NATO allies, they expressed an overwhelmingly positive and supportive view of the New START Treaty.

Now, there are also things that this new treaty will not do. As both Secretary Gates and Admiral Mullen will discuss more fully, the New START Treaty does not compromise the nuclear force levels we need to protect ourselves and our allies. The treaty does not infringe upon the flexibility we need to maintain our forces, including the bombers, submarines, and missiles, in a way that best serve our national security interests. The treaty does not constrain our plans for missile defense efforts.

Those of you who worked with me in the Senate know I take a backseat to no one in my strong support of missile defense. So, I want to this point very clearly. Nothing in the New START Treaty constrains our missile defense efforts.

Russia has issued a unilateral statement on missile defense, expressing its views. We have not agreed to this view, and we are not bound by this unilateral statement. In fact, we've issued our own unilateral statement, making it clear that the United States intends to continue improving and deploying our missile defense systems, and nothing in this treaty prevents us from doing so.

The treaty's preamble does include language acknowledging the relationship between strategic offensive and defensive forces. But, this is simply a statement of fact. It does not constrain our missile defense programs in any way. In fact, a similar provision was part of the original START Treaty, and did not prevent us from developing our missile defenses.

The treaty does contain language prohibiting the conversion or use of offensive missile launchers for missile defense interceptors, and vice versa. But, we never planned to do that anyway. As General O'Reilly, our Missile Defense Director has said, it is actually cheaper to build smaller, tailormade missile defense silos than to convert offensive launchers. And the treaty does not restrict us from building new missile defense launchers, 14 of which we are currently constructing in Alaska.

This administration has requested $9.9 billion for missile defense in FY 2011, almost $700 million more than Congress provided in FY 2010. This request reflects our commitment to missile defense and our conviction that we have done nothing, and there is no interpretation to the contrary, that in any way undermines that commitment.

Finally, the New START Treaty does not restrict our ability to modernize our nuclear weapons complex to sustain a safe, secure, and effective deterrent. This administration has called for a 10-percent increase in the FY 2011 budget for overall weapons and

infrastructure activities, and a 25-percent increase in direct stockpile work. This was not in previous budgets. And during the next 10 years, this administration proposes investing $80 billion into our nuclear weapons complex.

So, let's take a step back and put the New START Treaty into a larger context. This treaty is only one part of our country's broader efforts to reduce the threat posed by the deadliest weapons the world has ever known. And we owe special gratitude to Senator Lugar for his leadership and commitment through all the years on this issue.

This administration is facing, head on, the problems of nuclear proliferation and terrorism. We have several coordinated efforts, including the Nuclear Posture Review, the recently concluded Nuclear Security Summit, and the ongoing Non-Proliferation Treaty Review Conference.

While a ratified New START Treaty stands on its own terms, in the reflection of the benefits of—in national security for our country, it is also a part of our broader efforts.

So, Mr. Chairman, Senator Lugar, members of this committee, thank you for having us here, and for all of your past and future attention to this New START Treaty. We stand ready to work with you, as you undertake your constitutional responsibilities, and to answer all your questions today and in the coming weeks.

And we are confident that, at the end of this process, you will come to the conclusion that so many of your predecessors have shared over so many years, on both sides of the aisle, that this treaty makes our country more secure and merits the Senate's advice and consent to ratification.

[The prepared statement of Secretary Clinton follows:]

PREPARED STATEMENT OF SECRETARY OF STATE HILLARY RODHAM CLINTON, DEPARTMENT OF STATE, WASHINGTON, DC

Chairman Kerry, Senator Lugar, and members of the committee, thank you for calling several hearings on the new START treaty and for the invitation to appear before you. I appreciate your commitment to this critical issue.

It is a pleasure to testify with Secretary Gates and Admiral Mullen. We share a strong belief that the New START Treaty will make our country more secure. We urge the Senate to approve it.

Some argue that we don't need the New START Treaty. But the choice before us is between this treaty and no treaty governing our nuclear security relationship with Russia; between this treaty and no agreed verification mechanisms on Russia's strategic nuclear forces; between this treaty and no legal obligation for Russia to maintain its strategic nuclear forces below an agreed level.

As Secretary Gates has pointed out, every previous President who faced this choice has found that the United States is better off with a treaty than without one, and the U.S. Senate has always agreed. The 2002 Moscow Treaty was approved by a vote of 95 to 0. The 1991 START Treaty—93 to 6.

More than 2 years ago, President Bush began the process that has led to the New START Treaty we are discussing today. It, too, has already received bipartisan support. As James Schlesinger, the Secretary of Defense for Presidents Nixon and Ford and Secretary of Energy for President Carter, declared before this committee, "It is obligatory for the United States to ratify" it.

Today, I'd like to discuss what the New START Treaty is, and what it isn't.

It is a treaty that, if ratified, will provide stability, transparency, and predictability for the two countries with more than 90 percent of the world's nuclear weapons.

It is a treaty that will reduce the permissible number of Russian and United States deployed strategic warheads to 1,550. This is a level we have not reached since the 1950s. In addition, each country will be limited to 700 deployed strategic delivery vehicles and 800 deployed and nondeployed strategic missile launchers and

heavy bombers. These targets will help the United States and Russia bring our deployed strategic arsenals, which were sized for the cold war, to levels that are appropriate to today's threats.

It is a treaty that will help us track remaining weapons with an extensive verification regime. This regime draws upon our experience over the last 15 years in implementing the original START Treaty, which expired in December. The verification measures reflect today's realities, including the fewer number of facilities in Russia compared with the former Soviet Union. And for the first time, we will be monitoring the actual numbers of warheads on deployed strategic missiles.

Moreover, by bringing the New START Treaty into force, we will strengthen our national security more broadly, including by creating greater leverage to tackle a core national security challenge: nuclear proliferation.

I'm not suggesting that this treaty alone will convince Iran or North Korea to change their behavior. But it demonstrates our leadership and strengthens our hand as we seek to hold other governments accountable—whether that means further isolating Iran and enforcing the rules against violators, or convincing other countries to get a better handle on their own nuclear materiels. And it conveys to other nations that we are committed to real reductions, and to holding up our end of the bargain under the Non-Proliferation Treaty. In my discussions with foreign leaders, including earlier this month in New York, I have already seen how the New START Treaty makes it difficult for other countries to shift the conversation to the United States.

A ratified New START Treaty would also continue our progress toward broader United States-Russian cooperation, which is critical to other foreign policy priorities, including dealing with Iran's nuclear program, cooperating on Afghanistan, and pursuing increased trade and investment. Already, the negotiations over this treaty have advanced our efforts to reset the United States-Russian relationship. There is renewed vigor in our discussions on every level, including those between our Presidents, our military leaders, and with my counterpart, Foreign Minister Lavrov. Our approach to this relationship is pragmatic and clear-eyed. And our efforts—including this treaty—are producing tangible benefits for U.S. national security.

At the same time, we are deepening and broadening our partnerships with our allies. In my recent meetings with the other NATO members, they expressed an overwhelmingly positive and supportive view of the New START Treaty.

There are also things that this treaty will not do.

As Secretary Gates and Admiral Mullen will discuss more fully, the New START Treaty does not compromise the nuclear force levels we need to protect ourselves and our allies.

The treaty does not infringe upon the flexibility we need to maintain our forces, including bombers, submarines, and missiles, in the way that best serves our national security interests.

The treaty does not constrain our missile defense efforts. Those of you who worked with me in the Senate know I take a back seat to no one in my strong support of missile defense, so I want to make this point very clearly. Nothing in the New START Treaty constrains our missile defense efforts.

- Russia has issued a unilateral statement on missile defense expressing its view. We have not agreed to this view and we are not bound by it. In fact, we've issued our own statement making clear that the United States intends to continue improving and deploying its missile defense systems. Nothing in the treaty will constrain our missile defense efforts.
- The treaty's preamble does include language acknowledging the relationship between strategic offensive and defensive forces. But this is simply a statement of fact. It does not constrain our missile defense programs in any way. In fact, a similar provision was part of the original START Treaty and did not prevent us from developing our missile defenses.
- The treaty does contain language prohibiting the conversion or use of offensive missile launchers for missile defense interceptors and vice versa. But as General O'Reilly, our Missile Defense Director, has said, it is actually cheaper to build smaller, tailor-made missile defense silos than to convert offensive launchers. And the treaty does not restrict us from building new missile defense launchers, 14 of which we're currently constructing in Alaska.

This administration has requested $9.9 billion for missile defense in FY 2011, almost $700 million more than Congress provided in FY 2010. This request reflects our commitment to missile defense.

Finally, the New START Treaty does not restrict our ability to modernize our nuclear weapons complex to sustain a safe, secure, and effective deterrent. This administration has called for a 10-percent increase in FY 2011 for overall weapons and

infrastructure activities, and a 25-percent increase in direct stockpile work. During the next 10 years, this administration proposes investing $80 billion into our nuclear weapons complex.

Let's take a step back and put the New START Treaty into a larger context. This treaty is only one part of our country's broader effort to reduce the threat posed by the deadliest weapons the world has ever known. And we owe special gratitude to Senator Lugar for his leadership and commitment on this issue.

This administration is facing head on the problems of nuclear proliferation and terrorism. We have several coordinated efforts, including our new Nuclear Posture Review, the recently concluded Nuclear Security Summit, and the ongoing Non-Proliferation Treaty Review Conference. While a ratified New START Treaty stands on its own in terms of national security benefits for our country, it is also part of our broader efforts.

Mr. Chairman, Senator Lugar, and members of the committee, thank you again for having us here today and for all your past and future attention to the New START Treaty. We stand ready to work with you as you undertake your constitutional responsibilities, and to answer all your questions today and in the coming weeks.

We are confident that at the end of this process, you will come to the same conclusion that we and many others have reached—that the New START Treaty makes our country more secure and merits the Senate's advice and consent to ratification.

Thank you.

The CHAIRMAN. Thank you very much, Madam Secretary. We appreciate it.

May I say, also, that Secretary Gottemoeller and Ellen Tauscher and the whole team did a terrific job of keeping the committee appraised and briefed. And we had a number of sessions and even colleagues who went to Geneva. So, we thank you for the cooperation. And that is very, very helpful in getting us here.

Secretary Gates.

STATEMENT OF HON. ROBERT GATES, SECRETARY OF DEFENSE, DEPARTMENT OF DEFENSE, WASHINGTON, DC

Secretary GATES. Mr. Chairman, Senator Lugar, members of the committee, thank you for the opportunity to speak today regarding the agreement between the United States and Russia on the New Strategic Arms Reduction Treaty.

This treaty reduces the strategic nuclear forces of our two nations in a manner that strengthens the strategic stability of our relationship and protects the security of the American people and our allies.

America's nuclear arsenal remains a vital pillar of our national security, deterring potential adversaries and reassuring allies and partners. As such, the first step of the year-long Nuclear Posture Review was an extensive analysis which, among other things, determined how many nuclear delivery vehicles and deployed warheads were needed. This, in turn, provided the basis for our negotiations of START.

The results of those studies give me confidence that the Department of Defense will be able to maintain a strong and effective nuclear deterrent while modernizing our weapons to ensure that they are safe, secure, and reliable, all within the limits of the new treaty.

The U.S. strategic nuclear deterrent will continue to be based on the triad of delivery systems—intercontinental ballistic missiles, submarine-launched ballistic missiles, and nuclear-capable heavy bombers—within the boundaries negotiated in the New START Treaty. Those are an upper boundary of 1,550 deployed warheads,

up to 700 deployed ICBMs, deployed SLBMs, and nuclear-capable heavy bombers, and up to 800 deployed and nondeployed ICBM launchers, SLBM launchers, and heavy bombers equipped for nuclear armaments.

Under this treaty, we retain the power to determine the composition of our force structure, allowing the United States complete flexibility to deploy, maintain, and modernize our strategic nuclear forces in a manner that best protects our national security interests.

The Defense Department has established a baseline force structure to guide our planning, one that does not require changes to current or planned basing arrangements. The Department will retain 240 deployed submarine-launched ballistic missiles, distributed among 14 submarines, each of which will have 20 launch tubes. This is the most survivable leg of the triad, and reducing the number of missiles carried on each submarine, from 24 to 20, will facilitate Navy planning for the *Ohio*-class submarine replacement.

Recognizing the flexibility of the bomber leg of the triad, we will retain up to 60 deployed heavy bombers, including all 18 operational B–2s. At the same time, we will—we have to consider the Air Force's planning for a long-range strike replacement, and plan to convert a number of B–52Hs to a conventional-only role.

Finally, the United States will retain up to 420 deployed single warhead Minuteman-3 ICBMs at our current three missile bases.

Let me also address some of the things that the New START Treaty will not affect, echoing Secretary Clinton.

First, the treaty will not constrain the United States from deploying the most effective missile defenses possible, nor impose additional costs or barriers on those defenses. And I—speaking of stories in the news this morning and the last couple of days, I'll be happy to discuss the article in the New York Times this morning about the SM–3 missile.

As the administration's Ballistic Missile Defense Review and budget plans make clear, the United States will continue to improve our capability to defend ourselves, our deployed forces, and our allies and partners, against ballistic missile threats. We made this clear to the Russians in a unilateral statement made in connection with the treaty.

Furthermore, the New START does not restrict our ability to develop and deploy prompt global strike—prompt conventional strike capabilities that could attack targets anywhere on the globe in an hour or less.

The treaty's limit of 700 deployed delivery vehicles, combined with the associated ceiling of 1,550 deployed warheads, accommodates the limited number of conventional warheads we may need for this capability. We are also currently examining potential future long-range weapon systems for prompt global strike that would not be limited by the treaty.

In my view, a key contribution of this treaty is its provision for a strong verification regime. While the intelligence community will provide a detailed classified assessment, I would like to emphasize some of the key elements of this regime, which provides a firm basis for monitoring Russia's compliance with its treaty obligations

while also providing important insights into the size and the composition of Russian strategic forces.

The treaty allows each party to conduct up to 18 onsite inspections each year at operating bases for ICBMs, SSBNs, and nuclear-capable heavy bombers, as well as storage facilities, test ranges, and conversion and elimination facilities.

The agreement establishes a database, which will be initially populated 45 days after the treaty enters into force, and updated every 6 months thereafter, that will help provide the United States with a rolling overall picture of Russia's strategic offensive forces. This picture is further supplemented by the large number of notifications required, which will track the movement and changes in status of the strategic offensive arms covered by the treaty.

Unique identifiers, for the first time, will be assigned to each ICBM, SLBM, and nuclear-capable heavy bomber, allowing us to track the disposition and patterns of operation of accountable systems throughout their life cycles.

The treaty provides for noninterference with national technical means of verification, such as reconnaissance satellites, ground stations, and ships. This provides us with an independent method of gathering information that can assist in validating data declarations.

While telemetry is not needed to verify the provisions of this treaty, the terms, nonetheless, call for the exchange of telemetry on up to five launches per year per side.

I am confident that the New START Treaty will in no way compromise America's nuclear deterrent. In many ways, the primary threat to the effectiveness and credibility of the American deterrent is one that we control ourselves, and that is failing to invest adequately in our Nation's nuclear weapons infrastructure, a point I have made a number of times in recent years. Maintaining an adequate stockpile of safe, secure, and reliable nuclear warheads requires a reinvigoration of our nuclear weapons complex. That is, our infrastructure and our science, technology, and engineering base.

To this end, the Department of Defense is transferring $4.6 billion to the Department of Energy's National Nuclear Security Administration through fiscal year 2015. This transfer will assist in funding critical nuclear weapons life-extension programs and efforts to modernize the nuclear weapons infrastructure.

The initial applications of this funding, along with an additional $1.1 billion being transferred for naval nuclear reactors, are reflected in the Defense and Energy Departments' FY11 budget request, which I urge the Congress to approve.

These investments in the Nuclear Posture Review strategy for warhead life extension represent a credible modernization plan to sustain the nuclear infrastructure and support our Nation's deterrent.

I would close with a final observation. I first began working on strategic arms control with the Russians in 1970, 40 years ago, a United States effort that led to the first strategic arms limitation agreement with Moscow, 2 years later. The key question then, and in the decades since, has always been the same: Is the United States better off with a strategic arms agreement with the Rus-

sians, or without it? The answer, for successive Presidents of both parties, has always been, "With an agreement." The U.S. Senate has always agreed, approving each treaty by lopsided bipartisan margins.

The same answer holds true for New START. The United States is better off with this treaty than without it. And I am confident that it is the right agreement for today and for the future. It increases stability and predictability, allows us to sustain a strong nuclear triad, and preserves our flexibility to deploy the nuclear and nonnuclear capabilities needed for effective deterrence and defense.

In light of all these factors, I urge the Senate to give its advice and consent to ratification on the new treaty.

[The prepared statement of Secretary Gates follows:]

PREPARED STATEMENT OF HON. ROBERT GATES, SECRETARY OF DEFENSE, DEPARTMENT OF DEFENSE, WASHINGTON, DC

Mr. Chairman, members of the committee, thank you for the opportunity to speak today regarding the agreement between the United States and Russia on the New Strategic Arms Reduction Treaty. This treaty reduces the strategic nuclear forces of our two nations in a manner that strengthens the strategic stability of our relationship and protects the security of the American people and our allies.

America's nuclear arsenal remains a vital pillar of our national security, deterring potential adversaries and reassuring allies and partners. As such, the first step of the year-long Nuclear Posture Review was an extensive analysis which, among other things, determined how many delivery vehicles and deployed warheads were needed. This in turn provided the basis for our negotiations. The results of those studies give me confidence that the Department of Defense will be able to maintain a strong and effective nuclear deterrent while modernizing our weapons to ensure they are safe, secure, and reliable, all within the limits of this new treaty.

The U.S. strategic nuclear deterrent will continue to be based on the triad of delivery systems—intercontinental ballistic missiles (ICBMs), submarine-launched ballistic missiles (SLBMs), and nuclear-capable heavy bombers—within the boundaries negotiated in the New START Treaty. Those are:

- An upper boundary of 1,550 deployed warheads;
- Up to 700 deployed ICBMs, deployed SLBMs, and nuclear-capable heavy bombers; and
- Up to 800 deployed and nondeployed ICBM launchers, SLBM launchers, and heavy bombers equipped for nuclear armaments.

Under this treaty, we retain the power to determine the composition of our force structure, allowing the United States complete flexibility to deploy, maintain, and modernize our strategic nuclear forces in the manner that best protects our national security interests. The Defense Department has established a baseline force structure to guide our planning, one that does not require changes to current or planned basing arrangements.

- The Department will retain 240 deployed submarine-launched ballistic missiles distributed among 14 submarines, each of which will have 20 launch tubes. This is the most survivable leg of the triad, and reducing the number of missiles carried on each boomer from 24 to 20 will facilitate Navy planning for the *Ohio*-class submarine replacement.
- Recognizing the flexibility of the bomber leg of the triad, we will retain up to 60 deployed heavy bombers, including all 18 operational B–2s. At the same time, we have to consider the Air Force's planning for a long-range strike replacement and plan to convert a number of B–52Hs to a conventional-only role.

Finally, the United States will retain up to 420 deployed single-warhead Minuteman III ICBMs at our current three missile bases.

Let me also address some of the things that New START treaty will not affect.

First, the treaty will not constrain the United States from deploying the most effective missile defenses possible, nor impose additional costs or barriers on those defenses. As the administration's Ballistic Missile Defense Review and budget plans make clear, the United States will continue to improve our capability to defend ourselves, our deployed forces, and our allies and partners against ballistic missile

threats. We made this clear to the Russians in a unilateral statement made in connection with the treaty.

Furthermore, the New START does not restrict our ability to develop and deploy prompt conventional strike capabilities that could attack targets anywhere on the globe in an hour or less. The treaty's limit of 700 deployed delivery vehicles combined with the associated ceiling of 1,550 deployed warheads accommodates the limited number of conventional warheads we may need for this capability. We are also currently examining potential future long-range weapons systems for prompt global strike that would not be limited by the treaty.

In my view, a key contribution of this treaty is its provision for a strong verification regime. While the intelligence community will provide a detailed classified assessment, I would like to emphasize some of the key elements of this regime, which provides a firm basis for monitoring Russia's compliance with its treaty obligations while also providing important insights into the size and composition of Russian strategic forces.

- The treaty allows each party to conduct up to 18 onsite inspections each year at operating bases for ICBMs, SSBNs, and nuclear-capable heavy bombers, as well as storage facilities, test ranges, and conversion and elimination facilities.
- The agreement establishes a database, which will be initially populated 45 days after the treaty enters into force and updated every 6 months thereafter, that will help provide the United States with a "rolling" overall picture of Russia's strategic offensive forces. This picture is further supplemented by the large number of notifications required, which will track the movement and changes in status of strategic offensive arms covered by the treaty.
- Unique identifiers assigned to each ICBM, SLBM, and nuclear-capable heavy bomber will allow us to track the disposition and patterns of operation of accountable systems throughout their life cycles.
- The treaty provides for noninterference with national technical means of verification, such as reconnaissance satellites, ground stations, and ships. This provides us with an independent method of gathering information that assist in validating data declarations.
- While telemetry is not needed to verify the provisions of this treaty, the terms nonetheless call for the exchange of telemetry on up to five launches per year per side.

I am confident that the New START treaty will in no way compromise America's nuclear deterrent. In many ways, the primary threat to the effectiveness and credibility of the deterrent is one that we control ourselves, and that is failing to invest adequately in our Nation's nuclear weapons infrastructure—a point I have made a number of times in recent years. Maintaining an adequate stockpile of safe, secure, and reliable nuclear warheads requires a reinvigoration of our nuclear weapons complex—that is, our infrastructure and our science, technology, and engineering base.

To this end, the Department of Defense is transferring $4.6 billion to the Department of Energy's National Nuclear Security Administration through fiscal year 2015. This transfer will assist in funding critical nuclear weapons life extension programs and efforts to modernize the nuclear weapons infrastructure. The initial applications of this funding, along with an additional $1.1 billion being transferred for naval nuclear reactors, are reflected in the Defense and Energy Department's FY11 budget requests, which I urge the Congress to approve. These investments, and the Nuclear Posture Review's strategy for warhead life extension, represent a credible modernization plan to sustain the nuclear infrastructure and support our Nation's deterrent.

I would close with this. I first began working on strategic arms control with the Russians in 1970, a U.S. effort that led to the first Strategic Arms Limitation Agreement with Moscow 2 years later. The key question then and in the decades since has always been the same: Is the United States better off with an agreement or without it? The answer for each successive President has always been: "with an agreement." The U.S. Senate has always agreed, approving each treaty by lopsided, bipartisan margins.

The same answer holds true for New START: the United States is far better off with this treaty than without it, and I am confident that it is the right agreement for today and for the future. It increases stability and predictability, allows us to sustain a strong nuclear triad, and preserves our flexibility to deploy the nuclear and nonnuclear capabilities needed for effective deterrence and defense. In light of all of these factors, I urge the Senate to give its advice and consent to ratification of the New START Treaty.

The CHAIRMAN. Thank you, Secretary Gates.

Admiral Mullen.

STATEMENT OF ADM MICHAEL MULLEN, USN, CHAIRMAN, JOINT CHIEFS OF STAFF, WASHINGTON, DC

Admiral MULLEN. Mr. Chairman, Senator Lugar, distinguished members of the committee, I am pleased to add my voice in support for ratification of the New START Treaty, and to do so as soon as possible, as we are in our 6th month without a treaty with Russia.

This treaty has the full support of your uniformed military. Throughout its negotiation, Secretaries Clinton and Gates ensure that professional military perspectives were thoroughly considered. During the development of the New START Treaty, I was personally involved, to include two face-to-face negotiating session and several telephone conversations with my counterpart, the Chief of the Russian General Staff, General Makarov, regarding key aspects of the treaty.

The Joint Chiefs and I also had time to review the analytic work done in the Nuclear Posture Review regarding the shape of future U.S. strategic nuclear forces. Its recommendations were transmitted as guidance to the negotiating team in Geneva regarding the three central limits on strategic systems, and the warheads associated with them, that are contained in the treaty.

In short, the conclusion and implementation of the New START Treaty is the right thing for us to do, and we took the time to do it right.

The Chiefs and I believe the New START Treaty achieves important and necessary balance between three critical items—aims. It allows us to retain a strong and flexible American nuclear deterrent; it helps strengthen openness and transparency in our relationship with Russia; it also demonstrates our national commitment to reducing the worldwide risk of nuclear incidents resulting from the continuing proliferation of nuclear weapons.

You should know that I firmly believe that the central limits established in this treaty, and the provision that allows each side the freedom to determine its own force mix, provides us with the necessary flexibility to field the right force structure to meet the Nation's needs.

We plan to retain our triad of bombers, ballistic-missile submarines, and land-based intercontinental ballistic missiles in sufficient diversity and numbers to assure strategic stability between ourselves and the Russian Federation. We will also maintain sufficient capability to deter other nuclear states.

In addition, the agreement provides for an array of important verification measures that are critical to both sides in monitoring compliance with the new treaty.

This treaty is also a critical element in the President's agenda for reducing nuclear risks to the United States, our allies and partners, and the wider international community. Our recently concluded NPR acknowledges the continuing role for nuclear weapons in the defense of America while placing additional emphasis on positive steps to prevent nuclear terrorism and the risks from nuclear proliferation.

In summary, this New START agreement is important in itself, and should also be viewed in a wider context. It makes meaningful

reductions in the United States and Russian strategic nuclear arsenals while strengthening strategic stability and United States national security.

Coupled with the administration's clear commitment to prudently invest in our aging nuclear infrastructure and a nuclear warhead life-extension programs, this treaty is a very meaningful step forward.

I encourage the Senate to fully study the treaty. I believe you will see the wisdom of ratifying it. And I sit before you today recommending that you do so.

Thank you, Sir.

[The prepared statement of Admiral Mullen follows:]

PREPARED STATEMENT OF ADM MICHAEL MULLEN, USN, CHAIRMAN, JOINT CHIEFS OF STAFF, WASHINGTON, DC

Chairman Kerry, Senator Lugar, distinguished members of the committee, I am pleased to add my voice in support for ratification of the New START Treaty.

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The Joint Chiefs and I also had time to review the analytic work done in the Nuclear Posture Review (NPR) regarding the shape of future U.S. strategic nuclear forces. Its recommendations were transmitted as guidance to the negotiating team in Geneva regarding the three central limits on strategic systems and the warheads associated with them that are contained in the treaty. In short, the conclusion and implementation of the New START Treaty is the right thing for us to do—and we took the time to do it right.

The Chiefs and I believe the New START Treaty achieves important and necessary balance between three critical aims. It allows us to retain a strong and flexible American nuclear deterrent. It helps strengthen openness and transparency in our relationship with Russia. It also demonstrates our national commitment to reducing the worldwide risk of nuclear incident resulting from the continuing proliferation of nuclear weapons.

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In summary, this New START agreement is important in itself, and should also be viewed in wider context. It makes meaningful reductions in the United States and Russian strategic nuclear arsenals while strengthening strategic stability and U.S. national security. Coupled with the administration's clear commitment to prudently invest in our aging nuclear infrastructure and in nuclear warhead life-extension programs, this treaty is a very meaningful step forward. I encourage the Senate to fully study the treaty. I believe you will see the wisdom of ratifying it, and I sit before you today recommending that you do so.

The CHAIRMAN. Thank you very much, Admiral Mullen.

Secretary Gates, you wrote, last week, about the unanimous support of the Nation's military for this treaty. And, Admiral Mullen, you personally engaged with your counterpart, General Makarov,

at a couple of points in the course of these negotiations. You've just testified, both of you, to a list, of the things that we gained—and I was quite impressed by the series of benefits that you articulated. I'd like to ask each of you if you'd kind of summarize for us, in a layperson's language for a moment, just why the military has such confidence that this, in fact, strengthens our national security and does not present any of the challenges that some of the critics have raised.

Secretary Gates.

Secretary GATES. Well, I think that, first of all, this treaty, like its predecessors, brings four benefits that we would not otherwise have.

The first is transparency. Knowing what the Russians are doing, being able to track their systems, being able to count them, being able to observe them—for the first time, actually look at the warheads themselves, having the unique tagging that we've talked about—none of this kind of transparency would be possible without this treaty.

Second, predictability. This has been an important feature of strategic arms agreements with Russia since the very first one, in 1972, to have some idea to—for both sides to know the limits on the other, and therefore, avoiding the need to hedge against the unknown, and having sufficient verification in place to be able to have confidence in that judgment.

The third benefit is strategic stability. And the way this treaty is structured adds to that strategic stability. For example, as the number of warheads comes—the number of delivery vehicles comes down, putting just a single one of our warheads on an ICBM requires the Russians to use a one-for-one or two-for-one attack mode if they were to come after our ICBMs, so they would use up a significant portion of their strategic nuclear delivery vehicles trying to take out our ICBMS. All of this contributes to strategic stability.

And finally, this treaty, for the first time, gives us actual access to Russian weapons and Russian facilities. We've had access to facilities, but not the weapons themselves before.

So, I think, in each of these four areas, the treaty brings benefits to the United States and, frankly, enhances our security in ways that would not happen in the absence of such a treaty.

The CHAIRMAN. Thank you, Secretary.

Admiral.

Admiral MULLEN. Chairman, throughout the negotiations—and the ones I participated in certainly focused from the military perspective and our ability to maintain a very strong strategic deterrent. And it's my belief, and the belief of the Chiefs, including—in addition to the strategic commander, General Chilton—that, in fact, the treaty does that. Particularly important was the preservation, at this point in time, of the triad and the strength of that triad, which has been such a critical part of our arsenal, historically, and also in my interaction with our service chiefs, particularly the Chief of Staff of the Air Force and the Chief of Staff of the—or the Chief of Naval Operations, in order to be able to continue to invest and sustain the infrastructure and the people, the training, the kinds of things that we need to sustain this over time. So, the strength of that triad is—which has proven itself in the

past—is still very much there, even though some of the numbers—the numbers are down.

Second—and, to a limited degree, I can speak to this—but, what we typically need those weapons for—the ability to execute military operations, should that, at some point in time, absolutely have to—you know, have to occur—is that we are in very good shape with respect to any contingencies which are out there. And that was a substantial underpinning for this treaty, from the military perspective: Can we carry out the mission that the President of the United States has given us? And I just want to assure you that we can.

In the negotiations with the Russians, specifically, to look at the wide array of initiatives, including verification, the size of the arsenal, what we would look to the future—and to reemphasize what Secretary Clinton said—we've done this in a way that has put us—or continues to put us in a great position of strength, while at the same time, in a—from my perspective, a better position, in terms of cooperation with Russia—you know, keeping our eyes wide open, but certainly cooperating with them in ways, which has been a strength of this treaty, not just this—is a strength of this treaty, but historically, as well.

The CHAIRMAN. Thank you. I thought those were terrific summaries.

Secretary Clinton, in the context of your efforts, with respect to a number of the global issues and challenges we face, and particularly nonproliferation, can you similarly sort of reduce to the nub what the implications would be of not ratifying this agreement?

Secretary CLINTON. Well, Mr. Chairman, we would obviously lose all of the benefits that both Secretary Gates and Admiral Mullen discussed. And although they are benefits with respect to this treaty between the United States and the Russia Federation, they have many ancillary implications for our larger efforts against nonproliferation.

So, I would basically make five points: First, the intense efforts that we've engaged in, the last year, to reach this treaty, has built a level of understanding between the key decisionmakers in the United States and Russia that has been very helpful in other arenas, most notably with respect to Iran. I started my morning talking with Sergei Lavrov about, you know, finalizing the resolution and the agreement that it will be discussed later today.

Second, the impact of our resetting of a relationship that resulted in the treaty has had a very salutary effect on many of our allies and our adversaries. Our allies, particularly in NATO, as I said, welcomed this agreement, because they have been, historically, on the front lines, and even our Central and Eastern European friends were very pleased to see this level of cooperation between the United States and Russia. And that has laid the groundwork for us to work on the strategic concept that will be introduced with respect to NATO's future, to reestablish the NATO-Russia Council, and to do some other confidence-building measures, after the very unfortunate events concerning Georgia, that build the feeling of alliance among our NATO members, but, again, with a very clear view that they expect to—for us to continue to provide their defense.

Third, with respect to adversaries, or potential adversaries, the fact that the United States and Russia are working together is not good news. You know, they are not happy to see this level of cooperation. They're not happy that China and Russia have signed off on this resolution that we plan to introduce later. This is a real setback for them. And it has a very positive effect on our dealings with our international, you know, friends, about all of these other issues.

Fourth, having gone this far to achieve the benefits that are in this treaty, to lose them would not only undermine our strategic stability, the predictability, the transparency, the other points that both the Secretary and the Admiral made, but it would severely impact our potential to lead on the important issue of nonproliferation. Countries would wonder, "Well, if we can't get across the finish line on this treaty, can we get across the finish line on other matters, as well?"

And finally, I can only speak from personal experience, in the many endless meetings that I go to around the world, that the fact that we've reached this treaty and have fulfilled our continuing obligations as an NPT member on the three pillars, which include disarmament, nonproliferation, peaceful use of nuclear weapons, gives us so much more credibility on the nonproliferation agenda.

The CHAIRMAN. Thank you very much. Appreciate it.

Senator Lugar.

Senator LUGAR. Thank you very much, Mr. Chairman. As you have already zeroed in on specific objections that have been raised, I want to mention, just again, how important it will be to answer all of the questions of Senators with regard to missile defense.

Each one of you have categorically indicated there is no way—no way in which our missile defense will be inhibited in any way, at any time. But, that point still doesn't quite get through. Now, we have people worried about something in this treaty that's going to inhibit missile defense. So, I ask for your continued guidance as to how we make that point.

The second point is that, on the stockpile stewardship, or the making certain that the warheads that we now have work, that, in the event we were called upon—by ourselves, our allies, in any way—we have, in fact, the background, in terms of our laboratories, our continuing research, the personnel—some of whom have grown old, we need some young ones—all of these things, so that those things we now have, that are guaranteed by our treaties, and that we've verified everybody else in the world, in fact, are there, for their confidence, as well as our own.

And I mention that because we've written letters, sometimes bipartisan letters, sometimes all the Republicans, others—Secretary Gates has been a regular recipient of correspondence—and yet, at the same time, his response today, that $4.6 billion has been transferred over to try to meet this, is a significant commitment.

So, I—but, I mention that once again, and will not belabor the point.

Then the verification procedure; very important. Even Senators who are not enthusiastic about arms control treaties approached, I'm sure, the chairman and me last December the 5th, said, "What happens now? There are no American boots on the ground. We're

out of there. What about that? We've counted on this for years, that we had American boots on the ground, that our verification worked." I'll make just one personal point about this. On the wall of my conference room, we have a chart in which the Department of Defense has contributed data each month for the last 15 years. At the start, 13,300 nuclear warheads on missiles aimed at the United States—13,300. And a—testimony that any one of those would have obliterated my entire city of Indianapolis, leveled it, gone, everybody dead. Now, that's impressive to Hoosiers. I hope it's impressive to the other 49 States. [Laughter.]

And, by and large, they have supported anything that I could do to make certain that, one by one, those missiles left—or, rather, the warheads left the missiles. We've worked with the Russians to destroy the missiles, destroy the silos in which the missiles were located, every vestige of this, even the roots and branches and the finely planted daisies, or whatever else it is, in many fields in Siberia, or wherever we had them. It's critically important.

Now, there may be Americans, who have not gone through the arms control talks, who don't realize what a nuclear—one nuclear weapon can do. And there were 13,300 of them. Now, there are still, by some counts, as many as 5,000, not all deployed, but we have some distance to go.

Now, December 5 comes, no boots on the ground, no treaty, and some have always said, "Well, you can't trust the Russians. You don't want to deal with the Russians." We even have some members who have said, "We shouldn't knock out the very first of our weapons, we need every one of them. We ought to be building more." Now, I don't agree with that philosophy, I understand that's a possible way of going about this world.

But, I would say that—as a counterargument—during one trip that I was privileged to have with Russians, they became especially friendly and decided that they would like for me to go up to a base where they had the so-called "Typhoon submarines." Now the Typhoons were popularized by Tom Clancy in "The Hunt for Red October." They were remarkable submarines that went up and down our eastern coast, whether we knew about it or not, for the better part of a generation. Each one of them had, reportedly, 200 nuclear missiles; a chip shot into New York, Philadelphia, any other place they wanted to shoot, all that time. We may not have known about it, but we do now. We did then. I have a picture, in the office, that Russians took of me standing in front of a Typhoon, which was the first time our intelligence had seen a Typhoon, at that stage.

And yet, their agreement was that they wanted us to help them destroy the Typhoons. Taken 10 years to get through 3 of the 6. They are very complex situations. But, to leave three of the six still out there is unthinkable.

So, if I become dogmatic or emotional about it, it's from some experience of seeing what could hit us, and the need to have boots on the ground, in terms of verification.

So, we want to make sure we all know what the verification is and why it's at this particular level. And you've done your best, thus far.

But—now, without being tedious, I want to submit more questions that our staff has formulated in detail, so that there can be as complete a record of every nuance of this, that we have.

Now, finally, I would just say that our own experience with these treaties has been that, even after the treaties come, and we have implementing legislation, whether it be cooperative threat reduction or something of this variety, there have been Senators, perennially, who put all sorts of restrictions on all sorts of reports that were needed before any money could be spent. You were leveled, in the State Department or the Defense Department, with obligations to show 15 different things before a dollar could go. In fact, one year, no money at all was spent, with regard to disarmament in Russia, because of so many letters that never got written, and the appropriators took the money off the table.

So, whether we're doing a treaty or not, we have arguments, every year, among skeptics who somehow believe that arms control is not exactly their cup of tea.

I would just add that this is so important that I ask your indulgence in sending over more and more questions, and then publishing all of the results of those questions, so that anyone who is slightly interested in this, academically, will have every conceivable answer.

And finally, it has to come to a gut reaction. Is this something that's good for our country? Now, you have all affirmed that you believe that it is. And we appreciate that very direct testimony today.

And I thank you for indulging me in an essay rather than a set of questions, but they will be coming, in large numbers.

Thank you.

The CHAIRMAN. Senator, that's the kind of question, period, the panel really appreciates. So——

[Laughter.]

The CHAIRMAN [continuing]. Let me just say, from our point of view, we are enormously grateful to have your expertise in this effort, and I think the questions that you're going to pose are going to help the committee to put together precisely the kind of record that's needed here. So, I know the panel, as well as the committee, appreciates that approach.

Senator Dodd.

Senator DODD. Well, thank you very much, Mr. Chairman.

And let me thank our witnesses, as well, for your presence here today.

And let me say that, for the chairman this has been a longstanding issue, and he's done a remarkable job on it. But, also a word about Dick Lugar, who I've had the privilege of serving on this committee with for 30 years. And I have a feeling, when the last nuclear weapon is gone—and we all hope that day will come in our world—in the story of how mankind put its common good above its baser instincts, the names of Dick Lugar and Sam Nunn will figure prominently in that history. And having had the privilege of serving with both of them for many years, I want to thank Dick Lugar personally, but also Sam Nunn, for their work. And the three of you, as well, for your tremendous efforts in this regard.

This is very difficult work, and I think you've done a remarkable job getting it done.

I have two quick questions for you. One, in fact, relates to the Nunn-Lugar proposals. I wonder if any analysis has been done to determine whether or not we need to update Nunn-Lugar, in light of this New START accord? Obviously, that has been a very valuable tool over the years, as Senator Lugar has just affirmed. And the question would be, Do we need to do something else regarding Nunn-Lugar, in light of this treaty?

I don't know—Secretary Clinton or Admiral Mullen.

Admiral MULLEN. Actually, Senator, I'm not really sure. I—it's a great question, and I think it's something we have—from my perspective, we should look at.

Senator DODD. Well, I'd ask if that could be done as part of the questions we have.

Senator DODD. And then, second—in a sense, you've answered this, Secretary—Madam Secretary Clinton, but I wonder if you might just reach a little further.

First of all, congratulations, at least on the news we're hearing, about the Chinese and the Russians being supportive of the—of an international sanctions regime regarding Iran. That's extremely important news. As you know, we're in the midst, here, of a conference between the House and the Senate, on the Iran sanctions bill. In my other hat that I wear as chairman of the Banking Committee, on which Bob Corker serves, and others, we voted unanimously on an Iran sanctions bill. The House has done so, as well. And so, we need to proceed with that issue.

But, we're very interested in seeing what happens, internationally. Every member of the Conference Committee has expressed the view that an international sanction makes a lot more sense than unilateral. And I think we all agree with that, although we're not going to reduce or retreat from that unilateral sanctions effort here. But, certainly an effort on the multilateral front would be a tremendous step forward. And so, we commend you for that.

But, I wonder if you might comment on the reduction in counterproliferation efforts, more generally, and the effects this agreement might have on those efforts. I think, specifically, of India and Pakistan, for instance. To what extent might this agreement have the positive impact on causing other nations to begin to move in this direction?

Secretary CLINTON. Well, Senator Dodd, thank you. And thank you for all of your work on these and so many other important issues.

We believe that the treaty history between the United States and Russia is the bedrock of disarmament. And, as Senator Lugar just eloquently outlined, it has certainly been in our interests over all of these years.

We believe that, in the current environment in which we are putting forth this treaty for your consideration for ratification, it strengthens our hand in talking with other countries that have nuclear weapons.

Now, the fact is that if—as far as we know in the world—and I think we've got a pretty good handle on it—the United States and Russia have more than 90 percent of all nuclear weapons in the

world. And we want to, as we said in the NPR—the Nuclear Posture Review—we want to explore beginning conversations with other nuclear nations, starting with China, and see what kind of opportunity for discussion could exist.

The United States and Russia have, now, a 30-year history of these discussions, but we need to begin similar discussions with others. We go into those with the credibility that this treaty gives us.

Right now, as both the chairman and the ranking member have said, there is no treaty. We have no so-called "boots on the ground." We're not inspecting anything. We're not acquiring the kind of information that we think is in our national security interest. So, this treaty is not only, on its own merits, in our interests, but the fact of it gives us the credibility to go and talk with other nuclear-armed countries. It also gives us the credibility to reach agreement, as we now have, on a resolution in the United Nations, with countries that are, you know, concerned about the proliferation represented by Iran.

So, on this broad basis of how we can be more effective in making our case about what we see as the principal threat to the United States and the world—the proliferation of weapons of mass destruction, their use by rogue regimes or by networks of terrorists—this treaty gives us a lot of credibility, going forward.

Senator DODD. Well, I thank you. Thank you very much for that.

And let me just add that although we have questions to be asked, obviously, and answered, I want to express my strong support for this treaty. And I think we need to move on this. And my fervent hope is that we'll get this done now, in the next month or so, clearly before we adjourn. I can't imagine adjourning from this Congress and not have been completed this work. So, I appreciate very much your work.

The CHAIRMAN. Thank you very much, Senator Dodd.

Senator Corker.

Senator CORKER. Thank you, Mr. Chairman.

And thank each of you for your service and what you do on behalf of our country.

Madam Secretary, what recourse do each of the countries have against each other if there's violations in the treaty?

Secretary CLINTON. Well, Senator, there are several approaches.

One, there is a bilateral commission, that exists to iron out differences, solve problems, to which each country may seek recourse if there is some kind of violation, or perceived violation.

Senator CORKER. What kind of recourse?

Secretary CLINTON. Well, you know, we've had this—we have a long history with these treaties, where presenting information that we believe might violate the spirit or the letter of the treaty leads to changes.

I mean, there—this treaty is not a static document. It goes into effect, like the previous START Treaty and others, and then it begins to be implemented.

So, if we believe that, under the treaty, we're not getting access to what we have signed up for under the treaty, we raise that and we get the access. So, it's a constant effort to make sure that both

sides are complying with their agreements, as set forth in the treaty.

And I—you know, Senator Lugar is the expert in the room, probably along with Secretary Gates, but the history of these treaties has been—I would characterize as positive in the enforcement and implementation.

The final recourse we have is to withdraw from the treaty. You know, we——

Senator CORKER. Let me——

Secretary CLINTON [continuing]. We have the right to withdraw if we believe that this treaty is no longer in our security interests.

Senator CORKER. So, basically it's an understanding between two countries, and they act in good faith to live up to those.

Should it, then, trouble us that, before we ever get started, that each of the countries has a very different opinion of what we've negotiated, as relates to missile defense? And should not all—should all of us not want a joint statement from both countries as to that before we begin? Because it's sort of troubling that we begin with two divergent views on what we've agreed to, as relates to missile defense.

Secretary CLINTON. Well, Senator, again, there's a history, here. There were similar divergent views with the first START Treaty, and it didn't stop us from doing anything we did, and intended to do, on missile defense.

You know, it's a little bit like a political statement, I might suggest, that, you know, you can make an agreement and then you——

Senator CORKER. Duplicitous-like. Is that——

Secretary CLINTON. Yes, yes.

Senator CORKER [continuing]. What you're saying?

Secretary CLINTON. Well, no. I think that it is—you make an agreement. The agreement, on the face of it and in its terms, set forth the obligations, but, for various reasons, each side might want to characterize it a little bit differently. But, if you look at the statement—the unilateral statements that were made by the Russians, they basically said they would have a right to withdraw if, you know, we continued on missile defense. They have a right to withdraw anyway, and with the original START Treaty, they said similar things about missile defense; and here we are, billions of dollars later. And it just is not a—it's not a part of the treaty agreement itself.

Senator CORKER. As it relates to their ability to launch, it's my understanding they're already below the levels that the treaty stipulates, and that we're above it, and—so, as it relates to the ability to deliver, did we really get anything in this treaty at all?

Admiral MULLEN. Well, I—Senator, I think the significant reduction in overall nuclear weapons was very clearly a benefit.

Senator CORKER. But, aren't they already below the level, just specifically as it relates to strategic launch ability? Aren't they—because of the age of their system—aren't they already below levels that we've agreed to——

Admiral MULLEN. In terms of launching——

Senator CORKER. That's right.

Admiral MULLEN [continuing]. Launching vehicles——

Senator CORKER. That's right.

Admiral MULLEN [continuing]. Themselves, they are, yes.

Senator CORKER. OK, so——

Admiral MULLEN. But——

Senator CORKER [continuing]. So, let me ask you a question. We—it seems to me their neighbors are pretty concerned about their tactical abilities. And did we miss an opportunity, since they're already below on their strategic ability to deliver—they're already below that; we're the ones that are actually making cuts, not them—did we miss an opportunity—and I know we always Monday-morning quarterback, and whenever we negotiate on behalf of our caucus, other Senators say, "Well, why didn't you get this?"—and I know that's what I'm doing now, but I guess that's the purpose of this hearing—did we miss an opportunity to get them to do some things, tactically, that would have made their neighbors feel slightly more safe?

Admiral MULLEN. From my perspective, Senator, we seized an opportunity to come together and get to this treaty. It isn't everything that everybody could have wanted. Certainly, we're very aware of the tactical nuclear weapons that Russia has. That has been discussed with them, in terms of the future.

And, in a broader context, I think the leadership position that we're both in right now as a result of this, from the perspective of overall nuclear weapons inventory, it is certainly something that will be addressed in the future. But, it just was not a part of this negotiation.

Secretary GATES. I would also add two things, Senator.

First of all, what is important to our allies, and particularly those on Russia's periphery, is our reaffirmation of Article 5 of the NATO Treaty and the fact that NATO continues to believe and attest to the fact that it has—must have a nuclear capability. The F–35s that we are going to deploy will have a dual capability. So, we have protected our right, with respect to tactical nuclear weapons.

There's no question that they're concerned in Eastern Europe, particularly about Russian tactical nuclear weapons. That was not a part of this negotiation, but we have protected our own ability to do more.

And, just for the record, I would point out that, while their strategic nuclear delivery vehicles are under the current levels of the treaty, the number of warheads is actually above the level. So, they will be reducing the number of warheads.

Senator CORKER. So, I'm going to move on to something that you can address. I know these other things are lookbacks, and the treaty is what it is, from you all's standpoint.

I think the modernization issue is the issue that probably concerns all of us. And I know my time's limited now. But, I know there's a 23-page report that talks a little bit about, sort of, where we are. And I know it's a secure document. But, you know, it focuses mainly on our sub delivery system, and not the others. Our labs are telling us that, you know, they don't think there's any way that the amount of dollars that have been set aside adds up. You all talk about $80 billion in investment, but many of us look at it,

and it looks like it's double counting. In other words, much of it is money that was already going to be spent.

And all I would say is, as we move ahead and—I know I'm 13 seconds over now—I think that's an area where we're going to want a lot of clarification as to what the real commitment is, modernizationwise. I think that's really important to all of us. I think all of us know we have a—an aged system, and we know that for us to really be where we need to be, real investment in modernization needs to take place.

And I don't know if you want to make a quick closing comment.

I will say, to all of you, thank you again for your service and for your willingness to be here to testify.

Secretary GATES. Two quick comments.

First of all, I've been trying for 3½ years to get money for modernization of the nuclear infrastructure. This is the first time I think I have a chance of actually getting some. And ironically, it's in connection with an arms control agreement. But, the previous efforts have completely failed.

Second, I would just quote—and we will get you all the budgetary details and everything with respect to this—but, I would just quote the Director of the National Nuclear Security Administration, Tom D'Agostino, who said in testimony that, "The resources we have in the President's budget are exactly what we feel is needed in order to satisfy the requirements." And he said, separately, "What is—it is what is required to get the job done."

But, we'll give you all the details.

Senator CORKER. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Corker.

Senator Feingold.

Senator FEINGOLD. Thank you, Mr. Chairman, for holding the hearing.

This treaty stands to reduce the size of our arsenal and the Russian arsenal, making the world a safer place without constraining the ability to defend our Nation. Its ratification would also offer proof to the international community of the commitment of the United States to fulfilling our obligations under the Non-Proliferation Treaty, which will, of course, help foster the cooperation needed to stop the spread of nuclear weapons and materiels.

However, this treaty makes significant changes to the verification and inspection regime that was in place for nearly two decades under the original START Treaty. We have to ensure that this treaty is verifiable and guarantees our ability to adequately monitor Russian nuclear weapons and materiel. So, as a member of the Senate Select Intelligence Committee, I'm in the process of reviewing that.

But, let me go to Secretary Gates and just follow on Senator Corker's questions that have to do with modernization. I understand you were talking about funding issues, but let's get at least one clarification that I think you could provide.

Some of my colleagues in the Senate are concerned that this treaty would jeopardize our ability to modernize our arsenal. It's my understanding that nothing in this treaty prohibits us from building new warheads, if needed. Is that correct, Secretary?

Secretary GATES. That is correct.

Senator FEINGOLD. And then, let's turn to Admiral Mullen on the issue of verification. This treaty's verification regime differs in several ways from the one that was in place for nearly two decades, as I just mentioned. On one hand, we would no longer maintain an onsite inspection facility at Votkinsk. On the other hand, due to the change in counting rules, I understand that the new treaty would permit more vigorous onsite inspections.

So, Admiral, on balance, would you say that this would increase or decrease our overall understanding of the Russian arsenal?

Admiral MULLEN. I think, on balance, it would increase it. And, specifically, with respect to Votkinsk, one of the provisions of this treaty calls for notification of every weapon that's—gets made there now—notification to us 48 hours before it comes out the factory, specifically. I think the verification procedures in this treaty are easier. Secretary Gates has spoken, earlier, about the number of inspections, about the specifics of the inspections, for the first time, to be able to look into, and see the number of, weapons which are on top of any particular missile, where we haven't been able to do that before.

We will be able to count weapons on bombers, which we haven't been able to do before. We'll be able to, in fact, confirm facility elimination. There are very robust national technical means provisions in this treaty, and a specific provision which does not permit interference with that.

The unique identifier, which will be on every single weapon, is a brand new provision for verification and was—as was mentioned earlier, the number of tests—or launches each year, which will have telemetry—but, the telemetry needs of this treaty are different from the telemetry needs we had in the past. And we really don't need telemetry for the kind of verification that we need for this treaty that we had before, to include the ability to understand the weight of a missile, when we didn't know what was actually inside it.

So, I think the verification procedures for this treaty are very robust and meet the standards that we have, today, in the 21st century, and not the ones that we needed back in previous treaties.

Senator FEINGOLD. Admiral, I'm concerned that calls for maintaining a large arsenal are based on a misunderstanding of the potential impact of any use of nuclear weapons. Independent studies indicate that even a so-called "limited nuclear exchange" of 100 warheads would have devastating consequences.

Has the U.S. Government evaluated the impact of so-called "limited exchange"? And is it true that such an exchange could have a devastating global impact?

Admiral MULLEN. Yes, sir. I think the—a limited exchange would have a devastating global impact. Senator Lugar spoke to that earlier. A single—you know, a single weapon would have a devastating impact. And yet, we find ourselves, I think, over time, reducing the size of our arsenal, but also sustaining it at a size that preserves the deterrence aspect of it. We don't do this alone, and in a treaty with another country that's got an enormous number of nuclear weapons, as well.

So, clearly the devastation which would occur with any release of a nuclear weapon—and we were speaking, earlier, about—that

the—the merging of terrorists with nuclear weapons, which is another big concern and has been put at the top of the list in the NPR, here. All those things would be devastating. And from a—but, from the standpoint of the overall treaty, it's taken us in the right direction, and I think it's a very, very positive step, while preserving what we need, in terms of our overall strength and deterrence capability in a country.

Senator FEINGOLD. Thank you, Admiral.

And, Secretary Gates, I understand that the verification regime under the treaty will supplement the information we gather using other intelligence-gathering capabilities, such as satellites. To the extent that the new treaty scales back certain inspection activities, are we able to compensate for that loss of access, through other intelligence activities?

Secretary GATES. That certainly is the judgment of the intelligence community. Representatives of the DNI and CIA were involved in these negotiations throughout, and consulted, in terms of both the terms of the treaty and the verification terms. And I think what you are likely to hear from them is that they have high confidence in their ability to monitor this treaty until toward the end of the 10-year term, when that confidence level will go to moderate.

I would tell you that's what they do on all long-term evaluations of their intelligence capability. The further into the future you go, the confidence level begins to decline.

But, there's no question, in terms of the ability to verify this treaty. And, in fact, when Senator Lugar was talking about having his picture taken in front of a Typhoon submarine, and the fact that that was the first time we had seen one, I would only qualify that by saying that's the only time we've seen one from dry land. [Laughter.]

Senator FEINGOLD. Admiral Mullen, the Director of the Missile Defense Agency, Lieutenant General O'Reilly, recently testified that this treaty would actually reduce the constraints on the development of our missile defense program. Could you just, finally, say a bit about that?

Admiral MULLEN. Well—and the issue of missile defense has been one that obviously is very much in focus as a result of this. I mean, throughout the negotiations, there was—while we talked about it, there really was—it was, by and large, disconnected. And the purpose of this treaty was to not get at missile defense.

I see no restrictions in this treaty, in terms of our development of missile defense, which is a very important system, as well. And I would actually hope that, in the long term, given the relationship with Russia, that we would be able to see our way through to more cooperative efforts with them, in terms of missile defense, and very well, possibly, in the future, have the kind of impact that General O'Reilly was talking about.

Senator FEINGOLD. Thank you all.

Senator Isakson.

Senator ISAKSON. Thank you very much, Senator Lugar.

All of you have bragged about the—or, have talked about the verification improvements, or the ability to verify, in this. I wanted to ask a couple of questions.

Admiral Mullen, you talk about the identification system on each weapon. Is that going to be like a transponder from an airplane? Is it going to be a technological—how are we going to do that? Or do we know yet?

Admiral MULLEN. I think some may know. I don't. It is very clear that it was going to be visible and verifiable, and every single weapon would have it. And there were specific criteria that were laid on for each weapon, because the weapons, in fact, are different, as well.

Senator ISAKSON. But, would it be a technological verification versus a visible one, where they'd have some ability——

Admiral MULLEN. I think—I'd have to get back—I think it is visible, and—but, it could possibly be technologically verified, as well.

Senator ISAKSON. Well, that is—if you would, I'd like to have that information, because that is impressive.

Admiral MULLEN. Sure.

Senator ISAKSON Secretary Gates, thank you for being here. You talked about the submarine-launched missiles, and you talked about the number of inspections we'll now have, which is 18. Is that correct?

Secretary GATES. Yes, sir.

Senator ISAKSON. How many inspections do we have under the current—well, current START's expired by 6 months. How many did we have under START II?

Secretary GATES. I honestly don't remember.

[Pause.]

Secretary GATES. There was a quota of 28——

Senator ISAKSON. There were 28 inspections——

Secretary GATES [continuing]. For START II.

Senator ISAKSON. And now there—have 18?

Secretary GATES. Yes, sir.

Senator ISAKSON. Well, that's less.

Secretary GATES. Yes, sir.

Senator ISAKSON. So, that's not really an improvement.

Admiral MULLEN. I was just informed that, actually, the UIDs are mechanical, they're not technically detectable.

Senator ISAKSON. OK, they are——

Admiral MULLEN. And, second, I think it's important—under this treaty, there—under the previous treaty, there are 73 facilities that we inspected. Under this one—Russian facilities—under this treaty, there are only 27. And, in fact, based on the number of inspections—18—there are almost twice as many inspections per facility per year than under the previous treaty. And that speaks to moving this to where we are right now, as opposed to where we've been in the past.

Secretary CLINTON. Senator, that's a really important position for us to underscore, because we spent a lot of time on the inspection issue. And I have to confess, at first I wasn't quite sure, you know, what the numbers were, because we go from 28 to 18. But, then one of our very able negotiators showed me a map of all the sites in the former Soviet Union that we were inspecting, and then, thanks to Senator Lugar and other efforts, those sites have been closed, they've been shrunk, they've been dismantled—because it wasn't just in Russia, it was in Kazakhstan and Belarus and other

places. So, as Admiral Mullen says, in effect, we actually have twice as many inspections, because we have so many fewer sites to inspect.

Senator ISAKSON. I think it would be great for an eighth-grade-level memo on how less is more, because somebody'll take—I mean, that could be taken either way. I think it would be helpful to all of us.

Secretary GATES. Senator, if I could just elaborate on the answer that I gave you before on the number of inspections, the 18 versus 28, the 18 are divided into two categories. The first 10 are both at deployed and nondeployed sites; 8 are at nondeployed sites. But, in that first category of 10, we actually carry out inspections that were—that required two inspections under START II. There was a separate inspection of—on data updates, and a separate inspection on RVs under START II. Under this treaty, we do both in the same inspection. So, for all practical purposes, the same—the number of inspections is about the same as it was under START II.

Senator ISAKSON. Thank you.

Secretary Clinton, again, thank you for being here.

I seem to remember, from Dr. Schlesinger's testimony in our previous hearing, that, on this issue of short-range tactical weapons, they're not included in this START agreement. And it was an issue for the Russians, because of missile defense, because their old Eastern-Bloc satellite states are so close to them. Is that correct?

Secretary CLINTON. Senator, they were not willing to negotiate on tactical nukes. And history of these arms control agreements were always on strategic weapons. But, we have said that we want to go back and begin to talk to them about tactical nukes. We would like to, as soon as we can get this ratified, with all hope that the Senate will so advise and consent—we want to do that. And I had a very frank and useful discussion with our NATO allies—because you may know that there is a move on—or, there was a move on by a number of European countries to begin to put pressure on the United States to withdraw our tactical nukes from Europe. And we have said very clearly, No. 1, that has to be a NATO decision; it's not a unilateral decision; and, No. 2, we are not going to withdraw our tactical nukes unless there is an agreement for Russia to similarly discuss with us withdrawal of their tactical nukes.

So, this is an issue that was very well vetted by our NATO allies, our Central and our Eastern European allies. They know that, you know, Russia has their tactical nukes, you know, close to their borders with our NATO allies. It's one of the reasons—and this is something that either Secretary Gates or Admiral Mullen can address—it's one of the reasons why we altered our missile defense approach in Europe to the phase-adaptive approach, because, you know, very frankly, we were looking at, you know, what kind of medium-range missiles Iran had, you know, not the intercontinental. So, this whole question of shorter range missiles and the tactical nukes is one that we're going to address.

Senator ISAKSON. So, we maintain both the leverage of our existing tactical weapons that are in Europe, as well as proceeding with missile defense.

Secretary CLINTON. Yes, we do.

Senator ISAKSON. And the—our NATO partners have, I think, used the word "welcomed" this treaty. Is that correct?

Secretary CLINTON. Yes, it is.

Senator ISAKSON. Thank you very much.

The CHAIRMAN. Thank you very much, Senator Isakson.

Senator Cardin.

Senator CARDIN. Well, first, Mr. Chairman, thank you for this hearing, and—appreciate it very much.

I want to express my appreciation to our three witnesses for their service to this Nation.

And I concur in the comments made by our chairman, by Senator Dodd, by Senator Lugar, of the importance of moving forward on our efforts in world leadership on nonproliferation. And I see this treaty as a critical part in the relationship between Russia and the United States in providing world leadership on nuclear safety issues, on nonproliferation issues, and on responsible reductions of our nuclear stockpiles.

So, I'm pleased that we're moving forward on this, and I hope that we will be able to act prior to the end of this Congress.

Madam Secretary, I want to follow up on a statement you made earlier. You know, I see that—Russia and the United States having some common interest here, particularly against the threat of nuclear arms in other countries. And you mentioned Iran. Well, put me down in the category as being very concerned about what happened with Brazil and Turkey with Iran. I'm certain those two countries—well, these two countries may have acted in good faith, but Iran is not. We've been down this road before. We know that Iran can change its mind at any time in regards to the nuclear materiel. We also know that their—under this arrangement, they would continue on their refinement and—capacity to develop a nuclear weapon.

So, I was pleased to hear your status, that we are moving forward with the Security Council resolutions and that we have at least some cooperation from Russia and China. That, to me, is good news. And it seems to me it's one of the by-products on your negotiations on the START Treaty. So, I think this all comes together.

I—if there's further—more than you could elaborate on that now, I would appreciate it. If not, we certainly understand the timing that you're going through.

Secretary CLINTON. Well, Senator, thank you. And I think there's no doubt that our cooperation and the intensive efforts that so many of us, along with our Russian counterparts, put into the START negotiations over the last year—is part of the reason why we plan to circulate a draft resolution to the entire Security Council today, that includes Russia and China and their agreement on the wording of the text.

With respect to the efforts that were undertaken by Turkey and Brazil, you know, we have acknowledged the sincerity of the undertakings by both Turkey and Brazil. They have attempted to find a solution to Iran's standoff with the international community, and they made an announcement, in Tehran, that included certain commitments by Iran. But, as we and the international community have made consistently clear over the last many months, it is not sufficient for Iran to stand at a press conference and make a dec-

laration. Iran has to clearly and authoritatively convey to the International Atomic Energy Agency what its position is and what it is prepared to do, before any offer by Iran can be legitimately considered by the international community. That has not happened.

And, while the removal of a significant portion of low-enriched uranium from the territory of Iran would be a positive step, we are seriously concerned by a number of issues that were missing from the declaration announced. And the chairman began, today, by listing some of those. Chief among them is Iran's refusal to suspend its enrichment of uranium to near 20 percent levels. That is in clear violation of its international obligations. It is continually amassing newly enriched uranium, regardless of whether it comes to agreement on the Tehran research reactor concerns. And as President Medvedev said publicly yesterday, Russia shares our concerns about this continuing enrichment by Iran.

You know, we had further concerns, which I conveyed to both my Brazilian and Turkish counterparts, about the amorphous timeline for the removal of the LEU. The way that it was presented in this declaration, that could take months of further negotiation. And that is just not acceptable, to us and to our partners.

And finally, we're troubled by the continued failure of the Iranian side in this declaration to commit to engage with the P5+1 on its nuclear program, despite a request to do so since last October.

And we don't believe it was any accident that Iran agreed to this declaration as we were preparing to move forward in New York. With all due respect to my Turkish and Brazilian friends, the fact that we had Russia on board, we had China on board, and that we were moving, early this week—namely, today—to share the text of that resolution, put pressure on Iran, which they were trying to somehow dissipate.

So, Senator, given our very serious concerns about Iran's continued violations concerning its nuclear activities, we remain committed to moving forward with the process in the United Nations, and we are very committed to working with our counterparts at the U.N. and—in order to get as strong a possible resolution as soon as we can.

Senator CARDIN. Well, thank you very much for that response. I share Senator Lugar's concerns that a single missile could cause havoc with world stability. And I know that, on the START Treaty, you're trying to get the right balance between deterrence and nonproliferation. But, it goes beyond Russia and the United States. And that's why I think these numbers are significant, and the efforts of Russia and the United States to work together on these issues are important for the international community, including what is happening in Iran or what's happening in North Korea. And, as pointed out, the India-Pakistan issues are also ones of major concern to all of us.

So, I think it's extremely important that we keep focused on the overall objectives as we look at the Senate's ratification of the START Treaty, because it clearly has implications beyond just Russia and the United States.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you very much, Senator Cardin.

We're going to have a vote, here, in a few minutes. What—I want to not interrupt the hearing at all, so I would ask whichever Senator is, sort of, next in line on questioning, if they would leave—I will also leave immediately, when the vote goes off, and then turn around and come back so we can continue the hearing without interruption.

Senator Risch.

Senator RISCH. Mr. Chairman, thank you very much.

First of all, let me tell you where I come from on this. And I suspect everybody's in the same position. And that is, the first responsibility of a government is the protection of its citizens and the defense of the American people. Secretary Gates, I think, probably put this in about as good a—and simple a—understandable terms as you can, in saying, Are we better off with this, or are we better off without it? I mean, that's probably as good a way of looking at this as possible.

Secretary Gates, commenting on your prior testimony, you know, the modernization that you've been pursuing is absolutely critical. I mean, it's not only the number of weapons, but it's the technology, it's everything else. So, keep up the good work there, and we'll—from this Senator's standpoint, we'll help you, every way we can. That absolutely needs to be done.

Secretary Clinton, your discussion about pursuing a discussion or a treaty on tactical weapons—nuclear weapons—is certainly important, and I do hope, when this is over, that that will be pursued.

Secretary Gates, you talked about 40 years ago, when you started this. Certainly, that was an—a marvelous job that was done 40 years ago. It was a huge step forward for mankind and getting a START Treaty. But, we've had 40 years of experience with this now, and I kind of view it as a marriage. Things have changed dramatically over the last 40 years, and we seem to have developed irreconcilable differences on the defensive missile situation. And that's where—and I don't think this is secret; Secretary Clinton and I have discussed this—I have real difficulties with this. And I would have hoped that we would have taken advantage of this opportunity to try to smooth this over.

You know, 40 years ago, when this started, the—you had the new treaty. We—the two parties have now dealt with it for 40 years. Both parties have recognized what they have in their hands and how it would affect the world. This nonsense about a limited exchange—I mean, all somebody has to do is pull the trigger once. I mean, it doesn't matter whether it's 100, whether it's one; it would have profound changes on the culture of the world.

So—but, in any rate, 40 years ago, we didn't have Iran pursuing nuclear ambitions, we didn't have North Korea, we didn't have the Chinese situation, we didn't have India and Pakistan nuclear armed, and today we do. And, to me, that is the—is even a more pressing need than this particular treaty.

Now, it's a good thing to have this treaty. And the details of it, we can all spar about how many inspections there should be, and that sort of thing. But, to me, we need to be looking, kind of like a sports analogy, the second shot we're going to take; and that is, we ought to be looking at, What about these other situations? And the other situations are such that we can't sit down at a table with

Iran, we can't sit down at a table with North Korea, and talk to them using common sense and using reasonableness in reaching a treaty, like we have with the Russians, that has really been successful over the last 40 years. And they—I don't think anyone can argue that it hasn't been successful. These others don't fall in the same category.

So, in order to protect the American people, it has—absolutely critical that we develop, and we develop with the best technology, the best ability that we have, a defensive missile system. That's the only way we're going to protect ourselves from these other countries.

So, that's why I am concerned when, at the end of the day, after all the discussions, we have irreconcilable differences with the Russians. We say this doesn't impede our abilities, the Russians say, "Yes, it does." And I have the greatest respect for the ranking member, here, who says, "We need to say, over and over again, that this doesn't affect our ability to do that." But, yet, when you read the preamble, when you read some of the language in it, and, most importantly, when you read the unilateral statements, we have irreconcilable differences. This treaty means something different to the Russians than it means to us when it comes to protecting our people using a defensive missile structure.

So, having said all that, I'm going to give you a couple of minutes here to again reassure me. I've listened to all of you reassure me before. And I understand that the bottom-line answer is, "Well, if we don't like it, we can always get out of the treaty." Well, that isn't a legitimate answer, because other—if that's the case, then why have the treaty at all?

So, that's where I come from on this. That's the problem I have with this. I think that it's a really, really good thing to have this treaty. But, anything we do to convince the world, or suggest to the world, that we aren't going to do everything we possibly can to effect a legitimate defensive position really, really troubles me.

Secretary GATES. Senator, the Russians have hated missile defense ever since the strategic arms talks began, in 1969. In fact, those talks started with the Russians' primary interest being in negotiating the Antiballistic Missile Treaty. And it was under the insistence of the United States that we accompanied with—it with an interim agreement on strategic offensive weapons.

So, from the very beginning of this process, more than 40 years ago, the Russians have hated missile defense. They hated it even more in 1983, when Ronald Reagan—when President Reagan made his speech, saying we were going to do strategic missile defense. And so, the notion that this treaty has somehow focusd this antagonism on the part of the Russians, toward missile defense, all I would say is, it's the latest chapter in a long line of Russian objections to our proceeding with missile defense. And, frankly, I think it's because—particularly in the 1970s and 1980s, and probably equally now, it's because we can afford it and they can't. And we're going to be able to build a good one, and are building a good one, and they probably aren't. And they don't want to devote the resources to it, so they try and stop us from doing it, through political means. This treaty doesn't accomplish that for them.

There are no limits on us. We have made these unilateral statements on other issues relating to virtually every other strategic arms agreements we've—agreement we've had with the Russians, on one subject or another. Neither has ever considered them binding.

And I will tell you, we are putting our money where our beliefs are. As Secretary Clinton pointed out, our FY11 budget will add about 700 million more dollars on missile defense. We are going forward with a second missile field at Fort Greely. We are—we've put—we're putting more than a billion dollars into the second—into the two- and three-stage ground-based interceptor programs. We're buying THAADs, we're buying Patriot-3s, we're buying SM–3s, we're buying X-band radars. We are—we have a comprehensive missile defense program, and we are going forward with all of it. And our plan is to add even more money to it in FY12. So, you know, the Russians can say what they want, but, as Secretary Clinton said, these unilateral statements are totally outside the treaty, they have no standing, they're not binding, never have been.

Senator RISCH. Thank you, Mr. Chairman. My time's up.

The CHAIRMAN. Thank you, Senator Risch.

Let me—as our—as Secretary Clinton knows well, the best-laid plans of mice and men around here don't always work, and the Senate has delayed the vote to 12:05. So, we will continue in normal fashion.

Senator Casey.

Senator CASEY. Mr. Chairman, thank you very much.

And I want to thank our three witnesses for being here with us again. I—we recently had a briefing, which was very helpful, in another setting. And this is a continuation of the work that's been done by each of you, and those that work with you.

First of all, I think we—we still have a lot of debating and discussion about this treaty, and that will continue, and that's important, to have questions raised over the next several weeks or months, depending on how quickly we get—this treaty gets to the floor. But, I think it's apparent, from the testimony that you've provided, and others, people outside of government who worked in other administrations of both parties, all being committed to a safe, secure, and effective nuclear arsenal, but also in just—in summary fashion, highlighting Secretary Gates's four points, on transparency, predictability, strategic stability, and then access to both Russian facilities and weapons—all under the umbrella of a safe, secure, and effective arsenal, but also under, I guess, a broader umbrella of this treaty enhancing our security. I think it's critically important to make that point.

And, just by way of review, because in—the three of you know better than I that, in Washington, we need to review often, and reemphasize—Secretary Gates, I just wanted to review some of your testimony, just by way of emphasis and repetition—but, on page 3 of your testimony, you say the following, "First, the treaty will not constrain the United States from deploying the most effective missile defenses possible, nor impose additional costs or barriers on these defenses." That's one statement.

The next paragraph, "The New START agreement"—and again, I'm quoting—"The New START agreement does not restrict our

ability to develop and deploy prompt conventional strike capabilities that could attack targets anywhere on the globe in an hour or less."

Further along in that paragraph, you say, "We are currently examining potential future long-range weapon systems for prompt global strike that would not be limited by the treaty."

All three of those statements, I think, meet—or rebut, I should say—some of the arguments that have been made, over the last couple of weeks, on missile defense. And I think it's amplified by what Secretary Clinton said, on page 2, that the treaty, "does not compromise the nuclear force levels we need to protect ourselves and our allies. Second, the treaty does not infringe on the flexibility we need to maintain our forces, including bombers, submarines, and missiles, in a way that best serves our national security interests. And, third and finally, the treaty does not constrain our missile defense efforts." And then, of course, Secretary Clinton adds more to that assertion.

And, Admiral Mullen, your statements, as well.

So, I think that it's important that we confront that argument, but I think it's also important that we are very clear and unambiguous, as I think all three of you have been.

The one issue that was raised, in addition to missile defense—one of several—and it was raised in the context of a Foreign Relations Committee hearing that we had, a number of weeks ago—it's been raised by others, but I know former Secretary Schlesinger raised it—and it's this question of tactical weapons. And it keeps arising. And I wanted to have you speak to that, because one sense that I have is that prior to and during, but especially prior to, the START Treaty discussions and negotiations, I think it was very clear that we entered into negotiations with the Russians with an understanding that tactical nuclear weapons would not be discussed, that that would, in fact, take place later, and that, in particular—I know Secretary Perry made this point—that, concluding the New START Treaty was a necessary prerequisite to having discussions about tactical weapons.

I wanted to have each of you, if—in the 2 minutes we have—I know I haven't left you much time, but—speak to that question about the tactical and—weapons—and deal with the argument that's been presented.

Secretary GATES. Well, I think you've put your finger on it. I mean, there was agreement not to—that these were not a part of the negotiation and—from the very beginning.

But, in the context of their number of tactical nuclear weapons, let me just emphasize one other aspect that hasn't been mentioned, in terms of where I think this treaty is of benefit to the United States.

I believe the Russians are in the process of changing the—fundamentally, their approach to their own security. In the mid-1950s, President Eisenhower decided that, because of the vast number of Soviet soldiers, that the United States would not try and match the Russians, tank for tank, and soldier for soldier, in Europe, but, rather, rely on massive retaliation, massive nuclear retaliation. And so, we invested very heavily in our nuclear capability.

In 2010, the Russians, facing both financial constraints, but especially demographic constraints, are reducing the size of their conventional forces. And everything we see indicated they're increasing the importance and the role of their nuclear weapons in the defense of Russia, and leaving their conventional force more for handling problems on the borders, and internal problems.

So, this treaty constrains them in an area where I believe they are turning their attention as their population prevents them from having the kind of huge land army that has always characterized Russia. So, keeping a cap on that, and bringing those numbers down in the strategic area, and then, perhaps, hopefully, turning to the tactical nuclear weapons, where they—their tactical number weapons outnumber ours, thousands to one, basically, in Eastern Europe—I mean, in the western United States—in the western Russia—I think gives us a real advantage.

Senator CASEY. Secretary Clinton.

Secretary CLINTON. Well, Senator, the Nuclear Posture Review makes clear—and the President reiterated this commitment on April 8, at the signing of the treaty with President Medvedev in Prague—that the United States intends to pursue, with Russia, additional and broader reductions in our strategic and tactical weapons, including nondeployed weapons. Now, we can't get to a discussion about tactical weapons until we get the New START Treaty ratified, because, obviously, as Secretary Gates said, that really provides the base from which we start. And addressing tactical nuclear weapons requires close coordination with NATO, and we're in the process, as I said earlier, of working out the NATO alliance approach to tactical nuclear weapons through the strategic concept. So, all these things are moving together.

The first of business, of course, is the New START Treaty, because, you know, that precedes our ability to get into these additional discussions with the Russians.

Senator CASEY. Thank you.

I know we're out of time, but, Admiral Mullen.

Admiral MULLEN. Just two brief thoughts.

One is, throughout the negotiations, in the time I spent on this, it was a known that, one, we weren't dealing with this, but we needed to. And so, that's not a message that's lost on them.

And then, second, my experience, both in my last job, with the head of their Navy, as well as in this job, with, now, two separate Chiefs of Defense—what Secretary Gates said, their investment—they are clearly changing, and they are not going to be able to invest in the kind of ground forces that they've had in the past. They are investing in strategic—in their strategic forces, which, to me, just strengthens the importance of having this kind of treaty with them as we both move forward.

Senator CASEY. Thank you very much.

The CHAIRMAN. Senator DeMint.

Senator DEMINT. Thank you, Mr. Chairman. And thank you, Senator Lugar.

And I want to thank all three of you for your service to the country, as well.

We got the copy of the treaty on Friday. I look forward to getting into a lot of details. But, I'd like to express concerns, maybe in

more of a conceptual way today, just to get some quick response from you and to make one request.

The details are important, obviously, but it appears, from what you've said already, that, aside from the treaty with Russia, that the signal to the rest of the world, our credibility, the appearances of what it shows, as far as our good faith, is important. And certainly, making the world safer, reducing proliferation, is key. And I appreciate that goal, and I think we all share it.

The concerns I have are that some of the assumptions in the treaty appear to suggest a different role for America in the future. And I'll express a few of these concerns.

America does have a different role. As you all know, over 30 countries count on us for their protection. So, as far as military and defense, we play a much different role than Russia. Russia's a threat to many, but a protector of none.

America also the largest economic role in the world, as far as our trade with other countries, and we use it to help other countries. Russia uses their energy, their oil, as a threat.

And I think we know, as we look at nuclear weapons, that the Russians don't like missile defense, because they don't see it as a deterrent. They want to use it as a threat. And I think that's why this treaty, and what it says about missile defense, is very important.

But, the first underlying assumption, which I'm afraid is absurd and dangerous, is that America should seek parity with Russia when it comes to nuclear weapons. Russia doesn't have 30 countries counting on them for protection. And the reduction of our ability to—not just to deliver, but to protect from nuclear weapons, is more likely to result in proliferation than this arms treaty with Russia.

My biggest concern, though, is related to missile defense, because it's unrealistic to believe that our treaty with Russia is going to reduce proliferation with countries like Iran and Syria and other rogue nations that are intent on developing nuclear weapons.

The Russians don't appear to misunderstand what's in this treaty. And I don't have to read the preamble to you. But, it's very clear that we can develop defensive missile defense, as long as it does not threaten their offensive capabilities. I mean, that's exactly what it says here. That's what they've said in their statement. There is a clear disconnect between what you are telling us and what it says in this treaty and what the Russians are saying. We have complete flexibility with missile defense, until it gets to the point where it threatens their ability to deliver weapons. And once that happens, not just for Russia, but all over the world, that we render nuclear missiles irrelevant if we can shoot them down—and for us to even include in the treaty that idea that these things are interrelated is somewhat frightening to me. And I don't believe, for 1 minute, Iran is going to see this as a good sign.

What I would like, at this point—and I think other members of the committee would, too—after the first START Treaty was presented, members of the committee were given copies of the full negotiating record so that we can see the understandings that were discussed during the negotiations and that we can determine if

missile defense is, in fact, interrelated and if this parity issue is one that we have discussed openly with the Russians.

And I just want to ask Secretary Clinton, Will you allow members of the committee to see the full negotiating record?

Secretary CLINTON. Well, first, Senator, let me say that the language you're referring to—similar language was included in the START Treaty. And, you know, I hope we will be able to persuade you, by the end of this process, and we will certainly make every effort to do so, that nothing in any previous treaty, nor any unilateral statement or any preamble to a treaty, has in any way constrained our development of missile defense up to this date, and nothing in the current new treaty does, either.

I think that the facts really refute any concerns that you and others might have, because we have proceeded apace, over the last 40 years, with the development of missile defense, despite, as Secretary Gates said, the 40 years of opposition from the Russians.

Now, with respect to the information around the treaty, you know, we are submitting a detailed article-by-article analysis of the treaty. The analysis is nearly 200 pages long. It provides information on every provision of the treaty, the protocol, and the annexes, including how the United States will interpret the various provisions.

These materials were prepared by the treaty negotiators and, therefore, are drawn from the negotiating history. They're intended to provide a comprehensive picture of U.S. obligations under the treaty. And I do not believe—I will double check this, Senator—I do not believe that the negotiating record was provided with the original START Treaty, because negotiating records, going back to, I think, President Washington, Bob told me, the other day, have not been provided.

But, we will provide extensive and comprehensive information, and I hope, in the process, we will be able to persuade you that, just as in the past, despite the Russian dislike of our missile defense efforts, we are going forward.

And I voted for missile defense when I was here, when the START Treaty, that expired in December, was in effect. And I can assure you that you and other members will be able to continue to vote for missile defense in the future.

Senator DEMINT. Thank you, Madam Secretary.

And I just have to take what's in the treaty and what the Russians have said. It's clear that, at any point that our missile defense threatens their ability to deliver offensive weapons, that they feel completely free to walk away from this treaty. So—which means we, effectively, have no treaty unless it is our intent to dabble with missile defense and not create a global umbrella that could protect us.

But, it seems to make only common sense, at this point, as we see what's happening in Iran and around the country. Our ability to stop the development of nuclear weapons is very limited, but our ability to develop a defense system that could make those irrelevant would be the best disincentive we could provide the world, if they can't deliver them anywhere.

So, it's obvious there is a real concern here. The Russians apparently have gotten—the clear statement from this is that, at any

point, if our missile defense systems threatens their delivery system, they're going to walk away from this treaty. And I hope you can convince me by what—the negotiating records, that that is not what was discussed. But, I do know, in previous negotiations of treaties, that some members of committees have had the opportunity to see full negotiating records. And I hope this is something that you'll consider.

And I thank you, Mr. Chairman. I yield back.

The CHAIRMAN. Well thank you, Senator.

Just so the record is as complete as all of us want it to be, here, let me just state that we did not get the negotiating record under the START I process. We did get it with the INF Treaty. But, subsequent to that, the Foreign Relations Committee decided—and I will read from the report—that, "With the INF Treaty negotiations having been provided under these circumstances, both the administration and the Senate now face the task of ensuring the Senate review of negotiating records does not become an institutionalized procedure. The overall effect of fully exposed negotiations, followed by a far more complicated Senate review, would be to weaken the treatymaking process and thereby damage American diplomacy. A systemic expectation of Senate perusal of every key treaty's negotiating record could be expected to inhibit candor during future negotiations, and induce posturing on the part of U.S. negotiators and their counterparts during sensitive discussions."

I would suggest to the Senator, I think that we are going to be given a very frank account when we have a classified session with the negotiators; you'll be able to ask a lot of tough questions, and a lot of answers, I think, will be forthcoming. But, I think—personally, I think that the rationale that the Senate committee came to previously is a good rationale, and I think it stands today.

Senator DEMINT. Well, Senator, I appreciate that clarification. And I would be happy, at this point, even if it's redacted, to have some record of the discussion related to our missile defense and the linkage that was included in the preamble so that we can determine what both sides understood.

The CHAIRMAN. Let me suggest this, Senator—we all want you to be satisfied, and we want you to vote for this. But, I think that the better way to proceed would be—let's meet with the team, let's meet in classified session, let's see to what degree those answers can satisfy you.

I'd just share with the Senator, this is a preamble. And the preamble merely says, "Recognizing the existence of the interrelationship between strategic offensive arms and strategic defensive arms"—it's something we all recognize; there is a relationship "that this interrelationship will become more important as strategic nuclear arms are reduced." That stands to reason; if you reduce nuclear arms and you build up your missile defense, you can, in fact, completely obliterate one party's sense of deterrence. If their offense is totally obliterated by your defense, they no longer have an offense. What happens? They build. That's where we spent 40 years. And we decided, when we had over 30,000 warheads, to move in the opposite direction.

Senator DEMINT. Well, Senator, you're making my point. Obviously, we're agreeing to keep our missile defense to the point where it does not render their weapons useless.

The CHAIRMAN. No. All that's been said here is, there's a relationship. There's no agreement not to do anything. And it simply says that the current level doesn't do that. It's just recognizing a status quo. It does nothing to prevent us, unilaterally, from doing whatever we want.

Is that correct, Secretary Gates?

Secretary GATES. Yes.

The CHAIRMAN. That is correct.

Senator DEMINT. But, you just told me——

The CHAIRMAN. It simply acknowledges——

Senator DEMINT [continuing]. That if our missile defense can render theirs useless——

The CHAIRMAN. I'm speaking——

Senator DEMINT [continuing]. That——

The CHAIRMAN [continuing]. About the common sense of the theory, but I'm not suggesting that this in any way restrains us. I said, in my opening comments, it does not restrain us.

Senator DEMINT. But, is it not desirable for us to have a missile defense system that renders their threat useless?

The CHAIRMAN. I don't, personally, think so, no, because what'll happen is, if you get near that, they will do exactly what we both did over the course of 50 years; they will build to the point that they feel they can overwhelm your defense, and then you're back right into the entire scenario we had throughout the cold war, which took us up to 30,000 warheads each, or more.

Senator DEMINT. So, we're still at the point of mutually assured destruction. I mean, that's the basis of——

The CHAIRMAN. Yes. We certainly are. That is accurate.

Senator DEMINT. I think that's pretty——

Secretary GATES. And I think it needs—one point needs to be clarified here. Under the last administration, as well as under this one, it has been the United States policy not to build a missile defense that would render useless Russia's nuclear capabilities. It has been a missile defense intended to protect against rogue nations, such as North Korea and Iran, or countries that have very limited capabilities. The systems that we have, the systems that originated and have been funded in the Bush administration, as well as in this administration, are not focused on trying to render useless Russia's nuclear capability. That, in our view, as in theirs, would be enormously destabilizing, not to mention unbelievably expensive.

Senator DEMINT. So, our ability to protect other countries is a pipedream, and we don't even intend to do that. Is that true?

Secretary GATES. Our ability to protect other countries is going to be focused on countries like Iran and North Korea, the countries that are rogue states, that are not participants in the NPT, countries that have shown aggressive intent. And so, we are able to—we are putting in defenses in Europe that will be able to defend them. We have defenses in Asia. We're building defenses in the Middle East. So, we have missile defense capabilities going up all

around the world, but not intended to eliminate the viability of the Russian nuclear capability.

The CHAIRMAN. Senator, let me do this, because we need to recognize——

Senator DEMINT. Yes.

The CHAIRMAN [continuing]. Senator Shaheen.

It's a good discussion, it's a very important one, and it needs to be clarified. So, I'm going to leave the record open for 2 weeks so that we may submit additional questions in writing. The record from this particular hearing will remain open. The record for the entire process will still be built.

And, with that, I recognize Senator Shaheen to close out the hearing.

Senator SHAHEEN. Thank you——

The CHAIRMAN. We have about 5 minutes left on the vote, but there's a grace period, so you'll——

Senator SHAHEEN. OK.

The CHAIRMAN [continuing]. Get your full questioning period.

Senator SHAHEEN. Thank you, Mr. Chairman.

And thank you all for being here.

I want to follow up a little bit to make sure I'm clear on some of what I think I heard in your response to Senator DeMint. First of all, am I correct that the Russians had a unilateral statement similar to what is on the current START Treaty—on the first START Treaty?

Secretary CLINTON. There was also perambular language, but these unilateral statements are very much a pattern. We make them, they make them, but they are not binding, because they're not part of the treaty.

Senator SHAHEEN. And is it correct that, even as we developed our missile defense plans and pulled out of the ABM Treaty, that the Russians did not pull out of the START Treaty?

Secretary CLINTON. Yes; that is correct.

Senator SHAHEEN. And would you expect a similar reaction as we continue to develop missile defense plans with this New START Treaty, from the Russians?

Secretary CLINTON. Senator, we would. And furthermore, we continue to offer to work with the Russians on missile defense. We have a standing offer, and we hope that eventually they will, because we think we now have common enemies.

Senator SHAHEEN. Well, and just to, one more time, get it on the record—I think you answered this for Senator Risch—but, Secretary Gates and Admiral Mullen, are you concerned that this treaty constricts, in any meaningful way, our ability to carry out our current missile defense plans?

Secretary GATES. No. I have no concerns whatsoever.

And I would just add that the Russians signed this treaty knowing full well we intend to proceed with missile defense.

Admiral MULLEN. I have no concerns, ma'am.

Senator SHAHEEN. Thank you.

Secretary Clinton, you recently spoke at the NPT Review Conference, and called upon all countries to help strengthen the NPT, and mentioned that, 40 years ago, after the treaty came into force, President Kennedy warned that, by the year 1975, we could have

up to 20 countries with nuclear weapons. Fortunately, that hasn't happened. But, can you talk a little bit about how we ensure that the number of nuclear weapon states doesn't continue to rise, and how ratification of the START Treaty can help with that?

Secretary CLINTON. Well, Senator, I think it begins with the cooperative relationship between the United States and Russia, because there are three aspects to the NPT—one is nonproliferation, one is disarmament, and one is the peaceful use of nuclear energy—and the nonaligned movement states have, historically, come to their NPT obligations with some criticism that the United States is not doing its part on the disarmament front. There was none of that at this conference in New York, because of the fact that we had reached this agreement with Russia. So, it does provide a stronger platform on which we stand to make the case against proliferation.

The cooperation that we have obtained with Russia, on both North Korea and Iran in our efforts to constrain and eliminate their nuclear programs, has been very notable. And I think it is fair to say that, when this administration started, our relationship was not very productive. But, through many efforts, and, most particularly, the intensive efforts around the New START Treaty, that has changed.

I remember well the quote that you repeated, because the fears were that, once the genie was out of the bottle, we would have a multitude of countries with nuclear weapons. That hasn't happened, we're determined to prevent it from happening, and we're determined to continue our efforts to prevent Iran from having nuclear weapon. And, as I said at the beginning of the hearing, Russia has joined with us and is part of the agreed statement that is being discussed at the United Nations now.

Senator SHAHEEN. Thank you.

And just a final question. I know, in the earlier questioning, someone brought up the tactical nuclear weapons question. And I wonder if any of you could speak to what you think our ability to negotiate an agreement on tactical nuclear weapons might be if we fail to ratify this treaty.

Secretary CLINTON. Well, if we fail to ratify this treaty, I think it's zero. Once we ratify this treaty, which we are hopeful the Senate will do, it will still be hard, but it at least is possible, in the context of our NATO obligations.

Senator SHAHEEN. Thank you.

Would either of you like to add to that?

Secretary GATES. No. I think that's exactly right.

Senator SHAHEEN. OK.

Thank you all very much.

The CHAIRMAN. Secretary Clinton, Secretary Gates, Admiral Mullen, thank you very, very much. This has been very helpful.

As I said, the record is open. I know some Senators want to submit some questions in writing.

We're very grateful to you. Thank you for your work on this. Thanks for being here today.

We stand adjourned.

[Whereupon, at 12:20 p.m., the hearing was adjourned.]

ADDITIONAL QUESTIONS AND ANSWERS SUBMITTED FOR THE RECORD

RESPONSES OF SECRETARY GATES, ADMIRAL MULLEN, AND SECRETARY CLINTON TO QUESTIONS SUBMITTED BY SENATOR LUGAR

MISSILE DEFENSE

For many months prior to signature of the New START Treaty, administration officials indicated the treaty would contain nothing more than a "provision on the interrelationship of strategic offensive and strategic defensive arms," as the 2009 Joint Understanding between Presidents Obama and Medvedev stated.[1]

Congress clearly understood this when, last summer, a sense of Congress was adopted stating that "the President should maintain the stated position of the United States that the follow-on treaty to the START Treaty not include any limitations on the ballistic missile defense systems[.]"[2]

Consequently, some Senators were surprised to read paragraph 3 of Article V of New START, which is more than a mere statement on the interrelationship of strategic offensive and strategic defensive arms.

In addition, Russian and American unilateral statements on missile defense as well as language in the preamble and definitions all bear on missile defense.

Question. Article XIV, paragraph 3 of the treaty provides that either party may withdraw from the treaty "if it decides that extraordinary events related to the subject matter of the treaty have jeopardized its supreme interests." Has Russia indicated that it would regard any current or future part of either our Ballistic Missile Defense System or the Phased Adaptive Approach for missile defense in Europe as jeopardizing its supreme interests?

Answer. No. Regarding current capabilities, the treaty's preamble records the shared view of the United States and Russia that "current strategic defensive arms do not undermine the viability and effectiveness of the strategic offensive arms of the Parties." This indicates that Russia is not concerned that current U.S. ballistic missile defense programs jeopardize Russia's supreme interests.

Regarding future capabilities, Russia has expressed concerns about a potential buildup in the missile defense capabilities of the United States that would give rise to a threat to the strategic nuclear forces potential of the Russian Federation. In an effort to address Russian concerns we have provided, and will continue to provide, policy and technical explanations regarding why U.S. ballistic missile defense (BMD) capabilities such as the European-based Phased Adaptive Approach and the Ground-Based Midcourse Defense system will not undermine Russia's strategic nuclear deterrent.

Question. To what extent has the administration discussed our regional, and national, missile defense plans with the Russian Government and the Russian military?

Answer. The Obama administration has provided briefings to, and discussed U.S. regional and national ballistic missile defense (BMD) policy, plans, and programs with the Russian Government and the Russian military. Such briefings and discussions have been held in multiple channels such as the Arms Control and International Security Working Group and the Military Cooperation Working Group (consultations between the Joint Staff and the General Staff) which operate under the auspices of the United States-Russia Bilateral Presidential Commission. Such briefings and discussions are part of an effort to explain why U.S. missile defenses do not pose a threat to Russia's strategic deterrent. We will continue to provide such briefings as appropriate.

REDUCTION LEVELS

Secretary Clinton's Letter of Submittal and the President's Letter of Transmittal state that the purpose of New START is to require "mutual" reductions and limitations on U.S. and Russian strategic offensive arms. Some estimates indicate the United States may currently deploy 880 strategic nuclear delivery vehicles, while Russia may currently deploy just above 600. Thus, the central limitation to go to 800 deployed and nondeployed ICBM launchers, SLBM launchers and heavy bombers under Article II of New START would appear to require the United States to

[1] At http://www.whitehouse.gov/the__press__office/The-Joint-Understanding-for-The-Start-Follow-On-Treaty/.

[2] At section 1251(b)(1) of Title XII of Public Law 111–84, the National Defense Authorization Act for Fiscal Year 2010.

make reductions, but not Russia. Moreover, the limit to go to 700 deployed ICBMs, SLBMs and heavy bombers appears to require the United States to make significant reductions below current levels, but not Russia.

Admiral Mullen, your written statement indicates that: "I firmly believe that the central limits established in this treaty and the provision that allows each side the freedom to determine its own force mix provides us with the necessary flexibility to field the right future force to meet the Nation's needs."

Question. Why did the United States agree to such low limits? Would insisting on a limit of 900 delivery vehicles have better served U.S. interests?

Answer. The United States agreed to the New START Treaty's central limits of 1,550 deployed strategic warheads, 700 deployed strategic delivery vehicles, and 800 deployed and nondeployed ICBM and SLBM launchers and nuclear-capable heavy bombers based on strategic force analyses conducted in support of the Nuclear Posture Review (NPR) and high-level deliberations within the Department of Defense and the interagency. The NPR analysis and these deliberations concluded that the limits contained in the New START Treaty would be sufficient to support our deterrence requirements, including extended deterrence for our allies, in the current and projected international security environment. Operating within the limits and verification regime established by the New START Treaty, the United States and the Russian Federation will be able to maintain strategic stability at lower force levels.

Question. What did the United States get in return from Russia for agreeing to these limits in view of the fact that all of the reductions appear to be on the U.S. side?

Answer. Like the START Treaty, the New START Treaty sets equal, but lower, aggregate limits on the number of deployed strategic delivery vehicles and associated warheads that each side may have. These limitations on Russian forces, combined with mechanisms to verify compliance, constitute the basic bargain of the treaty, and are consistent with our objective of concluding a treaty that will provide predictability, transparency, and stability in the United States-Russian strategic relationship at lower nuclear force levels.

Seven years after entry into force of the New START Treaty, both Parties will have to ensure their strategic offensive forces are at levels within the treaty's three limits. The treaty allows the United States to maintain and modernize our strategic nuclear forces in a way that best protects our national security interests, within the overall limits of the treaty.

The administration agreed to the New START central limits on the basis of recommendations from the Department of Defense based on analyses conducted by the U.S. Strategic Command in support of the Nuclear Posture Review. These analyses indicated that the United States could field a highly capable triad of strategic delivery systems that would be fully capable of meeting the Nation's deterrence requirements.

The New START Treaty also reinforces America's ability to lead and revitalize global efforts to prevent proliferation and to strengthen the Nuclear Non-Proliferation Treaty by demonstrating that the world's two largest nuclear powers are taking concrete steps to reduce their nuclear arms.

SIGNIFICANCE OF NONCOMPLIANCE

A central question for the Senate in examining any arms control treaty is whether its terms would provide the United States with sufficient and timely warning to respond to noncompliance so as to deny a violator benefit of the violation, and well before noncompliance becomes militarily significant. Military significance has traditionally been seen in terms of the strengths of U.S. and Russian Forces and the motivations for Russian cheating.

Question. To what degree would you assess the Russians have any motivation to cheat under New START?

Answer. This topic is included in a classified National Intelligence Estimate on the Intelligence Community's ability to monitor the New START Treaty that was provided to the Senate on June 30, 2010.

Question. How would the types of OSI permitted in the New START Treaty (a) discover cheating relative to New START's limitations; (b) raise the cost of such cheating; and (c) deter cheating?

Answer. New START contains three central limits: 1,550 warheads on deployed ICBMs and SLBMs and nuclear warheads counted for deployed heavy bombers; 700

deployed ICBMs, deployed SLBMs, and deployed nuclear-capable heavy bombers; and 800 total deployed and nondeployed ICBM launchers, SLBM launchers, and nuclear-capable heavy bombers. The launchers, missiles, and heavy bombers subject to these treaty limits are required to be based at declared facilities, most of which will be subject to onsite inspections under the treaty.

As was the case under the START Treaty, onsite inspections will allow the Parties to confirm the declared numbers of missiles, mobile launchers, and deployed warheads on a spot-check basis, thereby helping to detect and deter misrepresentation of such numbers. The assignment of unique identifiers for each ICBM, SLBM, and heavy bomber, which can be confirmed during onsite inspections, also will serve as a deterrent to cheating by making it easier to track each declared strategic delivery vehicle.

The Intelligence Community's assessment of its ability to monitor the New START Treaty is conveyed in a classified National Intelligence Estimate (NIE) provided to the Senate on June 30, 2010. This NIE will help inform the verifiability report that the State Department is responsible for drafting in accordance with section 306 of the Arms Control and Disarmament Act. The section 306 report will be provided to the Congress, on a timely basis, and will address the determinations made by the U.S. Government as to the degree to which the requirements of the New START Treaty can be verified.

New START verification measures provide the ability to discover cheating, thus providing a basis for appropriate responses, and thereby helping to deter it.

Question. What activities involving New START accountable items are permitted under New START and what activities involving New START accountable items are prohibited under New START?

Answer. Article IV of the New START Treaty retains a number of the restrictions and prohibitions on activities relating to strategic offensive arms that contributed to predictability and stability under START. These include restrictions on where deployed arms and test items may be based, restrictions on where nondeployed strategic offensive arms may be located, a ban on strategic offensive arms at eliminated facilities with certain exceptions, and a ban on basing strategic offensive arms outside a Party's national territory.

Within the framework of the specific provisions of the New START Treaty, the Parties have significant discretion in how their strategic offensive forces are composed and structured. This principle is reflected in paragraph 2 of Article II and paragraph 1 of Article V of the treaty, which states that, subject to the provisions of the treaty, each Party has the right to determine the composition of its force structure and is free to carry out modernization and replacement of strategic offensive arms.

Question. Given that there are relatively few limits on warheads and delivery vehicles in New START as compared to START I, and the many administration statements that the United States and Russia are not likely to engage in a strategic buildup similar to that undertaken during the cold war, could there still be cheating under New START that would constitute militarily significant cheating, or would cheating likely be militarily insignificant and marginal?

Answer. Any act by the Russian Federation to violate its obligations under the New START Treaty, and/or to deceive the United States in its effort to verify Russian compliance with the New START Treaty, would be considered extremely serious. The military significance of any discovered cheating scenario would have to be assessed in terms of its potential military and political impact in the context of the broader international security environment at the time the cheating was occurring.

Factors that would bear on such an assessment include the quantitative level of cheating and the overall threat it posed to the military capabilities of the United States and its allies and partners; the kind or kinds of weapons involved and their specific capabilities; our assessment of the state of readiness and training of a clandestine force; whether the cheating scenario improved Russian strategic military capability in a manner that destabilized or threatened to destabilize the United States-Russian military balance and eroded U.S. deterrence; whether deployed U.S. military forces were sufficient to pose an effective counter to the Russian capabilities augmented by the clandestine force; whether the U.S. had sufficient strategic warning to generate additional capabilities to counter the Russian buildup; and the overall political and military situation surrounding the discovery of Russian cheating, whether it was occurring in the context of relative calm and stability in United States-Russian relations or during a period of already heightening tension between the United States and the Russian Federation.

VOTKINSK

Under the INF Treaty and START I, up to 30 U.S. monitors were permanently stationed at the portal-and-perimeter continuous monitoring (PPCM) facility at Votkinsk in Udmurtia to conduct continuous monitoring of final assembly of Russian ICBM systems using solid rocket motors, including road-mobile ICBM systems such as the SS–25 Topol, the SS–27 Topol-M, and now, the RS–24. Monitors observed and measured containers as they exited the portal perimeter area (a designated space in which inspection occurred) at the Machine Building Plant. New START does not contain continuous monitoring, despite the fact that Votkinsk remains the only location in Russia where this integration is done, and Russia appears to be deploying more road-mobile ICBMs.

Question. Why did the United States agree to terminate monitoring at Votkinsk?

Answer. Continuous monitoring at the Votkinsk Machine Building Plant began as part of the INF Treaty and was one of the verification measures used to monitor mobile ICBM production under the START Treaty. The termination of Votkinsk monitoring coincided with the expiration of the START Treaty. With the expiration of START on December 5, 2009, there was no legal basis for maintaining the U.S. portal monitoring facility at Votkinsk and the United States was required to terminate its presence at Votkinsk.

Question. At what point during the negotiations did the United States decide not to seek continued monitoring at Votkinsk as part of New START?

Answer. During the later part of 2007, the United States and Russia determined that neither side wanted to extend the START Treaty. While both sides indicated a willingness to continue some transparency and verification measures when a follow-on treaty was discussed in 2008, Votkinsk was not among them. With the anticipated expiration of START, preparations began in 2008 for ending U.S. portal monitoring at Votkinsk so that the United States would be able to depart in an orderly way when START expired on December 5, 2009. The Russian Government made clear to us that it was not prepared to agree to continuous monitoring at Votkinsk under a new treaty.

Question. What was the position of the Russian Government on continuing PPCM-Votkinsk under New START?

Answer. During the later part of 2007, the United States and Russia determined that neither side wanted to extend the START Treaty. With the anticipated expiration of START, preparation began in 2008 for ending U.S. portal monitoring at Votkinsk so that the United States would be able to depart in an orderly way when START expired on December 5, 2009. The Russian Government made clear to the United States that it was not prepared to agree to continuous monitoring at Votkinsk under a new treaty.

Question. If the previous administration decided to vacate Votkinsk, when was that decision made and in what context?

Answer. In anticipation of the December 2009 expiration of the START Treaty, the previous administration began to negotiate an agreement on arrangements for closing down U.S. continuous monitoring at Votkinsk. On October 20, 2009, with the expiration of the START Treaty less than 2 months away, the START Treaty's implementation commission, the Joint Compliance and Inspection Commission (JCIC), reached an agreement relating to closure of the portal monitoring activity. This October 2009 agreement is identical to an agreement negotiated and agreed ad referendum by the Bush administration in November 2008, with the exception of some minor nonsubstantive edits made to conform the English and Russian translations.

VERIFICATION

Secretary Gates, appearing before this committee in 1992 on START I, as Director of Central Intelligence, you stated, "the verifiability of this treaty has always been seen, by supporters and opponents alike, as the key to the Senate consent process." Writing in the Wall Street Journal last week, Secretary Gates stated that New START "establishes an extensive verification regime to ensure that Russia is complying with its treaty obligations. These include short-notice inspections of both deployed and nondeployed systems, verification of the numbers of warheads actually carried on Russian strategic missiles, and unique identifiers that will help us track—for the very first time—all accountable strategic nuclear delivery systems."

If there are no limits in New START on the number of reentry vehicles (RVs) on any missile, it would appear that better onsite inspections (OSI), including improved RVOSI, do not verify any limits but rather confirm that there are warheads on a

missile and that a given missile is where Russia says it is. It is also unclear how improved RVOSI can significantly contribute to verification of a treaty not limiting RVs.

In START I, unique identifiers were used to track road-mobile missiles, and only these missiles. In New START, unique identifiers would be used for all systems, but it is not clear what verification value there is in these arrangements.

Question. What are the New START onsite inspections and data notifications supposed to verify other than the location of a missile or heavy bomber in Russia?

Answer. The New START Treaty's verification regime, which includes onsite inspections, a comprehensive database, a wide range of notifications, and unique identifiers, as discussed below, is designed to permit verification of each Party's compliance with the treaty's provisions, including the three central numerical limits contained in Article II of the treaty, as well as the numbers and status of treaty-accountable strategic offensive arms.

On-site Inspections.—The treaty provides that each Party can conduct up to 18 onsite inspections each year at operating bases for ICBMs, ballistic missile submarines (SSBNs), and heavy bombers, as well as storage facilities, test ranges, and conversion and elimination facilities. These inspection activities contribute to the verification of compliance with the treaty's central limits by checking on the accuracy of declared data on the numbers of deployed and nondeployed ICBMs, SLBMs, and nuclear-capable heavy bombers and on the warheads located on or counted for them, as well as conversions and eliminations of strategic offensive arms.

Comprehensive Database.—A comprehensive database, which will be initially populated 45 days after the treaty enters into force, will receive new data constantly as notifications of changes in the force structures of the two Parties are conveyed in accordance with treaty provisions. It will also be updated comprehensively every 6 months. Thus, it will help provide the United States with a "rolling" overall picture of Russia's strategic offensive forces.

Notifications.—The treaty mandates a large number of notifications which will help to track the movement and changes in status of systems covered by the treaty.

Unique Identifiers (UID).—Unique alpha-numeric identifiers assigned to each ICBM, SLBM, and heavy bomber, when combined with required notifications and the comprehensive database, will contribute to our ability to track the disposition and patterns of operation of treaty accountable systems throughout their life cycles.

Question. Since enhanced RVOSI does not serve to verify an RV limit, how will it help monitor limits in Article II of the New START Treaty, or constitute an improvement over similar OSI under START I?

Answer. The New START Treaty's procedures for inspections of reentry vehicles are part of the treaty's more extensive type one inspections. These inspections confirm the accuracy of declared data on the numbers of warheads emplaced on designated, deployed ICBMs and SLBMs. These inspections will help to confirm compliance with the Article II central limit of 1,550 warheads on deployed ICBMs, deployed SLBMs, and nuclear warheads counted for deployed heavy bombers.

For the first time, inspectors will be tasked to confirm that the actual number of reentry vehicles emplaced on a designated ICBM or SLBM is consistent with information provided during the preinspection briefing.

Under the START Treaty, inspectors could only confirm that no more reentry vehicles than the number attributed to that type of missile were emplaced on an ICBM or SLBM designated for a reentry vehicle inspection.

Question. To which part of each New START accountable system will each unique identifier be applied?

Answer. The New START Treaty provides each Party with great flexibility regarding the mode of application and size of the unique identifiers (UIDs) it is required to affix to all of its ICBMs, SLBMs, and nuclear-capable heavy bombers. Currently, all U.S. strategic offensive systems have some form of number that will be used as the UID for treaty purposes.

U.S. ICBM first stages each contain a serial number that is located on an identification plate on the side of the first-stage rocket motor. For ICBMs loaded in silo launchers, where the first stage is not visible during an inspection, the UID will be affixed somewhere on or near the launcher, either inside the personnel access hatch of the silo, on the launcher closure door, or on the launch facility fence.

U.S. SLBM first stages each contain a serial number that is located on a plaque on the front dome of the first stage motor. For SLBM first stages that are not assembled with a second stage, the serial numbers can be directly accessed and viewed. For SLBMs that are partially or fully assembled, so that the serial numbers cannot be directly accessed and viewed, the UIDs will be affixed somewhere on or

near the missile first stage or written on a placard in the vicinity of the missile. For assembled SLBMs in loading tubes, the UIDs will be written on the exterior of the loading tube. For an SLBM loaded in a SSBN launcher, the UID will be affixed somewhere on the launcher or hatch.

Each heavy bomber carries a unique number that is located on the tail of the B–52 and B–1B and on the nose gear door of the B–2A.

Part Two of the Annex on Inspection Activities requires that the unique identifier of a deployed ICBM and deployed SLBM be replicated directly on the deployed launcher of ICBMs or near it, and directly on the deployed SLBM launcher, so that inspectors can view and record the UID in the inspection activity report.

Question. There is less stringent verification in the New START Treaty. Did the administration agree to this because (a) at lower numbers of facilities and systems less verification is needed; (b) because fewer treaty limits require less verification; or (c) because United States-Russian relations justify fewer formal nuclear verification and compliance mechanisms?

Answer. The verification measures contained in New START are not "less stringent" than those under the START Treaty. New START verification provisions are tailored to verify the requirements of the New START Treaty, which are different from START requirements. The New START Treaty allows the Parties greater operational flexibility to configure their strategic forces as they see fit within the overall treaty limits. This is possible and appropriate because of the knowledge accumulated during 15 years of START Treaty implementation and the developing relationship between the United States and Russia.

For example, under the expired START Treaty, provisions allowed for confirmation that a missile of a certain type was not carrying more than the maximum number of warheads attributed to that type of missile. In the New START Treaty, there are no restrictions on how many warheads a certain type of missile may carry. Instead, we will have the opportunity during inspections to confirm the actual number of warheads emplaced on a designated missile and declared during the preinspection briefing. Verification of the actual number of warheads was not required by the START Treaty.

While it is true that the new treaty provides for fewer inspections in a given year, 18, rather than the annual quota of 28 permitted under the START Treaty, the number of inspectable Russian facilities will be 35, substantially lower than the 70 facilities belonging to the four successor states to the former Soviet Union that were subject to inspection under the START Treaty. Therefore we have fewer facilities for inspection, and need fewer inspections to achieve a comparable level of oversight. In addition, type one inspections combine many of the aspects associated with two different types of inspections that were conducted separately under START, thus requiring fewer inspections annually at the operating bases while achieving many of the results of the previous START inspection regime with a smaller number of annual inspections.

COOPERATIVE MEASURES

Due to limitations inherent in our NTM, START I contained a variety of cooperative measures, including a ban on concealment, notifications of missile movement, equipment exhibitions, design differences to distinguish variants of systems, public display of certain missiles at certain times, and a ban on the denial of telemetric data monitoring. These were used to help target our NTM to monitor declared information under START I.

Question. In your view, does New START contain sufficient and similar cooperative measures to assist our NTM? For those cooperative measures not included in New START (a ban on denial of telemetric data, for example) why were they determined to be unnecessary? In the absence of such measures, would our NTM be sufficient to continue to provide information that, while not necessary to verify the New START Treaty, nevertheless remains useful for ensuring confidence and stability in the United States-Russian strategic relationship?

Answer. In July 2009, Presidents Obama and Medvedev issued a joint statement that the new treaty would contain "provisions on definitions, data exchanges, notifications, eliminations, inspections and verification procedures, as well as confidence building and transparency measures, as adapted, simplified, and made less costly, as appropriate, in comparison to the START Treaty." The verification regime of the New START Treaty is based upon the 15 years of successful implementation of START and is tailored to the specific obligations of the new treaty.

The New START Treaty provides for many of the same verification measures that were in START, such as: extensive notifications, prohibitions on interference with NTM, unique identifiers, inspections and exhibitions.

Further discussion about the intelligence community's ability to monitor the New START Treaty is included in a classified National Intelligence Estimate which was provided to the Senate on June 30, 2010.

INSPECTIONS

Under START I, there were 12 different types of OSI. According to the Department of State, the United States conducted more than 600 START I inspections in Belarus, Kazakhstan, Russia, and Ukraine. A 1992 analysis done by the executive branch concluded that to have 95 percent confidence of detecting just one instance of cheating involving the number of RVs on 25 of Russia's SS–18 ICBMs, we would need at least 16 inspections per year of such systems under START I. New START would permit up to 10 similar inspections per year on all deployed New START accountable systems in Russia.

Question. On what analysis did the administration rely to arrive at the number of annual inspects permitted under New START—10 per year on deployed systems and 8 per year on nondeployed systems?

Answer. The interagency assessed the number of type one and type two inspections needed annually to meet U.S. inspection objectives as the nature of these inspection types emerged during the New START negotiations. These assessments ultimately concluded that an annual quota of 18 such inspections would be adequate to meet U.S. inspection needs.

The New START Treaty provides for an annual quota of up to 18 short notice, onsite inspections to aid in verifying Russian compliance with its treaty obligations. These inspections will provide U.S. inspectors with periodic access to key strategic weapons facilities to verify the accuracy of Russian data declarations and deter cheating. Although the new treaty provides for fewer inspections than the annual quota of 28 permitted under the original START Treaty, the number of inspectable facilities in Russia under the New START Treaty (35) is also significantly lower than the declared number of such facilities in Russia, Belarus, Kazakhstan, and Ukraine—the former Soviet Union—when the START Treaty entered into force (70). Furthermore, some verification activities covered by two separate inspection types under the START Treaty have been combined into a single inspection under the New START Treaty.

The New START Treaty inspection quota includes up to 10 type one inspections of deployed and nondeployed strategic offensive arms which will be conducted at operating bases for ICBMs, ballistic missile submarines (SSBNs), and nuclear-capable heavy bombers. The quota also includes up to eight type two inspections focused on nondeployed strategic systems, which will be conducted at facilities such as storage sites, test ranges, and conversion or elimination facilities, as well as formerly declared facilities.

Question. Based on relevant START I data, or any data provided 45 days after the date of signature of New START as specified in Part Two of its Protocol, how many facilities, by name and location, and systems, by name, type and total number, in the Russian Federation would be accountable under New START?

Answer. Please see classified response to be provided separately.

Question. Are you confident that, to the extent they are needed, enough inspections are permitted? If so, on what basis?

Answer. The New START Treaty provides for an annual quota of up to 18 onsite inspections to aid in verifying Russian compliance with its treaty obligations. While the new treaty provides for fewer inspections than the annual quota of 28 permitted under the START Treaty, the 35 inspectable facilities Russia has declared under New START is also lower than the 70 inspectable facilities in Belarus, Kazakhstan, Russia, and Ukraine (55 of which were in Russia) at the time of entry into force of the START Treaty.

Further discussion about the intelligence community's ability to monitor the New START Treaty is included in a classified National Intelligence Estimate, which was provided to the Senate on June 30, 2010.

Question. Please provide for the record the analysis, including any statistical examination, done regarding the number of inspections required to have high, medium and low confidence of monitoring limits under New START. This material may be submitted in classified form if necessary.

Answer. This topic is included in a classified National Intelligence Estimate on the Intelligence Community's ability to monitor the New START Treaty that was provided to the Senate on June 30, 2010.

Question. Under START I, up to 10 "RVOSI-only" inspections per year were permitted in addition to other START I OSI. Under New START, there apparently will be 10 "RVOSI-plus" inspections minus some but not all other START I OSI for all deployed New START accountable systems. Is it the case that while the frequency of inspection activity goes down (expressed in numbers of inspections per year), the intensity of activity during each New START inspection would actually increase (expressed as combined START I–OSI activities and the length(s) of time for each such inspection)?

Answer. Type one inspections are to be conducted at the operating bases for ICBMs, SLBMs, and nuclear-capable heavy bombers and will focus on both deployed and nondeployed strategic systems. Type one inspections under the new treaty combine many of the elements from two START Treaty inspection types, the data update inspection and the reentry vehicle onsite inspection (RVOSI), which were conducted separately at ICBM bases and submarine bases under the START Treaty. Although there will be a smaller annual quota for onsite inspections under New START than under START (a total of 18 under New START compared to 28 under START), the scope of the type one inspections at the operating bases will be greater than either a data update inspection or RVOSI under START, thus the time needed to complete the inspection may be much longer than was the case for either of the separate inspections conducted under the START Treaty. The period of time for completing the portion of the type one inspection to confirm the number of reentry vehicles emplaced on a designated, deployed ICBM or SLBM will be the time necessary for inspectors to complete the inspection. Following the reentry vehicle inspection portion of the type one inspection, inspectors are permitted up to 24 hours to complete the inspection of nondeployed ICBMs, nondeployed SLBMs, and nondeployed mobile launchers of ICBMs at the applicable portions of operational bases. For inspection of heavy bombers at air bases, the time for conducting a type one inspection is up to 30 hours.

RESPONSE OF SECRETARY GATES, ADMIRAL MULLEN, AND SECRETARY CLINTON TO QUESTION SUBMITTED BY SENATOR WICKER

Question. Has the U.S. ever made side agreements or signed side letters to arms control treaties in the past? If so, what treaties? Please share these side agreements, classified or unclassified.

Answer. The United States has on occasion concluded side agreements to arms control agreements. For example, during the negotiation of the START Treaty, the United States and the Soviet Union concluded a number of side agreements and signed side letters associated with that treaty but not considered to be integral parts of the treaty. These included agreements on exhibitions of strategic offensive arms and on exchange of lists of inspectors, monitors, and aircrew members prior to entry into force of the treaty, and side letters on the phased reduction of deployed heavy ICBMs, on the distinguishability of B–1 bombers equipped for different types of nuclear armaments, and on the provision of photographs. These agreements and letters were provided to the Senate for its information as part of the START Treaty transmittal package (Treaty Doc. 102–20) and are also discussed in the committee's report on the START Treaty (Exec. Rept. 102–53).

In addition, following signature of the INF Treaty but prior to ratification, three exchanges of diplomatic notes, and an agreed minute, were agreed between the United States and the Soviet Union and were provided to the Senate during its consideration of the treaty. These are also publicly available (http://www.state.gov/t/isn/trty/18432.htm).

No such side agreements or letters were concluded or exchanged with respect to the New START Treaty.

RESPONSES OF SECRETARY GATES AND ADMIRAL MULLEN TO QUESTIONS SUBMITTED BY SENATOR LUGAR

PROMPT GLOBAL STRIKE

The New START Treaty will apply to ICBMs or SLBMs that carry conventional warheads, a so-called Prompt Global Strike (PGS) capability, because conventional warheads on ballistic missiles would count against Article II limits in New START.

The treaty defines the term "ballistic missile" to mean a missile that is a weapon-delivery vehicle that has a ballistic trajectory over most of its flight path. Thus, there is a one-for-one tradeoff within New START's limitations on deployed ICBMs, SLBMs and warheads between each PGS system and each nuclear missile, warhead, and launcher limited by the New START Treaty. If the United States were to deploy 28 SLBMs with conventional warheads, the real limit on deployed strategic offensive nuclear arms could actually be 672 and the warhead limit would be closer to 1,500-bringing us closer to what Russia currently deploys in strategic nuclear delivery vehicles, at 608.

Question. How many PGS weapons will the United States have over the duration of the New START Treaty, and when and on what delivery vehicles will they be deployed?

Answer. The New START Treaty protects the U.S. ability to develop and deploy a conventional prompt global strike (CPGS) capability, should the United States decide to pursue such a capability. A study of long range strike options, including those that would provide CPGS capabilities, is currently underway in the Department of Defense, but no decisions have been made on which, if any, CPGS delivery systems to acquire or when such systems would be fielded. However, based on analysis of alternative options, the Department of Defense has concluded that any deployment of conventional warheads on ICBMs or SLBMs during the 10-year life of this treaty would be limited, and could be accommodated within the aggregate limits of the Treaty while sustaining a robust nuclear triad.

Question. Do the limits in New START constrain either future PGS capabilities or our deployed strategic nuclear weapons (missiles, launchers and warheads) in ways that could prove detrimental to our future strategic capabilities, both conventional and nuclear, and deterrence missions?

Answer. No, the New START Treaty protects the U.S. ability to develop and deploy a conventional prompt global strike capability, should the U.S. decide to pursue such a capability. The treaty does not prohibit the United States from building or deploying conventionally armed, treaty-accountable ICBMs or SLBMs. Conventional warheads deployed on such ICBMs or SLBMs would count toward the New START Treaty aggregate warhead limit of 1,550, and the deployed ICBMs or SLBMs upon which they were loaded would count against the limits on deployed strategic delivery vehicles. However, based on analysis of alternative options, the Department of Defense has concluded that any deployment of conventional warheads on ICBMs or SLBMs during the 10-year life of this treaty would be limited, and could be accommodated within the aggregate limits of the treaty while sustaining a robust nuclear triad.

THE PREAMBLE—ADDITIONAL REDUCTIONS

The Preamble to the New START Treaty acknowledges that the Parties will seek to reduce further the role and importance of nuclear weapons and provide new impetus to a step-by-step process of reducing and limiting nuclear arms while maintaining the safety and security of their nuclear arsenals, and with a view to expanding this process in the future, including to a multilateral approach.

Question. From a military standpoint, would additional reductions in U.S. ICBMs, SLBMs and their launchers, warheads, and heavy bombers and their nuclear armaments below those contained in the New START Treaty be desirable, and if so, under what conditions?

Answer. The United States will continue to take concrete steps to reduce the role and number of nuclear weapons in its national security strategy, in accordance with its long-term goal of a world without nuclear weapons. But this goal will not be reached quickly and its success will not be achieved by U.S. actions alone.

As stated in the Nuclear Posture Review, the President has directed a review of post-New START arms control objectives to consider further reductions in nuclear weapons.

Specifically, the U.S. goals in post-New START bilateral negotiations with Russia will likely include reducing nonstrategic/tactical nuclear weapons and nondeployed nuclear weapons, as well as deployed strategic nuclear weapons—ICBMs, SLBMs, and nuclear-capable heavy bombers. Of course, any specific United States-Russian discussions on U.S. nonstrategic/tactical nuclear weapons will take place in the context of continued close consultation with allies and partners. The United States will maintain a nuclear arsenal to maintain strategic stability with other major nuclear powers, deter potential adversaries, and reassure our allies and partners of our security commitments to them.

BREAKOUT

The administration's Article-by-Article Analysis for New START states that as negotiations proceeded, the Parties agreed to pursue a limit for the aggregate number of deployed and nondeployed launchers of ICBMs and SLBMs and for deployed and nondeployed heavy bombers equipped for nuclear armaments. This limit (now in clause (c) of paragraph 1 of Article II) is intended to limit the ability of the Parties to "break out" of treaty limits by constraining the number of nondeployed ICBM and SLBM launchers and nondeployed heavy bombers available for deployment. Each Party will have to operate within this aggregate limit as it considers whether to build and store new systems, and whether to eliminate, convert or retain older systems.

The 1992 Foreign Relations Committee Report on the START I Treaty (Executive Report 102–53) stated, with regard to cheating and breakout scenarios, "there is always the possibility that the other side could have extra warheads on undeclared, non-deployed missiles. These missiles would be cost effective only if they could be launched from mobile missiles that could be reloaded in a relatively short time."

START I capped road-mobile systems at 250. It also used Votkinsk monitoring to obtain a running count on such systems, such as SS–25s, and applied a unique identifier to each such system.

Question. Under New START, do you assess that (a) Russia could maintain undetectable, undeclared, road-mobile missiles, and warheads and launchers that could be mated with them, and (b) whether Russia has any incentive(s) to do so?

Answer. This topic is addressed in the classified National Intelligence Estimate on the Intelligence Community's ability to monitor the New START Treaty that was provided to the Senate on June 30, 2010.

Question. What specific elements in the New START Treaty would allow us to detect such a covert capability?

Answer. This topic is addressed in the classified National Intelligence Estimate on the Intelligence Community's ability to monitor the New START Treaty that was provided to the Senate on June 30, 2010.

Question. What U.S. NTM could detect such a covert capability?

Answer. This topic is addressed in the classified National Intelligence Estimate on the Intelligence Community's ability to monitor the New START Treaty that was provided to the Senate on June 30, 2010.

Question. How long would it take for elements of Russia's strategic forces to reload road-mobile missile launchers, in either a training or combat scenario?

Does Russia have the infrastructure required to do either in an undetectable fashion?

Answer. This topic is addressed in the classified National Intelligence Estimate on the Intelligence Community's ability to monitor the New START Treaty that was provided to the Senate on June 30, 2010.

Question. Why does New START contain a limitation only on non-deployed launchers of road-mobile missiles and no limitation on nondeployed, road-mobile missiles of any kind?

Answer. The central limits on strategic delivery vehicles and their associated warheads are intended to limit the deployed strategic forces of each Party. During the negotiations, the Parties also agreed to pursue a third central limit for the aggregate number of deployed and nondeployed launchers of ICBMs and SLBMs, including all mobile launchers of ICBMs, and deployed and nondeployed heavy bombers equipped for nuclear armaments. This third central limit is designed to limit the ability of the Parties to "break out" of the treaty limits by constraining the number of nondeployed ICBM and SLBM launchers and nondeployed heavy bombers available for deployment.

Although there is no treaty limit on the number of nondeployed ICBMs and SLBMs, the ability of a Party to utilize any nondeployed ICBMs or SLBMs as part of a "break out" scenario is constrained by the overall limit on deployed and nondeployed ICBM and SLBM launchers and deployed and nondeployed heavy bombers.

Question. START I contained a limitation on the types of systems that could be kept in the nondeployed category. To wit, there was a limit of 110 total nondeployed launchers, of which no more than 18 could have been rail-mobile launchers. Why doesn't New START provide comparable specificity with regard to the types of accountable launchers or missiles that may be kept in a nondeployed mode?

Answer. New START was created with a view to maintain flexibility for both Parties by allowing each Party to determine for itself how to structure its strategic nuclear forces within the treaty's limits. New START has three central limits: the number of warheads on deployed ICBMs, on deployed SLBMs, and counted for deployed heavy bombers equipped for nuclear armaments; the number of deployed ICBMs, SLBMs, and heavy bombers; and the number of deployed and nondeployed ICBM launchers, SLBM launchers, and heavy bombers equipped for nuclear armaments.

These three limits, while separate, allow each Party a range of options with respect to how it will arrange its force structure. Each Party must make trade-offs regarding its force structure in order to meet all three limits.

Question. How does the third central limit in New START on deployed and nondeployed launchers constrain or shape future Russian strategic forces given that they are already well below New START's limits on deployed ICBMs, SLBMs, and heavy bombers?

Answer. This topic is addressed in the classified National Intelligence Estimate on the Intelligence Community's ability to monitor the New START Treaty that was provided to the Senate on June 30, 2010.

NET ASSESSMENTS

For START I, the United States conducted a net assessment of possible U.S. force structures in response to future Russian strategic offensive forces. To date, I am aware of no such assessments for U.S. and Russian strategic forces over the duration of the New START Treaty.

Question. Can you provide such assessments to this committee?

Answer. Assessments regarding the projected effectiveness of alternative U.S. nuclear force structures in the context of strategic exchanges involving potential future Russian Federation nuclear force structures and target bases were conducted within the context of the Nuclear Posture Review (NPR). The postulated Russian capabilities used to conduct these analyses were based on the intelligence community's assessments of potential future Russian force structures under various assumptions.

The Nuclear Posture Review analyzed the ability of notional U.S. force structures to meet posited deterrence and stability requirements at progressively lower numbers of U.S. and Russian nuclear forces to provide a basis for identifying acceptable strategic force levels that could be reflected in the interagency approved negotiating instructions to the U.S. New START delegation. This analysis was conducted by the U.S. Strategic Command in support of the Nuclear Posture Review at the Top Secret level.

There was no "final net assessment" of the balance of U.S. and Russian Federation strategic offensive forces under New START limits. Rather, the acceptability of U.S. strategic forces fielded within potential treaty limits was assessed in terms of their ability to meet posited U.S. deterrence and stability requirements.

Question. How will future U.S. strategic forces provide support for deterrence missions, in particular, extended deterrence missions, under New START?

Answer. The Secretary of Defense, based on recommendations from the Joint Chiefs of Staff, has established a baseline strategic nuclear force structure that fully supports U.S. security requirements including those associated with extended deterrence, and conforms to the New START Treaty limits. This baseline force structure—which provides a basis for future planning—provides the flexibility to make adjustments as appropriate, and as permitted by the treaty:

- The United States currently has 450 intercontinental ballistic missiles (ICBMs) deployed in silos. The baseline plan for compliance with the New START Treaty limits will retain up to 420 deployed Minuteman III ICBMs, each with a single warhead.
- The United States currently has 94 deployable nuclear-capable heavy bombers. Under the baseline plan, some will be converted to conventional-only heavy bombers (not accountable under the treaty), and up to 60 nuclear-capable heavy bombers will be retained.
- The United States currently has 14 strategic ballistic missile submarines (SSBNs). Under the baseline plan, all 14 will be retained. The United States will reduce the accountable number of submarine-launched ballistic missile (SLBM) launchers (launch tubes) from 24 to 20 per SSBN, and deploy no more than 240 SLBMs at any time.

Over the next decade, the United States will invest well over $100 billion in nuclear delivery systems to sustain existing capabilities and modernize some strategic

systems. U.S. nuclear weapons will undergo extensive life extension programs in the coming years to ensure their safety, security, and effectiveness. Maintaining a credible nuclear deterrent requires that the United States operate a modern physical infrastructure and sustain a highly capable workforce. The administration's modernization plan will ensure that our nuclear complex has the essential capabilities to support a strong nuclear deterrent—as well as arms control, nonproliferation, and counterproliferation requirements—over the next decade and beyond. The President is committed to modernizing the nuclear complex and maintaining a safe, secure, and reliable nuclear weapons stockpile without nuclear testing.

The Nuclear Posture Review makes clear that as long as nuclear weapons exist, the U.S. will maintain a safe, secure, and effective nuclear arsenal to deter attacks on the U.S., our allies, and partners. This includes extended deterrence. Extended deterrence and assurance remain strong and the U.S. remains firm in its security commitments to all of our allies and partners. While the U.S. is retiring the nuclear-tipped sea-launched cruise missile, the United States retains a variety of capabilities to forward-deploy nuclear weapons if the situation ever demands, including dual-capable fighters and heavy bombers.

Question. How do Russia's many tactical nuclear weapons shape stability calculations relative to future U.S. strategic nuclear forces?

Answer. Because of their limited range and very different roles from those played by strategic nuclear forces, the vast majority of Russian tactical nuclear weapons could not directly influence the strategic nuclear balance between the United States and Russia. Russian nuclear-armed sea launched cruise missiles, which could be launched from attack submarines deployed off U.S. coasts, hold locations in the United States at risk, but could not threaten deployed submarine-launched ballistic missiles (which will comprise a significant fraction of U.S. strategic forces under New START), and would pose a very limited threat to the hundreds of silo-based ICBMs that the United States will retain under New START. Because the United States will retain a robust strategic force structure under New START, Russia's tactical nuclear weapons will have little or no impact on strategic stability.

RESPONSES OF SECRETARY GATES AND ADMIRAL MULLEN TO QUESTIONS SUBMITTED BY SENATOR BARRASSO

Question. A foreign media source in India recently reported that in recent years Russia has developed new long-range nuclear missiles armed with multiple warheads that are said to be capable of "piercing U.S. missile defenses."

The article stated that "the land-based RS–24 missile is due to be deployed next year, and the submarine-launched Bulava missile is still undergoing tests." The article also states that by 2016 Russia plans to build a heavier land-based missile.

I would like to hear your analysis and evaluation of Russia's modernization of its nuclear arsenals. How concerned are you about these technological developments?

Answer. The Russian Federation has announced that it is developing and deploying new ICBMs and SLBMs. These include the MIRVed RS–24 ICBM, the new RSM–56 SLBM, a modernized SS–N–23 SLBM, and a new class of SSBN to carry the RSM–56. Russia has also stated that it is developing a new heavy ICBM and that it has signed a contract for preliminary design work on a new heavy bomber. Russia has also stated it is developing and deploying new nuclear warheads for its strategic nuclear force.

These developments are of concern to the Department of Defense. The Department will take all necessary steps to ensure that U.S. forces, and particularly our strategic forces, are able to fulfill their missions regardless of Russian technological or other types of advances.

Question. The United States and Russia have over 90 percent of the world's nuclear weapons. However, there are many nations who have interest in increasing their nuclear weapon supplies and capabilities.

The Nuclear Posture Review mentions concerns from the United States and other nations about China's military nuclear modernization efforts. The lack of transparency in China's nuclear programs raises further questions about China's future strategic intentions.

If we continue to reduce our nuclear force structure, do you believe this posture will invite other countries like China, who are ambitiously designing and fielding new weapons systems, to ramp up their nuclear programs to achieve parity with the United States and Russia?

Answer. China's military modernization programs, including its nuclear modernization, are a significant concern which we watch closely. However, China presently does not appear to be seeking parity with either the United States or Russia, and its nuclear arsenal remains much smaller than the U.S. and Russian arsenals. As a declared nuclear weapon state under the NPT, China's restraint in its nuclear modernization is important to nuclear disarmament and global non-proliferation efforts. We look to China to be more transparent about its strategic programs and to show restraint in them.

As the United States and Russia conduct bilateral negotiations to reduce nuclear arsenals further, the United States will seek greater transparency and assurances from China that it does not intend to increase its stockpile further in an attempt to achieve nuclear parity with the United States and Russia.

Question. The United States and Russia have over 90 percent of the world's nuclear weapons. However, there are many nations who have interest in increasing their nuclear weapon supplies and capabilities.

The Nuclear Posture Review mentions concerns from the United States and other nations about China's military nuclear modernization efforts. The lack of transparency in China's nuclear programs raises further questions about China's future strategic intentions.

As the United States and Russia make reductions to their nuclear weapons, what level of confidence do you have that other nations and nonstate actors will halt their pursuit or expansion of nuclear weapons?

Answer. The Nuclear Posture Review (NPR) states that the United States will give top priority to discouraging additional countries from acquiring nuclear weapons capabilities and stopping terrorist groups from acquiring the materiels to build nuclear bombs. To that end, the NPR states that the United States will need to intensify its efforts to build broad international support for the rigorous measures needed to prevent those dangers while maintaining stable deterrence and an effective nuclear arsenal. Reductions in U.S. and Russian strategic nuclear forces may contribute to these efforts by facilitating cooperation with Russia, fortifying U.S. credibility in calling on other nations to reduce or forswear nuclear capabilities, and reinforcing the global non-proliferation regime.

Although it is difficult to define levels of confidence regarding changes in other states' and nonstate actors' behavior as the United States and Russia make reductions in strategic nuclear forces, this comprises only a part of a broader effort to rebuild and strengthen the global nonproliferation regime and accelerate efforts to prevent nuclear terrorism. Other initiatives include aggressively seeking to secure all nuclear materiels worldwide, continuing cooperative threat reduction programs, impeding sensitive nuclear trade, and renewing the U.S. commitment to hold fully accountable any supporter or enabler of WMD terrorism, among others.

Question. While the U.S. and Russia have a rough equivalence in their strategic nuclear weapons, there is a significant imbalance in tactical nuclear weapons that favors Russia. The balance of tactical nuclear weapons is of particular concerns as we decrease the number of deployed strategic nuclear weapons.

Since the new treaty proposes reduction of deployed strategic nuclear weapons, what are our options to provide assurances to our allies in Europe?

Answer. The security architecture in Europe will retain a nuclear dimension as long as nuclear threats to U.S. allies and partners remain. A credible U.S. "nuclear umbrella" is provided by a combination of means—the strategic forces of the U.S. triad, nonstrategic nuclear weapons deployed forward in NATO countries, and U.S.-based nuclear weapons that could be deployed forward quickly to meet regional contingencies. Any change in the NATO component of these means will be identified and agreed upon as a collective alliance decision. The United States will also maintain its extended deterrence commitments to our allies in Europe through the continued forward deployment of U.S. forces in the region and strengthening U.S. and allied nonnuclear capabilities, including regional ballistic missile defense.

Tactical nuclear weapons are a concern, and, as stated in the Nuclear Posture Review, should be included in any future reduction arrangements between the United States and Russia. Ratification and entry into force of the New START Treaty would facilitate those discussions, whereas failure to ratify the treaty likely would make engagement with Russia on nonstrategic nuclear weapons more difficult.

RESPONSES OF SECRETARY GATES AND ADMIRAL MULLEN TO QUESTIONS SUBMITTED BY SENATOR WICKER

MISSILE DEFENSE

Question. General O'Reilly, the current head of the Missile Defense Agency, testified before the House Armed Services Committee that: "Relative to the recently expired START Treaty, the New START Treaty actually reduces constraints on the development of the missile defense program. Unless they have New START accountable first stages (which we do not plan to use), our targets will no longer be subject to START constraints, which limited our use of air-to-surface and waterborne launches of targets which are essential for the cost-effective testing of missile defense interceptors against MRBM and IRBM targets in the Pacific area.

It appears that we will now be able to launch missile defense targets from airplanes and surface ships. Why is this useful?

Answer. The Missile Defense Agency has long used air launched targets which are not accountable under the START Treaty. Such launches provide the Missile Defense Agency with greater flexibility to design tests that are more operationally realistic by enabling them to launch targets along any azimuth (or angle) in relation to the interceptor missile. The retired Trident I SLBM remained accountable under the START Treaty but will no longer be accountable under New START, thus expanding the availability of target missiles. The use of targets utilizing missiles not accountable under the New START Treaty, launched from airplanes and surface ships, which was prohibited by START but is not prohibited by the New START Treaty, will support more cost-effective testing of missile defense interceptors against medium- and intermediate-range ballistic missile threats in the Pacific region.

Question. It appears that the reason we can now launch missile defense targets in this way is because it is no longer prohibited for ballistic missiles to be launched from airplanes or surface ships under the New START treaty. Is this correct?

Answer. Yes. Those prohibitions do not exist under the New START Treaty. With respect to missile defense target launches, the New START Treaty actually provides greater flexibility, especially with regard to air-to-surface and water-borne launches of long-range ballistic missiles. Under START, air-to-surface ballistic missiles (called ASBMs) and water-borne launches of ballistic missiles from surface ships using treaty accountable ICBMs and SLBMs were prohibited.

Question. Is it really a net plus for U.S. security if we can launch missile defense targets from these platforms but at a cost of greater freedom for Russia to research and develop and deploy ballistic missiles with nuclear warheads from these same platforms?

Answer. We have previously been unable to exploit air-launched and water-borne launches of missile defense targets using the first stage of ICBMs and SLBMs due to prohibitions under the START Treaty. Under New START, we now have the flexibility to maximize our ability to test and develop missile defense targets, which directly enhances our national security. From a cost-benefit standpoint, we benefit since we have the opportunity to use various launch configurations to enhance our national security; both Parties will have equal rights to use air-launch and water-borne launch to develop offensive capability, should they so choose.

RESPONSES OF SECRETARY GATES AND SECRETARY CLINTON TO QUESTIONS SUBMITTED BY SENATOR LUGAR

Question. For each of the following inspections and exhibitions provided for under START I, please specify (a) whether New START provides for such inspections and exhibitions; (b) where in the New START Treaty, its protocol and annexes such inspections and exhibitions are provided for; and (c) if such inspection and exhibition is not permitted under New START, an explanation as to why:

- Baseline data inspections/exhibitions;
- Data update inspections;
- New facility inspections;
- Suspect-site inspections;
- Reentry vehicles inspections of deployed ICBMs and SLBMs;
- Post-exercise and dispersal inspections;
- Conversion or elimination inspections;
- Close-out inspections;
- Formerly declared facility inspections;

- Technical characteristics exhibitions/inspections;
- Distinguishability exhibitions/inspections for heavy bombers and long-range ALCMs.

Answer. The New START Treaty significantly simplifies the inspections framework from the original START Treaty.

Baseline data inspections under the START Treaty were designed to provide an opportunity during the opening months of START Treaty implementation to conduct an initial inspection at each inspectable facility in order to allow each side to familiarize itself with the accountable items of inspection at each of these facilities subject to inspection. Given the detailed familiarity of both sides with the declared facilities likely to be subject to inspection under the New START Treaty, it was agreed that similar one-time baseline data inspections would not be needed under the New Treaty. The procedures for type one and type two inspections are outlined in Sections VI and VII of Part Five of the Protocol to the Treaty, and further specified in Parts Six and Seven of the Annex on Inspection Activities.

The functions of the data update inspections under START are largely served by type one and type two inspections, during which inspectors will confirm the accuracy of the declared data regarding deployed and/or nondeployed items of inspection at facilities subject to inspection. Procedures for the conduct of these inspections are outlined in Sections VI and VII of Part Five of the Protocol to the Treaty and are further specified in Parts Six and Seven of the Annex on Inspection Activities.

The sides agreed that retaining new facility inspections was not necessary, because the sides are considered unlikely to open many new facilities during the life of the New START Treaty. Moreover, the functions of a new facility inspection can be readily accomplished by the first type one or type two inspections conducted at a new facility.

The sides agreed that suspect-site inspections would not be required under the New START Treaty. The purpose of these inspections under the START Treaty was to confirm that the covert assembly of mobile ICBMs was not occurring at a few selected ballistic missile production facilities. Each Party was obligated to declare up to three facilities as potentially subject to such a suspect-site inspection, because they produced ballistic missiles as large as, or larger than, any mobile ICBM possessed by that side. During the development of the U.S.-proposed verification regime, the relevant departments and agencies concluded that suspect-site inspections provided minimal value in assisting the detection of potential covert production of mobile ICBMs. Ultimately, the United States agreed that verifying Russia's ballistic missile production would be accomplished through other means, including the combination of confirming data declarations, the application of unique identifiers to all strategic ballistic missiles, advance notification of the exit of solid fuel ICBMs or SLBMs from their production facilities, and the use of national technical means of verification.

The functions of reentry vehicle inspections for deployed ICBMs and SLBMs conducted under START are served by reentry vehicle inspections conducted as a key component of type one inspections carried out at ICBM bases and ballistic missile submarine bases. The details of the procedures for conducting these inspections are set forth in Section VI of Part Five of the Protocol and Part Six of the Annex on Inspection Activities. The purpose of such inspections is to confirm the number of reentry vehicles emplaced on designated, deployed ICBMs and SLBMs.

The sides agreed not to include post-exercise dispersal inspections under the New START Treaty. These inspections were never used during the implementation of the START Treaty, simply because the Russian Federation never declared exercise dispersals for its mobile ICBM force. The United States could use a type one inspection to conduct an inspection at a mobile ICBM base whose forces participated in an exercise dispersal, should the Russians ever conduct an exercise dispersal.

The functions of the START Treaty conversion or elimination inspections are served by conversion or elimination inspections conducted under the New START Treaty, which will count against the annual quota for type two inspections. The overall procedures for conducting the conversion or elimination of strategic offensive arms subject to the treaty are set forth in Part Three of the Protocol, while the more detailed procedures for such inspections are contained in Section VI of Part Five of the Protocol, and further defined in Part Seven of the Annex on Inspection Activities.

The functions of close-out inspections conducted under the START Treaty can be served by the conduct of a formerly declared facility inspection under New START. Eliminated facilities become subject to formerly declared facility inspections, which could be conducted should questions arise regarding the activities taking place there. Under the New START Treaty, formerly declared facility inspections count

towards the type two inspection quota in accordance with Section VII of Part Five to the Protocol.

Technical characteristics exhibitions and distinguishability exhibitions conducted under the START Treaty have been condensed in a single exhibition under the New START Treaty, the conduct of which is outlined in Section VIII of Part Five of the Protocol to the Treaty, with more specific procedures set forth in Part Eight of the Annex on Inspection Activities. The purposes of these exhibitions conducted under the new treaty are to demonstrate the distinguishing features and to confirm the technical characteristics of each new type, variant, or version of an ICBM, mobile ICBM launcher, SLBM, or heavy bomber equipped for nuclear armaments. Distinguishability exhibitions for long-range Air-Launched Cruise Missiles (ALCMs) conducted under START do not exist under the New START Treaty, because it is no longer necessary to establish distinguishing features of long-range ALCMs in order to verify compliance with the treaty.

Question. Please indicate (a) which New START exhibitions will count against the 18 annual inspections the treaty permits the United States to conduct in Russia and specify (b) how the treatment provided each such exhibition in New START differs from that provided in START I with regard to total annual inspections permitted and the information or items monitored in such exhibitions.

Answer. Exhibitions will not count against the quota of 18 annual inspections permitted under the New START Treaty. Similarly, exhibitions conducted under the START Treaty did not count against the annual inspection quota for that treaty. Much of the information on items displayed during an exhibition conducted under the New START Treaty remains unchanged from that obtained under the START Treaty.

Question. New START's Preamble states that the Parties seek "to create a mechanism for verifying compliance with the obligations under this Treaty, adapted, simplified, and made less costly in comparison to" START I. Please specify what adaptations were made to START I's verification regime that make the New START regime simpler and less costly.

Answer. A goal of each Party in the negotiations was to make the New START verification regime simpler and less costly. This was achieved by consolidating a number of START inspections into each of the two types of New START inspections, thereby reducing the number of inspections carried out at inspectable facilities.

Under New START, elements of data update inspections and reentry vehicle on-site inspections conducted under START were consolidated into a single type one inspection. Although type one inspections at operational bases will be longer in duration, there will be fewer numbers of inspections at these facilities each year. For example, under START, operational ICBM and ballistic missile submarine (SSBN) bases were subject to up to four START inspections each year, up to two each of two types of inspection.

Under New START, the maximum number of inspections at such facilities is two per year. New START also consolidated START data update inspections, formerly declared facility inspections, and conversion or elimination inspections into type two inspections. These inspections will be conducted at storage, repair, loading, maintenance, and conversion or elimination facilities, test ranges, eliminated facilities where nondeployed ICBMs, SLBMs and heavy bombers equipped for nuclear armaments were located, or at operational bases to confirm the elimination of strategic offensive arms.

The New START verification regime is tailored to the limits of the treaty and will support the standard of effective verification that was achieved under START inspections. It combines elements of the START Treaty with new elements designed for the limitations of the New START Treaty. Type one and type two inspections conducted under New START were derived from the 12 different types of inspections that were provided for under START. Through the 15 years of successful implementation of START inspections, the interagency judged that some of the START inspections could be combined, consolidated, or eliminated as a way to make New START inspections simpler and less costly. Baseline data inspections, new facility inspections, suspect site inspections, post exercise dispersal inspections, and close-out inspections were eliminated under New START because they were not necessary to verify the limits of the New START Treaty.

Costs will also be reduced through the use of the simplified inspection procedures that were developed to confirm the elimination of items subject to the treaty. Under START elimination inspections, inspectors were required to remain at the elimination inspection sites up to several weeks a year as items were undergoing the entire elimination process. During a type two elimination inspection under New

START, inspectors now would confirm only the results of the elimination process once notified by the possessing Party that an item of inspection has been eliminated.

Question. For the United States, what are annual implementation costs expected to be over the duration of the New START Treaty?

Answer. The Defense Agencies and Military Departments are presently engaged in an analysis of annual budget costs and associated funding requirements. The final costs will be dependent on decisions concerning the future force structure, conversion and elimination procedures, facility requirements for supporting inspections, and the development of additional inspection equipment. While the Nuclear Posture Review provided certain recommendations concerning the force structure, it did not specify the New START-compliant structure nor set the schedule for its implementation. Costs will also be dependent on the types of elimination and conversion procedures that are selected for the conversion or elimination of U.S. strategic offensive arms. The treaty provides the flexibility for the U.S. to decide what conversion or elimination procedure is most suitable for the task at hand. In addition, the Services are reviewing potential facility modifications that may be necessary to support inspection activities. Finally, the treaty also provides for the possible development of new inspection equipment to facilitate and enhance inspection activities.

Until the Military Departments have completed their review of these matters, it would be premature to speculate on the implementation costs.

Question. Please provide a listing, by calendar year, over the lifetime of the START I Treaty, of (a) the number of inspections per year conducted in Russia and (b) the type of each such inspection (RVOSI, data update, etc.); and (c) the location in Russia where each such inspection was conducted.

Answer. Please see classified response to be provided separately.

ARTICLE III

Under paragraph 6 of Article III, missiles of an existing type cease to be subject to New START "if all ICBM or SLBM launchers of a type intended for such ICBMs or SLBMs have been eliminated or converted in accordance with Part Three of the Protocol to this Treaty."

Question. Is it possible for Russian missiles of one type to be launched by a Russian launcher not originally designed or intended for that missile type?

Answer. Please see classified response to be provided separately.

Question. How observable are preparations to modify a launcher to carry a missile of a different type, i.e., a type for which it was not originally designed, intended or used?

Answer. Please see classified response to be provided separately.

Question. How many Russian INF or START accountable mobile launchers were eliminated from accountability but then subsequently used for launch of other missiles, either by Russia, or by nations to which Russia exported such launchers?

Answer. There is no evidence that launchers eliminated from accountability under the INF or START Treaties have been used by Russia to launch other missiles, or have been exported to other nations to launch other missiles.

CONVERSION AND ELIMINATION

Paragraph 4 of Section I of Part Three of the New START Protocol appears to state that Parties may continue to apply conversion or elimination procedures rendering strategic offensive arms "inoperable," (paragraph 2) or conversion of ICBM or SLBM launchers to make them "incapable" (paragraph 3) for strategic missions, even when, per paragraph 4, "in the opinion of the other Party, the procedures developed by the Party carrying out the conversion or elimination are ambiguous or do not achieve the goals set forth in paragraph 2 or paragraph 3 of this Section," subject then only to demonstrating the ambiguous or deficient procedure to the Bilateral Consultative Commission. The determinations regarding inoperability and incapability appear to be made only by the Party applying (even ambiguous) conversion and elimination procedures.

Question. For the United States, what criteria will be used to determine whether elimination procedures for strategic offensive arms subject to the New START Treaty in Russia are, or are not, ambiguous?

Answer. Part Three of the Protocol makes clear that strategic offensive arms will no longer be subject to the treaty's aggregate limits when they are rendered inoperable, precluding their use for their original purpose. Such elimination may be ac-

complished by procedures described in Part Three of the Protocol or using a newly developed procedure. If a new procedure for elimination is developed, the inspecting Party will consider whether the procedure will clearly preclude the item's use for its original purpose.

In determining whether newly developed elimination procedures are sufficient, the United States will not limit itself to a predetermined set of criteria. Rather, we will assess the procedures used and take into account the experience and knowledge gained from 15 years of START Treaty implementation to determine whether the procedure will render that item inoperable.

In the event questions arise regarding newly developed procedures, a Party may request that the Party carrying out the elimination conduct, within the framework of the Bilateral Consultative Commission (BCC), a demonstration of the procedures. Demonstrations may include descriptions, diagrams, drawings, and photographs, as needed, or may be conducted onsite, if so agreed.

Question. For the United States, what criteria will be used to determine whether conversion procedures for strategic offensive arms subject to the New START Treaty in Russia are, or are not, ambiguous?

Answer. Part Three of the Protocol makes clear that an ICBM launcher, SLBM launcher, or heavy bomber will no longer be subject to the treaty's aggregate limits when it is rendered incapable of employing ICBMs, SLBMs, or nuclear armaments for heavy bombers by agreed procedures described in the Protocol. If a new procedure for conversion is developed, the inspecting Party will consider whether the procedure will clearly result in rendering the item incapable of employing ICBMs, SLBMs, or nuclear armaments for heavy bombers, as applicable.

In determining whether newly developed conversion procedures are sufficient, the United States will not limit itself to a predetermined set of criteria. The procedures used for conversion must be such that the other Party can confirm the results of the conversion. If it appears that a newly developed procedure is not clear enough to confirm the conversion of an item, a Party may raise the issue in the framework of the Bilateral Consultative Commission (BCC) and require the inspected Party to conduct a demonstration of the new procedures.

Question. For the United States, what criteria will be used to determine whether procedures for the conversion or elimination of strategic offensive arms subject to the New START Treaty in Russia would, or would not, meet the goals specified in paragraphs 2 and 3 of Section I of Part Three of the New START Protocol?

Answer. The treaty provides flexibility for various conversion or elimination procedures, each of which must meet the specified criteria. These criteria ensure that the converted item must be rendered incapable of employing ICBMs, SLBMs, or nuclear armaments; and the eliminated item must be rendered inoperable, precluding its use for its original purpose.

Specifically, procedures for the elimination of solid-fuel ICBMs and SLBMs are contained in Section II of Part Three of the Protocol. Procedures for the conversion or elimination of ICBM launchers are contained in Section III of Part Three of the Protocol. Procedures for the conversion or elimination of SLBM launchers are contained in Section IV of Part Three of the Protocol. Procedures for the conversion or elimination of heavy bombers are contained in Section V of Part Three of the Protocol. The Parties have agreed that the specific procedures contained in these sections meet the standards specified in paragraphs 2 and 3 of Section I.

Newly developed procedures for conversion or elimination, which are also permitted, must meet these same standards. In determining whether newly developed conversion or elimination procedures are sufficient, the United States will not limit itself to a predetermined set of criteria.

Question. How will the United States determine whether a strategic offensive launcher in Russia is (a) "inoperable"; (b) "incapable of employing ICBMs, SLBMs, or nuclear armaments"; and (c) completely eliminated?

Answer. ICBM and SLBM launchers are rendered "inoperable" by using the procedures provided for in paragraphs 1–4 of Section III and paragraph 1 of Section IV, respectively, of Part Three of the Protocol to the New START Treaty. Once these procedures have been completed and applicable confirmation procedures are complied with, the ICBM or SLBM launcher is considered to be eliminated.

SLBM launchers and nuclear-capable heavy bombers are considered to be "incapable of employing ICBMs, SLBMs, or nuclear armaments" once the procedures provided for in paragraphs 6 and 7 of Section IV and paragraphs 3 and 4 of Section V, respectively, of Part Three of the Protocol to the New START Treaty are completed. The results of these procedures are subject to verification through type two inspections. Once these procedures have been completed and applicable confirmation

procedures are complied with, a launcher or heavy bomber is considered to be converted and ceases to be subject to Article II limits of the treaty.

Question. Part Three of the New START Protocol lays out rules for conversion of strategic offensive arms subject to the treaty, but not reconversion, i.e., back to a role or with capability to undertake strategic missions and uses consistent with their original purpose. (a) What are the benefits of this situation for the United States; and (b) why is there no reconversion ban in the protocol?

Answer. The United States is currently converting all of its B–1B heavy bombers such that they will be incapable of employing nuclear armaments. Once the conversion process is completed, the B–1B will no longer be subject to the New START Treaty and will not count against its limits. The United States also plans the similar future conversion of some, but not all, of its B–52H heavy bombers.

The United States has completed the conversion of all the SLBM launchers on four *Ohio*-class submarines into cruise missile launchers or rendered the launchers incapable of employing SLBMs. As a consequence, these SLBM launchers will no longer count against the New START Treaty limits. The United States agreed in the Second Agreed Statement in Part Nine of the Protocol to conduct one-time exhibitions of each of the four SSGNs to confirm that the launchers in these submarines are incapable of launching SLBMs.

The United States also plans to convert individual SLBM launchers on a number of SSBNs by rendering them incapable of employing SLBMs and thus reducing the accountable aggregate number of SLBM launchers while maintaining the existing number of SSBNs.

The Parties also agreed to use exhibitions or inspections as set forth in the First, Second, Third, and Seventh Agreed Statements to provide assurance that the converted missile launchers remain incapable of launching strategic ballistic missiles and the converted heavy bombers remain incapable of launching nuclear armaments.

In order to provide for future contingencies, the United States did not support a ban on the reconversion of ICBM and SLBM launchers and heavy bombers. Changes in future U.S. plans for its strategic forces or unforeseen events, both technological or policy related, could potentially require the reconversion of some launchers or heavy bombers to their original purpose in order to meet such future contingencies. Reconversion would allow such flexibility.

Question. Why are there no provisions in Part Three of the Protocol specifically regarding the conversion of ICBMs and SLBMs, only launchers of ICBMs and SLBMs and elimination of ICBMs and SLBMs?

Answer. Part Three of the Treaty's Protocol provides for the conversion of launchers of ICBMs and SLBMs by rendering them incapable of employing ICBMs or SLBMs. The other Party must be able to confirm this. The treaty's conversion procedures cannot be applied to ICBMs and SLBMs because these missiles cannot be rendered incapable of employing nuclear weapons while still remaining operable. Therefore, ICBMs and SLBMs are removed from accountability under the treaty by elimination, that is, by rendering them inoperable.

Question. Paragraph 3 also notes that a converted strategic offensive arm that ceases to be subject to the New START Treaty "may be used for purposes not inconsistent with the Treaty." Could you provide an illustrative list of such purposes?

Answer. Some examples of "purposes not inconsistent with the Treaty" for which converted strategic offensive arms might be used are: use of a converted SLBM launcher as a launcher capable only of launching nonnuclear sea-launched cruise missiles; and use of a converted heavy bomber as a heavy bomber capable only of carrying nonnuclear armaments.

RATIFICATION AND IMPLEMENTATION

Question. Does the executive branch believe it has authority under relevant U.S. law to implement reductions or limitations of United States strategic nuclear forces at or below limits provided in the New START Treaty, or other actions relevant to such reductions and limitations planned and described in the 2010 Nuclear Posture Review, before the New START Treaty, its protocol and annexes, enters into force in accordance with paragraph 1 of Article XIV of the New START Treaty?

Answer. Part Eight of the Protocol on provisional application makes it clear that the executive branch is not seeking to implement the New START Treaty's reductions or limitations prior to entry into force of the treaty. Any reductions in strategic forces that may occur prior to entry into force of the treaty would be consistent with the President's authority as commander in chief and not pursuant to the treaty.

SPACE LAUNCH FACILITIES

Part One of the Protocol defines (term no. 73.) a "space launch facilit." as "a specified facility from which objects are delivered into the upper atmosphere or space using ICBMs or SLBMs."

Question. How many such facilities are there in the Russian Federation?

Answer. The initial Russian data declaration will be received no later than 45 days after entry into force of the treaty. However, the former Soviet START parties (Belarus, Kazakhstan, Russia, and Ukraine) had four declared space launch facilities under START: three in the Russian Federation (Nenoksa, Plesetsk, and Svobodnyy) and one in Kazakhstan (Leninsk-1).

Question. Does Russia conduct peaceful space launch activities at any facility where it either stores or tests offensive ballistic missiles?

Answer. The following facilities have been used in the past for both peaceful space launches and storage and/or testing of offensive ballistic missiles:

- Dombarovskiy ICBM Base, Russia (declared under START; Russia has provided site diagrams indicating its intent to declare under New START);
- Kapustin Yar Test Range, Russia (declared under START; Russia has provided site diagrams indicating its intent to declare under New START);
- Leninsk Test Range and Space Launch Facilities, Kazakhstan (declared under START); and
- Plesetsk Test Range and Space Launch Facilities (declared as a test range and as a space launch facility under START; Russia has provided site diagrams indicating its intent to declare under New START).

Russia's space launch facility declarations under New START will not be known until the initial data declaration 45 days after EIF.

Question. Is it possible to distinguish the launch of a rocket that is a strategic offensive weapon from the launch of a peaceful space launch vehicle?

Answer. Please see classified response to be provided separately.

NUNN-LUGAR/COOPERATIVE THREAT REDUCTION (CTR)

Question. Do you believe that United States CTR assistance to the Russian Federation will be needed to ensure that the Russian Federation is able to implement the New START Treaty efficiently and to maintain security and accurate accounting on Russian nuclear weapons and weapons-usable components and materiels?

Answer. The Russian Federation will be able to implement the New START Treaty without U.S. Cooperative Threat Reduction (CTR) reduction assistance, but we believe it will be able to do so more efficiently and will be better able to maintain security and accurate accounting with U.S. CTR assistance. The CTR program has played a major role in the elimination of strategic offensive arms that were taken out of service due to implementation of the START Treaty for almost two decades. The CTR program, in concert with the non-proliferation programs of the Department of Energy, has also played a very significant role in securing Russian nuclear weapons and stocks of fissile materiels.

Clearly, the responsibility for implementing the New START Treaty will belong to the Government of Russia. The role of the CTR program will be, as it was throughout the implementation of START, to incentivize the Russian Government to continue the excellent cooperation it has had with the Department of Defense in eliminating Russian strategic delivery systems and in enhancing nuclear weapons storage and transportation security. It is also important to note that the elimination procedures that the Russian Government has requested us to continue to employ in some cases are more robust than those required under the New START Treaty, and that payment for the work funded by CTR is not made until the elimination activity has been confirmed as completed by a U.S. Government CTR official.

RESPONSES OF SECRETARY GATES AND SECRETARY CLINTON TO QUESTIONS SUBMITTED BY SENATOR BARRASSO

Question. Recently, former Secretary James R. Schlesinger testified before this committee that the Russians have consistently resisted efforts to deal with the imbalance of tactical weapons. He stated that, "The likelihood of their being willing to do so in light of New START is sharply diminished, for we have now forfeited substantial leverage."

Were tactical weapons addressed during the negotiations with Russia?

If so, what exactly was discussed during those negotiations?

What was the position of Russia on this issue?

What did the United States propose regarding tactical weapons?

If not, why did the United States not push for tactical weapons to be a part of the treaty negotiations?

What is the reason for the United States to forfeit substantial leverage on this issue?

Answer. No. As agreed by Presidents Obama and Medvedev, the purpose of the New START Treaty was to reduce and limit the two nations' strategic offensive arms; therefore the issue of tactical nuclear weapons was not raised. A more ambitious treaty that addressed tactical nuclear weapons would have taken much longer to complete, adding significantly to the time before a successor agreement, including verification measures, could enter into force following START's expiration in December 2009. Because of their limited range and different roles, tactical nuclear weapons do not directly influence the strategic balance between the United States and Russia. President Medvedev has expressed interest in further discussions on measures to further reduce both nations' nuclear arsenals. We intend to raise strategic and tactical nuclear weapons, including nondeployed nuclear weapons, in those discussions.

Question. Did the United States get any Russian cooperation on Iran as a result of signing this treaty?

Answer. Our renewed focus on improving our relations with Russia, including last year's negotiations on the New START Treaty, has led to a greater understanding and increased cooperation between the United States and Russia in a number of areas. This renewed relationship is key to curbing nuclear threats across the globe.

We are working very closely and in cooperation with Russia on our shared goal of preventing Iran from acquiring a nuclear weapons capability. Russia does not support an Iran with nuclear weapons and—in addition to other constructive contributions to international nuclear nonproliferation efforts—has joined the November 2009 International Energy Agency (IAEA) Board of Governors resolution condemning Iran's lack of cooperation with the IAEA, its refusal to suspend enrichment, and its failure to comply with its Safeguards Agreement.

Since early 2009, the United States, Russia, and our partners in the P5+1 have offered to constructively engage Iran—but Iran failed to take advantage of this opportunity. Since 2006, there have been six U.N. Security Council resolutions (UNSCRs) calling on Iran to suspend enrichment. Iran has refused to meet with the P5+1 about its nuclear program despite our efforts and its commitment to do so last October. Russia supported UNSCR 1929 passage on June 9, the sixth UNSCR of its kind, imposing additional sanctions on Iran. Russia also continues to provide key assistance in the ongoing IAEA proposal discussions to refuel the Tehran Research Reactor.

We continue to discuss with Russia our concerns about advanced weapons sales to states such as Iran. We appreciate Russia's restraint in the transfer of the S–300 missile system to Iran.

Question. There has been a variety of views on whether rail-mobile missile launchers will count under the New START Treaty. Secretary Schlesinger has indicated that rail-mobile ICMBs may not count under the new treaty.

Does the New START Treaty address rail-mobile missile launchers?

Answer. Rail-mobile ICBMs are not specifically mentioned in the New START Treaty because neither Party currently deploys ICBMs in that mode. Nevertheless, the treaty covers all ICBMs and ICBM launchers, and would include any rail-mobile system, should either Party decide to develop and deploy such a system.

Question. Could rail-mobile missile launchers be deployed and not count against the New START Treaty limits?

Answer. No. The treaty covers all ICBMs and ICBM launchers, including a rail-mobile system, should either Party decide to develop and deploy such a system.

The New START Treaty defines an ICBM launcher as a "device intended or used to contain, prepare for launch, and launch an ICBM." This is a broad definition that covers all ICBM launchers, including any future rail-mobile launchers.

A rail-mobile launcher containing an ICBM would meet the definition of a "deployed launcher of ICBMs," which is "an ICBM launcher that contains an ICBM" and, along with any nondeployed rail-mobile launchers of ICBMs, would fall within the limit of 800 on deployed and nondeployed launchers of ICBMs and SLBMs and deployed and nondeployed heavy bombers. The ICBMs contained in rail-mobile

launchers would count as deployed and therefore fall within the 700 ceiling on deployed ICBMs, SLBMs, and heavy bombers.

If a Party chose to develop and deploy rail-mobile ICBMs, such missiles and their launchers would therefore be subject to the treaty and its limitations. Specific details about the application of verification provisions would be worked out in the BCC. Necessary adjustments to the definition of "mobile launchers of ICBMs"—to address the use of the term "self-propelled chassis on which it is mounted" in that definition—would also be worked out in the BCC.

Question. If rail-mobile missile launchers are not provided for under the treaty, how will the United States be able to track and monitor the number and movement of these weapons?

Answer. Neither the United States nor Russia currently deploys rail-mobile launchers. If a Party chose to develop and deploy rail-mobile ICBMs, such missiles and their launchers would be subject to the treaty. Appropriate detailed arrangements for incorporating rail-mobile ICBM launchers and their ICBMs into the treaty's verification and monitoring regime would be worked out in the Bilateral Consultative Commission.

Question. What type of measures will be used to monitor other activities outside the New START Treaty?

Answer. Please see the classified National Intelligence Estimate on the Intelligence Community's ability to monitor the New START Treaty.

Question. What additional information will the United States be able to obtain under the New START Treaty that we were not able to obtain under the previous START treaty?

Answer. Each ICBM, SLBM, and heavy bomber will be assigned an alpha-numeric unique identifier (UID), which will be included in the applicable notifications, periodic data declarations, and briefings presented prior to inspections, and may be confirmed during inspections. Under the previous treaty, only mobile ICBMs had such UIDs.

Routine data exchanges will contain certain information that was not provided under START, specifically, the declaration of the total number of warheads deployed on ICBMs and SLBMs based at each such facility. Included in the data exchanges will be the UID for each ICBM, SLBM, or heavy bomber based at the respective facilities. An innovation in New START is the requirement to notify the change between deployed and nondeployed status for ICBMs and SLBMs.

As part of an inspection, the inspected Party must declare the number of reentry vehicles on each deployed ICBM and deployed SLBM present at the ICBM base or submarine base and subject to inspection, and the number of nuclear armaments located in or on deployed heavy bombers present at the heavy bomber base and subject to inspection. Inspections will be used to confirm the actual number of reentry vehicles declared for designated, deployed ICBMs and deployed SLBMs, and to confirm the number of nuclear armaments onboard or attached to designated, deployed heavy bombers, although we expect that number to be zero since neither Party routinely maintains nuclear armaments loaded on its heavy bombers. In addition, inspectors will be able to record the UIDs from all items that are inspected.

Question. What information will the United States no longer be able to obtain under the New START Treaty that we were able to obtain under the previous START treaty?

Answer. The United States will not obtain recordings of telemetric information from the Russian Federation for each ICBM or SLBM flight test, as was the case under the START Treaty. Instead, each side will provide telemetric information on up to five launches per year on a parity basis.

Cooperative measures, under which heavy bombers or mobile ICBMs were, upon request, placed in the open for viewing by national technical means of verification, are not required by the new treaty.

Although the New START Treaty requires 48 hours advance notice for solid-fueled ICBMs and SLBMs exiting Votkinsk, there will no longer be continuous monitoring of the facility including the presence of monitors as was the case under the INF and START Treaties.

For more details, please see the classified National Intelligence Estimate on the Intelligence Community's ability to monitor the New START Treaty, published on 30 June 2010.

Question. Do you believe that we will see similar problems with Russia regarding violations of the new verification procedures?

Answer. Although the New START Treaty is less complex than the START Treaty, different interpretations by the Parties might arise regarding how to implement the inspection activities and other verification provisions of the New START Treaty. Should such a situation arise, the Parties will seek to resolve their differences in the Bilateral Consultative Commission.

Question. How will the New START Treaty address similar violations from occurring?

Answer. RVOSI: The New START Treaty establishes the inspected Party's right to cover reentry vehicles and other equipment with individual covers, but with the caveat that such covers must not hamper inspectors in accurately identifying the number of reentry vehicles emplaced on a front section. This provision is intended to ensure that covers are not used in such a manner that would obscure the actual number of reentry vehicles on a front section. It is similar to the START provision for covers that did not hamper inspectors, but specifies individual covers and makes the distinction between the New START verification task of determining the actual number of warheads versus the START provision of confirming that there were no more than the attributed number. In addition, as set forth in the Inspection Activities Annex, reentry vehicle covers are to be viewed, and in some cases measured, by inspectors prior to their use during the reentry vehicle inspection portion of a type one inspection.

Telemetry: The obligations in the New START Treaty are different from those in START. None of the new treaty's specific obligations, prohibitions, or limitations requires analysis of telemetric information to verify a Party's compliance. Nevertheless, to promote openness and transparency, the Parties have agreed to exchange telemetric information on an agreed equal number (up to five annually) of launches of the testing party's choice of ICBMs and SLBMs (which could include launch vehicles that contain the first stage of an ICBM or SLBM).

RESPONSES OF SECRETARY GATES AND SECRETARY CLINTON TO QUESTIONS SUBMITTED BY SENATOR WICKER

MISSILE DEFENSE

Question. In the April 27 issue of Time magazine, Dimitri Simes, the President of the Nixon Center, wrote, "In this official's account, the full spectrum of U.S. officials from the President to working-level negotiators clearly conveyed that the reason they rejected more explicit restrictions on missile defense was not because of U.S. plans, but because of fear that such a deal could not win Senate ratification. A senior U.S. official intimately familiar with the talks has confirmed that the Russians were advised not to press further on missile defenses because the administration had no intention to proceed with anything that would truly concern Moscow."

Do you disagree with this characterization?

Answer. Yes, we disagree with this characterization. The April 1, 2009, Joint Statement issued by Presidents Obama and Medvedev, stated that "the subject of the new agreement will be the reduction and limitation of strategic offensive arms." This statement signified that Russia agreed that the treaty to be negotiated to replace START would not attempt to reduce or limit defensive arms.

Broadly, the United States is committed to the ballistic missile defense policies outlined in the Ballistic Missile Defense Review. The United States was not interested, and is not interested, in any agreements that would prevent the effective implementation of these policies.

Question. Will you agree to share with the Senate details/cables/etc of any conversations in any venue with the Russians where missile defense was discussed?

Answer. We are committed to providing answers in a detailed briefing, in a classified session if needed.

RESPONSES OF SECRETARY GATES TO QUESTIONS SUBMITTED BY SENATOR LUGAR

BOMBER LIMITS

Under START I, flexible treatment was given to heavy bombers equipped to carry nuclear, long-range air-launched cruise missiles (ALCMs). The United States was permitted to count 10 weapons for up to 150 of its heavy bombers and Russia was permitted to count 8 weapons for up to 180 of its heavy bombers. For both sides, each heavy bomber over 150 and 180 were counted as a number of weapons equal

to the number of ALCMs with which each such heavy bomber was actually equipped. This rule gave the United States a considerable warhead-counting advantage over Russia—an ability to exceed START I's limit of 6,000 warheads by perhaps 2,500 to 3,000 warheads, given our number of bombers and ALCMs in 1992.

Under New START, there would be more flexible treatment regarding heavy bombers, as each heavy bomber counts as one warhead. Yet, the Air Force plans to retire, without a follow-on system, our nuclear-capable ALCMs. Russia has announced plans for a new heavy bomber and a new nuclear-capable ALCM, and while the recent U.S. Nuclear Posture Review concluded the United States will maintain a triad of nuclear forces—including bombers—no modernization plan exists for this leg of the triad.

Question. If we are to maintain a bomber leg in the triad, why has the Air Force delayed relevant planning?

Answer. The Air Force and the Department of Defense are committed to the bomber leg of the triad. With the completion of the Nuclear Posture Review (NPR), the Air Force is commencing an analysis of alternatives on the Long-Range Standoff Cruise Missile while the Department of Defense completes its study on Long-Range Strike systems that includes consideration of alternatives for a future bomber. Additionally, these planning efforts will coincide with legacy sustainment efforts for the B–2 and B–52 heavy bombers, and associated Air-Launched Cruise Missiles (ALCMs) and B–61 gravity bombs. The NPR states that a full scope Life-Extension Program will sustain the B–61 to ensure that production begins in 2017.

Question. Do more flexible rules regarding heavy bombers provide particular advantages to the United States if we would no longer maintain significant numbers of such aircraft and nuclear-capable ALCMs?

Answer. Neither side will secure an advantage over the other under the New START Treaty—whether with regard to one particular system or in the aggregate. Instead, the treaty will allow both sides to meet their legitimate security needs within a set of limits while acknowledging a mutual desire to reduce further the role and importance of nuclear weapons in the strategic postures of the Parties. With this in mind, the United States will retain the capacity within its bomber force to help meet its overall nuclear deterrence requirements. At the same time, to meet other warfighting requirements, U.S. bomber conventional capabilities are unrivaled and continue to advance. In this context, the New START rules represent the appropriate balance of transparency, accountability, and flexibility. Transparency rules for heavy bombers reflect the need to inspect and monitor these strategic delivery vehicles. The New START attribution rule of one nuclear warhead for each nuclear-capable heavy bomber strikes a balance between the fact that bombers are no longer on day-to-day nuclear alert and are not considered first strike weapon systems, and the fact that these bombers nonetheless have the capability to deliver nuclear armaments stored on or near their air bases. In addition, the New START Treaty conversion and elimination procedures provide greater flexibility, for instance to convert heavy bombers so that they are not capable of employing nuclear armaments and will not count against the treaty's aggregate limits, resulting in reduced costs and burdens for converting and eliminating such bombers.

Question. Former Secretary of Defense James Schlesinger stated in testimony on April 29 that the bomber rules of New START mean "Russia can maintain 2,100 strategic weapons rather than the 1,550 specified in the Treaty." At the lower limits on strategic offensive arms specified in New START, and given our declining edge in these systems, does the bomber advantage now go to the Russians instead of the United States?

Answer. The U.S. force of nuclear-capable heavy bombers is larger and more sophisticated than that of the Russian Federation. Under the New START limits, it will contain up to 60 B–2As, the world's only stealth bomber, and B–52Hs equipped to deliver long-range, nuclear-armed air-launched cruise missiles. With these bombers, plus over 60 B–1Bs that have been converted to carry only nonnuclear armaments, the U.S. bomber force will remain superior to that of the Russian Federation for the life of the New START Treaty. Counting one nuclear warhead for each nuclear-capable heavy bomber applies to both sides and does not provide Russia an advantage.

Question. What actions will the Department of Defense undertake to prepare for the conversion and elimination processes envisioned under New START?

Answer. The New START Treaty gives considerable flexibility beyond START in the procedures to convert or eliminate strategic offensive arms to enable both Parties to meet these central limits. The DOD is exploring various courses of action

that utilize this greater flexibility in reference to ICBM launcher elimination procedures and heavy bomber conversion and elimination procedures. The DOD is also researching the cost and operational constraints of the three methods of conversion of SLBM launchers permitted under the New START Treaty to determine which method is the most cost-effective. Final recommendations and actions will be based on fiscally acceptable solutions that meet the obligations of the treaty.

Question. What planning or other actions have been undertaken by your Office, the Joint Chiefs and relevant Military Departments to anticipate New START's entry into force and implementation in the United States?

Answer. DOD has undertaken efforts to plan for the treaty so that we can comply with the treaty at entry into force. In February 2010, the Department of Defense established the New START Treaty Implementation Working Group (NST–IWG) to oversee and coordinate the Department's planning for implementation of the New START Treaty. The NST–IWG includes representatives from OSD, the Chairman of the Joint Chiefs of Staff, the Military Services, and the Defense Agencies. The NST–IWG currently meets weekly to review the status of preparations within each Service and Agency to implement the NST, including the identification of long lead time items and resolution of issues identified. The NST–IWG has also coordinated DOD efforts to fully comply with and successfully implement the New START Treaty requirements identified in Part Eight of the Protocol for provisional application prior to entry into force, including the exchange of site diagrams and provision of certain notifications. DOD Components are also actively engaged in planning, programming, budgeting, and allocating resources, including personnel, for implementation of the New START Treaty at entry into force.

The Defense Threat Reduction Agency (DTRA) is preparing to perform its inspection and escort responsibilities should the Senate consent to ratification of New START. DTRA will train the agency's cadre of inspectors and escort personnel on the provisions of the new treaty and how to implement those provisions. Initial certification of DTRA inspectors and escorts will occur over the May–October 2010 timeframe and involve formal instruction on treaty provisions, self-study, mock inspections at U.S. facilities, and team certification standards and boards. DTRA has also been actively coordinating with the Air Force and the Navy to prepare facilities subject to inspection under New START, and is working to update the Web-based Arms Control Enterprise System to support New START.

Question. How will the Department of Defense undertake to protect sensitive information under the New START Treaty, and will such procedures differ in any way from those applied under START I?

Answer. The New START Treaty inspection regime was designed to minimize security risks while ensuring the U.S. ability to monitor Russian compliance. The Department of Defense is currently preparing the plans and procedures necessary to ensure that sensitive information is protected while complying with the terms of the New START Treaty. These plans and procedures are based on the extensive experience gleaned from hosting close to 500 Russian inspection missions of U.S. facilities during the life of the START Treaty. The Department will make use of the security countermeasures procedures that were developed and validated during implementation of the START Treaty and designed to limit access only to the information that is required to meet treaty requirements. Although some of the procedures will be modified due to differences between the New START Treaty and the START Treaty, they will be very similar to those procedures developed and improved during the 15 years of implementing the START Treaty.

The Department's preparations for implementation will focus heavily on ensuring that any security risks at DOD facilities are identified and addressed well before the first Russian inspection on U.S. territory is conducted. Over the coming months, the Defense Agencies and Military Departments will conduct various training events, including mock inspections at facilities subject to inspection. These activities are designed to train national and local U.S. in-country escorts in their duties and responsibilities, refine inspection procedures, and ensure a wide range of contingencies is identified and addressed.

DELIVERY SYSTEMS MODERNIZING

Press reports indicate the administration will invest $100 billion over the next decade in strategic nuclear delivery vehicles. About $30 billion of this total will go toward development and acquisition of a new strategic submarine, leaving about $70 billion. According to estimates by U.S. Strategic Command, the cost of maintaining our current dedicated nuclear force is approximately $5.6 billion per annum or $56 billion over the next decade. This leaves roughly $14 billion of the $100 bil-

lion the administration intends to invest for other items. Only $14 billion would remain for development and acquisition of a next-generation bomber, a follow-on ICBM, a follow-on nuclear-capable ALCM, and to develop a Prompt Global Strike capability.

Question. In light of these figures, is $100 billion a sufficient investment in future strategic nuclear delivery vehicles over the next decade?

Answer. The estimated investment of well over $100 billion for strategic delivery vehicles over the next decade, provided in the Section 1251 report, represents a best-estimate of costs associated with deployed systems and programs underway and planned. This estimate does not include all of the costs associated with potential future modernization programs. DOD is currently studying long-range strike options, including future bomber requirements and prompt global strike systems, and is also initiating an analysis of alternatives for a follow-on, nuclear-capable ALCM. Studies regarding a possible follow-on ICBM will be initiated in 2011–2012. Therefore, costs associated with any future program decisions on these systems would be additive to the estimate of well over $100 billion in the Section 1251 report.

WARHEAD LIFETIME EXTENSION POLICY GUIDANCE

Language in the Nuclear Posture Review on life extension programs for warheads gives a clear preference to refurbishment and reuse-raising the bar for replacement as an option. Some clarification on life extension programs is provided in the 1251 report.

Question. What assurance is there that our National Laboratories can or would pursue objective, technical analyses (to include replacement) for certain stockpile options given the clear guidance in the NPR that this administration prefers refurbishment and reuse?

Answer. The National Laboratories have consistently pursued their stockpile stewardship responsibilities in a professional and thorough manner, and have provided objective, technical analyses to maintain the safety, security, and effectiveness of the nuclear weapons stockpile. Since the mid-1990s the directors of the National Laboratories have submitted annual assessments for their respective systems and components, to include identification of problems and recommendations for future life extension or replacement action, which are compiled into the annual Report on Stockpile Assessment which is, in turn, reviewed and transmitted to the President by the Secretaries of Defense and Energy. These requirements and expectations of the National Laboratories will not change. The Nuclear Posture Review clarified that the National Laboratories will study the full range of approaches to address requirements for each warhead life extension program. In the "Report in Response to NDAA FY10 Section 1251; New START Treaty Framework and Nuclear Force Structure Plans (U)" submitted to Congress, the administration noted the following: "The Laboratory Directors will ensure that the full range of LEP approaches, including refurbishment, reuse, and replacement of nuclear components are studied for warheads on a case-by-case basis. While 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)." In accordance with these stated policies, the National Nuclear Security

Administration and the National Laboratories will work with the Department of Defense to identify options that meet the requirements and then develop a preferred life extension approach that is then presented to the Nuclear Weapons Council for approval, and ultimately recommended to the administration. The President's budget request, as implemented by congressional authorization and appropriations processes, validates that life extension approach before the production phase of the process begins, irrespective of whether it utilizes refurbishment, reuse, or replacement of nuclear components.

Los Alamos, Lawrence Livermore, and Sandia National Laboratories released a "Tri-Lab Directors' Statement on the Nuclear Posture Review" on April 9th, 2010. The laboratory directors stated: "We believe 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."

Question. Has any Laboratory Director or Laboratory study specified a requirement for replacement?

Answer. We have not yet completed the study phase of a Life Extension Program (LEP) under the guidance outlined in the NPR. Consistent with the Nuclear Posture Review, the replacement of nuclear components would be undertaken only if critical Stockpile Management Program goals could not otherwise be met and if specifically authorized by the President and approved by Congress. That determination would be made prior to the engineering development phase of a LEP.

Question. Does this language in the NPR suggest that the administration does not plan to pursue replacement?

Answer. No. The Nuclear Posture Review clarifies the administration's intention to consider all options to achieve the required life extension improvements to ensure a safe, secure, and effective nuclear stockpile. All approaches will be considered in the development of life extension program options, and the National Nuclear Security Administration and the National Laboratories will work with the Department of Defense to identify options that meet requirements and then propose a preferred life extension approach to the Nuclear Weapons Council.

Question. Former Secretary of Defense and Energy James Schlesinger concluded on April 29 before the committee that this guidance was "slightly inconsistent" with the approach proposed by the 2009 Strategic Posture Commission. Why did the administration deviate from the Commission's recommendation(s) in this area?

Answer. The Strategic Posture Commission recommended that all LEP) options be considered on a case-by-case basis, and the NPR is consistent with the Commission in this regard (and many others). The NPR additionally expressed a preference for refurbishment and reuse over replacement of nuclear components. We are committed to ensuring that the technical community is not constrained in its exploration of technical options for warhead life extension. Accordingly, the Nuclear Posture Review and supplemental guidance make clear that the technical community is to consider all technical options as it studies how best to extend the life of existing warheads in order to meet stockpile management goals (i.e., increased safety, security, and reliability) without providing new military capabilities or conducting underground nuclear tests. The National Nuclear Security Administration Laboratory Directors will ensure that the full range of Life Extension Program (LEP) approaches, including refurbishment, reuse, and replacement of nuclear components, is studied on a warhead-by-warhead basis. While the Nuclear Posture Review expresses a policy preference for refurbishment and reuse when decisions are being made 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 assessment of the ability of each LEP approach to meet stockpile management goals. The three Laboratory Directors stated that this approach to life extension "provides the necessary technical flexibility to manage the nuclear stockpile into the future with an acceptable level of risk."

NATIONAL LABORATORIES FUNDING

In fiscal year 2010, Congress provided roughly $6.4 billion for atomic energy defense activities of the National Nuclear Security Administration (NNSA). If the FY10 budget is taken as a 10-year baseline, that would be $64 billion of the $80 billion proposed for nuclear weapons activities at NNSA, assuming no increase for inflation or increased costs, such as for construction, occurred. Assuming a standard rate of annual inflation of 3 percent to cover cost-of-living adjustments in salaries and increased material costs using the FY10 appropriation as the baseline, then to hold that budget constant, a total of $75.6 billion in 10 years, from fiscal years 2011 to 2020, would be required.

This leaves $4.4 billion over 10 years for modernization, money which you would transfer from your budget to the Energy Department.

In your testimony you confirmed that the Department of Defense is transferring $4.6 billion to the NNSA through FY 2015 to fund "critical nuclear weapons' life extension programs and efforts to modernize the nuclear weapons infrastructure." You state that these investments "represent a credible modernization plan."

Question. What are the modernization options you envision beyond planned lifetime extensions and planned and projected annual stockpile work to which you might transfer funds?

Answer. The National Nuclear Security Administration Nuclear Security Enterprise will require sustained vigilance to regain and retain the critical skills and ca-

pabilities needed to assess and certify the enduring nuclear stockpile. Regular recapitalization of the infrastructure and continual investments in modern technologies and approaches are essential to achieve this goal. Regarding the stockpile itself, the Stockpile Stewardship and Management Plan documents all envisioned lifetime extensions and planned and projected annual stockpile work. History has shown that surveillance can uncover unexpected developments that can, in turn, lead to new requirements for future life extension activities.

Question. Would the modernized complex you contemplate support parallel life extension programs and production?

Answer. Yes. The National Nuclear Security Administration (NNSA) Stockpile Stewardship and Management Plan (SSMP) accounts for multiple-phased life extension programs being conducted at the same time. With congressional support and necessary funding, the phasing will allow different elements of a modernized NNSA capacity-based enterprise to work in parallel for greater overall efficiency. For example, NNSA is presently producing extended life W76–1 reentry body warheads, while at the same time conducting a series of feasibility studies and a detailed cost-estimate for refurbishing the B61–3/4/7/10 family of nuclear bombs. The SSMP commits the Department of Energy to delivering all of the W76–1 warheads required by the Navy, fully completing the B61 Life Extension Program (LEP) in support of the Air Force requirements, and initiating a 2011 LEP study of alternatives for the W78 reentry vehicle warhead. The phases of these various LEP activities will overlap in time and will be performed in parallel.

Question. To what degree is it desirable to establish a capability to execute parallel life-extension programs?

Answer. As stated in the response to the preceding, the National Nuclear Security Administration (NNSA) Stockpile Stewardship and Management Plan (SSMP) accounts for multiple-phased life extension programs being conducted at the same time. With congressional support and necessary funding, the phasing will allow different elements of a modernized NNSA capacity-based enterprise to work in parallel for greater overall efficiency.

Question. If the complex plan does not support parallel life extension programs, what additional funding would be required in the FY 2011 to FY 2015 timeframe to support such an objective?

Answer. As discussed in the responses to previous questions, the National Nuclear Security Administration fiscal year 2011 Stockpile Stewardship and Management Plan (SSMP) does account for multiple phased life extension programs being conducted simultaneously. We believe this plan, when implemented, will adequately support the Department of Defense's evolving military requirements. Sustained support of the program is essential. Additional capabilities beyond those outlined in the SSMP are not deemed necessary; therefore, cost estimates for additional capabilities have not been generated.

Question. What facility improvements would be required in the weapons complex to undertake parallel life extensions, and could they be completed before any scheduled LEPs are to be completed?

As discussed in the responses to previous questions, the National Nuclear Security Administration fiscal year 2011 Stockpile Stewardship and Management Plan (SSMP) does account for multiple phased life extension programs being conducted simultaneously. We believe this plan, which includes facility improvements, will, when implemented, adequately support the Department of Defense's evolving military requirements. With Congressional support of current and planned administration budget requests, the Department of Energy and National Nuclear Security Administration will be funded through FY 2015 to achieve the life extension and facility milestones contained in the SSMP.

1251 REPORT

The recently released 1251 report reaffirms the 2010 NPR policy that, "the United States will give strong preference to options for refurbishment or reuse" of our nuclear weapons. This position is at odds with the recommendations of the bipartisan Congressional Commission on the Strategic Posture of the United States.

Question. What are the guarantees that critical skills will not be lost if our Nation relies solely on refurbishment and reuse of existing pits in life extension programs?

Answer. We are committed to ensuring that the technical community is not constrained in its exploration of technical options for warhead life extension. Accordingly, the Nuclear Posture Review (NPR) makes it clear that the technical commu-

nity is to consider all technical options as it studies how best to extend the life of existing warheads in order to meet stockpile management goals (e.g., increased safety, security, and reliability) without providing new military capabilities and without underground nuclear tests. The Laboratory Directors will ensure that the full range of life extension program (LEP) approaches, including refurbishment, reuse, and replacement of nuclear components, is studied on a case-by-case basis. Although 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 on their best technical assessment of the ability of each LEP approach to meet stockpile management goals.

Question. How will the capability to design new pits be maintained in the absence of the actual exercise of those skills—through replacement or new pit production programs—and what current or planned stockpile work would maintain these skill sets in the absence of such weapons activities?

Answer. The response to this question is the same as the response to the previous question. Additionally, the core National Nuclear Security Administration program to develop a predictive capability for anticipating the evolution in performance margin and quantifying the possibilities of failure modes as nuclear explosives age is a significant and long-term scientific challenge that exercises key critical skills. This goal requires a vigorous science, technology, and engineering base where the skills are developed and honed through meaningful design and experimental work, and are additionally challenged through ongoing stockpile surveillance and annual assessments. These activities produce the necessary learning environment needed to retain the critical skills for Stockpile Stewardship and Management.

Question. Do you have any estimate as to the result New START Treaty implementation in Russia will have on U.S. CTR assistance to the Russian Federation?

Answer. Preliminary discussions with our Russian CTR partners have indicated their intent to meet New START Treaty targets in a manner consistent with CTR nonproliferation and threat reduction objectives. We therefore have every reason to believe that the excellent cooperation and close collaboration that has developed between U.S. and Russian partners over the past several years will continue under the new treaty.

RESPONSES OF SECRETARY GATES TO QUESTIONS SUBMITTED BY SENATOR DEMINT

Question. Why has the U.S. (in the Nuclear Posture Review) committed to the unilateral retirement of Sea-Launched Cruise Missiles (SLCM)? Does not Russia retain SLCMs?

Answer. Russia does retain SLCMs. Although the United States will retain its highly capable force of conventionally armed SLCMs that can be launched from attack submarines as well as several types of surface combatants, the Tomahawk Land Attack Missile—Nuclear (TLAM–N) will be retired as stated in the Nuclear Posture Review (NPR). TLAM–N has not been operationally deployed aboard submarines since the 1991 Presidential Nuclear Initiatives were announced and subsequently implemented. Based on analysis performed as part of the NPR, including numerous consultations with allies, the administration determined that TLAM–N was a redundant capability and could be retired. The United States will maintain its strong commitment to the defense and security of allies, including our commitment to provide extended deterrence with dual-capable fighters and heavy bombers if the situation ever demands.

Question. How will nondeployed ICBMs be maintained? Precisely how long will be necessary to "deploy" a formerly nondeployed ICBM?

Answer. Nondeployed ICBMs will be stored in accordance with the provisions of the New START Treaty either at declared storage facilities or at ICBM bases. The United States stores the bulk of its ICBMs in stages and not as fully assembled missiles. The United States will continue to maintain a small number of nondeployed, fully assembled missiles at each ICBM base in mission-ready status (i.e. spares).

The length of time to deploy a former nondeployed ICBM would depend on a number of factors. A fully assembled, nondeployed ICBM located at its ICBM base would take a matter of days to deploy, whereas an ICBM stored in stages at a storage facility located far from an ICBM base could take weeks to deploy due to the time necessary to transport the ICBM to the base, assemble, and deploy within a silo. Consequently, depending on a number of variables, the deployment time for a nondeployed ICBM to be emplaced in a launch silo could take from days to weeks.

Question. In your testimony to the Senate Foreign Relations Committee, you outlined a plan to reduce the number of missiles on each submarine by four, to convert some B–52s to a conventional role, and to remove at least 30 Minuteman III missiles. What is the anticipated cost of these activities? Were the costs of elimination contained in the budget projections considered in the formulation of the 1251 report plan?

Answer. The Section 1251 Report outlines a baseline U.S. force structure associated with the New START Treaty. Its budget projections do not include the costs of elimination and conversion. The treaty provides flexibility for both sides to decide what procedures would be most suitable to achieve those reductions in ways that would be cheaper and less burdensome. The Department of Defense is presently conducting analyses to determine the preferred types of conversion and elimination procedures as well as the associated financial costs.

Question. Can you precisely define what a Unique Identifier (UID) is? Where have they been employed in the past?

Answer. There are numerous methods a Party may use to affix a UID to missiles and heavy bombers; for instance, a UID could be painted, stenciled, engraved, emplaced on a placard, or etched. All U.S. strategic offensive systems currently have some form of UID. For example, U.S. ICBM first stages carry a unique serial number that is located on an identification plate on the side of the first-stage rocket motor. Heavy Bombers have a unique number that is located on the tail of the B–52 and B–1 and on the nose gear door of the B–2.

A Unique Identifier (UID) is a unique, nonrepeating alphanumeric identifier. Under the START Treaty, UIDs were used to track only mobile ICBMs and Russia utilized and reported UIDs on its mobile ICBM force. For the United States, the Peacekeeper system was designated as a mobile system under the START Treaty, which meant that it also contained a UID that was utilized and reported. Within the U.S. Armed Forces, the serial numbers and tail numbers on all other systems were used for maintenance and tracking purposes, but were not required to be reported under the START Treaty.

Under the New START Treaty, unique alphanumeric identifiers will be applied to all ICBMs, SLBMs, and heavy bombers equipped for nuclear armaments. These unique identifiers will be included in the database and in applicable notifications, so that individual strategic delivery vehicles may be tracked. During inspections, the Parties will be able to confirm these unique identifiers, as appropriate, which will provide additional confidence in the validity of the information in the database and notifications.

Question. You stated that, "While telemetry is not needed to verify the provisions of this treaty, the terms nonetheless call for the exchange of telemetry on up to five launches per year per side." If telemetry exchange is not for verification, what purpose does it serve to intelligence collection? How will the U.S. benefit from this provision, if Russia can select their own five flights, effectively preventing evaluation of new delivery platforms?

Answer. There are no obligations, prohibitions, or limitations in the New START Treaty that require the analysis of telemetric information in order to verify a Party's compliance with the treaty. For instance, the treaty does not limit the development of new types of missiles so there is no requirement to determine the technical characteristics of new missiles, such as their launch weight or throw-weight, in order to distinguish them from existing types. Nevertheless, the United States and Russia agreed to exchange telemetric information on an equal number of launches of ICBMs and SLBMs each year (up to five annually), with the testing party deciding the launches for which it will exchange information, to promote transparency and predictability. The value of such exchanges will depend on the specific launches for which telemetric information is exchanged.

For more discussion about the purpose served by telemetry for intelligence collection, please see the classified National Intelligence Estimate on the intelligence community's ability to monitor the New START Treaty.

RESPONSES OF SECRETARY GATES TO QUESTIONS SUBMITTED BY SENATOR BARRASSO

Question. The force structure of our nuclear triad is critical to maintaining an effective deterrent. The 2001 Nuclear Posture Review laid out our force structure in plain view while the 2010 Nuclear Posture Review is silent on force structure.

Your current force structure plan only provides a range of options. In your May 13, 2010 Wall Street Journal op-ed arguing for the New START Treaty, you stated: "Based on recommendations of the Joint Chiefs of Staff, we plan to meet the Trea-

ty's limits by retaining a triad of up to 420 ICBMs, 14 submarines carrying up to 240 SLBMs, and up to 60 nuclear-capable heavy bombers."

Secretary Gates, how do you expect Members from States like North Dakota, Montana, Washington, Georgia, Missouri and Wyoming to vote on this treaty without a detailed force structure?

Answer. The Department of Defense has provided to the Congress a report in response to Section 1251 of the National Defense Authorization Act, Fiscal Year 2010 providing substantial detail on our nuclear force structure plans in light of the New START Treaty. As explained in greater depth in that report, the United States will sustain and, in appropriate cases, modernize its robust triad of strategic delivery vehicles.

Because the treaty covers a 10-year period after entry into force, the Department has outlined a baseline force structure that fully supports U.S. strategy. This structure is important for planning purposes and shows our commitment to maintaining the triad, but also allows us to modify our force structure plans while fielding a force of 700 deployed strategic delivery vehicles, as circumstances dictate. Furthermore, the baseline nuclear force structure fully supports U.S. security requirements without requiring changes to current or planned basing arrangements.

Question. When will the detailed force structure plan be submitted to Congress?

Answer. The Department of Defense has submitted a detailed force structure plan, along with the New START Treaty, in accordance with Section 1251 of the National Defense Authorization Act, Fiscal Year 2010. Future force structure decisions will be briefed to Congress expeditiously.

Question. As you know, Damage Expectancy (DE) is the main criteria for weapon selection by war planners.

Damage Expectancy = Probability of Arrival x Probability of Damage

The ICBM and SLBM weapons have a high Probability of Arrival (PA) on target. The air breathing weapons or bombers (B–52 and B–2) must have a substantially lower PA because they must potentially fly through a defensive enemy environment (SAMs, fighters) or a deteriorated air environment (atmospheric first strike dust, volcanic ash). As we recently learned, a volcano eruption can ground an entire continent of aircraft.

Secretary Gates, can you explain the rationale for including so many aging bombers in the force structure given the lower damage expectancy for this weapons system?

Answer. The B–52 and B–2 bombers serve two principal purposes as part of the U.S. strategic triad. First, these heavy bombers could be placed on quick reaction alert, as an effective hedge, were a technical problem to emerge with regard to one of the other triad legs, or in response to a sharp deterioration of the international political situation. Second, they can be deployed to a threatened region in order to provide a visible and deployable signal of U.S. commitment and resolve as we meet our extended deterrence commitments to U.S. allies and partners during a crisis situation.

In addition, the ability to recall nuclear-equipped heavy bombers, if launched for survival, provides a critical capability to help manage the threat of nuclear escalation during a crisis or at the beginning of an armed conflict.

Question. In 2008, Secretary Gates coauthored a paper titled the "National Security and Nuclear Weapons in the 21st Century." This paper argued for a strong nuclear deterrent. In the foreword, Secretary Gates stated: "We believe the logic presented here provides a sound basis on which this and future administrations can consider further adjustments to U.S. nuclear weapons policy, strategy, and force structure."

The white paper recommended a U.S. strategic nuclear force baseline that includes:

- 450 Minuteman III ICBMs;
- 14 *Ohio*-class submarines; and
- 76 bombers (20 B–2 and 56 B–52 bombers)

Total of 862.

Question. Secretary Gates, can you please explain how the threat environment has changed to allow our nuclear deterrent to be reduced to 700 delivery vehicles since your 2008 recommendation to maintain 862 delivery vehicles?

Answer. The Nuclear Posture Review (NPR) conducted detailed analysis of current and future threats, as well as potential reductions in strategic weapons, including delivery vehicles that would allow the United States to sustain stable deterrence

at lower force levels. The conclusion from the NPR analysis is that stable deterrence could be maintained at lower strategic delivery vehicle levels, given our estimates of current and future Russian strategic forces.

It is also worth noting that the NPR and New START plans call for retaining all 14 SSBNs, but New START counting rules will allow the United States to count the missiles as deployed only when mated with launchers. This New START counting rule and the treaty's elimination and conversion provisions will allow the United States to retain all 14 SSBNs while having them account for only 240 deployed strategic delivery vehicles—some 96 fewer than assumed in the 2008 paper.

RESPONSES OF SECRETARY GATES TO QUESTIONS SUBMITTED BY SENATOR WICKER

MISSILE DEFENSE

Question. The New START Treaty prohibits the U.S. from placing Missile Defense interceptor missiles on submarines. Why did our negotiators permit this?

Answer. Article V of the treaty prohibits a Party from converting or using ICBM or SLBM launchers for the placement of missile defense interceptors or vice versa. The United States accepted this proposal because, as LTG Patrick O'Reilly, Director, Missile Defense Agency (MDA), explained, the MDA had studied the concept of launching missile defense interceptors from submarines and determined that such a course would be operationally impractical and extremely expensive. Furthermore, submerged submarines are not easily integrated into our missile defense command and control network.

Question. Secretary Gates, you said of the New START treaty on March 26 at the White House, "Nor does this treaty limit plans to protect the United States and our allies by improving and deploying missile-defense systems."

Will you clarify this statement?

Answer. The New START Treaty does not constrain the United States from deploying the most effective missile defenses possible, nor does it add any additional cost or inconvenience to our missile defense plans. As the Ballistic Missile Defense Review, our budget submission and projections, and the U.S. unilateral statement made in connection with the New START Treaty all make clear, the United States will continue to improve its missile defenses throughout the next decade.

Question. Is it appropriate to have any restriction at all on our ability to adapt to future changes in threats to the United States? Article V of the treaty has now taken at least one option off the table, has it not?

Answer. Regarding the treaty's ban in Article V, paragraph 3, on the conversion of ICBM or SLBM launchers to missile defense interceptor launchers and vice versa, this ban does not constrain the Department's missile defense plans in any way. We currently have a sufficient number of missile defense silos to accommodate the 30 Ground-Based Interceptors (GBIs) that we are fielding. Furthermore, should the decision be made in the future to field additional GBIs, we will already have eight extra, unoccupied missile defense silos in the ground at Fort Greely, Alaska.

The new treaty prohibits the conversion of ICBM or Submarine Launched Ballistic Missile (SLBM) launchers to missile defense launchers while "grandfathering" the five former ICBM silos at Vandenberg Air Force Base (VAFB) already converted for Ground Based Interceptors. The Department never had a plan to convert additional ICBM silos at VAFB. In 2002, we began converting ICBM silos to operational silos for launching GBIs because we had not developed a silo specifically for GBIs at that time. Since then, we have developed a GBI silo that costs $20M less than converting ICBM silos and is easier to protect and maintain.

Likewise, the conversion of SLBMs into missile defense interceptors, or the modification of our submarines to carry missile defense interceptors, would be very expensive and impractical. Furthermore, submerged submarines are not easily integrated into our missile defense command and control network.

UNITED STATES-RUSSIA RESET

Question. Secretary Gates, on March 26, you stated that "this treaty strengthens nuclear stability." The U.S. and Russia were well on their way toward achieving reductions to a range of 2,200–1,700 warheads as called for by the 2002 Moscow Treaty, and it was the opinion of most informed observers that U.S. and Russian nuclear weapons did not pose a threat to each other. In fact, it is the disparity in tactical nuclear weapons—not addressed by this treaty—that most threatens stability. Former Secretary James Schlesinger told the Senate Foreign Relations Committee

in May that "the significance of tactical nuclear weapons rises steadily as strategic nuclear arms are reduced."

What was wrong with nuclear stability before this agreement was negotiated?

How does it strengthen nuclear stability?

By not eliminating the huge disparity in Russian tactical nuclear weapons, does this contribute to nuclear instability?

The President announced in his Nuclear Posture Review that he will move to de-MIRV all our land-based ICBMs. START II eliminated all land-based MIRVs. I understand that START II never entered into force, but seeing as how land-based MIRVs have always been considered particularly de-stabilizing, why shouldn't it be considered a tremendous step backwards for arms control to complete a treaty where the Russians will be allowed to deploy large numbers of land-based MIRVs, which they have announced they plan to do?

Should we be concerned that this treaty does not prevent Russia from moving to large numbers of land-based MIRVs?

Answer. The immediate impetus behind the negotiation of the New START Treaty was the expiration of the START agreement, a treaty whose limitations and verification regime had been an important component of strategic stability for 15 years. As the Congressional Strategic Posture Commission recommended, it was important to negotiate a successor agreement that would preserve the nuclear arms control architecture between the United States and Russia, including the extensive verification provisions so essential for transparency and predictability. Beyond that, the negotiating effort was prompted by the objective of reinvigorating the arms control process in order to enable progress on additional issues of importance in the bilateral strategic relationship, including negotiation of a future nuclear arms reduction treaty that includes Russian tactical nuclear capabilities.

The New START Treaty strengthens strategic stability. It does so by imposing lower limits on strategic delivery vehicles and the strategic warheads they carry and by promoting predictability and transparency in our relationship with Russia, the world's other principal nuclear power. At the same time, the New START Treaty enables both the United States and the Russian Federation to field diverse, survivable, effective strategic nuclear forces that minimize the incentives for either side to strike first against the other, even in severe political crises. The New START Treaty will also enable the United States to maintain and modernize our robust and redundant triad of strategic delivery systems, our vital nuclear weapons complex, and our important ballistic missile defense capabilities. It also accommodates our possible deployment of conventional prompt global strike capabilities.

Tactical (nonstrategic) nuclear weapons are not limited by New START although, as the NPR makes clear, the United States intends to pursue additional and broader reductions with Russia that include all nuclear weapons, including tactical nuclear weapons and nondeployed nuclear weapons.

Because of their limited range and different roles, tactical nuclear weapons do not directly influence the strategic nuclear balance between the United States and Russia. Furthermore, within the regional context, the United States relies on multiple capabilities to support extended deterrence and power projection, including: its superior conventional force capabilities, tactical nuclear capabilities, the U.S. strategic nuclear deterrent, ballistic missile defenses, and allied capabilities.

While encouraging Russian de-MIRVing of its silo-based ICBMs was a longstanding U.S. arms control objective during the cold war, this was not an objective in either the Moscow Treaty or the New START Treaty. It is important to note that MIRVed mobile ICBMs differ from fixed, silo-based MIRVed ICBMs, because the former, when deployed to the field, are more survivable and thus do not present a stark "use or lose" choice in the fashion that silo-based ICBMs do. Limiting land-based MIRVed ICBMs was not an objective in the New START Treaty negotiations, which focused on extending the overarching arms control and verification architecture and permitting each Party to define its own strategic nuclear force structure and composition.

The United States will observe closely Russian force developments as they relate to MIRVing of land-based systems. Of particular interest will be Russian decisions regarding allocation of multiple warheads to silo-based ICBMs relative to the allocation of warheads to mobile ICBMs and SLBMs.

RESPONSES OF SECRETARY GATES TO QUESTIONS SUBMITTED BY SENATOR INHOFE

START (GENERALLY)

Question. In your testimony, you argue that the de-MIRVed ICBM force is stabilizing due to the need for Russia to use one-for-one or two-for-one attacking.

Was de-MIRVing necessary to achieve this stability?

If not, why were limitations on the number of warheads on ICBMs not a part of the treaty, and why is the United States taking a unilateral step?

Answer. The U.S. Nuclear Posture Review (NPR) decision to complete the de-MIRVing of the silo-based Minuteman III ICBM force was made because de-MIRVing enhances the strategic stability of the nuclear balance by reducing the incentives of a would-be attacking side to strike first. This is the case because de-MIRVing allows for the retention of a larger number of delivery vehicles and the silos that house them and thus forces the attacker to expend at least as many warheads (one attacking RV to destroy one RV of the opponent) and probably more (two or more attacking RVs to destroy the one RV of the opponent) to execute a first strike to neutralize the ICBM force. This means that an exchange would result in a net loss for the attacker in terms of RVs expended compared to the number of U.S. RVs destroyed. In addition, the deployment of hundreds of U.S. ICBMs in silos would compel the attacker to launch many hundreds of RVs, to attempt to neutralize this highly capable force.

Under the New START Treaty, each side will have the flexibility to determine the composition of its strategic forces. The U.S. de-MIRVing of ICBMs is being taken unilaterally because it enhances stability, irrespective of Russia's strategic force structure.

Question. The Russians have resumed attack submarine patrols off the East and West coasts of the United States. They have announced that these submarines could be equipped with cruise missiles carrying tactical nuclear weapons. How does this treaty, which fails to capture this important threat, improve our National Security?

Answer. The New START Treaty, in line with predecessor arms control treaties such as the START Treaty and the Treaty on Limitation of Strategic Offensive Arms (SALT), covers strategic forces, which do not include nuclear-armed, sea-launched cruise missiles. However, in 1991, the United States and the Soviet Union, as a political commitment, voluntarily agreed to cease deploying any nuclear SLCMs on surface ships or multipurpose submarines. Throughout the period of START implementation, including as recently as December 2008, Russia has declared that it planned to deploy zero nuclear SLCMs.

The United States intends to pursue discussions with Russia about arms control initiatives covering tactical nuclear weapons, including nuclear-armed, sea-launched cruise missiles, in the pursuit of a stable, long-term strategic relationship during the next round of United States-Russian nuclear arms reduction negotiations.

The New START Treaty improves our national security by strengthening strategic stability, providing for key data exchange and verification measures, preserving the ability of the United States to sustain and modernize its strategic triad, allowing each side freedom to choose and alter its mix of strategic forces, and fully protecting the U.S. flexibility to deploy important nonnuclear capabilities, including prompt global strike and missile defenses.

Question. You stated that a feature of arms agreements is, "to have some idea for both sides to know the limits on the other and therefore avoiding the need to hedge against the unknown."

a. Upon ratification of the treaty, and the reduction in deployed weapons, will there be a reduction in the hedge due to "having sufficient verification in place to be able to have confidence in that judgment"?

b. Is the U.S. hedge size connected to the treaty?

c. Is the U.S. hedge something Russia is interested in limiting due to perceptions about an advantage it affords the U.S. to upload its strategic missiles?

Answer a. The United States has benefited during the START Treaty from reduced uncertainty regarding the size and status of Russian strategic forces. Those benefits continue today but uncertainty will rise over time in the absence of a new treaty and its strong verification regime. The limits and verification provisions of the New START Treaty, if it is ratified and enters into force, will reduce uncertainty relative to what it otherwise would have been the case, and therefore will reduce the requirement for the United States to hedge.

Answer b. The treaty limit of 800 on deployed and non-deployed ICBM launchers, deployed and nondeployed SLBM launchers, and deployed and nondeployed heavy

bombers sets a practical upper bound on what could be uploaded onto strategic delivery vehicles from the nondeployed warhead hedge. This upload capability will be more than sufficient under New START. The long-term U.S. hedge provided by the responsiveness of the U.S. nuclear weapons infrastructure is not affected by the treaty.

Answer c. Whatever concerns the Russian Federation may have had, Russia agreed to the treaty, which permits the U.S. to maintain a significant upload capability that serves as a hedge against technical and geopolitical uncertainties.

STOCKPILE MODERNIZATION

Question. The anticipated funding directed to nuclear weapons in the 1251 Report is $80B for weapons and $100B for delivery vehicles.

a. How much of the $80B over 10 years has been "donated" by the DOD?

b. What specific programs are anticipated for delivery vehicle modernization, and in what year will these programs commence?

Answer a. The DOD transferred nearly $4.6 billion in top-line over the period FY 2011–2015 for National Nuclear Security Administration weapon activities for infrastructure enhancement, Life Extension Programs, and enhanced stockpile stewardship. This $4.6 billion includes a $145 million transfer in top-line over the period FY 2012–2015 for science, technology, and engineering activities in the Enhanced Stockpile Stewardship Program. In addition, another nearly $1.1 billion was transferred to Naval Reactors for reactor design and development during the same period. The specific annual breakdown of the DOD topline transfer ($M) is:

Annual Breakdown of the DOD Topline Transfer

[Millions of dollars]

	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	TOTAL
Weapons	561.0	736.4	858.5	1,148.9	1,292.6	4,597.4
Naval Reactors	80.6	150.9	223.7	278.8	350.9	1,084.9

Answer b. The FY 2011–2020 costs provided in the section 1251 report include funds for sustaining and upgrading existing systems, including the B–2A and B–52H bombers, Minuteman III ICBMs, and the *Ohio*-class SSBN. In addition, the report includes estimated costs for the *Ohio*-class SSBN replacement, with the initial funding for this program having been provided in the FY 2010 DOD budget. These FY 2011–2020 cost estimates do not provide funds for possible follow-on systems—the ALCM follow-on and the Minuteman III ICBM follow-on, and a possible follow-on heavy bomber—as studies are now underway regarding the analysis of options for these systems. As specific decisions are made regarding these systems, any necessary funding will be requested in future DOD budget requests.

RESPONSE OF ADMIRAL MULLEN TO QUESTION SUBMITTED TO BY SENATOR LUGAR

Question. From your standpoint, how specifically does the flexibility provided in New START, both in terms of its central limits and other provisions bearing on modernization and flexibility regarding strategic forces, benefit the U.S. military?

Answer. Under New START, each Party retains the right to determine for itself the structure and composition of its strategic forces within the treaty's overall limits. This provides the United States with the flexibility to deploy, maintain, and modernize its strategic nuclear forces in the manner that best protects U.S. national security interests. This means that the United States will be able to maintain a triad of ICBMs, SLBMs, and nuclear-capable heavy bombers under the New START Treaty—and the U.S. will retain the ability to "upload" a significant number of nuclear warheads as a hedge against any future technical problems with U.S. delivery platforms or warheads, a technical breakthrough by an adversary that threatens to neutralize a U.S. strategic delivery system, or as a result of a fundamental deterioration in the international security environment. The United States also maintains the freedom to take steps necessary to sustain existing capabilities, including those necessary to ensure the safety, security, and effectiveness of the U.S. stockpile of nuclear weapons.

Furthermore, the treaty does not restrict the U.S. ability to develop, test, or deploy conventional prompt global strike capabilities that could enable it to precisely

attack targets anywhere on the globe. Should the United States deploy conventional warheads on treaty-accountable ICBMs or SLBMs, they would count toward the treaty's aggregate deployed warhead limit of 1,550, just as conventional warheads would not have been distinguished from nuclear warheads in terms of accountability under the START Treaty. However, the treaty's limit of 700 deployed delivery vehicles combined with the associated ceiling of 1,550 deployed warheads would accommodate any plans the United States might pursue during the life of this treaty to deploy conventional warheads on ballistic missiles. Moreover, the treaty does not prohibit the development, testing, or deployment of potential future long-range weapons systems for conventional prompt global strike that are currently under development. We would not consider such nonnuclear systems that do not otherwise meet the definitions of the New START Treaty to be accountable as "new kinds of strategic offensive arms" for the purposes of the treaty.

RESPONSES OF ADMIRAL MULLEN TO QUESTIONS SUBMITTED BY SENATOR DEMINT

Question. The Nuclear Posture Review is rather unclear regarding nuclear targeting policy. Under this treaty, will the U.S. maintain a counterforce targeting capability, one that will hold at risk the targets that constitute the means of strategic attack on the U.S. in a timely and effective manner?

Answer. Utilizing existing targeting policies, the NPR conducted detailed analysis of potential reductions in strategic weapons, and concluded that stable deterrence could be maintained at lower levels, assuming parallel reductions by Russia to meet the lower ceiling of the New START Treaty.

The President, through the National Security Staff (NSS), establishes the Nation's targeting policies. These targeting policies are currently under review and, once the review is complete, will provide the foundation for revisions to appropriate nuclear planning directives within the Department of Defense.

Question. In your testimony to the Senate Foreign Relations Committee, you state that the United States "will also maintain sufficient capability to deter other nuclear states." Is this capability separate from, or in addition to, the ability to deter against Russia, if needed?

Answer. The aggregate U.S. deterrent capability includes capabilities to deter other nuclear states as well as those capabilities needed to deter Russia.

Question. During the campaign, President Obama asserted that the U.S. strategic nuclear force was on "hair-trigger" alert. Was that assessment accurate? Under this treaty, will the alert levels of the U.S. strategic nuclear forces remain as they were earlier in the decade?

Answer. As outlined in the 2010 Nuclear Posture Review, the President concurred that the current alert posture of U.S. strategic forces—with heavy bombers off full-time alert, nearly all ICBMs on alert, and a significant number of SSBNs at sea at any given time—should be maintained for the present. The President also agreed that the United States should continue to posture U.S. forces and enhance command and control arrangements for strategic nuclear forces to reduce further the possibility of nuclear launches resulting from accidents, unauthorized actions, or misperceptions, while maximizing the time available to the President to consider whether to authorize the use of nuclear weapons. Looking to the longer term, the Department of Defense will explore whether new modes of basing may ensure the survivability of the triad while eliminating or reducing incentives for prompt launch.

Question. In New START, Votkinsk will not be monitored, but notification of every launcher made there will be preceded by 48 hour notification. The fundamental philosophy of START monitoring was to assume that deception might occur. It appears that the fundamental philosophy of New START is that deception is unlikely. Would you characterize this as a weakening of the verification process?

Answer. No. The standard for the New START Treaty verification regime remains, as under the START Treaty, "effective verification." As explained by Ambassador Paul Nitze in the context of the INF Treaty ratification deliberations in 1988, effective verification means "we want to be sure that, if the other side moves beyond the limits of the treaty in any militarily significant way, we would be able to detect such violation in time to respond effectively and thereby deny the other side the benefit of the violation." This standard was reaffirmed in the START Treaty context by Secretary of State James Baker in 1992. As discussed during the START Treaty advice and consent deliberations, the required stringency of an effectively verifiable treaty regime is influenced by political circumstances, military capabilities, economic constraints, and other such factors. For instance, a major objective of the

United States in negotiating the START Treaty verification regime was to establish means to verify that treaty in an environment of strictly limited access due to the closed nature of the Soviet Union.

In this light, the requirements of effective verification have changed since the negotiation of the START Treaty. Today, the United States and Russia are not enemies, and each has developed a much more complete understanding of the strategic nuclear forces of the other Party in large part due to implementation of the START Treaty, including its inspection, notification, and telemetry regime. The United States now has a significantly clearer understanding of Russia's capabilities than the United States had when negotiating the START Treaty 20 years ago. The United States, therefore, sought to negotiate a more tailored verification regime for the New START Treaty that would involve lower costs and less administrative and operational burdens to both Parties than under the START Treaty.

Regarding continuous perimeter and portal monitoring at the Votkinsk Production Facility, this began as part of the INF Treaty and was one of the verification measures used to monitor mobile ICBM production under the START Treaty. During the last administration, the United States and Russia agreed that neither side wanted to extend the START Treaty. Preparations for ending the monitoring at Votkinsk began in 2008 so that the United States would be able to depart in an orderly way when the START Treaty expired on December 5, 2009.

The New START Treaty contains a new, simplified provision to track and account for new solid-fueled ICBMs and SLBMs being produced at Votkinsk. The New START Treaty specifically requires Russia to notify the United States 48 hours in advance every time a solid-fueled ICBM or SLBM leaves its production facility. The United States agreed to provide this same notification regarding the exit of any solid-fueled ICBM or SLBM from its production facility. The New START Treaty also continues the requirement from the START Treaty that each side notify the other of completion of a missile's transit and of its new location. These provisions will facilitate monitoring through National Technical Means. In addition, the New START Treaty requires the application of unique alphanumeric identifiers on all ICBMs and SLBMs as well as heavy bombers to help track and account for them from the time they are produced until they are eventually eliminated or converted, or otherwise removed from accountability.

RESPONSES OF SECRETARY CLINTON TO QUESTIONS SUBMITTED BY SENATOR LUGAR

Question. Might the Russian Duma and Federation Council specify, as they did in ratifying START II, conditions under which Russia may withdraw from New START relative to missile defense?

Answer. We have no information regarding whether the Russian Duma and Federation Council might specify conditions under which Russia may withdraw from New START. We will promptly inform the committee if such information becomes available to us.

Question. Do you have any information regarding what the Kremlin is likely to suggest in a draft law on ratification for New START relative to missile defense and the withdrawal clause in New START?

Answer. No. We will promptly inform the committee if such information becomes available to us.

Question. In your view, would the language on missile defense in New START impose constraints on our missile defense plans, programs and policies similar to those contained in the 1972 Anti-Ballistic Missile Treaty?

Answer. No. The 1972 ABM Treaty included specific limits on the number, location, and character of the ABM deployment sites and components for both the United States and the Soviet Union. The New START Treaty does not include any such limitations, and will not constrain the United States from deploying the most effective missile defenses possible, nor will it impose additional costs or barriers on those defenses. The treaty does not impose legal obligations or conditions that constrain existing or projected U.S. missile defense programs. As the administration's Ballistic Missile Defense Review and budget plans make clear, the United States will continue to improve our capability to defend the U.S. homeland, our deployed forces, and our allies and partners against the threat of limited ballistic missile attack and regional missile threats.

Question. Aside from its right to withdraw from New START, has Russia asserted a separate right to suspend implementation of New START, as it purported to do with the Conventional Forces in Europe (CFE) Treaty?

Answer. No.

Question. Does this administration intend to negotiate, as a part of missile defense cooperation with Moscow, agreements similar to those made in the Standing Consultative Commission in September 1997?

Answer. The Obama administration does not intend to negotiate, as a part of its missile defense cooperation talks with Russia, agreements similar to those agreed to in the Standing Consultative Commission in September 1997. Those agreements were signed within the context of the ABM Treaty and established criteria for differentiating between strategic and nonstrategic BMD systems. Our view is that the evolution of BMD technologies, especially since the U.S. withdrawal from the ABM Treaty in 2002, has made the distinction between strategic and nonstrategic BMD systems no longer valid, particularly as regional BMD systems are capable of enhancing the protection of the U.S. homeland and could thereby assume a strategic role.

We also believe that attempting to negotiate a distinction between strategic and nonstrategic missile defense systems, in the manner of the September 1997 agreements, would wrongly signal a willingness to negotiate limitations on BMD systems based on such a distinction. The Obama administration has consistently informed Russia that while we seek to establish a framework for United States-Russia BMD cooperation, the United States cannot agree to constrain or limit U.S. BMD capabilities numerically, qualitatively, operationally, geographically, or in other ways.

VERIFICATION PROCESS, NEW VERSES OLD

Verification under START I consisted of a three-step process of (a) notification, (b) monitoring, and (c) verification of compliance. Eighty types of notification were required and the Parties had to exchange this data pursuant to the START I MOU. Monitoring included 12 different types of onsite inspection, PPCM, cooperative measures, and the use of our National Technical Means (NTM). Special access inspection rights existed, although with a right of refusal given to the inspected Party. Verification of compliance consisted of taking into account any uncertainties presented by declared data in conjunction with START I's terms to make a finding on the likelihood of a violation or noncompliance by the Parties to START I.

Question. With respect to each of the following START I-accountable items or actions, please specify (a) whether New START contains provisions for notification, monitoring, and verification for each such item; (b) where in the New START Treaty, its protocol and annexes such notification, monitoring, and verification is specified or permitted; or (c) if notification, monitoring, and verification of such items is not included in New START, an explanation as to why it was not included:

- The number, by type, of deployed, fixed land-based ICBMs and SLBMs and their launchers;
- The number, by type, of deployed and non-deployed road-mobile and rail-mobile ICBMs and their launchers, and the production/final integration of mobile ICBMs;
- The aggregate throw weight of ballistic missiles;
- The number of warheads on ICBMs and SLBMs;
- The number of nondeployed mobile missiles;
- The aggregate number of deployed missiles;
- Technical parameters for new types of both missiles and ALCMs through technical exhibitions, exchange of telemetric data and NTM;
- The number, by type, of deployed heavy bombers that are equipped for nuclear-capable ALCMs;
- The number, by type, of deployed heavy bombers that are not equipped for nuclear ALCMs but that carry other nuclear munitions;
- The number, by type, of formerly nuclear-capable heavy bombers, training aircraft, and heavy bombers equipped for conventional munitions that no longer carry nuclear munitions;
- The elimination of strategic nuclear launchers and delivery vehicles;
- Monitoring production of ICBMs for mobile launchers of ICBMs to confirm the number of ICBMs for mobile launchers of ICBMs produced;
- Elimination of declared facilities.

Answer. *The number, by type, of deployed, fixed land-based ICBMs and SLBMs and their launchers;*

Article VII, paragraphs 1 and 2; Article XI, paragraphs 2 and 3; Protocol, Part Two, Section I, paragraph 5; Protocol, Part Two, Sections III and IV; Protocol, Part Four, Sections II and III; Protocol, Part Five, Section VI.

The number, by type of deployed and non-deployed road-mobile and rail-mobile ICBMs and their launchers, and the production/final integration of mobile ICBMs;

Article VII, paragraphs 1 and 2; Article XI, paragraphs 2 and 3; Protocol, Part Two, Section I, paragraph 5; Protocol, Part Two, Section III; Protocol, Part Four, Sections II and III; Protocol, Part Five, Sections VI and VII.

The aggregated throw weight of ballistic missiles;

There are no provisions for verifying throw weight in the New START Treaty because the Treaty does not limit the aggregate throw weight of ballistic missiles.

Throw weight was used under the START Treaty as an indirect measure of a missile's capability with respect to the number of warheads it could carry, and its assessment was part of the calculation of the number of warheads attributed to a new type of missile under the START Treaty.

In contrast, the New START Treaty requires a Party to provide during pre-inspection procedures the actual number of warheads emplaced on each ICBM or SLBM subject to the inspection, and does not utilize the warhead attribution method for counting ICBM and SLBM warheads. The warhead inspection portion of a New START Type One inspection is used to confirm the accuracy of the declared data on the actual number of warheads emplaced on a designated, deployed ICBM or SLBM.

The number of warheads on ICBMs and SLBMs;

Article VII, paragraphs 1 and 2; Article XI, paragraph 2; Protocol, Part Two, Section I, paragraph 5; Protocol, Part Two, Sections III and IV; Protocol, Part Four, Section II; Protocol, Part Five, Section VI.

The number of non-deployed mobile missiles;

Article VII, paragraphs 1 and 2; Article XI, paragraphs 2 and 3; Protocol, Part Two, Section I, paragraph 5; Protocol, Part Two, Section III; Protocol, Part Four, Sections II and III; Protocol, Part Five, Sections VI and VII.

The aggregate number of deployed missiles;

Article VII, paragraphs 1 and 2; Article XI, paragraph 2; Protocol, Part Two, Section I, paragraph 5; Protocol, Part Two, Sections III and IV; Protocol, Part Four, Section II; Protocol, Part Five, Section VI.

The technical parameters for new types of both missiles and ALCMs through technical exhibitions, exchange of telemetric data and NTM;

For missiles: Article VII, paragraphs 1 and 2; Article XI, paragraph 4; Protocol, Part Two, Section VII; Protocol, Part Four, Section II; Protocol, Part Five, Section VIII.

For ALCMs: The New START Treaty does not specifically limit long-range nuclear ALCMs, nor are there any Treaty provisions that would require the exchange or confirmation of technical parameters for ALCMs.

The number, by type, of deployed heavy bombers that are equipped for nuclear-capable ALCMs;

Article VII, paragraphs 1 and 2; Article XI, paragraph 2; Protocol, Part Two, Section I, paragraph 5; Protocol, Part Two, Section V; Protocol, Part Four, Sections II and III; Protocol, Part Five, Section VI.

The number, by type, of deployed heavy bombers that are not equipped for nuclear ALCMs but that carry other nuclear munitions;

Article VII, paragraphs 1 and 2; Article XI, paragraph 2; Protocol, Part Two, Section I, paragraph 5; Protocol, Part Two, Sections V; Protocol, Part Four, Sections II and III; Protocol, Part Five, Section VI.

The number, by type, of formerly nuclear-capable heavy bombers, training aircraft, and heavy bombers equipped for conventional munitions that no longer carry nuclear munitions;

Article VII, paragraphs 1 and 2; Article XI, paragraph 2 and 3; Protocol, Part Two, Section I, paragraph 5; Protocol, Part Two, Sections V; Protocol, Part Four, Sections II and III; Protocol, Part Five, Section VI and VII; Protocol, Part Nine, First Agreed Statement.

The elimination of strategic nuclear launchers and delivery vehicles;

Article VII, paragraphs 1 and 2; Article XI, paragraph 3; Protocol, Part Two, Section I, paragraph 5; Protocol, Part Two, Sections II and III; Protocol, Part Three, Sections I, II, III, IV, V, and VI; Protocol, Part Four, Section V; Protocol, Part Five, Section VII.

Monitoring production of ICBMs for mobile launchers of ICBMs to confirm the number of ICBMs for mobile launchers of ICBMs produced.

Article VII, paragraphs 1 and 2; Protocol, Part Two, Section I, paragraph 5; Protocol, Part Two, Section III; Protocol, Part Four, Section III; Protocol, Part Five, Sections VI and VII.

Elimination of declared facilities;

Article VII, paragraphs 1 and 2; Article XI, paragraph 3; Protocol, Part Two, Section IX, paragraphs 7 and 8; Protocol, Part Three, Section VII; Protocol, Part Four, Section V; Protocol, Part Five, Section VII, paragraphs 5 and 6.

Question. Please describe verification tasks that would be carried out in the 7 years after entry into force of the New START Treaty and in the period of time thereafter.

Answer. Verification of the New START Treaty will be carried out throughout the ten-year duration of the New START Treaty using all the measures and procedures provided for in the Treaty. These include on-site inspections, national technical means of verification, unique identifiers, data exchanges, and notifications:

- ON-SITE INSPECTIONS.—The Treaty provides that each Party can conduct up to 18 on-site inspections each year. These inspections are divided into two groups.

  Type One inspections are conducted at the operating bases for ICBMs, ballistic missile submarines (SSBNs), and nuclear-capable heavy bombers and focus on both deployed and non-deployed strategic arms. Each Party is allowed to conduct up to ten Type One inspections annually.

  Type Two inspections are focused on non-deployed strategic arms and conducted at places such as storage sites, test ranges, and conversion or elimination facilities. Each Party is allowed to conduct up to eight Type Two inspections annually.

  The New START Type One inspections combine many of the aspects associated with two different types of inspections conducted separately under the START Treaty, thus requiring fewer inspections annually at the operating bases while achieving many of the results of the previous treaty's inspection regime.

  Type One inspections contribute to verification of the Treaty's central limits by assessing the accuracy of declared data on the numbers of deployed and non-deployed ICBMs, SLBMs, and nuclear-capable heavy bombers and on the warheads located on or counted for them.

  Type Two inspections may also be used to confirm the conversion and elimination of strategic offensive arms and to determine whether eliminated facilities are being used for purposes inconsistent with the Treaty.

- NATIONAL TECHNICAL MEANS (NTM).—The Treaty provides for the use of national technical means of verification (e.g., reconnaissance) to verify compliance with the provisions of the New START Treaty.

  NTM will provide an independent method of gathering information that will contribute to the validation of Russian data declarations.

  The Treaty, in Article X, commits both Parties not to interfere with the NTM of verification of the other Party operating in accordance with that article.

- UNIQUE IDENTIFIERS (UID).—Each Party will assign and provide a unique alpha-numeric identifier for each of its deployed and non-deployed ICBMs, SLBMs, and heavy bombers subject to the Treaty.

  These unique identifiers, when combined with required notifications and inspections, will contribute to the ability to track the disposition and patterns of operation of such arms throughout their life cycles, including their production, movement between facilities, changes in deployment status, possible storage, and eventual conversion or elimination.

- DATA EXCHANGE.—The Parties are required to exchange aggregate data on their strategic offensive arms and related facilities 45 days after entry into force of the Treaty and semi-annually thereafter.

  The sides will exchange data on the numbers, locations, and technical characteristics of deployed and non-deployed strategic offensive arms subject to the Treaty, listed by unique identifier for ICBMs, SLBMs, and heavy bombers, as well as data on the facilities where these arms are located.

  This exchange of data will help provide the United States with an overall picture of Russia's accountable strategic offensive arms. Each Party will be able to use on-site inspections and other means in order to check the validity of the other Party's data declarations.

- NOTIFICATIONS.—The Treaty establishes a comprehensive notifications regime to track the movement and changes in status of strategic offensive arms subject to the Treaty.

  This notifications regime ensures that the database is an updated, "living document" that provides transparency regarding the disposition of each Party's strategic offensive arms.

  Through such notifications, and through tracking ICBMs, SLBMs, and heavy bombers by their UIDs, the United States will be better able to track the status of Russian strategic offensive arms throughout their life cycles.

Question. The preamble implies that additional reductions would be possible only in a multilateral context. What steps are being taken in this regard with countries other than Russia, and could future U.S. reductions, below those in New START, occur only if undertaken by other countries, such as China?

Answer. Preserving continuity in our strategic nuclear relationship with Russia is important. Thus, our first order of business is to work with the Senate in support of the ratification and entry into force of this Treaty. As stated in the Nuclear Posture Review, the President has directed a review of post-New START arms control objectives to consider further reductions in nuclear weapons. The President has also expressed his desire to address non-strategic nuclear weapons and non-deployed nuclear weapons in future bilateral negotiations with Russia. It is also our goal to expand this process to a multilateral approach in the future.When the New START Treaty is ratified and enters into force, we can begin to move to expand the process of further reducing and limiting nuclear arms.

UNILATERAL STATEMENTS

In connection with signing the treaty, both Russia and the United States made unilateral statements regarding missile defense. The President's Letter of Transmittal states that they are not legally binding and are not integral parts of the New START Treaty.

Question. What is the legal status and significance of these statements?

How do these statements differ from the statements on missile defense made by the Soviet Union and the United States in connection with the signing of the START I Treaty in 1991?

Answer. These unilateral statements do not change the legal rights or obligations of the Parties under the treaty and are not legally binding. Thus, these unilateral statements have the same legal status as the unilateral statements made by the Soviet Union and the United States in connection with the signing of the START Treaty in 1991.

The New START Treaty, like most other arms control treaties, provides that a Party may withdraw from the treaty if that Party decides that extraordinary events related to the subject matter of the treaty have jeopardized its supreme interests. Under this standard, each Party may decide when extraordinary events related to the subject matter of the treaty have jeopardized its supreme interests.

The unilateral statement made by the Russian Federation reflects its current view that such "extraordinary events" would include a build-up in the missile defense system capabilities of the United States "such that it would give rise to a threat to the strategic nuclear forces potential of the Russian Federation."

President Medvedev explained the Russian view regarding the significance of the Russian unilateral statement during a television interview in April 2010 in which he said: "That does not mean that if the USA starts developing missile defense the treaty would automatically be invalidated, but it does create an additional argument that binds us and that makes it possible for us to raise the question of whether quantitative change to missile defense systems would affect the fundamental circumstances underlying the treaty. If we see that developments do indeed represent a fundamental change in circumstances, we would have to raise the issue with our American partners. But I would not want to create the impression that any changes would be construed as grounds for suspending a treaty that we have only just signed."

The 1991 Soviet unilateral statement on "the interrelationship between reductions in strategic offensive arms and compliance with the Treaty between the U.S. and the USSR on the Limitation of Anti-Ballistic Missile Systems" stated that the START Treaty may be effective and viable only under conditions of compliance with the ABM Treaty, and further that the extraordinary events referred to in the relevant provision in the START Treaty also include events related to withdrawal by one of the Parties from the ABM Treaty or related to its materiel breach." When the United States withdrew from the ABM Treaty in 2002, however, the Russian

Federation (as a successor state to the Soviet Union) did not withdraw from the START Treaty.

In both U.S. unilateral statements—made in connection with the New START Treaty and with the START Treaty—the United States provided reasons why its activities related to missile defense should not raise concerns for Russia (or, in the case of START, the Soviet Union).

INITIAL DATA NOTIFICATION

Part Two of the New START Protocol specifies that not later than 45 days after the date of signature the Parties will provide certain categories of data to each other relating to their strategic offensive arms—(a) site diagrams of facilities and, if applicable, (b) coastlines and waters diagrams for each facility at which inspection activities may be conducted; (c) an initial exchange of data according to the categories of data contained in Part Two; and in accordance with the Annex on Inspection Activities to the Protocol, (d) photographs, unless such photographs were previously provided in connection with fulfilling the requirements of the START Treaty. Given that the treaty was signed on April 8, the 45-day period for submitting this data ended on May 23.

Question. Has Russia provided this data to the United States and vice versa?

Answer. The United States and the Russian Federation have conducted their initial exchange of site diagrams and coastlines and waters diagrams pursuant to the requirements of Part Two of the Protocol. As provided in the Protocol, the initial exchange of data and photographs will not take place until 45 days after entry into force of the treaty.

Question. Will the State Department brief the Committee on Foreign Relations on the Russian submission when and if this information is received?

Answer. In accordance with paragraph 6 of Article VII of the treaty, which is being provisionally applied, site diagrams and coastlines and waters diagrams may not be released to the public unless so agreed within the framework of the Bilateral Consultative Commission. The State Department therefore will provide these diagrams to the Committee through classified channels.

The administration will be prepared to brief the committee regularly on treaty implementation, including the data exchanged between the Parties.

COMMON NAMES

Question. Why does Article III in New START fail to provide the common American names ("known to the United States of America as") for Russian ICBM and SLBM systems, as was the case in Article III of START I?

Answer. Article III lists the existing types of ICBMs and their launchers, SLBMs and their launchers, and heavy bombers as of the date of signature of the treaty. The Parties agreed to use the formal designations that each Party had established for each ICBM and its launcher, each SLBM and its launcher, and each heavy bomber rather than the NATO designation which had been used by the United States under the START Treaty. By using a single designation to reference a treaty-accountable item, the possibility for confusion is reduced and the implementation of treaty provisions is simpler.

PROVISIONAL APPLICATION

Part Eight of the Protocol specifies that paragraph 2 of Article V, will be provisionally applied.

Question. Has Russia developed or deployed any new kinds of strategic offensive arms other than the existing types listed in paragraph 8 of Article III since December 4, 2009? If so, what are they?

Answer. Please see classified response to be provided separately.

Question. Why does the New START Treaty define a "new type" (defined term number 46. in Part One of the Protocol) but not a "new kind" of strategic offensive arm?

Answer. Both the START Treaty and the New START Treaty have definitions for "new type"; however, neither Treaty contains a definition of a "new kind of strategic offensive arm." Leaving the term "new kind of strategic offensive arm" undefined allows the Parties to discuss and reach agreement regarding new arms that do not fall within any definition established by the treaty.

Question. Why is the notification in the relevant annex concerning "a new kind of strategic offensive arm" limited to questions and clarifications, with no reference to characteristics, capabilities or distinguishing features for new kinds of strategic offensive arms?

Answer. The notification concerning a "new kind of strategic offensive arm" is structured to provide flexibility in the event that a Party raises a question about any new kind of strategic offensive arm. Such questions and clarifications could include, but are not limited to, references to characteristics, capabilities, or distinguishing features.

The notification also provides for responding to any such questions.

Part Eight of the Protocol specifies that paragraph 1 of Article VI will be provisionally applied.

Question. Since December 4, 2009, has the Russian Federation carried out any conversion, elimination, or removed by other means from accountability any strategic offensive arms and facilities?

Answer. Since the end of the START Treaty, the Russians have continued to eliminate and convert missiles systems and facilities, similar to how they did under that treaty. For instance, missile and rocket motor eliminations are under Cooperative Threat Reduction contracts. Examples of the conversion and elimination activities since the expiration of START include:

- Elimination of SS–25 ICBMs at Votkinsk
- SS–25 ICBM launchers have been eliminated at Pibanshur
- SS–25 ICBM rocket motors have been burned at Krasnoarmeysk
- SS–N–23 SLBMs have been eliminated at Krasnoyarsk.

Question. Which New START verification provisions would apply to any strategic offensive arms and facilities converted, eliminated, or removed by other means from accountability during provisional application of the New START Treaty?

Answer. While there are many verification provisions that will apply to strategic offensive arms and facilities converted, eliminated, or removed by other means from accountability once the New START Treaty enters into force, notification of any launch of an ICBM or SLBM is the only such provision that will be applied during the provisional application period. This provision adopts by reference the existing "Agreement Between the United States of America and the Union of Soviet Socialist Republics on Notification of Launchers of Intercontinental Ballistic Missiles and Submarine-Launched Ballistic Missiles of May 31, 1988."

Russian strategic offensive arms are being eliminated during this period of provisional application in cooperation with U.S. personnel under the Cooperative Threat Reduction Program, but there are no provisions for providing notification thereof under the New START Treaty for this period.

Part Eight of the Protocol specifies that paragraph 2 of Article VII of the treaty will be provisionally applied by the two sides pending the treaty's entry into force, but says that such provisional application shall be "only to the extent required to provide the notifications provided for in this Part."

Paragraph 2 of Article VII of the treaty provides that "Each Party shall notify the other Party about changes in data and shall provide other notifications in a manner provided for in Part Four of the Protocol to this Treaty."

Question. Please specify which notifications the Parties have agreed to provide in the period prior to the treaty's entry into force by virtue of the provisional application of paragraph 2 of Article VII of the treaty.

Answer. The Parties agreed to provisionally apply the following notifications:

1. Paragraph 5, Section III, Part Four of Protocol: the beginning of a major strategic exercise involving heavy bombers.
2. Paragraph 6, Section III, Part Four of Protocol: the completion of a major strategic exercise involving heavy bombers.
3. Paragraph 1, Section IV, Part Four of Protocol: any launch of an ICBM or SLBM, in accordance with the Agreement Between the United States of America and the Union of Soviet Socialist Republics on Notification of Launches of Intercontinental Ballistic Missiles and Submarine-Launched Ballistic Missiles of May 31, 1988.
4. Paragraph 1, Section VII, Part Four of Protocol: a request to convene a session of the BCC.
5. Paragraph 2, Section VII, Part Four of Protocol: a response to a request to convene a session of the BCC.
6. Paragraph 3, Section VII, Part Four of Protocol: other messages relating to the activities of the BCC.

7. Paragraph 4, Section VII, Part Four of Protocol: a request for clarification of a notification.
8. Paragraph 5, Section VII, Part Four of Protocol: a clarification, correction, or modification of a notification.
9. Paragraph 6, Section VII, Part Four of Protocol: additional messages with respect to the Treaty.

Question. Does this include all notifications provided for in Part Four of the Protocol to the treaty?

Answer. No. The notifications provisionally applied, prior to entry into force of the New START Treaty, do not include all notifications provided for in Part Four of the Protocol to the Treaty, but only the nine notifications specified in the response to the previous question.

Question. Is it limited to notifications relating to provisions of the treaty that are being provisionally applied pursuant to Part Eight of the Protocol?

Answer. Yes, the Part Four notification provisions that are being provisionally applied are limited to the nine notifications referred to in Part Eight of the Protocol. Part Eight of the Protocol specifies that paragraph 4 of Article VII will be provisionally applied.

Question. What "additional notification." does Article VII contemplate?

Answer. Paragraph 4 of Article VII permits the Parties to provide additional notifications on a voluntary basis beyond those specified in paragraph 2 of the Article if a Party deems this necessary to ensure confidence in the fulfillment of obligations assumed under the treaty. Such notifications would be determined by the transmitting Party.

Question. Would these notifications be of a different type or provide different data than specified in the other treaty notifications, or are they merely additional notifications of an identical type and content?

Answer. The notifications provided for in paragraph 4 of Article VII could, for example, provide additional information necessary to ensure confidence in the fulfillment of obligations assumed under the treaty. However, there are no specific criteria regarding what the notifications should include, and the content of the notification will be determined by the transmitting Party.

PROVISIONAL APPLICATION OF START I AND NEW START

Question. Does the Russian Federation have the necessary domestic legal authority to permit it to provisionally apply relevant provisions of the treaty and Protocol in the period prior to their entry into force as provided for in Part Eight of the Protocol?

Answer. Yes. The Russian negotiators advised that the Russian Federation does have the necessary domestic authority to permit it to provisionally apply those provisions listed in Part Eight of the Protocol.

Question. What was the record regarding provisional application of the START I Treaty? Did Russia permit or carry out actions under provisional application or did it wait until START I entered into force before initiating all activities under START I, its Protocols and the MOU?

Answer. Under the START Treaty, Russia fulfilled the obligations the Parties had agreed to provisionally apply, which were primarily related to the operation of the Joint Compliance and Inspection Commission; the development of telemetry-related procedures; the exchange of site diagrams and photographs; early exhibitions; and the exchange of inspector, monitor, and aircrew lists.

Question. Is Russia presently applying all provisions identified in Part Eight of the New START Protocol on a provisional basis under its terms?

Answer. Yes. In signing the Treaty, Russia agreed to provisionally apply the portions of the treaty and its Protocol that are listed in Part Eight of the Protocol (Provisional Application) during the interim between signature and entry into force of the Treaty. We have no reason to conclude that Russia is not fulfilling its obligations under Part Eight of the Protocol on provisional application.

SUBSTANTIVE RIGHTS AND OBLIGATIONS

Article XV of the treaty provides that the Parties may use the Bilateral Consultative Commission (BCC) created by the treaty to make changes to the treaty's protocol "that do not affect substantive rights or obligations unde." the treaty. Such

changes would be made without resorting to the regular procedures for amending the treaty.

Question. Does the executive branch intend to submit changes adopted through this procedure to the Senate for advice and consent as it would do with formal amendments to the treaty?

Answer. The START Treaty contained similar language in each of its Protocols, under which the Parties used the Joint Compliance and Inspection Commission (JCIC) to make changes in the Protocols that did "not affect substantive rights or obligations unde." that treaty. The executive branch intends to use the same procedures with respect to making such changes in the New START Treaty as it did in making them within the framework of the START Treaty's JCIC. Accordingly, changes to the Protocol that do not affect substantive rights or obligations under the treaty will not be submitted to the Senate for advice and consent. Any change that does affect substantive rights or obligations would be an amendment and would require Senate advice and consent. Every agreement reached in the BCC will be provided for the Senate to view. The authority to agree on such changes through the JCIC was an important tool for the successful implementation of the START Treaty.

Question. What criteria does the executive branch intend to use to determine whether a particular change to the treaty will "affect substantive rights or obligations?"

Answer. The START Treaty provides many helpful precedents for analyzing the question of whether a particular change in the New START Protocol will "affect substantive rights or obligation." under the treaty. In most cases, the nonsubstantive changes made in the JCIC under the START Treaty were related to verification procedures and information exchange and were of a technical nature. The executive branch intends to consult with the Senate in those cases in which there could be a question as to whether a proposed change in the Protocol will affect substantive rights or obligations under the treaty.

Question. Please provide examples of the kinds of changes the executive branch envisions being adopted through this procedure.

Answer. Some provisions of the treaty are highly detailed and may require adjustment over the life of the treaty. This would include, for example, provisions regarding the content and timing of notifications in New START or the detailed procedures related to inspections.

The experience of the START Treaty's Joint Compliance and Inspection Commission (JCIC) provides some helpful examples of the type of changes that might be agreed upon within the framework of the New START Treaty's Bilateral Consultative Commission. For example, the JCIC agreed on the releasability of treaty-related data, as is also provided for under paragraph 5 of Article VII of the New START Treaty, on specific procedures for use of radiation detection equipment, and on changes to types of inspection equipment.

Question. Does the executive branch intend to consult with the Senate in making determinations about whether a particular change affects substantive rights or obligations under the treaty?

Answer. As with the START Treaty, the executive branch intends to consult with the Senate in those cases in which there could be a question whether a proposed change in the Protocol would affect substantive rights or obligations under the treaty.

RESPONSES OF SECRETARY CLINTON TO QUESTIONS SUBMITTED BY SENATOR DEMINT

Question. Are you familiar with 22 U.S.C. § 2578, which requires the Secretary of State to compile and maintain the negotiating history of all arms control agreements. The text reads:

> (a) PREPARATION OF RECORDS.—The Secretary of State shall establish and maintain records for each arms control, proliferation, and disarmament agreement to which the United States is a party and which was under negotiation or in force on or after January 1, 1990, which shall include classified and unclassified materials such as instructions and guidance, position papers, reporting cable and memoranda of conversation, working papers, draft texts of the agreement, diplomatic notes, notes verbal, and other internal and external correspondence.

(b) NEGOTIATING AND IMPLEMENTATION RECORDS.—In particular, the Secretary of State shall establish and maintain a negotiating and implementation record for each such agreement, which shall be comprehensive and detailed, and shall document all communications between the parties with respect to such agreement. Such records shall be maintained both in hard copy and magnetic media.

Will you agree to share all of these materials with Senators and their staffs? How soon will you submit this material, unclassified and classified?

Answer. A detailed article-by-article analysis of the New START Treaty that is nearly 200 pages long was provided to the Senate in the transmittal package from the President on May 13, 2010. This analysis provides information on every provision of the treaty, protocol, and annexes and was prepared by the treaty negotiators with relevant information drawn from the negotiating record.

The treaty text and these materials, as well as testimony provided at hearings on the treaty, and the regular briefings to the committee by senior officials, including the negotiating team, provide a comprehensive picture of U.S. obligations under the treaty. However, should you have any outstanding questions we are committed to providing answers in detailed briefings, in a classified session, if needed.

Question. During Senate consideration of the START I Treaty and implementation of the ABM Treaty, members of the Senate were provided the negotiating records. Indeed, the Senate advice and consent process for START was led by a Senate Arms Control Observer Group led by Senators Nunn, Lugar, Byrd, Warner, and the Majority and Minority Leaders, Mitchell and Dole. Access to the record and the negotiators were critical to achieving a clear understanding of the treaty's provisions and thus facilitated the approval process. Please explain why the administration does not support full transparency in the advice and consent process and why it does not support providing the U.S. Senate—charged constitutionally with providing advice and consent to treaties—full access to the negotiating record?

Answer. The Executive does not traditionally submit to the Senate the "negotiating record" of a treaty for which the Senate's advice and consent is being sought. For example, the Senate gave advice and consent to 90 treaties during the 110th Congress. In not one of those cases did the Executive provide to the Senate "full access to the negotiating record."

So far as we are aware, Senators were not provided "full access to the negotiating record" during Senate consideration of the START Treaty. Nor was the negotiating record provided to the Senate during its consideration of the ABM Treaty. Rather, information from the negotiating record was provided to the Senate in relation to a controversial interpretation of the ABM Treaty after the Senate had provided its approval and the treaty had entered into force.

As the committee noted in its report on the treaty between the United States and the USSR on the Elimination of Their Intermediate-Range and Shorter-Range Missiles, "a systemic expectation of Senate perusal of every key treaty's 'negotiating record' could be expected to inhibit candor during future negotiations and induce posturing on the part of U.S. negotiators and their counterparts during sensitive discussions." The committee report further noted that regularly providing the negotiating record would ultimately "weaken the treaty-making process" and "damage American diplomacy."

Of course, Senators being asked to provide advice and consent to ratification of a treaty should have a full understanding of what obligations would be undertaken by the United States upon ratification of that treaty. Thus, when a treaty is submitted by the President it is accompanied by a detailed article-by-article analysis of the treaty. The analysis of the New START Treaty transmitted to the Senate by the President on May 13, 2010, is nearly 200 pages and provides information on every provision of the treaty, protocol, and annexes. This analysis was prepared by the treaty negotiators with relevant information drawn from the negotiating record. The treaty text and these materials provide a comprehensive picture of U.S. obligations under the treaty. Should you have any outstanding questions we are committed to providing answers in detailed briefings, in a classified session, if needed.

Question. You argued that there is no custom of sharing the full negotiating record with the Senate, stating that administrations going back to President Washington have chosen not to provide the negotiating records of treaties to the Senate.

Is it not the case that President Washington submitted the full negotiating record of Jay's treaty to the Senate?

Can you please explain how not sharing the negotiating record of this treaty is consistent with President Obama's memo from his first days in office that said "Ad-

ministration is committed to creating an unprecedented level of openness in Government"?

Answer. As noted in my answer to the previous question, the Executive does not traditionally submit to the Senate the "negotiating record" of a treaty for which the Senate's advice and consent is being sought. In the case of the Jay Treaty, President Washington may have provided aspects of the negotiating record to the Senate, but that is certainly not standard practice. Instances in which the negotiating record or portions thereof have been provided to the Senate are extremely rare exceptions to the rule. For example, it is notable that although the Senate gave its advice and consent to 90 treaties during the 110th Congress, in not one of those cases did the Executive provide to the Senate "full access to the negotiating record."

President Obama's Memorandum on Transparency and Open Government was designed to strengthen our democracy and promote efficiency and effectiveness in Government. The principles articulated in the President's Memorandum mandate that Senators be provided with a comprehensive picture of U.S. obligations under the treaty. This is accomplished in the detailed article-by-article analysis of the treaty that accompanied the President's transmittal of the New START Treaty on May 13, 2010. This analysis, which is nearly 200 pages and provides information on every provision of the treaty, protocol, and annexes, was prepared by the treaty negotiators with relevant information drawn from the negotiating record.

Regularly providing full access to the negotiating record of treaties would not only be unnecessary to a full understanding of the treaty's provisions, but would also have a negative impact on the effectiveness of the U.S. Government. As the committee noted in its report on the treaty between the United States and the USSR on the Elimination of Their Intermediate-Range and Shorter-Range Missiles, "a systemic expectation of Senate perusal of every key treaty's 'negotiating record' could be expected to inhibit candor during future negotiations and induce posturing on the part of U.S. negotiators and their counterparts during sensitive discussions." The Committee Report further noted that regularly providing the negotiating record would ultimately "weaken the treaty-making process" and "damage American diplomacy."

Question. Secretary Clinton, in your testimony you stated, "And we have said very clearly, number one, that it has to be a NATO decision [to withdraw our tactical nukes from Europe]. It's not a unilateral decision. And, number two, we are not going to withdraw our tactical nukes unless there is an agreement for Russia to similarly discuss with us withdrawal of their tactical nukes." Would you be willing to support a restatement of your second point to read, "We are not going to withdraw our tactical nukes unless there is an agreement for Russia to similarly withdraw their tactical nukes."?

Answer. As stated in the April 2010 U.S. Nuclear Posture Review, we will seek to include non-strategic and non-deployed nuclear weapons in the next round of arms control negotiations with Russia. While we don't want to prejudge the outcome of future negotiations, we have consistently stated that NATO's nuclear posture should be discussed and decided together by Allies. It is the U.S. view that in any future reductions, our aim should be to seek Russian agreement to increase transparency on non-strategic nuclear weapons in Europe, relocate these weapons away from the territory of NATO members, and include non-strategic nuclear weapons in the next round of U.S.-Russian arms control discussions alongside strategic and non-deployed nuclear weapons.

RESPONSES OF SECRETARY CLINTON TO QUESTIONS SUBMITTED BY SENATOR WICKER

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Question. Secretary Clinton, what is timeline for the completion of the national intelligence estimate and the formal verification assessments required to completely evaluate the treaty? What are the terms of reference of that NIE? Will it be limited to an estimate of the verifiability of the treaty or will it also evaluate how the treaty contributes, along with our national technical means, to an understanding of Russian nuclear forces?

Answer. The National Intelligence Estimate on the Intelligence Community's ability to monitor the New START Treaty was published on June 30, 2010, and has been provided to the Senate.

The verifiability assessment of the New START Treaty is conveyed in the State Department's Section 306 report which addresses the determinations of the U.S. Government as to the degree to which the limits of the New START Treaty can be

verified. The Section 306 report was published on July 12, 2010 and has been provided to the Senate.

MISSILE DEFENSE

Question. Secretary Clinton, the Ballistic Missile Defense Review Report states, "The United States will continue to engage [China and Russia] on this issue to help them better understand the stabilizing benefits of missile defense . . ." Regarding Russia, would you detail how the U.S. side used the New START negotiations to help the Russians better understand the stabilizing benefits of missile defense?

Answer. The United States did not use the New START Treaty negotiations as a medium to help the Russians better understand the stabilizing benefits of missile defense. From the outset, the United States and Russia agreed that the New START Treaty was intended to replace the START Treaty, and that it would focus on the reduction and limitation of strategic offensive arms.

U.S. missile defense discussions with Russia have been conducted in the Arms Control and International Security Working Group, which is cochaired by Under Secretary of State Ellen O. Tauscher and Deputy Foreign Minister Sergei Ryabkov. This working group operates under the umbrella of the United States-Russia Bilateral Presidential Commission which was established by President Obama and President Medvedev at the Moscow Summit, July 6–8, 2009.

We have provided, and will continue to provide, policy and technical explanations to Russia regarding why U.S. ballistic missile defense (BMD) capabilities such as the European-based Phased Adaptive Approach will not undermine Russia's strategic nuclear deterrent. The United States has also offered to provide transparency and confidence-building measures to demonstrate that existing and planned U.S. BMD programs are not directed against Russia and do not threaten Russia's strategic deterrent and to develop various forms of missile defense cooperation between the United States and the Russian Federation.

Question. In remarks at the Atlantic Council on April 21, 2010, Under Secretary of State Ellen Tauscher said, "Our Russian friends needed some assurances as it negotiated deeper reductions in the absence of an ABM Treaty. The United States made a unilateral statement to clarify that our missile defense systems are not intended to affect the strategic balance with Russia."

Why was it necessary to provide such assurances to Russia?

Answer. A number of public statements made by Russian leaders about the treaty have shown that they considered such assurances necessary in the context of reaching agreement on the treaty. Under Secretary Tauscher's statement to the Atlantic Council was based on standing U.S. policy as articulated in the 2010 Ballistic Missile Defense Review that "while the GMD system would be employed to defend the United States against limited missile launches from any source, it does not have the capacity to cope with large scale Russian [or Chinese] missile attacks, and is not intended to affect the strategic balance with those countries."

The United States has made clear that U.S. missile defense efforts are not directed against Russia. As Secretary Gates stated in his May 18 testimony before the SFRC:

> Under the last administration, as well as under this one, it has been U.S. policy not to build a missile defense that would render useless Russia's nuclear capabilities. It has been a missile defense intended to protect against rogue nations such as North Korea and Iran, or countries that have very limited capabilities. The systems that we have, the systems that originated and have funded in the Bush administration, as well as in this administration, are not focused on trying to render useless Russia's nuclear capability. That, in our view, as in theirs, would be enormously destabilizing, not to mention unbelievably expensive.

Because Russia has expressed concerns that U.S. ballistic missile defense (BMD) capabilities could eventually be a threat to Russia's nuclear deterrent, the United States has sought to explain to Russia our approach to missile defense, consistent with the testimony of Secretary Gates quoted above. To this end, we have provided, and will continue to provide, policy and technical explanations regarding why U.S. BMD capabilities such as the European-based Phased Adaptive Approach do not and cannot pose a threat to Russian strategic deterrent forces.

Question. What other "assurances" did U.S. negotiators provide with respect to future U.S. missile defense plans?

Answer. U.S. missile defense was not the subject of New START negotiations. U.S. negotiators did not provide Russia with "assurances" with respect to future

U.S. missile defense plans, openly or otherwise. Nonetheless, we have stated, in various fora, that U.S. missile defense is not intended to affect the strategic balance with Russia.

Question. Were the Russians informed that the U.S. intends to deploy the SM–3 block IIB missile in Europe to defend against the ICBM threat from the Middle East? What was the Russian response?

Answer. The potential deployment of the SM–3 Block IIB was clearly explained during the President's September 19, 2009 announcement of the "Phased Adaptive Approach" to ballistic missile defense in Europe as well as in the Ballistic Missile Defense Review Report to Congress, which was published on February 1, 2010. Additionally, the Obama administration has provided briefings on U.S. regional and national ballistic missile defense (BMD) policy, plans, and programs to representatives of the Russian Government and the Russian military. The briefing and discussion conducted in Moscow in October 2009 within the Arms Control and International Security Working Group of the United States-Russia Bilateral Presidential Commission included a clear description of all four phases of the U.S Phased Adaptive Approach (PAA) to missile defense in Europe, including the possible deployment of the SM–3 Block IIB under Phase 4 to defend against the ICBM threat from the Middle East. A second briefing and discussion were held between representatives of the U.S. Joint Staff and the Russian General Staff in a meeting of the Military Cooperation Working Group.

Russia has expressed concerns that the ability to defend against ICBMs launched from the Middle East that is slated to be deployed under Phase 4 of the PAA in Europe could pose a threat to Russia's strategic nuclear deterrent. This is not the case. Representatives of the Obama administration have explained and will continue to explain that U.S. missile defenses, including those to be deployed during all phases of the European PAA, do not pose a threat to Russia's strategic deterrent.

Question. Do the Russians view the IIB as a qualitative improvement to U.S. missile defense systems that would justify withdrawal from the treaty?

Answer. To date, the Russians have not identified specific missile defense systems whose deployment would justify Russian withdrawal from the treaty. At a press conference on April 6, 2010, just prior to the signing of the treaty, Foreign Minister Lavrov, in speaking about the prospective deployment of U.S. SM–3 systems in Romania, said that "[w]ith respect to the practical aspects of the contemplated unilateral U.S. missile defense systems. We have noted that in the first stages, the system will not have strategic characteristics. When and if the strategic features of this system emerge, we will look into the extent to which they create risks to our strategic nuclear forces."

Question. Given the disparity in views between the U.S. and Russia on missile defense, do you think this treaty is setting the stage for future confrontation over this issue as the U.S. continues to deploy missile defense systems, especially in Europe?

Answer. No, I do not believe the treaty is setting the stage for future confrontation over this issue. The New START Treaty does not constrain U.S. plans for fielding and continuing to develop missile defenses. The U.S. unilateral statement in response to Russia's statement makes it clear that the United States intends to continue to improve and deploy the most effective missile defense capabilities possible.

Beyond the context of the New START Treaty, Russia has expressed concerns that future U.S. BMD capabilities—including the later phases of the Phased Adaptive Approach—could eventually be a threat to Russia's strategic nuclear deterrent. In an effort to address Russian concerns, we have provided, and will continue to provide, policy and technical explanations regarding why U.S. BMD capabilities such as those associated with the Phased Adaptive Approach will not undermine Russia's strategic nuclear deterrent. The United States has also offered to provide transparency and confidence-building measures to demonstrate that existing and planned U.S. BMD programs are not directed against Russia and do not threaten Russia's strategic deterrent. These discussions with Russia regarding our missile defense plans will continue to take place independent from bilateral New START Treaty discussions.

These efforts seek to minimize future friction with Russia regarding U.S. missile defense programs. Regardless, the United States is committed to implementing the BMD policies outlined in the Ballistic Missile Defense Review Report, including deployment of the Phased Adaptive Approach in Europe, as needed to respond to long-range missile threats that emerge in the Middle East.

Question. In a GAO report concerning the Russia 123 last June, that agency stated:

> We identified weaknesses in the process State used to ensure interagency consultation during the development of the classified NPAS annex that accompanied the United States-Russia 123 agreement, including a lack of formal guidelines, failure of NRC to analyze the final version of the annex prior to the Commission's vote on the agreement, and concerns with the consultative process involving the intelligence community.

As the administration has opted to resubmit the Russia 123 Agreement, can you assure this committee that those issues have all been addressed?

Answer. In its report on the United States-Russia Nuclear Agreement (GAO–09–743R, released June 29, 2009), the GAO report outlined three recommendations for Executive Action.

The first recommendation was that the Secretary of State should work with the Secretary of Energy (DOE), Chairman of the Nuclear Regulatory Commission (NRC), and Director of National Intelligence (DNI), as appropriate, to clarify how interagency participants will implement their statutorily assigned roles and responsibilities in the review process for agreements for peaceful nuclear cooperation entered into under Section 123 of the Atomic Energy Act of 1954, as amended ("123 Agreements") and associated documents, such as the Nuclear Proliferation Assessment Statement (NPAS) and classified annex that accompany 123 Agreements. In the course of preparing and clearing the documents needed for resubmission to Congress in May 2010 of the United States-Russia 123 Agreement, the Department of State informed all relevant interagency officials of their roles and responsibilities in reviewing and clearing the submittal package, and the National Security Council (NSC) sent all involved agencies a timetable that agencies were expected to meet in completing those responsibilities. The Department of State also took steps throughout the clearance process to keep interagency officials informed of the status of the transmittal package.

The second recommendation was that the Secretary of State should work with the Secretary of Energy, NRC Chairman, and the DNI, as appropriate, to establish written procedures to carry out the process used to develop, review, and transmit 123 Agreements and associated documents. While the Department has not yet drafted a formal set of written procedures for interagency consideration, we were cognizant of the concerns underlying this recommendation and took steps throughout the process of reviewing and clearing the United States-Russia 123 Agreement transmittal package to make sure that all relevant interagency officials understood their responsibilities, and that the objective of the recommendation was fulfilled within the time available to complete the relevant documents and forward them to the Congress.

The third recommendation was that the Secretary of State should, with the Secretary of Energy, NRC Chairman, and DNI, as appropriate, ensure adequate time for consultation with the NRC and provide for the NRC to be given the final versions of all necessary documents prior to any vote on approval for, and submission of its views and recommendations on, a 123 agreement. In the course of preparing and clearing the 2010 United States-Russia 123 Agreement transmittal package, the Department of State kept relevant NRC officials informed about the status of the various documents in the package and ensured that the NRC received the last versions of those documents prior to their submission to the President for his approval of the 123 Agreement and requisite statutory determination.

Question. As you know, the House version of the Iran Sanctions legislation now in conference includes a provision that would prevent the Russia 123, or any other 123 agreement for nuclear cooperation, from being implemented unless the President determines that the country in question is not providing Iran with nuclear weapons technology or ballistic missile or advanced conventional weapon technology.

Do you agree with this provision? If not, why did you cosponsor S. 970 when you were a Senator? As you may recall, that legislation contained almost the exact same provision?

Do you think the President would be able to issue such a determination in the case of Russia?

Answer. The administration continues to believe that there are significant benefits to the United States in concluding an agreement for peaceful nuclear cooperation with Russia ("123 Agreement"). Once it enters into force, the 123 Agreement will provide a solid foundation for long-term civil nuclear cooperation, create commercial opportunities for U.S. industry, and enhance cooperation on important global nonproliferation benefits. The Nuclear Proliferation Assessment Statement

(NPAS) submitted as part of the 2010 transmittal package is based on a current assessment of Russia's nonproliferation behavior and reaches the conclusion that the 123 Agreement will promote, and will not constitute an unreasonable risk to, the common defense and security.

We are working very closely and in cooperation with Russia on our shared goal of preventing Iran from acquiring a nuclear weapons capability. Russia does not support an Iran with nuclear weapons and—in addition to other constructive contributions to international nuclear nonproliferation efforts— joined the November 2009 IAEA Board of Governors resolution condemning Iran's lack of cooperation with the IAEA, its refusal to suspend enrichment, and its failure to comply with its Safeguards Agreement. Russia has supported all six U.N. Security Council resolutions calling on Iran to suspend enrichment, and also continues to provide key assistance in the ongoing IAEA proposal discussions to refuel the Tehran Research Reactor.

Question. The President, in a statement released on May 10 said, "After review of the situation and of the NPAS and classified annex, I have concluded: (1) that the situation in Georgia need no longer be considered an obstacle to proceeding with the proposed Agreement." Has Russia withdrawn from its illegal occupation of South Ossetia and/or Abkhazia? If not, why is the illegal invasion no longer a concern of the Department of State?

Answer. Enhancing peace and security in the Caucasus is a priority for the United States. The decision to move forward with the 123 Agreement was made on its own merits and in order to advance nonproliferation, a goal which Georgia shares. Advancing civil nuclear energy cooperation with Russia through this Agreement in no way diminishes our unwavering support for Georgia's sovereignty and territorial integrity. We still have serious differences with Russia over its actions and posture in Georgia. We are frank and forthright in making our views known to Russia, bilaterally as well as through the Geneva process and in other international fora. We continue to urge Russia to abide by its August 12, 2008, cease-fire commitments. In particular, we have expressed concern over the Russian Government's construction of permanent bases in South Ossetia and Abkhazia, and its refusal to withdraw to prewar positions, both of which we think are inconsistent with those commitments.

Question. According to a May 11 Reuters report, a senior Kremlin official said that, "Russia wants 'the swiftest removal' of U.S. sanctions against Russian state arms exporter Rosoboronexport and three other enterprises he indicated were under U.S. restrictions aimed at preventing weapons proliferation. 'We will demand it—seeing as they are counting on our position in working out (measures) against Iran with the international community.'"

Can you assure this committee that any decision to remove sanctions on entities in any country will be based solely on whether the entity is proliferating technology in violation of our law and not as a result of a quid pro quo with Russia where they agree to support sanctions, especially sanctions they have already watered down?

Answer. There has been no quid pro quo with the Russian Government on the issue of sanctions. We decided to lift penalties on several Russian entities because doing so was determined to be in the foreign policy and national security interests of the United States.

We believe that securing the 1929 UNSC resolution will have a significant impact on Iran's ability to develop weapons of mass destruction and acquire conventional weapons. The UNSC resolution will put international legal constraints on potential exports of concern by entities in all U.N. Member States, including Russia.

Nonproliferation is a high priority for the United States, and the Russian Government is a key partner in this effort. We will continue to work cooperatively with the Russian Government to prevent entities from contributing to weapons of mass destruction, missile programs, or conventional weapons programs of concern. At the same time, we will continue to implement U.S. nonproliferation penalties when appropriate. We will continue to monitor the activities of Russian entities and will make determinations consistent with existing legislation and other legal authorities.

Question. When will you submit the Iran, North Korea, Syria Non Proliferation Act (INKSNA) reports that are due semiannually, but have not been submitted since October 2008?

Answer. The Department acknowledges that delivery of the INKSNA report was delayed considerably. The Department has completed the determinations mandated by the legislation and provided a classified report to the Foreign Affairs Committees of the Congress on July 10, 2010. The Department is prepared to brief on the report's content and judgments.

Question. Secretary Clinton, in your prepared remarks you asserted that the completion of New START "conveys to other nations that we are committed to real reductions, and to holding up our end of the bargain under the Non-Proliferation Treaty." The United States has been reducing its nuclear weapons stockpile for 40 years, and that fact is very well-known. It did not take the declassification of our stockpile numbers at the NPT Review Conference to demonstrate it. In this respect, what benefits to the nonproliferation regime can we expect to come from the particular reductions embodied in this treaty that have not come from the previous 40 years of US nuclear reductions?

Answer. The cornerstone of the nonproliferation regime is the Nuclear Non-Proliferation Treaty (NPT), which contains three pillars—disarmament, nonproliferation, and access to peaceful uses of nuclear energy—all of which are interlinked. The treaty obligates nuclear-weapon states to pursue negotiations on effective measures relating to disarmament, and without measures for this purpose, the willingness of non-nuclear-weapon state Parties to support a strong nonproliferation regime would likely diminish. We can expect that the New START Treaty, combined with further nuclear reductions and nonproliferation efforts such as holding Iran accountable for Treaty violations, will strengthen the NPT regime and ensure that it remains the principal legal barrier to nuclear proliferation.

The United States and Russia are the world's two largest nuclear powers. Although both nations have made significant cuts to their stockpiles, both still possess significantly more warheads than any other nation. For this reason, the world looks to the United States and Russia to uphold the architecture of arms control and nonproliferation.

RESPONSES OF SECRETARY CLINTON TO QUESTIONS SUBMITTED BY SENATOR INHOFE

TACTICAL NUCLEAR WEAPONS

Question. Secretary Clinton, the 2010 Nuclear Posture Review concludes that "large disparities in nuclear capabilities could raise concerns on both sides and among U.S. allies and partners, and may not be conducive to maintaining a stable, long-term relationship, especially as nuclear forces are significantly reduced." Under this treaty, the U.S. will reduce deployed strategic nuclear warheads to 1,550 and the Russians will do the same. At the same time, the Russians will continue to deploy at least 3,800 tactical nuclear warheads in addition to their strategic nuclear warheads, compared to only a couple of hundred deployed U.S. tactical nuclear weapons. Not only will the Russians maintain 10–1 superiority in tactical nuclear weapons, their tactical nuclear weapons will outnumber our strategic nuclear weapons by at least 2–1.

What impact will this disparity have on allied views of the U.S. nuclear umbrella?

What leverage do we have to address this disparity in the future, and why didn't we make this an objective for this agreement?

Answer. Because of their limited range and different roles, tactical nuclear weapons do not directly influence the strategic balance between the United States and Russia. Furthermore, within the regional context, the United States relies on additional capabilities to support extended deterrence and power projection, including: conventional force capabilities, ballistic missile defenses, allied capabilities, advanced technologies, and modernization and maintenance of existing forces, to name a few. As President Obama stated in Prague last year, we are committed to maintaining a safe, secure, and effective nuclear arsenal to deter any adversary and guarantee that defense to our allies. During the Nuclear Posture Review (NPR) consultations, our NATO allies were engaged on the issue of extended deterrence and were assured of our continued commitment to their defense. Allies have welcomed the outcome of the NPR, as well as the signing of the New START Treaty.

A more ambitious treaty—one that addressed tactical nuclear weapons or additional nuclear weapons states—would have taken much longer to complete, adding significantly to the time before a successor agreement, including verification measures, could enter into force following START's expiration in December 2009. We hope the New START Treaty will set the stage for further negotiations with Russia on measures to reduce both our strategic and tactical nuclear weapons, including nondeployed nuclear weapons.

Question. Secretary Clinton, it is common knowledge that Russia was going down to 600–800 strategic delivery vehicles whether or not there was a NEW START Treaty. At Russia's request, the administration decided to forgo the leverage it had

to include tactical nuclear weapons in this treaty—for which the Russians have a 10 to 1 advantage over the United States.

What was the rationale for forgoing that leverage?

What is the Russian incentive to open new negotiations on tactical nuclear weapons now that they have NEW START?

Answer. A more ambitious treaty that addressed tactical nuclear weapons would have taken much longer to complete, adding significantly to the time before a successor agreement, including verification measures, could enter into force following START's expiration in December 2009. Because of their limited range and different roles, tactical nuclear weapons do not directly influence the strategic balance between the United States and Russia.

President Medvedev has expressed interest in further discussions on measures to further reduce both nations' nuclear arsenals. The Russians are concerned with the totality of the U.S. nuclear stockpile, the upload capability of our strategic ballistic missiles as well as U.S. tactical weapons located in Europe. Also, Article VI of the Nuclear Nonproliferation Treaty (NPT) stipulates that nuclear weapons states are to work toward achieving nuclear disarmament. The Russians are sensitive to world opinion and want to be seen as favorably working towards this goal. As stated in the April 2010 Nuclear Posture Review and by the President at the signing of the New START Treaty in Prague, we intend to raise strategic and tactical nuclear weapons, including nondeployed nuclear weapons, in those discussions.

STOCKPILE MODERNIZATION

Question. Secretary Clinton, you testified that the NNSA budget for FY11 shows a 10-percent increase in the weapon and infrastructure and a 25 percent increases in direct stockpile work. You stated, "This was not in previous budgets." Since you are comfortable discussing the NNSA budget, please answer the following questions:

Isn't it true that the FY07, FY08 and FY09 budgets each showed an anticipated FY11 budget requirement of about $7 billion, the amount requested by the Obama administration this year.

Answer. The prior years referenced are correct for the Weapons Activities account. The President's FY 2011 budget request is specifically focused on the implementation of administration objectives as stated in the 2010 Nuclear Posture Review.

Question. It is true that the direct stockpile work budget, under weapon activities, is 25 percent higher than prior budgets. Does the direct stockpile work increase come at the expense of infrastructure requirements outlined in the FY07–FY09 budgets (including essential replacement facilities for plutonium and uranium operations)?

Answer. The President's FY 2011 budget request increases directed stockpile work by 26 percent compared to FY 2010, and includes increases in science and selected infrastructure investments to satisfy Department of Defense requirements. The President's FY 2011 budget request reflects a balanced approach to satisfy planned directed stockpile work, science capabilities, infrastructure investment, and continuity of essential capabilities for plutonium and uranium operations, consistent with requirements identified in the Nuclear Posture Review and plans outlined in the Stockpile Stewardship and Management Plan.

Question. What is the assurance that NNSA will be able to modernize the complex, with sufficient capacity and with an adequate time-line, at these lower levels?

Answer. The recently completed NNSA Stockpile Stewardship and Management Plan provides the comprehensive resource planning document for modernizing the nuclear security enterprise over the long term to support the administration's objectives detailed in the Nuclear Posture Review. The Secretary of Energy and the Secretary of Defense are confident that we have a credible modernization plan necessary to sustain the nuclear infrastructure and support our nation's deterrent.

Question. Table 3 of the DOD/DOE 1251 report shows the Readiness in Technical Base and Facilities (RTBF) account as essentially flat until FY16, yet the NNSA is going to be starting work on the CMRR and the UPF facilities prior to that year. Please explain how the RTBF account will be sufficient to cover design and construction work on those two facilities and will cover, with next-to-no increases, current requirements for RTBF funding for facilities and operations costs across the NNSA enterprise.

Answer. The current Future Years Nuclear Security Program (FYNSP) RTBF construction budget for fiscal years 2011–2015 has been prioritized to enable design

completion and the start of construction for the CMRR nuclear facility and the Uranium Processing Facility (UPF).

Question. Please explain the apparent slip in the date for initial operations for CMRR from 2020 to 2022. Is this due to insufficient funding?

Answer. There is no slip in the date for initial operations for the CMRR nuclear facility. Construction of the CMRR nuclear facility is scheduled to be completed in 2020, with transition to full operations to be completed in 2022.

Question. Should the administration have requested more money?

Answer. No, we believe the budget we have set forth meets requirements and is executable.

Question. Please provide detailed breakdowns on a site-by-site basis for FY11–16 for RTBF spending.

Answer. Please see the spreadsheets that follow.

RTBF FY2011-2015 President's Budget Request

Site Code DepAdm Prog Subprog	2011	2012	2013	2014	2015
KCP					
3: RTBF					
1: Operations of Facilities					
R1.01: Operations of Facilities	186,102,000	136,809,000	95,373,000	86,460,000	89,418,000
1: Operations of Facilities Total	186,102,000	136,809,000	95,373,000	86,460,000	89,418,000
2: Program Readiness					
R2.01: Program Readiness	4,662,000	4,594,000	4,573,000	4,233,000	4,378,000
2: Program Readiness Total	4,662,000	4,594,000	4,573,000	4,233,000	4,378,000
5: Containers					
R5.01: Containers	125,000	976,000	954,000	963,000	996,000
5: Containers Total	125,000	976,000	954,000	963,000	996,000
3: RTBF Total	**190,889,000**	**142,379,000**	**100,900,000**	**91,656,000**	**94,792,000**
LANL					
3: RTBF					
1: Operations of Facilities					
R1.01: Operations of Facilities	318,464,000	311,265,000	306,709,000	291,778,000	301,767,000
1: Operations of Facilities Total	318,464,000	311,265,000	306,709,000	291,778,000	301,767,000
4: Material Recycle and Recovery					
R4.01: Material Recycle and Recovery	15,270,000	12,128,000	14,145,000	14,897,000	15,407,000
4: Material Recycle and Recovery Total	15,270,000	12,128,000	14,145,000	14,897,000	15,407,000
8: Readiness in Technical Base and Facilities Construction					
04-D-125: #04-D-125 CMR Replacement, LANL	225,000,000	305,000,000	300,000,000	299,961,000	300,000,000
06-D-140-03: #06-D-140-03 PED, Replacement of Rad Liquid Waste Treatment Plant, LANL	4,000,000				
07-D-140-02: #07-D-140-02 PED, TRU Waste Facility, LANL	5,000,000	6,500,000	12,349,000	71,151,000	40,000,000
07-D-220: #07-D-220 Replacement of Rad Liquid Waste Treatment Plant, LANL		40,000,000	15,455,000		
11-D-801: #11-D-801 TA-55 Reinvestment Project Phase 2, LANL	20,000,000	19,640,000	20,221,000	20,468,000	42,480,000
8: Readiness in Technical Base and Facilities Construction Total	254,000,000	371,140,000	348,025,000	391,580,000	382,480,000
3: RTBF Total	**587,734,000**	**694,533,000**	**668,879,000**	**698,255,000**	**699,654,000**
LLNL					
3: RTBF					
1: Operations of Facilities					
R1.01: Operations of Facilities	80,106,000	42,307,000	43,002,000	22,110,000	22,867,000
1: Operations of Facilities Total	80,106,000	42,307,000	43,002,000	22,110,000	22,867,000
5: Containers					
R5.01: Containers	163,000	160,000	158,000	161,000	167,000
5: Containers Total	163,000	160,000	158,000	161,000	167,000
3: RTBF Total	**80,269,000**	**42,467,000**	**43,160,000**	**22,271,000**	**23,034,000**
NTS					
3: RTBF					
1: Operations of Facilities					
R1.01: Operations of Facilities	80,077,000	74,883,000	75,176,000	75,486,000	86,190,000
1: Operations of Facilities Total	80,077,000	74,883,000	75,176,000	75,486,000	86,190,000

Site Code	DepAdm Prog	Subprog	2011	2012	2013	2014	2015
		2: Program Readiness					
		R2.01: Program Readiness	22,815,000	14,144,000	13,855,000	19,099,000	19,752,000
		2: Program Readiness Total	22,815,000	14,144,000	13,855,000	19,099,000	19,752,000
	3: RTBF Total		102,892,000	89,027,000	89,031,000	94,585,000	105,942,000
PX							
	3: RTBF						
		1: Operations of Facilities					
		R1.01: Operations of Facilities	121,254,000	117,332,000	118,189,000	118,391,000	122,441,000
		1: Operations of Facilities Total	121,254,000	117,332,000	118,189,000	118,391,000	122,441,000
		2: Program Readiness					
		R2.01: Program Readiness	3,734,000	3,638,000	3,738,000	3,397,000	3,513,000
		2: Program Readiness Total	3,734,000	3,638,000	3,738,000	3,397,000	3,513,000
		5: Containers					
		R5.01: Containers	4,367,000	3,900,000	3,856,000	3,906,000	4,040,000
		5: Containers Total	4,367,000	3,900,000	3,856,000	3,906,000	4,040,000
		6: Storage					
		R6.01: Storage	8,246,000	7,177,000	8,150,000	7,487,000	7,743,000
		6: Storage Total	8,246,000	7,177,000	8,150,000	7,487,000	7,743,000
		8: Readiness in Technical Base and Facilities Construction					
		08-D-802: #08-D-802 High Explosive Pressing Facility, PX	30,000,000	30,359,000			
		8: Readiness in Technical Base and Facilities Construction Total	30,000,000	30,359,000			
	3: RTBF Total		167,601,000	162,406,000	133,933,000	133,181,000	137,737,000
SNL							
	3: RTBF						
		1: Operations of Facilities					
		R1.01: Operations of Facilities	117,369,000	115,272,000	116,363,000	115,600,000	109,213,000
		1: Operations of Facilities Total	117,369,000	115,272,000	116,363,000	115,600,000	109,213,000
		2: Program Readiness					
		R2.01: Program Readiness	19,021,000	10,116,000	9,834,000	18,703,000	19,342,000
		2: Program Readiness Total	19,021,000	10,116,000	9,834,000	18,703,000	19,342,000
	3: RTBF Total		136,390,000	125,388,000	126,197,000	134,303,000	128,555,000
SRNS							
	3: RTBF						
		1: Operations of Facilities					
		R1.01: Operations of Facilities	92,722,000	98,192,000	98,275,000	99,154,000	102,546,000
		1: Operations of Facilities Total	92,722,000	98,192,000	98,275,000	99,154,000	102,546,000
		4: Material Recycle and Recovery					
		R4.01: Material Recycle and Recovery	3,364,000	3,334,000	3,325,000	3,358,000	3,473,000
		4: Material Recycle and Recovery Total	3,364,000	3,334,000	3,325,000	3,358,000	3,473,000
		5: Containers					
		R5.01: Containers	3,410,000	2,500,000	2,811,000	3,288,000	3,400,000
		5: Containers Total	3,410,000	2,500,000	2,811,000	3,288,000	3,400,000
	3: RTBF Total		99,496,000	104,026,000	104,411,000	105,800,000	109,419,000

Site Code DepAdm Prog Subprog	2011	2012	2013	2014	2015
Y12					
3: RTBF					
1: Operations of Facilities					
R1.01: Operations of Facilities	220,927,000	221,292,000	223,386,000	224,636,000	227,321,000
1: Operations of Facilities Total	220,927,000	221,292,000	223,386,000	224,636,000	227,321,000
4: Material Recycle and Recovery					
R4.01: Material Recycle and Recovery	40,905,000	40,561,000	40,428,000	40,366,000	41,747,000
4: Material Recycle and Recovery Total	40,905,000	40,561,000	40,428,000	40,366,000	41,747,000
5: Containers					
R5.01: Containers	11,153,000	9,799,000	9,647,000	9,765,000	10,099,000
5: Containers Total	11,153,000	9,799,000	9,647,000	9,765,000	10,099,000
6: Storage					
R6.01: Storage	15,987,000	12,358,000	13,275,000	14,455,000	14,950,000
6: Storage Total	15,987,000	12,358,000	13,275,000	14,455,000	14,950,000
8: Readiness in Technical Base and Facilities Construction					
06-D-140-05: #06-D-140-05 PED, Uranium Processing Facility, Y-12		50,000,000	12,728,000		
06-D-141: #06-D-141 PED, Y-12, Uranium Processing Facility	115,016,000				
10-D-501: #10-D-501 Nuclear Facility Risk Reduction (NFRR), Y12		35,387,000	17,909,000		
11-D-802: #11-D-802 Uranium Processing Facility, Y-12		55,400,000	177,259,000	270,012,000	320,000,000
8: Readiness in Technical Base and Facilities Construction Total	115,016,000	140,787,000	207,896,000	270,012,000	320,000,000
3: RTBF Total	**403,988,000**	**424,797,000**	**494,632,000**	**559,234,000**	**614,117,000**
All Other					
3: RTBF					
1: Operations of Facilities					
R1.01: Operations of Facilities	40,970,000	61,160,000	52,735,000	27,661,000	36,028,000
1: Operations of Facilities Total	40,970,000	61,160,000	52,735,000	27,661,000	36,028,000
2: Program Readiness					
R2.01: Program Readiness	19,077,000	16,000,000	15,998,000	18,109,000	18,728,000
2: Program Readiness Total	19,077,000	16,000,000	15,998,000	18,109,000	18,728,000
4: Material Recycle and Recovery					
R4.01: Material Recycle and Recovery	10,890,000	5,655,000	5,775,000	4,765,000	4,927,000
4: Material Recycle and Recovery Total	10,890,000	5,655,000	5,775,000	4,765,000	4,927,000
5: Containers					
R5.01: Containers	8,774,000	4,708,000	5,674,000	4,888,000	5,055,000
5: Containers Total	8,774,000	4,708,000	5,674,000	4,888,000	5,055,000
8: Readiness in Technical Base and Facilities Construction					
14-D-MC: #14-D-MC, Mission Consolidation, Various				31,860,000	19,776,000
8: Readiness in Technical Base and Facilities Construction Total				31,860,000	19,776,000
3: RTBF Total	**79,711,000**	**87,523,000**	**80,182,000**	**87,283,000**	**84,514,000**
Grand Total	1,848,970,000	1,872,546,000	1,841,325,000	1,926,568,000	1,997,764,000

Question. Secretary Clinton, when you were a member of the Senate Armed Services Committee, that committee and several others, supported the Reliable Replacement Warhead program. As you know, it was stopped by one House subcommittee.

Is that your recollection?

Do you still support the RRW, which you consistently supported when you served on the SASC?

Answer. This administration has made clear that we will maintain a safe, secure, and effective nuclear arsenal, and our recent budget request for a 10% increase in NNSA weapons funding is indicative of this commitment. After months of extensive analysis, our Nuclear Posture Review (NPR), which was led by DOD and included the NNSA and the State Department, concluded that we can maintain the safety, security, and reliability of our nuclear arsenal through life extension programs (LEPs). Reliable Replacement Warhead (RRW) was a program to replace all existing nuclear warheads with a common family of new warhead designs. In contrast to that approach, the NPR adopted a nuclear warhead LEP under which our experts will study options for ensuring the safety, security, and reliability of nuclear warheads on a case-by-case basis, consistent with the congressionally mandated Stockpile Management Program. The full range of LEP approaches will be considered: refurbishment of existing warheads, reuse of nuclear components from different warheads, and replacement of nuclear components. In any decision to proceed to engineering development for warhead LEPs, the United States will give strong preference to options for refurbishment or reuse. Replacement of nuclear components would be undertaken only if critical Stockpile Management Program goals could not otherwise be met, and if specifically authorized by the President and approved by Congress.

Question. Secretary Clinton, I am concerned that the administration is laboring under the misconception that nuclear disarmament, which this treaty is designed to advance, must progress simultaneously with the pursuit of nonproliferation goals. I believe this is a serious matter of sequencing. The danger is that the administration will be advancing towards nuclear disarmament goals—which include unilateral steps like the change declaratory policy, the virtual prohibition on building new nuclear weapons and disclosing the size of the U.S. nuclear stockpile—while it is entirely possible that the nonproliferation regime is running off the rails. Put differently, the administration appears to be pursuing nuclear disarmament on nothing more than the hope that the nonproliferation regime will not break down.

Should not fulfillment of the nonproliferation agenda precede steps, particularly unilateral and bilateral ones, toward nuclear disarmament?

Answer. The cornerstone of the nonproliferation regime is the Nuclear Nonproliferation Treaty (NPT), which contains three pillars—disarmament, nonproliferation, and access to peaceful uses of nuclear energy—all of which are interlinked. The treaty obligates nuclear-weapon states to pursue negotiations on effective measures relating to disarmament, and without measures for this purpose, the willingness of non-nuclear-weapon state Parties to support a strong nonproliferation regime would likely diminish. Despite years of calls by many of the latter states for a sequential or exclusive focus on disarmament, the United States has promoted strengthening the NPT in a balanced fashion across all three of its pillars. The success of the 2010 NPT Review Conference is a testament to the success of this approach. We will continue to advocate continued progress on all three pillars simultaneously, not sequentially, and we observe growing international agreement on the fairness of this approach, as evidenced by the progress at this year's Review Conference.

U.S. and Russian arms control and reduction efforts play an important role in nonproliferation. We cannot achieve a world free of nuclear weapons without the United States and Russian Federation, which between them hold 90 percent of the world's nuclear weapons, taking significant and substantial disarmament steps.

In part due to the substantial efforts of the United States in such arms reductions, there has been significant progress in furthering the multilateral nuclear nonproliferation agenda in recent months. In May, the NPT Review Conference produced a consensus final document that endorses the Additional Protocol to International Atomic Energy Agency (IAEA) safeguards, supports a strengthened IAEA with sufficient resources to meet its safeguards responsibilities effectively, and calls for strengthened export controls, among other important measures to strengthen nonproliferation. With the NPT Review Conference producing a substantive final document for the first time in a decade, the nonproliferation agenda certainly is not "running off the rails"; to the contrary, it is currently "getting back on track."

THE HISTORY AND LESSONS OF START

WEDNESDAY, MAY 19, 2010

U.S. SENATE,
COMMITTEE ON FOREIGN RELATIONS,
Washington, DC.

The committee met, pursuant to notice, at 2:40 p.m., in room SD–419, Dirksen Senate Office Building, Hon. John F. Kerry (chairman of the committee) presiding.

Present: Senators Kerry, Shaheen, Lugar, Corker, Isakson, Risch, and DeMint.

OPENING STATEMENT OF HON. JOHN F. KERRY, U.S. SENATOR FROM MASSACHUSETTS

The CHAIRMAN. The hearing will come to order.

Thank you very much for being here. And I'm particularly grateful to one of our Nation's leading statesmen, whom it is my pleasure to welcome here today: James Baker. He has been a top advisor to three Presidents over the course of two decades, including serving as the 67th Secretary of the Treasury and the 61st Secretary of State.

Most significantly for our purposes today, as President George H.W. Bush's chief diplomat, he negotiated and concluded the original START agreement. And some of us have been around here long enough to remember his visit to this committee to present the START Treaty in June 1992. All of us are very fortunate to have Secretary Baker here today to put that treaty in the context of decades of arms control efforts and to explain how those efforts advanced American interests and diplomacy during the cold war and after.

When President Bush and President Gorbachev signed the original START Treaty in July 1991, it was indeed a remarkable moment; it was the first time that America and Russia agreed to reduce the number of strategic nuclear weapons that they had deployed. But, less than 6 months later, before the treaty was even ratified, the Soviet Union fell apart, ending the cold war and leaving us in a very transformed world.

Some suggested that START became irrelevant when our enemy of many decades disappeared, but Secretary Baker argued that the treaty remained important because it strengthened strategic stability between nations that still possess thousands of nuclear weapons and still didn't fully trust each other. As he testified, that stability rested on "the predictability that START mandates through its openness and transparency provisions."

The fact is that, because America and Russia were no longer engaged in an arms race, they were able to begin to work together. At an uncertain moment, arms control was a familiar mechanism through which to extend the habits of cooperation as our two countries wrestled with contentious issues, like the reunification of Germany, and others. As Secretary Baker testified, START was a gateway to a new era of cooperation.

As much as times have changed, I think there are parallels with today. Like its predecessor, New START is going to significantly reduce the number of nuclear weapons that the United States and Russia can deploy, and it will revitalize our relations with Moscow.

When Secretary of Defense Gates testified before this committee yesterday about the benefits of New START, he cited many of the same advantages that Secretary Baker had enumerated two decades earlier, specifically: transparency, predictability, and strategic stability. Now, as then, verification remains vital.

Unfortunately, the verification measures that Secretary Baker negotiated expired on December 5 of last year. Since then, day by day, we have been losing crucial visibility into the Russian nuclear program. The New START Treaty will restore that visibility and, in some ways, enhance it. As Admiral Mullen said yesterday, the United States should ratify this agreement as soon as possible, because we are in our sixth month without a treaty.

But, the confidence this new treaty builds extends beyond the verification measures that it puts in place. It presents an opportunity to expand United States-Russian cooperation on a range of issues, including Iran. In fact, as we learned from Secretary Clinton yesterday, Russia and the United States have agreed on a draft U.N. resolution sanctioning Iran for its nuclear activities.

Further, as Secretary Baker can testify, the original START Treaty was a powerful demonstration of how bilateral arms control can strengthen our global effort to halt the spread of nuclear weapons. Today, New START is winning us new credibility and leverage at this month's Review Conference on the Nuclear Non-Proliferation Treaty. Our progress on United States-Russian arms control has helped ensure that Iran cannot distract the world with charges of nuclear hypocrisy.

Yesterday, some of my colleagues raised questions about the New START Treaty. In response, Secretary Gates and Admiral Mullen made absolutely clear that there is nothing in this treaty whatsoever that inhibits our missile defense plans. They are firm that its verification procedures are excellent, far better than what we have with no treaty. And they assured us that the $80 billion the administration has committed to our nuclear weapons infrastructure will maintain the safety and effectiveness of our stockpile.

So, today is the third in a series of hearings on the treaty. We will continue to give it the thorough review that it warrants. And, as I mentioned yesterday to Senator DeMint, we will, shortly, have a classified hearing with the negotiators themselves so that we can probe into the negotiation record within those confines, and we'll continue, in other ways, to review this record. I'm confident that at the end of this process we're going to be able to reach a strong bipartisan consensus on advice and consent, just as we did on the original START Treaty, which, I remind people, the Senate ap-

proved by a vote of 93 to 6, and the Moscow Treaty, which was approved, 95 to nothing.

So, Secretary Baker, I thank you for traveling and coming here and refreshing yourself on all of the START issues in order to inform the committee. We genuinely value your advice and insights, and we look forward to hearing from you today.

Senator Lugar.

OPENING STATEMENT OF HON. RICHARD G. LUGAR, U.S. SENATOR FROM INDIANA

Senator LUGAR. Well, Mr. Chairman, I join you in welcoming our esteemed witness and our friend, former Secretary of State James Baker.

Yesterday, the Foreign Relations Committee was briefed on the New START Treaty by Secretaries Gates and Clinton and Admiral Mullen. Today, we will benefit again from the perspective of an architect of the original START agreement.

As President George H.W. Bush's Secretary of State, Jim Baker testified on the START Treaty before the Foreign Relations Committee on June 23, 1992. At that time, he was heavily engaged not only in bringing the treaty to fruition, but also in transitioning our relationship with Russia from cold-war antagonism to a more open post-cold-war dynamic.

Much has changed in the intervening 18 years, but most of the basic strategic concerns that motivated the Reagan and Bush administrations to pursue nuclear arms control with Moscow in the 1980s and early 1990s still exist today.

We are seeking mutual reductions in nuclear warheads and delivery vehicles that contribute to stability and reduce the costs of maintaining the weapons. We are pursuing transparency of our nuclear arsenals, backed up by strong verification measures and formal consultation methods. We are attempting to maximize the safety of our nuclear arsenals and to encourage global cooperation toward nonproliferation goals. And we're hoping to solidify United States-Russian cooperation on nuclear security matters while sustaining our knowledge of Russia's nuclear capabilities and intentions.

The Reagan-Bush arms control strategy led to the Intermediate-Range Nuclear Forces Treaty and the START Treaties. These agreements shifted the goal of nuclear arms control from limiting weapons buildups to making substantial verifiable cuts in existing arsenals. These treaties and their successors have made us safer. They have greatly reduced the amount of weaponry threatening the United States, and have served as a powerful statement of the intent of the United States to curtail the spread of weapons of mass destruction.

They also helped open the Russian military and defense establishments, facilitated relationships between American and Russian officials, and provided mechanisms promoting predictability, and regularized consultations. This remains a fundamental tenet of the New START Treaty, which contains nearly all of the confidence-building measures first initiated in treaties negotiated and signed by Presidents Reagan and Bush.

We know, however, that bilateral treaties are not neat instruments, because they involve merging the will of two nations with distinct, and often conflicting, interests. Treaties come with inherent imperfections and questions. As Secretary Gates testified yesterday, even successful agreements routinely are accompanied by differences of opinion by the parties. The ratification process, therefore, is intended to consider whether limits on strategic forces and verification procedures are fully consistent with U.S. national security.

Having served as White House Chief of Staff, Secretary of the Treasury, and Secretary of State during the Reagan and Bush years, our witness is in a unique position to offer insights about the historical legacy of START as it pertains to the context of a New START Treaty.

I also look forward to his perspective on our relationship with Moscow and the broader geopolitical impact of the START agreements. How important is the New START Treaty to our long-term relationship with Moscow? And does it advance strategic goals beyond Russia?

I thank the Chair again for holding this hearing, and look forward to our discussions.

The CHAIRMAN. Thank you very much, Senator Lugar.

Mr. Secretary, thank you. You can choose to use your text or summarize, as you wish, and I'll put the full text in the record; however you want to proceed.

STATEMENT OF HON. JAMES A. BAKER III, FORMER SECRETARY OF STATE, FORMER SECRETARY OF THE TREASURY, SENIOR PARTNER, BAKER BOTTS LLP, HOUSTON, TX

Secretary BAKER. What I'd like to do——

The CHAIRMAN. If you push the button on the—there's a button there—yes.

Secretary BAKER. Yes. What I would like to do is to go ahead and give you my statement, because I've tried to make it complete, both with respect to my view of the treaty itself and my view of some other peripheral questions that you might want to——

The CHAIRMAN. Absolutely, please.

Secretary BAKER [continuing]. To address.

The CHAIRMAN. Proceed.

Secretary BAKER. And I thank you for the opportunity to appear again before the Foreign Relations Committee. I think the staff told me, when I walked in this afternoon, this was the 20th time that I've been up here. And I'm delighted to be back. But, I do come here today, not as an expert on the particulars of this New START Treaty, but, rather, really, as you pointed out, as the Secretary of State who negotiated much of START I, all of the Lisbon Protocol, and much of START II.

So, I want to begin by speaking about the role that arms control has played in enhancing American security over the decades, because I happen to be one who strongly believes that it is important for our country, and for Russia, to maintain a vigorous commitment to arms control as a part of our efforts to create and maintain an effective nonproliferation regime.

When they're carefully enacted, arms control treaties can reduce the threat of global nuclear devastation while also preserving our Nation's nuclear arsenal as a critical component of our security and the security of our allies. As a result, it's my view that any treaty the Senate ratifies has to maintain our decades-long combination of intercontinental ballistic missiles, submarine-launched ballistic missiles, and heavy bombers, as well as retain our ability to change our force mix, as needed.

Negotiations on the original START Treaty began, as you indicated, Mr. Chairman, in the early 1980s, during some of the most contentious years in the United States-Soviet rivalry, when the United States and Soviet Union were running the arms race at a really fast clip. Many feared that the cold war would turn hot, and START was about stopping that race. It was about beginning to shrink the enormous nuclear arsenals that each side had built, and it was about stabilizing the nuclear relationship between the two countries so that our diplomatic relationship could evolve without the fear that either side was going to seek an atomic advantage.

By dramatically reducing each side's nuclear forces, START took a relationship that was filled with uncertainty and made it far more predictable. The original treaty provided a foundation for Washington and Moscow to reduce their arsenals and to improve diplomatic ties and overall cooperation; and that's just what we did in those years.

START made the United States-Soviet nuclear balance more predictable, and not simply by putting numbers on a piece of paper; it made the balance more predictable by imposing stringent verification provisions, including onsite inspections.

President Ronald Reagan was famously focused on the importance of verification. "Trust, but verify" was a maxim that he quoted to the Soviets many, many times. And President George H.W. Bush shared that insistence.

START provided an unprecedented transparency. It gave us a window into what had been the world's most secretive and most threatening military establishment.

The secrecy that had been a hallmark of the cold war, and one of its most destabilizing characteristics, was replaced by an openness that was an invaluable asset to our national security. Of course, when I was Secretary of State and testified before this committee about START I, in June 1992, conditions had changed dramatically from when the negotiations had first started, in the early 1980s. The Soviet Union had dissolved, leaving Boris Yeltsin in charge of Russia. The decades-long United States-Soviet conflict was coming to an end.

But, as I said then, if START was a product of the cold war, it was not a relic of the cold war. The breakup of the Soviet Union produced a time of great potential, but it also produced a time of great uncertainty. Amid that uncertainty, START was an anchor of stability, promising that our nuclear security would remain assured as relations between the two countries evolved.

I think that promise was fulfilled. Despite ups and downs in relations between Washington and Moscow over the last 18 years, START ensured strategic stability between the United States and

Russia. It reduced nuclear arsenals by 30 percent to 40 percent, and it did so in a verifiable way.

Later, START II, which, of course, was ratified by the United States Senate, but not by the Russian Duma, pushed for the elimination of multiple nuclear warheads on intercontinental ballistic missiles.

Even after the Moscow Treaty, signed by Presidents George W. Bush and Vladimir Putin in 2002, had further lowered the ceilings for the United States and Russian arsenals, START remained essential and important. It provided the verification mechanisms for the Moscow Treaty, which had none, propping open that key window into Russian nuclear forces, a window that only becomes more important as our arsenals shrink further.

But, the legacy of START extends well beyond the provisions of the treaty. START really initiated an era of broader nuclear cooperation with Russia. Two months after he signed START, on July 31, 1991, President George H.W. Bush announced his intention to unilaterally withdraw most tactical nuclear weapons that the United States deployed abroad. That was a decisive step that was quickly reciprocated by Mikhail Gorbachev.

START also enabled our diplomatic, scientific, and military establishments to form deeper levels of trust and collaboration. And as the ranking member knows very well, a direct result of that was the Nunn-Lugar Cooperative Threat Reduction Program, which immeasurably improved our security by helping keep nuclear material out of the hands of terrorists.

I really don't think Nunn-Lugar would have been nearly as successful as it was if the Russians had lacked the legally binding assurance of parallel United States reductions through the START Treaty.

START I also served as a sign of the United States and Russian commitment to nonproliferation, generally, during the period when George H.W. Bush was President and I served as Secretary of State.

As I also testified before this committee in 1992, the reductions under START I constituted a major step by the United States and Russia toward fulfilling their obligations under Article 6 of the Nuclear Non-Proliferation Treaty. Nonnuclear states have long regarded these reductions as keys to the success of that treaty, and really to their cooperation with it.

Most concretely, through the Lisbon Protocol, START actually removed nuclear weapons from three former Soviet states—Belarus, Kazakhstan, and Ukraine—ensuring, thereby, that the breakup of the Soviet Union did not lead to a breakdown of the Nuclear Non-Proliferation Treaty.

START, therefore, was a turning point, I think, in United States-Russian relations. And today, the threat of nuclear war really is only a shadow of what it once was. But, that does not mean that arms control is no longer important. It is precisely at times when relations are warming that we can accomplish the most by reducing nuclear dangers and reinforcing our ability to cooperate. That enhanced cooperation, in turn, enables us to further reduce nuclear dangers, establishing a virtuous circle that strengthens American security.

Although I'm not an expert on the nuances of the proposed New Treaty, Mr. Chairman, it appears to take our country in a direction that can enhance our national security while at the same time reducing the number of nuclear warheads on the planet. It can also improve Washington's relationship with Moscow regarding nuclear weapons and delivery vehicles, a relationship that is going to be vital if the two countries are going to cooperate in order to stem nuclear proliferation in countries such as Iran and North Korea.

I agree with Secretary of Defense Bob Gates when he wrote, last week in the Wall Street Journal, that the new treaty provides verification that has been needed since START I expired in December. An effective verification regime is a critical component of arms control, and I believe that the world is safer when the United States and Russia are abiding by one.

So, in my view, Mr. Chairman, the New START Treaty is a modest and appropriate continuation of the START I Treaty that expired this past December, subject, however, to there being satisfactory answers to a few questions that have been raised. And so, I would like to mention a couple of those questions for your consideration as the committee moves forward. Although this may not be a complete list, it includes questions that I personally believe should be answered before a ratification vote is taken.

And let me begin with missile defense. Any arms treaty that goes into effect should focus on nuclear weapons reduction, and not on missile defense limitations. In the New START Treaty, however, there is at least one clear limitation on U.S. missile defense systems. Specifically, Article 5 limits the conversion of ICBM and SLBM launchers into launchers from missile defense interceptors. Now, I understand that the current administration has no plans for transforming strategic weapons launchers into missile defense launchers. The administration believes that it is less expensive to build new systems rather than to convert existing ones. But, I'm not so sure how wise it is to restrict future administrations.

Another question concerns the verification program, because it does not appear as rigorous or extensive as the one that verified the numerous and diverse treaty obligations and prohibitions under START I. This complex part of the treaty is even more crucial when fewer deployed nuclear warheads are allowed than were allowed in the past. As a result, I think the proposed verification regime deserves thorough scrutiny.

It is also important that we maintain a nuclear stockpile that would allow the United States to adequately cover the 30-or-so countries allied with us around the world that are currently under our nuclear umbrella. And we should make sure that we have enough nuclear capacity, in case we decide to expand that nuclear umbrella, to include perhaps another 9 to 10 countries, should Iran acquire a nuclear weapons capability.

And finally, Mr. Chairman, while not a part of the New START Treaty, I would like to call the committee's attention to two other issues that I think are related to it.

First, there is a section in the administration's Nuclear Posture Review that appears on page 8 of the executive summary and that says, "The United States will not use, or threaten to use, nuclear weapons against any non-nuclear-weapons states that are a party

to the NPT and in compliance with their nuclear nonproliferation obligations." Presumably, that would apply even if a country were to use chemical or biological weapons against us. And I question the wisdom of that position.

And, frankly, Mr. Chairman, my apprehension in this regard comes from my own real-world experience. On January 9, 1991, as the George H.W. Bush administration was in the final stages of the buildup to remove Saddam Hussein's troops from Kuwait, I had a 7-hour meeting in Geneva with Tariq Aziz, Iraq's Foreign Minister. At the end of our discussion, when it was quite clear that war was inevitable, I warned him against using weapons of mass destruction against our troops. "If conflict ensues," I told Aziz, "and you use chemical or biological weapons against U.S. forces, the American people will demand vengeance, and we have the means to exact it." And I further said, "Mr. Minister, this is not a threat, it is a promise."

It is entirely possible, and even likely, in my opinion, that Iraq did not use its chemical weapons against our forces because of that warning. Of course, that warning was broad enough to include the use of all types of weapons that America possessed.

Years later, when Saddam Hussein was captured, debriefed, and asked why he had not used his chemical weapons, he recalled the substance of my statement to Aziz in Geneva.

So, I think, Mr. Chairman, that the Nuclear Posture Review should not limit our flexibility, not just our military flexibility, but also our diplomatic flexibility, in responding either to the threat of a biological or chemical attack upon us or to an actual attack.

Second, let me say that I think it's critical that we beef up the reliability of our nuclear stockpile. Because our security is based upon the safety and reliability of our nuclear weapons, it is important that our Government budget enough money to guarantee that those weapons can carry out their mission. As we reduce warheads and launchers, it is more and more imperative that those we have left be safe and be reliable.

Members of the committee, as you continue your consideration of this treaty, I know that you will thoroughly examine these questions, and others that some may have, about New START. It is important that nuclear weapons treaties have the broadest bipartisan support possible so that leaders in Moscow and other international capitals understand that our country wholeheartedly supports the treaty. Bipartisan support was important, as you pointed out, Mr. Chairman, when the Senate ratified START I in 1992 by a vote of 93 to 6, and START II in 1996 by a vote of 87 to 4. And bipartisan support will be equally important with the New START Treaty,

Thank you again for the opportunity to appear before you today, and I would be happy to try and respond to your questions.

[The prepared statement of Secretary Baker follows:]

PREPARED STATEMENT OF JAMES A. BAKER III, SENIOR PARTNER, BAKER BOTTS L.L.P., HOUSTON, TX

Thank you, Chairman Kerry and Ranking Member Lugar. It is a pleasure to appear again before the Foreign Relations Committee.

I come here today not as an expert on the particulars of the New START Treaty. But rather, as the Secretary of State who negotiated much of START I, all of the Lisbon Protocol, and much of START II.

I want to begin by speaking about the role that arms control has played in enhancing American security over the decades. I strongly believe that it is important for our country and Russia to maintain a vigorous commitment to arms control as part of our effort to create and maintain an effective nonproliferation regime. When carefully enacted, arms control treaties can reduce the threat of global nuclear devastation while also preserving our Nation's nuclear arsenal as a critical component of our security and the security of our allies. As a result, any treaty the Senate ratifies must maintain our decades-long combination of Intercontinental Ballistic Missiles, Submarine-Launched Ballistic Missiles, and heavy bombers as well as retain our ability to change our force mix as needed.

Negotiations on the original START Treaty began in the early 1980s, during some of the most contentious years in the United States-Soviet rivalry, when the United States and the Soviet Union were running the arms race at a fast clip. Many feared that the cold war would turn hot.

START was about stopping that race. It was about beginning to shrink the enormous nuclear arsenals that each side had built, and about stabilizing the nuclear relationship between the two countries so that our diplomatic relationship could evolve without the fear that either side was seeking an atomic advantage. By dramatically reducing each side's nuclear forces, START took a relationship filled with uncertainty and made it far more predictable. The original treaty provided a foundation for Washington and Moscow to reduce their arsenals and improve diplomatic ties and cooperation—and we did.

START made the United States-Soviet nuclear balance more predictable, and not simply by putting numbers on a piece of paper. It made the balance more predictable by imposing stringent verification provisions, including onsite inspections. President Ronald Reagan was famously focused on the importance of verification. "Trust but verify" was a maxim that he quoted to the Soviets many times—and President George H.W. Bush shared that insistence. START provided unprecedented transparency. It gave us a window into what had been the world's most secretive and most threatening military establishment. The secrecy that had been a hallmark of the cold war—and one of its most destabilizing characteristics—was replaced by an openness that was an invaluable asset to our national security.

Of course, when I was Secretary of State and testified before this committee about the START I Treaty in June 1992, conditions had changed dramatically from when negotiations began in the early 1980s. The Soviet Union had dissolved, leaving Boris Yeltsin in charge of Russia. The decades-long United States-Soviet conflict was coming to an end.

But, as I said then, if START was a product of the cold war, it was not a relic of the cold war. The breakup of the Soviet Union produced a time of great potential but also tremendous uncertainty. Amid that uncertainty, START was an anchor of stability, promising that our nuclear security would remain assured as relations between the two countries evolved.

That promise was fulfilled. Despite ups and downs in relations between Washington and Moscow over the last 18 years, START ensured strategic stability between the United States and Russia; it reduced nuclear arsenals by 30 percent to 40 percent; and it did so verifiably. Later, START II, which was ratified by the U.S. Senate but not the Russian Duma, pushed for the elimination of multiple nuclear warheads on ICBMs. Even after the Moscow Treaty signed by Presidents George W. Bush and Vladimir Putin in 2002 further lowered the ceilings for the United States and Russian arsenals, START remained essential. It provided the verification mechanisms for the Moscow Treaty, which had none, propping open that key window into Russian nuclear forces—a window that only becomes more important as our arsenals shrink further.

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The START I Treaty also served as a sign of the United States and Russian commitment to nonproliferation during the period when George H.W. Bush was President and I served as his Secretary of State. As I also testified before this committee in 1992, the reductions under START I constituted a major step by the United

States and Russia toward fulfilling their obligations under Article VI of the Nuclear Non-Proliferation Treaty. Non-nuclear states have long regarded such reductions as key to the success of that treaty—and to their cooperation with it. Most concretely, through the Lisbon Protocol, START actually removed nuclear weapons from three former Soviet states—Belarus, Kazakhstan, and Ukraine—ensuring that the break-up of the Soviet Union did not lead to a breakdown of the Nuclear Non-Proliferation Treaty.

START, therefore, was a turning point in United States-Russian relations, and today, the threat of nuclear war is only a shadow of what it once was. But that does not mean that arms control is no longer important. It is precisely at times when relations are warming that we can accomplish the most by reducing nuclear dangers and reinforcing our ability to cooperate. That enhanced cooperation in turn enables us to further reduce nuclear dangers, establishing a virtuous circle that strengthens American security.

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Another question concerns the verification program because it does not appear as rigorous or extensive as the one that verified the numerous and diverse treaty obligations and prohibitions under START I. This complex part of the treaty is even more crucial when fewer deployed nuclear warheads are allowed than were allowed in the past. As a result, the proposed verification regime deserves thorough scrutiny.

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Members of the committee, as you continue your consideration of this treaty, I know that you will thoroughly examine these questions and others that some may have about New START. It is important that nuclear weapons treaties have the broadest bipartisan support possible so that leaders in Moscow and other international capitals understand that our country whole-heartedly supports the treaty.

Bipartisan support was important when the Senate ratified START I in 1992 by a vote of 93–6 and START II in 1996 by a vote of 87–4. And bipartisan support will be equally important with New START.

The CHAIRMAN. Well, thank you very much, Mr. Secretary. That's a very helpful and comprehensive view. And I appreciate the questions that you've raised. They are questions that the committee is going to have to analyze, and we're already starting to; I think they were raised yesterday. And I look forward to furthering that discussion a little bit with you now, perhaps.

With respect to the missile defense question, you noted the point about the conversion of the silo, and you wouldn't want to tie somebody's hands in the future. Would it be relevant to you, would it affect your judgment about that, at all, if the Missile Defense Agency, themselves, said to you, "Mr. Secretary, that's a particularly time-consuming as well as expensive proposition, and we see no benefit from putting the missile defense interceptor in the Midwest in our country, because we want to continue to build the silos in what we consider to be better locations, such as Alaska"? If they said that to you, would that have an impact on you?

Secretary BAKER. They have said that to me, Senator, because I was given a brief by the administration, and I was grateful for that, so I know that that's their position, and I understand that position. I'm simply saying that I think that the Senate, in discharging its duty to advise and consent, will want to satisfy itself that, indeed, that it makes good sense, not only to agree to it now, but to agree to it with respect to future administrations, because it is treaty language. But, I understand that the administration position is, it's cheaper to build new ones, and we have no plans to use current launch platforms for missile defense interceptors.

The CHAIRMAN. Let me ask you a question with respect to barring the threat of nuclear retaliation, in the negative security assurance, as we refer to it with respect to countries that don't possess, and aren't seeking, nuclear weapons. I remember very starkly, as a matter of fact, that 7-hour meeting, and we were all glued to the television when you came out of it. And I remember the very stark assessment that you made about that meeting.

Secretary BAKER. Yes.

The CHAIRMAN. So, I think we all recall that very, very pointedly. And I think your diplomacy in those days, let me also comment, was quite extraordinary. I think you were—if I recall, you made about your 15th trip to Syria, 16th—15 or 16 trips—when you finally secured the support of Hafez al-Assad and——

Secretary BAKER. I think it was 15 trips to the Middle East, but maybe only 9 to Syria.

The CHAIRMAN. Well, 9 to Syria. I'm trying to help—you know, I'm telling a Texas tale, here. [Laughter.]

But, at any rate, Mr. Secretary, let me express my admiration for what you did put together there. It was a genuine coalition, it was a superb piece of diplomacy, and I think we all respected it enormously then, and do——

Secretary BAKER. Thank you.

The CHAIRMAN [continuing]. Today.

In that context, I have no doubt that the veiled threat of nuclear retaliation, I would assume, must have helped. Certainly I'm sure that Tariq Aziz understood it, and I would hope that Saddam Hussein did. And the way things played out, one has to assume that, of course, he did.

Now, that was a country that was trying to build a nuclear weapon, so it would not be one of the cases that would fall under this current concept.

Secretary BAKER. Well, they were not in compliance with their NPT obligations, is the point I think you're making, Senator.

The CHAIRMAN. Agreed.

Secretary BAKER. Yes. So, they really were not—they were not a country that—with respect to which there would be any prohibition——

The CHAIRMAN. Right.

Secretary BAKER [continuing]. Under the current policy—the new policy.

The CHAIRMAN. What I'm trying to get at is that—correct, I agree with that. That's the point I'm making. But, it's really a dilemma, and I'm trying to figure out how we deal with this. We had been making a negative security assurance for over a decade, I think, when you became Secretary of State. And we never mentioned chemical or biological threat. And I suspect that you didn't—I think, in your account now you didn't specifically mention nuclear retaliation to Tariq Aziz. I think you were veiled in the comment. There was a constructive ambiguity. Is that correct?

Secretary BAKER. I said, "If you use weapons of mass destruction against our forces, the American people will demand vengeance, and we have the means to exact it." That's all I said.

The CHAIRMAN. Perfect. That's exactly what I'm trying to underscore here.

Now, in 2001, the policy that you, in fact, carried out with Tariq Aziz changed, and it went from constructive ambiguity to an outright threat, openly, of nuclear retaliation. And that change had an impact in a lot of different places; some would say, negatively in many places. And the current administration has been trying to sort of work back, if it can, to this place where you get the genie back in the bottle, but it's hard to get back to ambiguity after someone else has sort of thrown it out.

So, this is where we are today. And my question to you really is—we have only a partial ambiguity with respect to biological weapons—Do you see any way out of this? Is there any construct that you think gets us back into the, perhaps, virtues of a constructive ambiguous statement?

Secretary BAKER. Well, there's some specific language that I don't have, right now, in my head, in the new Nuclear Posture Review, with respect to biological weapons, I think, that would give us—there's wiggle room in the new Nuclear Posture Review with respect to biological. There's none—there is none with respect to chemical.

And I guess what I'm saying is, I don't see the harm or lack of benefit, if you want to put it that way, in our being able to tell a country that threatens the use of chemical weapons against our forces, or that uses chemical weapons against our forces, that is nevertheless in compliance with its NPT obligation—I don't see the harm in our being able to tell them, "Hey, you do this at your peril. We're warning you," and not go any further than that. I mean, you could certainly write it that way, I think. I don't understand why we want to have—I understand, now, that there's only, if I'm not mistaken—and you may want to delve into this in a closed session, not—so, I won't name it, but I understand there's really only—right now, only one country that would qualify for the—that would be a problem under the current Nuclear Posture Review. There's one country that has chemical weapons, that would—that might be dissuaded from using them against our forces if we were able to make such a threat.

The CHAIRMAN. We're going to take up that in classified session. I think it's appropriate. I think it's a good question——

Secretary BAKER. And those are chemical, they're not biological.

The CHAIRMAN. Yes, I understand.

Secretary BAKER. Because there is—there's wiggle room on the biological.

The CHAIRMAN. Would you reject a strategic arms control agreement unless the administration went back on its Nuclear Posture Review position?

Secretary BAKER. Would I reject this particular——

The CHAIRMAN. Would you see that as a——

Secretary BAKER [continuing]. Treaty?

The CHAIRMAN. Right.

Secretary BAKER. No. What I said in my statement was, I think this is related. I think it's something that, given the fact that this committee is considering ratifying a far-reaching treaty, you know, it's a treaty that is expected to last for some time—it might not be a bad time to look at that related question. That's all I'm saying.

The CHAIRMAN. Fair enough. It's a good point, and we will do that. That's a good point.

Senator Lugar.

Senator LUGAR. Well, thank you, Mr. Chairman.

Secretary Baker, in your statement, you noted that START also enabled our diplomatic, scientific, and military establishments to form deeper levels of trust and collaboration. And you've also generously mentioned that the Nunn-Lugar Act was a result of that kind of openness that happened through diplomacy. And I would

just say that one of the effects of this, which you guided, was that—we talked a little bit about chemical and biological—the START Treaty dealt with nuclear weapons and counts and so forth, but, as a part of your statement, you point out how the relationship deepened, and, as a result, we began to talk about chemical weapons and biological weapons. Now, this led to a very long debate in this country over the Chemical Weapons Convention.

Secretary BAKER. Yes.

Senator LUGAR. And, as you recall, ratification of that was not an easy task.

Secretary BAKER. No.

Senator LUGAR. And the Russians felt that we would never ratify it. But, once we did, they were on the spot. And so, they had to come along with it.

Now, this all came to mind last year at Sucha, which is now a very large facility brought together by Russians and Americans to destroy what may be as many as 100,000, and some would estimate 200,000, missiles that contain nerve gas. And the process is literally draining the nerve gas out of every one of these, bituminizing it, as they say, and burying it in the ground. And these are very mobile situations. You can put one in the proverbial suitcase.

Secretary BAKER. Yes.

Senator LUGAR. Now, this was not contemplated by the START Treaties, but nevertheless a very important product, because it led to Americans and Russians coming together to understand that they had a problem with the Caucasus, they had a problem with terrorists, as well as we did. They even had problems with their old nuclear warheads buried in vaults. I remember being invited in to see some of these, which I—they were in a morgue, bodies there in the tomb, with records of what sort of servicing they'd had and how long they had been there, and some hopes by the Russians, we would take out the oldest ones first so there might not be an accident in Russia. Well, none of this is contemplated by the treaty, but it comes about in sort of the ambience that you describe as Americans actually get boots on the ground in Russia and begin to take this seriously.

Now, at Sucha, I would just add, there was a press conference with the Russians. I was fortunate to have at least somebody who knew much more about our own chemical weapons situation than I did, because the Russians assured the world they were going to meet the deadline of the Chemical Weapons Convention. There's no conceivable possibility.

Secretary BAKER. No.

Senator LUGAR. And the very plant we were dedicating indicated there's at least a 7-year period of time, which all the rest of the world saw at the same time. But, we had three instances, in our country, in which we're not going to meet it, either. And the point that I'm making is that sometimes there is ambiguity in these situations, but if we're all standing on the same platform, all talking to the same world press, there's a degree of openness there that clearly was not true before you and the Presidents that you served opened up the process. And this is, I think, critically important for us to understand, because, since December the 5th, we still are—have been allowed into Russia. It's not a closed society. But, there

isn't any obligation on the part of the Russians to open up anything.

Now, I appreciate—you know, we're getting arguments that, "Why should we, in fact, destroy anything more?" And so, I want to ask this question of you today. Scorecards that we have in our office indicate that there may be "X" number of nuclear weapons deployed by both countries, a good many more involves nondeployed, sort of, not destroyed, either. But, what assurance can we give to those who would ask, "Do we have enough weapons to protect 30 countries, or more? Do—should we be destroying anything or does this, in fact, inhibit our security?" In other words, some would say, "Why in the world are we even discussing an arms control agreement? We may need every one of those bombs, and prepared to shoot them all off in every direction necessary, at least to give the impression that we're likely to do so."

Give us some idea of the perspective you have of how many weapons, for instance, we really need to fulfill these obligations, quite apart from the condition they need to be in.

Secretary BAKER. Well, Senator Lugar, I'm not someone who would have expertise on that, particularly now, although I think you have to rely on the judgment of your military leadership. If the military leadership tells you that 1,550 nuclear warheads is sufficient to carry out our nuclear umbrella responsibilities, I think you're not going to get any better judgment than what they give you; or that 700 deployed launchers is enough, 800 in total. So, if you're going to go 1,550 and 700–800, and the military says, "This is all we need"—and it's my understanding that's what they say; at least that's what they told me when I asked them for a briefing—that's—I don't know where else you go to get a judgment on that.

You know, when I was negotiating START I, we were in excess of—we were north of 6,000 warheads. I mean, and I think 1,550 warheads is a heck of a lot of warheads, seems to me, just as a layman. But, I'm a layman on this, and I think if the military leadership, the Joint Chiefs, and the Office of the Secretary of Defense, and the national nuclear agency said, "This is what we need," I don't know where you'd get better judgment than that.

Senator LUGAR. Thank you very much.

The CHAIRMAN. Thank you, Senator Lugar.

Senator Corker.

Senator CORKER. Thank you, Mr. Chairman.

And, Mr. Secretary, thank you for the great context that you provide us, and background. And, you know, we advise and consent; we don't really have an opportunity to change much. What we can do is focus on modernization, which is not a part of this, and ensure that what we do have is reliable. And certainly if we knew that, we might even reduce more than we have. So, that's something that's very, very important to us.

The missile defense piece is kind of interesting. I mean, we started out in Russia's—has sent out a unilateral statement that's very different than ours as it relates to missile defense. And then you bring up the issue of if, in fact, we're saying that there's no way this limits our missile defense, why in the world would we say that we're going to do away with our offensive launchers' ability to

be converted. And I'm just wondering if you might help us think through what somebody might have been thinking, in basically restricting our ability to do that, when, in essence, missile defense in no way was to be impeded.

Secretary BAKER. Well, the preambular language in the treaty that's a little bit opaque and ambiguous, if you will, is not something that I see as particularly unusual, given the position the Russians—the Soviets, first, and then the Russians, have had for many, many years, going way, way back. And I think that Secretary Gates may have testified about this yesterday. But, they've always had a fear of our ability with respect to missile defense, our ability to construct a missile defense system, because they can't afford it, and we can.

It was—it goes all the way back to Star Wars, certainly, and maybe a little back before that. When Ronald Reagan announced that he was going to do this, they went into paroxysms of fear over there. And it was one of the things, I think, that helped bring about the changes that Gorbachev instituted in the Soviet Union. I think they concluded, at some point, they weren't going to compete with the United States, primarily economically, but also militarily, particularly with respect to missile defense.

So, I think, if you'll look at the negotiating record of this treaty—and I don't know this for a fact, but I've heard, that the Russians wanted a limitation from the United States on our ability to construct missile defense systems. And we said, "No, we're not going to give you that."

They made noises about missile defense even when I was negotiating Start I and II with them. And even—but, back in those days, we have the ABM Treaty, and it was in force. But, they were still nervous about it.

So, it's—I think it just reflects what has been a pervasive and is a systemic nervousness on their part that somehow we're going to build a missile defense system that will totally negate their offensive nuclear capabilities and will lead to a destabilizing situation, because they'll be worried about first strike, and so forth. That's why, I think, it's in there. I think it was a matter of giving—tipping the hat, if you will, to their concern, without really giving them anything; although, as I pointed out in my statement, I do think the one thing we did give them, in my view, is that we agreed we will not use our current launchers, we will not put our missile defense interceptors in those current launchers.

Senator CORKER. And I know you've questioned that, whether we should have done that, or not.

So, let me ask you this. So, we—we, I think, have all—we're all focused, in a proactive way, in ensuring that the administration invests properly in modernization.

Secretary BAKER. Right.

Senator CORKER. And we're—we have concerns about the numbers and some double counting and all of that, that may be taking place. We'll find out, certainly, soon.

But, as it relates to our relationships with Russia and, just, others, what should our posture be, as far as our aggressiveness, on spending money on missile defense right now? I mean, if they have tremendous concerns about it, we obviously have done something

to—maybe it was a chit that we weren't going to use anyway—but, what should our—in the Senate, in the House, what should our posture be toward our country in building up our missile defense program even more?

Secretary BAKER. Well, I think that the posture should be that we're going to pursue the recommendations of our military leadership and the people who are versed in this field with respect to what we need, because we have—as I understand it, we have refused, in this treaty, to agree with the Russians that we're going to put limitations on it, save that one I mentioned.

Senator CORKER. You know, everybody kind of Monday-morning-quarterbacks around here. Do you see any missed opportunities in this treaty? I know that many of the neighbors and—of Russia are concerned about their tactical abilities. Were there—are there things that you see that we might have pursued, that we didn't?

Secretary BAKER. In this treaty?

Senator CORKER. Yes, sir.

Secretary BAKER. I can't think of any, Senator. But, I did characterize this as a modest and appropriate continuation of what we've been—what we were doing, back during START I and START II.

Senator CORKER. So, we refer to NATO—and I know there have been some discussions about our ability, with the number of warheads we have, to protect the 30 countries. Just, while you're here, and you're a person of—that we all respect greatly, on both sides of the aisle—we've had discussions about NATO here, and it seems to me that what's happened with NATO is, we've sort of been—become the protector of all. The budgets that the countries were supposed to maintain as it relates to defense have not been there. And obviously, with what's happening, that's going to diminish even more.

Would you give us any editorial comment, since you're someone, again, that we all listen to, regarding what our posture ought to be, as far as expansion of NATO, and just what our relationship ought to be to NATO, in general?

Secretary BAKER. Well, I've always seen NATO as a very successful military alliance. It was an extraordinarily successful military alliance as long as it was a defensive alliance. Once it became a little bit of an offensive alliance, it became less successful. And we're experiencing difficulties with our NATO partners coming forward with their commitments, particularly in Afghanistan.

Nevertheless, we have had a nuclear umbrella extended to many, many of those—of our nuclear partners for many, many years. I'm not sure that they—that they're all beneficiaries of it. Maybe some of the newer members may not be; I'm not positive about that. But, it goes back to the 40 years of the cold war, Senator. And we've had that nuclear—we've had that commitment out there for a long time. I don't think we ought to walk away from that. But, we ought to take a position with our partners that, "If you want to—if you want the benefits of this alliance, then you have to bear your share of the burdens."

Senator CORKER. My time is up. Thank you for your service, and thanks for being here.

Secretary BAKER. Thank you, Senator.

The CHAIRMAN. Thank you very much, Senator Corker.

Senator Shaheen.

Senator SHAHEEN. Thank you, Mr. Chairman.

It's very nice to have a chance to hear from you, Secretary Baker.

Secretary BAKER. Thank you, Senator.

Senator SHAHEEN. In your testimony, you talked about the importance of an effective verification regime as being a critical component to arms control, and the importance of having that kind of regime with Russia and—I assume, so that we can have a sense of what Russia is doing. Are you worried—or, can you talk about the benefit of the verification measures that are in this new version of START?

Secretary BAKER. In this treaty?

Senator SHAHEEN. Yes.

Secretary BAKER. No. What I said in my prepared remarks, Senator, was that this is one of the issues I think the committee ought to take a close look at. And you really—I don't think you can satisfy yourself just on a casual examination of the literal language of the treaty. It's important, I think, to talk to the people in our—again, in our military who are going to be involved with the actual onsite verifications and that kind of thing.

We have things today that—I pointed out that this verification regime is nowhere near as intrusive and extensive as what we negotiated in START I. But, today we have national tactical means that we didn't, maybe, have then. There are provisions in this treaty that say you can't interfere with national technical means that commit the parties not to do that. It's my understanding that we only have 27 Russian nuclear facilities that we have to inspect under this treaty; whereas, under START I, we had 73. So, you have all those differences. But, I don't think anybody can tell you that the verification regime is sufficient until you actually get down there in the weeds—it's very, very complicated—and study the details of it. The administration's point people will tell you, as they've told me, that they're quite comfortable with the verification provisions that are in there, and their ability to verify Russia's obligations under this treaty. That doesn't mean it—it might not—it wouldn't hurt to delve deeply into it. All I'm saying is, it's a far different verification regime than we had in START I, and therefore, it's worth a look. That's what I'm saying.

Senator SHAHEEN. But, I'm correct that, right now, given that START has expired, we don't have any verification——

Secretary BAKER. We have nothing.

Senator SHAHEEN [continuing]. In place.

Secretary BAKER. No. That's correct.

Senator SHAHEEN. And your point is that it's important to have verification measures——

Secretary BAKER. It's really important that we be in there. It's been quite some—I think START expired December the 5th. It's been a number of months now since we've been able to really go in there and verify anything. And it's important that we have that right. And not just so much because we might think the Russians are cheating, which I personally wouldn't suspect right now—first place, I think it would be, economically, very difficult for them—but because it gives us a sense of assurance, and them as well, when they're over here—it promotes stability. It promotes atomic

and nuclear stability. And it's very good. And it leads to the kind of things that we discussed in my colloquy with the chairman. If you can do things diplomatically that would be impossible, in my view, if you're on a razor's edge with another country, with respect to whether you're going to have a nuclear conflagration with that country.

Senator SHAHEEN. In your testimony, you also make a link between arms control and an effective nonproliferation regime. Do you think the START Treaty will be a signal to the international community that the United States is serious about carrying out its responsibilities under the Non-Proliferation Treaty?

Secretary BAKER. I think it will, Senator. And I think it was. I think START I was, and I think START II was, frankly, even though it was deMIRVing, which, of course, never got ratified by the Russian Duma. But, yes, I think it's a signal that the United States is honoring—or, United States and Russia are taking steps to meet their obligations under—I think it's Article 6 of the Nuclear Non-Proliferation Treaty. That may not be the right article; I'm not sure.

Senator SHAHEEN. And what do you think it would signal to the rest of the world if we fail to ratify this START Treaty? Are you concerned about what the interpretation from the rest of the world might be to that?

Secretary BAKER. I don't think that the rest of the world would see it as the end of the world, but they would say, "Wait a minute, now. You're sitting there with all those nuclear weapons, and you negotiate a treaty, and then you don't ratify it. What's your—where are you going? What is your objective? What's your goal?" But, having said that, you don't want to ratify it unless you satisfy yourself with respect to these questions that have been raised. And I'm sure you will.

We had these—we had questions like this, let me assure you, with respect to START I and, to a lesser extent, with START II. By the time of START II, the relationship between the Soviet Union and Russia—and Russia and the United States had totally changed. I mean, things were moving in the direction that we—both countries wanted to see them go. And—but, I think if you ratify, this treaty will help promote, in the future, that kind of cooperation rather than confrontation.

Senator SHAHEEN. So, you're affirming what we heard yesterday from the Secretaries Clinton and Gates, that there are additional benefits, other than——

Secretary BAKER. There are no—there were, with START I, Senator; there were clearly a lot of additional benefits. Senator Lugar has talked about one of them, the Nunn-Lugar Initiative, and the Chemical Weapons Treaty—no, sorry—Chemical Weapons Convention flowed from START I. The Lisbon Protocol, where we were able to take—where we were able to denuclearize three countries—Belarus, Kazakhstan, and Ukraine—all flowed from the START Treaty.

Senator SHAHEEN. Thank you.

The CHAIRMAN. Thank you, Senator Shaheen.

Senator Risch.

Senator RISCH. Thank you, Mr. Chairman.

Secretary Baker, thank you for what you did, on behalf of America, on behalf of the world, the original work you did on the START Treaty. I think, when you talk about 6,000 warheads, and now we're down to—I—you know, I thought—I think 1,500 is a considerable amount. When you think of 6,000—I mean, you only need one or two, really, if—to bring a country to its knees. But, in any event, thank you for that.

Secretary BAKER. Thank you.

Senator RISCH. Thank you for the conversation you had with Mr. Aziz. I can think of a couple of countries right now in the world that it would be nice to have you go and have a sitdown with them and tell them what's going to happen if they do certain things, and have them believe you. It might make the world a safer place.

You bring a lot of wisdom to this, which we really appreciate. And you're focused on something that I've had a concern about since the onset of this, and that is the advice you gave, of not ensnaring the issue of missile defense in a arms treaty that's not a defensive treaty, but, rather, an offensive treaty. I think that's wise counsel. And it has troubled me that it is in here. It's in the preamble. It's in the—as you pointed out, it's in the body of the treaty itself.

But, one of the things that's most disconcerting to me is the unilateral statements. And I've heard Secretary Clinton and others who have come in here and said, "Oh, don't worry about that. Those are just unilateral statements. They're just postures."

You know, I come from a part of the country that you either have an agreement or you don't have an agreement. And when I read those unilateral agreements, we don't have an agreement. In fact, indeed, we have irreconcilable differences when it comes to missile defense. And it seems to me, if we're going to have an agreement, we ought to have an agreement. And so, again, I'm troubled by that. And I think your wisdom about not ensnaring the two issues together, I think, is important. And I think that's particularly true in light of the fact of where we find the world today.

When you originally started this, we had the United States and we had Russia that had nuclear weapons. And we were doing the things that we did, and rightfully so, and it was important that we had the treaty. But, you know, today it is really important—the—our job, as a Congress, our job, as a government, our first job, is to defend the American people. And it seems to me, where we now have other countries—Iran, North Korea, Pakistan, India—and the other issues out there—it seems to me that a missile defense is more important now than it's ever been. And I am particularly concerned about the irreconcilable differences that we have, and how far apart we are on the missile defense issue.

Secretary BAKER. Well, I raised that question, Senator, because I think it's something the committee should look at before it takes its ratification vote. And I know it will. I, frankly, would not share that much concern about it, for this reason. The Russians are saying, "We're now entitled to claim—if America increases its missile defense, we're entitled to claim that that's inimical to our strategic offensive capability and withdraw from the treaty." Well, fine. They can withdraw from the treaty anyway. And so can we. So, I don't

know how we are prejudiced by that, if the end result is, we're going to—parties are just going to withdraw from the treaty.

There is, in fact, no restriction on the United States of America's ability to move forward on missile defense, in whatever way it wants, except one. That is, we cannot use our current platforms—offensive weapons platforms for missile defense interceptors. That's the only restriction.

Senator RISCH. And I agree with that. I only wish that it said that right in the preamble, and say, "Look, this thing has got nothing to do with missile defense, and the parties are going to go their own ways on it." I wish it was in there.

Let me—I've only got a little time left—first of all, I—you know, to me, nobody can argue that we really need a treaty in order to have an inspection regime. And the inspection regime, to me, is the most important part of this, because, as you pointed out, I mean, either party can withdraw, for any reason, or no reason at all, from the treaty, as it exists. So, an inspection regime is important.

I shared your concerns, that you raised in your testimony, about why the inspection regime was ratcheted back, here, when it is the most important part of the treaty. Did you get a satisfactory answer from the administration when you talked to them about that?

Secretary BAKER. I got a pretty complete answer, Senator, because I asked them that question. And part of the answer was what I've already said. There are fewer installations that need to be inspected now, and there are unique identifiers that we are now putting on every Russian nuclear weapon, that we didn't used to be able to put on, as a part of our verification process.

And the military, for what it's worth, are very comfortable with the inspection regime that we now have. It is intrusive. It is onsite. I raised a question about the counting rules in this treaty, because in the treaty I negotiated, if a bomber could carry 20 warheads, we counted it as 20. Today, you count it as one. If you could—if you could put five nuclear warheads on top of a missile—in my treaty, we counted it as five; in this treaty, you count it as one. I said, "Well, how—why would you—how can you do that? How do you feel comfortable?" They said, "Well, we can climb up there and we can look at those warheads on the top of that missile, and we can verify whether they're there." And I agree with that. They're right about that. I said, "Well, what about the bombers?" Well, a bomber is a second-strike weapon, and it's not a first-strike weapon, and it's not something that we're worried about not being able to determine whether there's one or 14 warheads on a heavy bomber.

But, the counting rules, Senator, apply, as well, for us. I mean, whatever latitude there is, by virtue of a lack of attribution of warheads, we get the benefit of that, just like the Russians do.

So, all I'm saying about verification is, you ought to just make sure that you look carefully, have your experts get in there, and have detailed briefings to satisfy yourselves that you've got enough verification capability. The military will tell you that you do. And, you know, prima facie, you—I think you have to take their word for it. But, you can go in there and dig deeper and see if you have any reason to doubt it.

Senator RISCH. Again, Secretary Baker, thank you for great service to America.

And thank you, Mr. Chairman.

Senator LUGAR [presiding]. Senator DeMint.

Senator DEMINT. Thank you, Senator Lugar.

Mr. Secretary, honored to be with you today. And they've called a vote, so I'm just going to have to have one focused question here.

I know you know better than anyone, when Ronald Reagan first envisioned a strategic missile defense——

Secretary BAKER. Right.

Senator DEMINT [continuing]. System, that he had hoped, at some point in the future, that that technology could render nuclear missiles obsolete. And obviously, at the time, Russia had the nuclear weapons, that defense system was focused at them.

Yesterday, it became, in the hearing here, that—of why there is an apparent discrepancy between what we say about the treaty's effect on missile defense and what the Russians say. And Secretary Clinton and Secretary Gates made it clear that their vision of missile defense has nothing to do with defending against Russian missiles, that our current-day vision in this administration is that missile defense is aimed at North Korea or Iran or some rogue nation that could fire a missile or two at us. But, the—but, this whole START Treaty is based on the assumption that we will not develop a missile defense system that in any way threatens Russia's offensive capacity. That's what Secretary Clinton told me yesterday, Senator Kerry agreed to. And for me, given the fact that Russia is, in some ways, a defunct socialist Third World country at this point, and we're agreeing to nuclear parity with them, the idea that we are agreeing to a treaty that binds us to not defend ourselves against nuclear missiles takes us back 30 years to a mutually assured destruction strategy——

Secretary BAKER. Yes.

Senator DEMINT [continuing]. Which seems to be a huge step backward.

Secretary BAKER. Well, Senator, I understand that. I think the only answer to the question you pose is that mutually assured destruction worked for 40 years, and it can work for a few more years with respect to one country. If we have a certain number of missiles, and they know, if they launch on us, they're wiped off the face of the Earth, it's likely to work. I think that's what they were—what the Secretary of State and the Secretary of Defense were probably saying yesterday.

And therefore, the focus of this administration, at least—maybe future administrations will have a different focus—is to build missile defenses against the other threats that you pointed out——

Senator DEMINT. Right.

Secretary BAKER [continuing]. The threats of Iran and North Korea and maybe some other countries.

Senator DEMINT. Right.

Secretary BAKER. And we're quite free to build as—whatever we want, with respect to those threats.

Senator DEMINT. Thank you. That makes——

Secretary BAKER. Yes.

Senator DEMINT [continuing]. Clear. Thank you, sir.

Thank you.

Senator LUGAR. Secretary Shaheen, do you have—Senator Shaheen, any more questions?

I know Senator Kerry is hurrying to get back to the hearing to keep it open. And—however, I think Senators, for the moment, will have to vote, there being 6 more minutes——

Secretary BAKER. It's all right.

Senator LUGAR [continuing]. Left to get there.

So, I will, on behalf of the chairman, recess the hearing, because the chairman may, in fact, have an additional question or two, or comment. I just want to express my own appreciation again to you, Secretary Baker, for the constancy of your observation about all these issues over the years, just as fresh as 22 years ago, or whenever——

Secretary BAKER. Yes, thank you, Senator.

Senator LUGAR [continuing]. We commenced the first START Treaty.

Secretary BAKER. Thank you, Senator.

Senator LUGAR. We are recessed for a few minutes until the chairman arrives.

[Recess.]

The CHAIRMAN [presiding]. We'll come back to order.

Thank you, Mr. Secretary. I apologize for the interruption.

I gather Senator DeMint did get to question.

Secretary BAKER. Yes, he did.

The CHAIRMAN. So, I think we're through almost all the questions, unless Senator Kaufman is going to come over, which I don't know.

If I could just ask your indulgence for a few minutes longer and ask you a couple of things.

You noted in your testimony that the verification program is less extensive than the START I Treaty. When you say that, are you referring strictly to the numbers of inspections, but not necessarily to the quality or rigor of them?

Secretary BAKER. Yes, Senator, I am. But, as I mentioned, when I think—when you were out of the room, the military and the people who are going to be in charge of running the inspections tell me they've got all the ability and rights and capabilities they need in order to assure—to verify compliance with this treaty, and they're very comfortable about that. And I mentioned, I think, as well when you were out of the room, that there's far more latitude to use unique identifiers, and that every Soviet missile, as I understand it, is going to have its own unique identifier number. We didn't have that back in the days of START I. We may have had it with respect to mobile missiles, but not with respect to anything else. I think that's right.

And there's going to be much more use of national technical means and their provisions that say you can't interfere with national technical means.

So, they're comfortable with it. All I'm saying is, I think it's an area where—since it's so critical to the treaty, that—where the committee will want to do its own due diligence and dig in to make certain that it shares that comfort.

The CHAIRMAN. Indeed, we have that obligation, and we're——

Secretary BAKER. Yes.

The CHAIRMAN [continuing]. Going to do that, for certain. I would note that, in addition, I think, yesterday, Secretary Gates advised the committee, or reminded the committee, that, in this particular instance, a single inspection is going to be able to be used in order to confirm data on launchers and missiles, and then to count the reentry vehicles at the same time, so they're combining two into one, so you get a twofer, in a sense, which may account for some of the——

Secretary BAKER. And there are fewer installations to inspect, which I mentioned.

The CHAIRMAN. And there are only 27.

Secretary BAKER. And you have telemetry exchange rights and so forth.

The CHAIRMAN. Correct. Yes.

If I can ask you, generically, sort of looking at the nuclear landscape today, I'd like to take advantage of your presence here to share with the committee what levers you think may or may not exist, or if there are any that haven't been used by us, with respect to strengthening the NPT regime as a whole, sort of the challenge that we face—in India, Pakistan, North Korea, and Iran now. While you succeeded in reducing the nuclearization of a number of states, and while some other states have chosen to give it up since then, we still have this very significant moment, at this point, with respect to Iran, and what the implications would be for the gulf and a number of Arab States. I just wonder if you'd sort of share your sense of how you see that now, from afar, not dealing with it on a day-to-day basis, but I know you follow it.

Secretary BAKER. Well, I think that the NPT Review is an extraordinarily important thing to see successfully accomplished. But I, frankly, Senator, I'm—Mr. Chairman, I'm not sure what you do when you have as many new nuclear powers as we see today. I was not a big fan, for what it's worth, of fudging a little bit with respect to nuclear cooperation with some countries that developed nuclear weapons outside of the NPT. I mean, I think—but, I can't—I don't know that there's anything more we can do, other than to concentrate on the NPT, try to strengthen it, consistently have a strong review, and do the best we can to fight proliferation.

I do believe this, that—and I said this in my testimony—if we have a good arms control agreement with Russia, that is being observed by both countries, that will help us, in my opinion, in the U.N. Security Council, deal with the problem of Iran. And that is extraordinarily important. I mean, Pakistan and India and North Korea and Israel, now, all have the bomb, and some of them have it in violation of the NPT that they signed, and some of them have it because they were never NPT countries to begin with.

The CHAIRMAN. What, if any, observations would you make, generically, about the Russian state, at this point, with respect to how it might view its own need for these weapons? I mean, we obviously lived—you lived, we lived—in a very different world 20 years ago. You, yourself, said, a moment ago, that you thought the chances of this kind of confrontation are significantly reduced. Does that, do you think, lay the foundation, potentially, for even further reductions?

Secretary BAKER. You mean further reductions after this treaty?

The CHAIRMAN. Yes.

Secretary BAKER. Well, I think the logical path would be to continue to try and reduce the number of warheads in the world and the number of launch vehicles. You're not going to be able to do any good, with respect to the problem you've just asked me about, and that is the countries that have proliferated, unless you are seen to be willing to reduce along with them.

Now, you know, some very prominent and distinguished voices in American foreign policy—among them, Henry Kissinger and George Shultz and Sam Nunn and Will Perry—have called for the goal of a world without nuclear weapons. Well, the first person that I ever heard call for that was my boss, Ronald Reagan. And, of course, I don't think you can just dismiss that as being an airy-fairy notion, but, at the same time, you've got to realize how extraordinarily difficult that will be. I, for one, would welcome an effort to see that happen—I really would—without saying, for 1 minute, that we would get rid of our nuclear capability or our nuclear deterrent.

And I would put at least three conditions on any such effort.

Condition No. 1: Everybody would have to be at the table—nuclear-capable nations and threshold states, as well—states that might become nuclear.

And, second, everybody would have to take reductions proportionately. None of this stuff about, "You powers—the United States and Russia—you've got to get rid of yours before we're going to talk about—or, you've got to get yours down to the level we are." No, sir. Everybody reduces proportionately.

If you do those two things—and that is, everybody at the table and it—and stated as simply an aspiration or a goal, and make it clear that America's not going to get rid of her nuclear deterrent until such an agreement is negotiated.

And the third condition is the one we've been talking about a lot here with this treaty verification: unlimited verification, onsite, anywhere, anytime, anyplace.

You do those three things. Everybody's at the table, including nuclear threshold states and nuclear-capable states, proportionate reductions, and intrusive verification. That's the only way you'll ever get something like that negotiated. When you think about it, when you think about the countries that will have to sign on to that, including the ones that we've just mentioned—Pakistan, India, North Korea, Israel, and all the other nuclear states, and some nuclear threshold states, like Iran.

The CHAIRMAN. Well, I think those are very good criteria to try to satisfy. I had the privilege of speaking at Wehrkunde this year on this subject, and I don't disagree with you, it is a noble and worthy goal; it is very complicated, obviously. And a lot of aspects of conflict resolution between states would have to be changed, attitudinally. But, in addition to that, I wonder if it wouldn't also require, as a prerequisite, some kind of restraints on conventional weapons, because if all you do is shift it over to another place, the balance of power can be played out in its own, you know, dangerous ways.

Secretary BAKER. I think—I understand what you're saying, but I think that would really complicate it.

The CHAIRMAN. Yes.

Secretary BAKER. I really do. And what we're really talking about is a nuclear cataclysm. I mean, conventional weapons don't have that——

The CHAIRMAN. No, they don't. But, with respect to——

Secretary BAKER [continuing]. Destructive capacity.

The CHAIRMAN [continuing]. War, if you go back and read the history—I mean, this is all a sidebar—but, if you go—and you know the history—when you're dealing with conventional weapons—and somehow people think there's an exhaustion factor or a supremacy factor that you wear out the other side, one way or the other—it can be costly. And as we recall in the battles of World War I, when they just threw people at it, with expendability, generations were lost in a lot of countries. I've sometimes wondered whether—I just wonder aloud—whether that deterrent—I mean, there were thoughts, as we all recall, with Lyndon Johnson, in Vietnam, about whether or not we shouldn't invade the North. And most people would make the judgment that one of the reasons we didn't was the presence of two nuclear powers on the other side—Russia and China.

Secretary BAKER. Yes.

The CHAIRMAN. So, you know, these are long-term goals.

Secretary BAKER. Absolutely. And nobody ought to underestimate the excruciating difficulty of ever getting to a world without nuclear weapons.

The CHAIRMAN. But, you will agree with me, I know, that every step one takes moving in that direction makes the world a safer place, if you can do it in company with——

Secretary BAKER. As long as it's done in balance, yes.

The CHAIRMAN. Right.

Secretary BAKER. As long as it's not done unilaterally or——

The CHAIRMAN. Exactly.

Secretary BAKER [continuing]. Or in a way that would be destabilizing.

The CHAIRMAN. Agreed.

Secretary BAKER. But, again, Mr. Chairman, I know you're not advocating that we should go for a world without nuclear weapons in which we reduce first and then everybody comes along. I mean, that's a nonstarter.

The CHAIRMAN. Absolutely a nonstarter. By no means. I'm also not willing to do it without the kinds of terms that you described. I mean, if you don't have unlimited verification, and you don't have everybody at the table, it would be impossible.

Secretary BAKER. You don't have everybody at the table, unlimited verification, and proportionate reductions only. So, if we've got a lot more than a small proliferator out there, they nevertheless—if we take a 10-percent cut, they've got to take a 10-percent cut. It's the only way you're ever going to get the countries—in my opinion, you'll ever be able to negotiate it diplomatically with the countries.

The CHAIRMAN. Well, Mr. Secretary, as always, thank you for being here to help us think through this treaty. I think your comments today are important and well taken, and I think they will help a number of folks here to sort of sift through the pros and

cons of this agreement, and to focus on the questions that you've put to us, which are already, I think, surfacing as the principal areas of concern that we have to flesh out. And we'll be doing that over the next weeks.

Next Tuesday, we'll have Secretary Kissinger here, and then we'll be moving in to get the negotiating team and have some classified sessions and, hopefully, be able to move to the resolution and ratification relatively quickly.

Thank you.

Secretary BAKER. Well, thank you for having me, Mr. Chairman.

The CHAIRMAN. We're honored. Thank you, sir, very much.

We stand adjourned.

[Whereupon, at 4:05 p.m., the hearing was adjourned.]

THE ROLE OF STRATEGIC ARMS CONTROL IN A POST-COLD-WAR WORLD

TUESDAY, MAY 25, 2010

U.S. SENATE,
COMMITTEE ON FOREIGN RELATIONS,
Washington, DC.

The committee met, pursuant to notice, at 9:33 a.m., in room SD–419, Dirksen Senate Office Building, Hon. John F. Kerry (chairman of the committee) presiding.

Present: Senators Kerry, Cardin, Casey, Kaufman, Lugar, Corker, Risch, and Barrasso.

OPENING STATEMENT OF HON. JOHN F. KERRY, U.S. SENATOR FROM MASSACHUSETTS

The CHAIRMAN. The hearing will come to order.

Good morning, everybody. This morning we are enormously privileged to welcome one of America's most distinguished statesmen, perhaps the dean of diplomacy in the United States, Dr. Henry Kissinger, who served as National Security Advisor and Secretary of State to Presidents Nixon and Ford.

This is our fourth hearing on the New START Treaty. And by our count, this is Dr. Kissinger's 66th appearance before this committee. We are particularly fortunate to have him—that's more than some Senators on the committee, I think—we are particularly fortunate to have him back to testify, because of his deep expertise on great power relations and nuclear strategy.

It was 1957 when Dr. Kissinger helped define the study of nuclear deterrents by publishing one of the classic books on the subject: "Nuclear Weapons and Foreign Policy." And while serving President Nixon, he successfully negotiated the SALT I accord, the first agreement to limit United States and Soviet nuclear weapons.

In 2007, precisely 50 years after publishing his book, Dr. Kissinger once again shaped public debate on nuclear security when he joined with George Shultz, William Perry, and our former colleague, Sam Nunn, to endorse the goal of a world free of nuclear weapons. That suggestion surprised many people. But Dr. Kissinger and his coauthors wrote that the spread of nuclear weapons to rogue states and possibly even terrorists means that the world is now on the precipice of a new, dangerous nuclear era. That, they argued, demanded a new way of thinking.

Now, as you know, Dr. Kissinger does not just throw out empty strategy pronouncements. And that's precisely why his article laid out a list of concrete steps that would enhance our security in the immediate future. One of the steps Secretary Kissinger recom-

mended is that we continue reducing the size of United States and Russian nuclear arsenals. New START, which lowers the legal limit on deployed warheads by up to 30 percent, is a responsible move in that direction. Four decades of bilateral arms control treaties with Moscow have decreased fears of nuclear aggression and helped the United States and Russia to work together. The New START Treaty continues and advances the tradition of reductions that was forged in the original START agreement and the Moscow Treaty.

Secretary Kissinger and his coauthors have also argued that strategic arms control can help us to fight nuclear proliferation. The United States and Russia, together, hold more than 90 percent of the world's nuclear weapons. That is why they wrote that we have a special responsibility—we and Russia—a special responsibility, an obligation, and the experience to demonstrate leadership. They said bilateral nuclear reductions are key to our global effort to reduce the spread of nuclear weapons.

This is a crucial point in time. Some have said that other countries don't care how many nuclear weapons the United States and Russia have. But, in fact, we've already seen that New START can help us fight nuclear proliferation, and therefore, nuclear terrorism.

Last week, Secretary Clinton testified to this committee that New START had renewed American credibility at this month's conference in New York to review the Nuclear Non-Proliferation Treaty. That means we've already been better able to isolate Iran and prevent it from diverting attention from its own troubling behavior. And the New START Treaty has reenergized our relationship with Russia, helping us to persuade Moscow to support a new round of U.N. sanctions against Iran.

Since 2007, Dr. Kissinger and his coauthors have elaborated on their groundbreaking work. They have emphasized, among other things, the importance of the original START Treaty's verification mechanisms, which expired on December 5 of last year. Skeptics have argued that the New START Treaty's verification provisions are not as effective, because they provide for fewer inspections. But that argument overlooks three crucial details. First, there are many fewer facilities to inspect today than when START was first signed. Second, for the first time ever, Russian missiles will be given a unique identification number that allows us to track that specific missile. And third, United States inspectors will be able, for the first time, to determine how many reentry vehicles are on a Russian missile. Our military, at every level, as testified to by Admiral Mullen, the Chairman of the Joint Chiefs of Staff, is confident that New START's verification provisions get the job done. And the New START Treaty safeguards are better than what we have right now. The fact is that until we ratify a treaty, we have none. So, that's the choice.

Secretary Kissinger has also argued that we must reduce tensions with Russia on missile defense so that we can cooperate more effectively.

The preamble to the New START Treaty acknowledges the relationship between offensive forces and missile defenses. It does nothing more than acknowledge the relationship. As Secretary Jim

Baker testified last week, we're tipping our hat to Russia's concerns without giving anything away.

Some people have insisted that the preamble constrains our ability to deploy missile defenses against rogue states. So, let me be clear on this point. This accord imposes no restriction—zero—none—no restriction on our ability to defend ourselves. In fact, the administration has been clear that we will not be limited in any way in plans to continue to build missile defenses to protect America from Iran or North Korea or any other individual nuclear threat.

Dr. Kissinger knows how important bipartisanship is in our consideration of arms control agreements. The Senate approved SALT I by a vote of 88 to 2 during his tenure as National Security Advisor. Many years later, the Senate endorsed the original START Treaty, 93 to 6. The Moscow Treaty was approved with 95 Senators voting in favor and none voting against. I am confident that once this committee concludes its deliberations, we will find overwhelming support for the New START Treaty, as well.

And part of that deliberation takes place today, as it has in our prior hearings, by inviting distinguished statespeople from our country to share their thoughts with us. Today, as I've said previously, we are pleased to have one of our most distinguished statesmen of all, Dr. Henry Kissinger.

Senator Lugar.

OPENING STATEMENT OF HON. RICHARD G. LUGAR, U.S. SENATOR FROM INDIANA

Senator LUGAR. Mr. Chairman, I join you in welcoming our friend and distinguished witness, former Secretary of State and National Security Advisor, Dr. Henry Kissinger.

Last week, the Foreign Relations Committee received testimony, as you pointed out, on the New START Treaty from Secretaries Gates and Clinton and Admiral Mullen, and former Secretary of State James Baker. In April, we heard from former Defense Secretaries Jim Schlesinger and William Perry.

Our witnesses have expressed the common view that while there are questions to be answered about the treaty and our broader nuclear posture, a decision not to ratify the treaty would forgo an opportunity and exacerbate the broader challenges to U.S. foreign policy.

Our hearings on the New START Treaty come at a time when we are witnessing fundamental changes in United States strategic planning.

In addition to consideration of the treaty, this committee is studying the full meaning of the new Nuclear Posture Review. Moreover, the treaty has coincided with the Nuclear Non-Proliferation Treaty review conference underway in New York; Iran's continued pursuit of nuclear programs; the development of a new Strategic Concept for NATO; and discussions related to the Ballistic Missile Defense Review.

The New START Treaty has been, both directly and indirectly, linked to each of these issues, and Senate's decision on START will reverberate throughout our strategic relationships worldwide.

The New START Treaty follows a period when we have had severe disagreements with Russia. Russian actions related to Iran, Afghanistan, and North Korea, for example, often have exhibited a reflexive resistance to United States positions even when we have substantial commonality of interest. Russia's repeated use of energy exports as a political weapon and its treatment of Ukraine and Georgia demonstrate a hard-line on regional issues. In this context, we should avoid ratcheting between excessive expectations and severe disappointment in our attitude toward Russia.

We also should avoid the idea that the New START Treaty can reset our relationship with Russia on its own.

But recent difficulties in the United States-Russian relationship make the New START Treaty more important, not less. Distancing ourselves from nuclear engagement with Russia would greatly reduce our knowledge of what is happening in Russia, hinder our ability to consult with Moscow in a timely manner on nuclear and national security issues, further strain our own defense resources, weaken our nonproliferation diplomacy worldwide, and potentially, heighten arms competition.

As Secretary Baker said last week, "Despite ups and downs in relations between Washington and Moscow over the last 18 years, START ensured strategic stability between the United States and Russia." Dr. Kissinger, I hope that you will elaborate on what role such treaties play in our relationship with Moscow, as well as in sustaining United States influence worldwide.

Beyond Russia, we must think strategically about how we hope to shape the world in an era when developed nations are contending with an explosion of debt that limits the resources they are willing to apply to international problems, even as opponents practice asymmetrical warfare that is expensive to combat and terrorist cells seek weapons of mass destruction.

Meanwhile, the systemic risks to the global economic system have increased sharply in recent years due to the debt situation and the growing fragility of energy, food, and water supplies, which are likely to be the subject of increasing international conflict. In such an environment, few security problems will be solved by increasing U.S. defense expenditures.

Our margins for error in preventing nuclear proliferation in the coming decades will be especially narrow. Reaching common ground on START provides some foundation for continuing United States-Russian cooperation on reducing the nuclear, chemical, and biological dangers facing our world.

The NPT is under stress from the actions of Iran and North Korea and the concerns of neighboring countries. The treaty is also contending with the complications that arise out of an expansion of global interest in nuclear power. The national security of both Russia and the United States will suffer if the world experiences a breakdown of the nonproliferation regime. Unless the United States and Russia provide strong leadership in this area, the coming surge in demand for nuclear power will lead more and more nations to seek their own enrichment facilities. If non-nuclear-weapons states opt for major nuclear power programs and their own fuelmaking capabilities, they could produce enough nuclear materiel for thousands of nuclear bombs. This could generate a raft

of new nuclear weapons states, exponentially increase the threat of nuclear terrorism, and provoke highly destabilizing arms races.

The New START Treaty, by itself, cannot address these threats. But without a strategic nuclear treaty with Russia and all the consultations and transparency measures that come with it, we will have very little hope of tackling the more acute security problems that confront both of our nations.

We are very fortunate to have Dr. Kissinger with us today to examine the New START Treaty, our relationship with Russia, and the broader strategic environment that we are attempting to shape. And I look forward to his insights and our discussion, as always.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Lugar.

Dr. Kissinger, we welcome your testimony.

As I said, your full testimony will be placed in the record as if read in full. And if you choose to summarize or read part of it, or all of it, the choice is yours.

Thank you, sir.

STATEMENT OF HON. HENRY KISSINGER, FORMER SECRETARY OF STATE, KISSINGER ASSOCIATES, NEW YORK, NY

Dr. KISSINGER. Mr. Chairman——

The CHAIRMAN. Can you push the—I think there's a button on there. And if you pull it down a little closer, it'd be great.

Dr. KISSINGER. Mr. Chairman, Mr. Ranking Member, it's a great privilege to be able to testify before this committee, after a fairly long interval, actually.

I have submitted a statement. And I think it might be most efficient if I summarize my views and gave the Senators an opportunity to question me about them.

And I broke my statement, in effect, into two parts. One, an assessment of the agreement. And second, the strategic and geopolitical issues we need to deal with as a country, independent of the treaty, as a result of a new, evolving situation.

The subject of nuclear arms control grew out of the effort of those who had created the largest and most destructive weapons that had ever existed to resolve by negotiations some of the ultimate consequences of the decisions that had been made over a period of years.

A number of objectives have characterized these negotiations: to reduce or eliminate the danger of war by miscalculation, which requires transparency and verification; to bring about the maximum stability in the balance of forces to reduce incentives for nuclear war by design, especially by reducing incentives for surprise attack; and to overcome the danger of accidents fostered by the automaticity of the new technology. All of these measures, combined, might merge into an international system that would reduce or limit—and, in the end, hopefully, eliminate—the use of these weapons as a conscious choice.

And in the last decade, there have emerged two vast additional dangers that profoundly affect the way we think of weapons of mass destruction: the proliferation of these weapons and the consequent danger that nonstate groups might acquire some of these weapons.

As the chairman and ranking member have pointed out, the treaty before you is an evolution of agreements that go back to the 1970s, and particularly of the series of START agreements that were started in the Reagan administration and then continued, in some form, in every subsequent administration.

In my view, the agreement is a modest step forward, stabilizing American and Russian arsenals at a somewhat reduced level. It provides transparency. It reintroduces many of the verification measures that lapsed with the expiration of the last START agreement. It encourages what the Obama administration has described as "the reset of political relations with Russia," and it may provide potential benefits in dealing with the issues of proliferation.

I want to emphasize the point that both the chairman and the ranking member have made, the importance of a continuing dialogue with a country that, together with us, possesses 95 percent of the world's nuclear weapons, on the measures to deal with these weapons. Without such a dialogue, the world would be rudderless in front of its greatest dangers.

I have not had an opportunity to study the full text of the treaties, including the associated protocols. And I'm aware that, at the end of any negotiation, controversies arise because the treaty merges the views of the parties with different requirements and sometimes adversarial purposes. I would have preferred some of the provisions to be somewhat different. But, I do not believe they affect the central purpose of the treaty. And having negotiated arms control agreements myself, I recognize the difficulty of achieving every objective.

In deciding on ratification, the concerns need to be measured against the consequences of nonratification, particularly interrupting a process that has been going on for decades, the relationship to the NPT, and to the attempt to achieve a strategic coherence.

So, for all these reasons, I recommend ratification of this treaty, unless the deliberations of this committee reveal material that is not before me and that I do not anticipate encountering.

Having said this, let me raise a number of concerns that affect, not the text of the treaty, but the nature of the international situation within which this treaty takes place and to which the deliberations of this committee could play an important role.

The first is that, when SALT agreements were negotiated in the 1970s, the Soviet Union was a global adversary. And the danger of strategic war with the Soviet Union was a major factor in all our deliberations. Today, a strategic war with Russia is a relatively negligible danger. We have an obligation and should attempt to control the nuclear armaments. But, the relationship with Russia now has to be defined, importantly, in political and not only in strategic terms.

Second, when arms control started, the world was essentially bipolar. As weapons are reduced and as other arsenals proliferate, we can envision a world of multilateral nuclear establishments. And in the interval before—where we are and where, perhaps, we may wind up after a period that President Obama described could—would not be reached in his lifetime. When all—when nuclear weapons are hugely reduced, we have to, as a country, ask

ourselves a series of questions of how one defines a multilateral strategic balance, how one defines the number of delivery vehicles, what happens when nuclear countries make an alliance with each other, confronting a third state, and what will be the impact on the international situation when we achieve our objective and deterrence has to be achieved primarily by conventional weapons.

I repeat, I'm not raising these concerns as an objection to the treaty, but as a guide to issues that need to be discussed as our debate continues.

Two considerations follow from this. The first is that, at some early point, the negotiations that are now bilateral have to merge into multilateral discussions. We will reach a point where further reductions of American and Russian weapons, by themselves, will have to take into account the growing relative importance of the arsenals of other countries that are being augmented.

The second point is that, as we go through these reductions, tactical nuclear weapons will have to be included in any further deliberations. The imbalance in tactical nuclear weapons between Russia and the states around it cannot be made up under reduced nuclear strategic weapons on our side or decreasingly made up by our own strategic forces.

So, those two considerations should guide future approaches.

And finally, I would like to say two things. Concerns have been raised with respect to missile defense and with respect to modernization. I agree with the chairman. I do not believe this treaty is an obstacle to a missile defense program or modernization. Those are decisions that the United States can and should take as part of its own strategic design. And I share the view that a robust program of modernization must be an integral part of the ratification of this treaty and be discussed between the administration and the Senate as the treaty deliberations go forward.

In short, this committee's decision will affect the prospect for peace for a decade or more. It is, by definition, not a bipartisan, but a nonpartisan, challenge.

I thank you for the opportunity of appearing before you.

[The prepared statement of Dr. Kissinger follows:]

PREPARED STATEMENT OF DR. HENRY A. KISSINGER, FORMER SECRETARY OF STATE, KISSINGER ASSOCIATES, NEW YORK, NY

Thank you, Mr. Chairman and Ranking Member Lugar. It is a pleasure to meet again with this committee, whose membership has substantially turned over since I last testified before it.

Let me begin by placing the treaty into the context of arms control issues as they have evolved in the half-century that I have dealt with them. I consulted in the Kennedy administration during discussions on Berlin and the Nuclear Test Ban Treaty in the 1960s. As National Security Advisor and Secretary of State, I participated in the negotiations of several arms control agreements in the 1970s. In various advisory capacities and as a concerned citizen ever since, I have advocated both arms control measures as well as a strong national defense.

The subject of nuclear arms control grew out of the seemingly paradoxical effort of those who had created the largest and most destructive arsenals to avoid by negotiation the ultimate consequences of their own decisions. The advent of nuclear weapons and other instruments of mass destruction causes strategy to be conducted at the edge of an abyss from which, should we fall into it, there may be no return. An increasing familiarity with the implications of modern weapons technology has generated a growing desire to mitigate its consequences to the greatest extent compatible with our security.

A number of objectives characterize these negotiations: to reduce or eliminate the danger of war by miscalculation, which requires transparency of design and deployment; to bring about the maximum stability in the balance of forces to reduce incentives for nuclear war by design, especially by reducing incentives for surprise attack; to overcome the danger of accidents fostered by the automaticity of the new technology. All these measures combined might, if successful, merge into a strategy that would reduce or limit—and, in the end, perhaps eliminate—the use of these weapons as a conscious choice.

In the last decade, there have emerged two vast additional dangers that profoundly affect the way we think of weapons of mass destruction and arms control: the proliferation of weapons of mass destruction and the consequent danger that nonstate groups might acquire some of these weapons.

The treaty before this committee is the latest of a series of measures seeking to control strategic arms going back to the 1970s when the numbers of strategic nuclear weapons were limited in the so-called SALT agreements. The treaty before this committee is an evolution of the START treaties begun in the Reagan administration and elaborated by its successors of both parties. It is, as I shall argue, probably the last agreement on strategic arms that can be made without taking tactical nuclear weapons into account. It is also approaching the end of what can be achieved by bilateral negotiations on the subject between the United States and Russia. Growing existing arsenals and proliferation will soon impose a multilateral context.

The current agreement is a modest step forward stabilizing American and Russian arsenals at a slightly reduced level. It provides a measure of transparency; it reintroduces many verification measures that lapsed with the expiration of the last START agreement; it encourages what the Obama administration has described as the reset of political relations with Russia; it may provide potential benefits in dealing with the issue of proliferation.

I have not had an opportunity to study the full text of the treaty including its associated protocols. I understand that the Senate has not yet received the obligatory National Intelligence Estimate required for ratification procedures nor the State Department judgments on compliance performance. Before making its final decision, this committee will no doubt carefully review those documents. The committee has also available to it the concerns of previous witnesses, particularly those of Secretaries Baker and Schlesinger. The committee could make a significant contribution by clarifying some of the treaty's ambiguities.

At the end of any negotiation, controversies arise because a treaty merges the views of parties with different requirements and sometimes adversarial purposes. I personally would have preferred to avoid establishing a separate category for deployable but not deployed missiles or a different counting rule for airplanes. I would also have preferred to avoid prohibiting the use of missile launching sites for strategic defense as unnecessarily limiting strategic options of a future President. But having negotiated arms control agreements myself, I recognize the difficulty of achieving every objective. In deciding on ratification, these concerns need to be measured against the consequences of nonratification, which would profoundly affect global confidence in American purposes.

Based on the evidence currently available, I would submit these key judgments:

- The treaty, if observed, would maintain strategic stability with Russia over the next decade at somewhat lower force levels than currently existing.
- The treaty allows for the necessary modernization of our forces. The obstacles to the necessary modernization are not provisions in the treaty but strategic decisions within our unilateral capacity to make.
- The treaty does not unduly restrict our ability to build and deploy an effective missile defense system—again, a decision that will be shaped by strategic choices in our power to make.
- The treaty, with its inspection and verification regime, is a significant confidence-building measure that may help lay the foundation for more constructive United States-Russian relations.
- Verification must be adequate to detect any attempt to break out in sufficient time to devise an appropriate response. The committee will want to pay special attention to the protocols dealing with these subjects and to expert testimony on that subject.

LONG-TERM ISSUES

Having said this, allow me to use this opportunity to raise additional concerns not as obstacles to ratification but to shape further negotiations we might pursue on the

subject of arms control. The committee might use the ratification process to help shape a bipartisan consensus with respect to them.

We need to adapt our policies to the changed political context. While negotiating traditional arms control, we must recognize that the danger of a strategic nuclear conflict with Russia is negligible. The United States-Russian relationship can no longer be defined in purely strategic terms. Nor should arms control bear the entire weight of this relationship. The contribution of the Russian-American relationship to world peace must be judged importantly in political terms—on the global issues like nuclear proliferation, environment, and energy.

When strategic arms control with the Soviets began 40-plus years ago, the strategic world was bipolar. Other nuclear arsenals were not of sufficient dimension to affect the overall balance because the numbers of strategic warheads and delivery systems were so vast.

Three key elements have changed in the intervening years:

- First, the number of nuclear weapons states has grown, as have the arsenals of some smaller nuclear weapons states.
- Second, the numbers of American and Russian strategic warheads and deliveries systems have been radically reduced and are approaching levels where the arsenals of other countries will bear on the strategic balance, as will tactical nuclear weapons, particularly given the great asymmetry in their numbers in Russia's favor.
- Third, nonproliferation policies have failed to arrest the spread of nuclear weapons—including in the immediate issues of North Korea and Iran.

A multilateral strategic context is inherently more complex than a bilateral one. It obliges us to think through questions as these:

- How is a multilateral strategic balance to be defined?
- How many warheads and delivery vehicles of which kind are needed to deal with other contingencies, including those arising from proliferation and terrorism, and still have a sufficient residue to maintain a credible deterrent posture vis-a-vis Russia?
- How would we deal with a potential hostile alliance of nuclear-armed states? And, further, how does the prospect of nuclear alliances affect the strategic equation?
- What are the requirements of a credible war-fighting strategy in this context?
- As nuclear arsenals are reduced and conventional defenses grow in relative significance or as deliberate substitute, what is the relevance of the lessons of history that deterrence is difficult to calculate with conventional weapons, hence the frequency of wars throughout history?

As we move toward lower numbers, extended deterrence guaranteeing allies and partners needs to be dealt with. For as strategic arsenals are reduced, the distinction between tactical and strategic nuclear weapons is bound to erode. The large Russian stockpile of tactical nuclear weapons, unmatched by a comparable American deployment, could threaten the ability to undertake extended deterrence. This challenge is particularly urgent given the possible extension of guarantees in response to Iran's nuclear weapons program and other programs that may flow from it. For all these reasons, as the Nuclear Posture Review suggests, we are approaching with this treaty the limit beyond which further reductions are inadvisable unless they include Russia's tactical systems.

This committee is not in a position to settle all of these issues in the context of one ratification debate. But it can start—and indeed already has—the discussion, raise public awareness and convey a sense of the Senate with respect to them to guide future national decisions.

MODERNIZATION

The United States is the only nuclear weapons state not currently modernizing its nuclear capabilities and supporting infrastructure. The pool of scientists, engineers, designers, and technicians that has underpinned our nuclear forces is shrinking as we continue to rely on designs 20 years old.

As part of a number of recommendations, my colleagues, Bill Perry, George Shultz, Sam Nunn, and I have called for significant investments in a repaired and modernized nuclear weapons infrastructure and added resources for the three national laboratories. We expressed this view in a statement of January 20, 2010, as follows: "Maintaining high confidence in our nuclear arsenal is critical as the number of these weapons goes down. It is also consistent with and necessary for U.S. leadership in nonproliferation, risk reduction, and arms reduction goals . . . Departures from our existing stewardship strategies should be taken when they are

essential to maintain a safe, secure, and effective deterrent." In determining what is essential, I believe that great weight should be given to the findings of the bipartisan Schlesinger-Perry Commission: "So long as modernization proceeds within the framework of existing U.S. policy, it should encounter minimum political difficulty."

Bill Perry has summed up the challenge before our country: We must "move in two parallel paths—one path which reduces nuclear dangers by maintaining our deterrence, and the other which reduces nuclear dangers through arms control and international programs to prevent proliferation. Given today's threats of nuclear proliferation and nuclear terrorism, these are not mutually exclusive imperatives. To protect our Nation's security, we must succeed in both."

This committee's decision will affect the prospects for peace for a decade or more. It is, by definition, not a bipartisan but a nonpartisan challenge. Thank you for the opportunity to contribute to your deliberations.

The CHAIRMAN. Well, thank you very much, Secretary Kissinger. We appreciate the testimony.

I was particularly struck when I read your testimony. I'm particularly struck by the strategic overlay that you set out, in the back part of your testimony that you've just referred to. You raise an intriguing and important set of questions.

I do think—I'd like to come to that, but I first want to try to bear in on the treaty itself, for a moment, if I can. But, I think those questions that you have posed with respect to the geopolitical, slash, long-term nuclear challenge are very, very important ones. And they're, in some ways, more interesting and challenging.

With respect to the tactical nuclear weapons, there is, I think, a complete agreement in this committee and in the administration that that is the next step, that we cannot proceed further, in a sense. It was never assumed that that would, in fact, be part of this discussion. It was sort of the next discussion. I think you would agree that, notwithstanding the imbalance on the tactical weapons, that the levels that we've arrived at, the 1,550 warheads and the 700 delivery vehicles, leave you confident that this arrangement that comes out of this treaty will, in fact, leave the United States in the position of strength and the position of deterrence that it needs. Is that correct?

Dr. KISSINGER. Yes. Yes, it does. The—any employment—any use of nuclear weapons will produce hugely catastrophic consequences. So, one should not visualize an unlimited use of tactical nuclear weapons that one would not respond to. I think the present numbers will enable us to maintain deterrence.

The CHAIRMAN. And in your prepared testimony, you said that a failure by the United States to ratify this treaty would profoundly affect global confidence in American purposes. I think that's an important warning, and I wonder if you would elaborate a little bit.

Dr. KISSINGER. Well, I would argue, on two levels. One, under the NPT, the United States obligated itself to negotiate about the reduction, and indeed eventual elimination, of its nuclear weapons. Second, the expectation, globally, that a serious effort is being undertaken to limit the prospects of nuclear war, has become an almost permanent feature of the international negotiating scene and a major commitment, especially of this administration.

This START Treaty is an evolution of treaties that have been negotiated in previous administrations, of both parties. And its principal provisions are an elaboration or continuation of existing agreements. Therefore, a rejection of them would indicate that a

new period of American policy has started that might rely largely on the unilateral reliance of its nuclear weapons and would, therefore, create an element of uncertainty in the calculations of both adversaries and allies. And therefore, I think it would have an unsettling impact on the international environment.

The CHAIRMAN. And also in your opening, you said that, with the inspection and verification regime that's in this treaty, you deem it to be, "a significant confidence-building measure that may help lay the foundation for more constructive United States-Russian relations." Could you also elaborate, perhaps, on what you could envision coming out of this, on the plus side, as a result of that confidence-building?

Dr. KISSINGER. Well, we will need, as I indicated in the second part of my statement, a reevaluation of global strategy, in the light of the emerging pattern. One could imagine an ultimate goal in which the incentive to initiate nuclear war is removed, to the greatest extent possible. And this, of course, would have to be coupled with a redesign of our own military forces so that they can fill whatever gaps occur as a result of that decision. So, as negotiations proceed, verification of the strategic forces of an increasing number of countries should be included in the negotiation process to bring about these objectives.

The CHAIRMAN. Fair enough.

With respect to the modernization issue of our forces, you have deemed that this treaty allows for sufficient modernization to take place to maintain the security of our deterrent. Is that accurate?

Dr. KISSINGER. I'm not aware of any provisions in the treaty that prevents the modernization of our forces. The modernization of our forces depends largely on unilateral decisions we make—and should make—as part of our own strategic design.

The CHAIRMAN. And you say that; that is, in fact, what you said in the testimony. I just wanted to make that a more visible part of this colloquy, if you will, that there's nothing in the treaty that restrains that modernization. That is really a decision that is made by the executive department and the Congress. Correct?

Dr. KISSINGER. The—modernization, in my view, depends on decisions made by the executive branch of the government and approved by the Congress.

The CHAIRMAN. Thank you, sir.

Senator Lugar.

Senator LUGAR. Secretary Kissinger, I wanted to ask you, again, the broad question which faces this committee. The committee has been discussing a good number of aspects of our strategic posture and future defense plans, which constitute a great deal of importance to us. But, the immediate question, it seems to me, is, What would be the consequences of failure to ratify the New START Treaty with regard to United States-Russia relations or our broader nonproliferation agenda?

Dr. KISSINGER. Since Russia and we possess 95 percent of the world's nuclear weapons, an understanding between the United States and Russia about the consequences of their use, and restraining their use, where that is possible, and restraining their numbers, is very important. For a long time, the dialogue with

respect to nuclear weapons has been sometimes the principal feature of our relationship.

During the period of bipolarity, this was understandable. But, now we are moving into a period where, actually, strategic conflict between the United States and Russia is extremely unlikely. So, what we negotiate with each other should become a pattern that ought to spread to the rest of the world. But, it also ought to be considered, by both sides, as a means to restrain the pressures they put on each other in the political field. So, it is not really compatible with the spirit of this treaty, or with the purpose of this treaty, if, on the one hand, there is restraint in the deployment and building of nuclear weapons while, on the other side, issues like proliferation are not dealt with in a compatible fashion.

So, the long-term impact of the treaty will have to be judged, importantly, by the degree to which Russia is willing join in a regime, not only of the relations of Russia to the United States, but of the spread of nuclear weapons to other countries; at the moment, specifically, Iran.

Senator LUGAR. Well, that's a very important consideration. I know, from your experience, as you've proceeded through treaty-building on several occasions, the conversation may have started out with regard to nuclear weapons, but very frequently the relationship involved other weapons of mass destruction—chemical weapons, even allegations of biological weapons. And one reason for the treaties, both on the Russian side and ours, was the degree of transparency illustrated by the transport of American service personnel and contractors to Russia, which was of value to the Russians themselves. This was the case simply because the Russians were fearful, with the breakup of the Soviet Union, that elements in the Caucasus, or various other people that were fairly close by, might gain access to fissile materiel, or, in smaller situations, chemical weapons in the form of shells.

Now, I mention this because the relationship that has been denoted by these treaties has brought this degree of transparency, in terms of counting and vision, but, likewise, with the sheer numbers of Americans with boots on the ground in Russia who were very helpful and were perceived that way by the Russians.

Now, what I perceive, as we proceed in this particular situation, is that the appreciation of how important that has been is sort of being lost in translation. This is of concern to me. The transparency aspect of this is critically important. Now, I'm convinced the treaty does not restrain, as you pointed out, any developments of our own weapon systems, nor our missile defense. But, I am concerned the verification aspects, the relationship, the status of American personnel implementing agreements in Russia, and so forth could be vastly inhibited if we do not have accord with this treaty. Do you share that feeling?

Dr. KISSINGER. I agree that the verification provisions of this treaty, even if they are somewhat modified from the previous one, are extremely important for this relationship.

I would also like to supplement an answer I gave to the chairman when he asked what other steps might occur. I believe that the control of fissible materiel around the world will have to be a crucial aspect of a continuation of this process, and that, again,

requires that some of the key verification provisions of this agreement should be put into force.

Senator LUGAR. Well, I thank you for that statement. With regard to developments in related areas, for instance, chemical weapons, the plant at Shchuchye providing for the destruction of nearly 2 million chemical weapons shells and nerve agent was established last year. It appears that both Russia and the United States, although we are parties to the Chemical Weapons Convention, will not be able to meet the April 2012 deadline for possessor states.

One of the values of having this close relationship with the Russians regarding the destruction of our chemical weapons stockpiles is that we both know what the other has at this point, and so does the rest of the world.

So, I get back to the point that transparency is tremendously important, in terms of our relations with every other country, as well as our joint work with the Russians in trying to stop proliferation efforts by other actors around the world. This is going to be difficult for both of us, even if we currently possess 90 to 95 percent of the weapons.

But, I thank you again for your testimony today.

The CHAIRMAN. Thank you Senator Lugar.

Senator Casey.

Senator CASEY. Thank you, Mr. Chairman.

Dr. Kissinger, thank you for your testimony and the help you're providing this committee as we consider the ratification question.

I wanted to highlight a couple of bullet points in your testimony. Page 3—and I'm reading in pertinent part, I won't read every bullet point—but, you say, on page 3 of your prepared testimony, that, "Based upon the evidence currently available, I'd submit these key judgments." The first one is the following: "The treaty, if observed, would maintain strategic stability with Russia, over the next decade, at somewhat lower force levels than currently existing." The second bullet point—I'm just reading the first sentence of that, "The treaty allows for the necessary modernization of our forces." And then the third bullet point has this full sentence, "The treaty does not unduly restrict our ability to build and deploy an effective missile defense system—again, a decision that will be shaped by strategic choices in our power to make."

All three are—including the other statements you make in that section—key considerations for us as we deliberate.

And I guess the one that has had a lot of attention paid to it is missile defense. And I just wanted to comment further, if you have any further comments, about the question of missile defense and the ratification impact in that question.

Dr. KISSINGER. Well, first, with the relationship of the treaty to missile defense. There are two aspects in which the treaty talks about missile defense. One is in the preamble, and the other is in the prohibition against using missile-launching silos—offensive missile-launching silos for missile defense.

The first of these provisions is not prescriptive. It states that the strategic equation will be affected by changes in missile defense status. In an abstract world, and if I could have written the treaty without a Russian counterpart, I might not have put that in. But,

it's a statement of—it's a truism. It is not an obligation. It's something to which countries can react unilaterally.

The second one, about prohibiting the use of existing offensive silos, my understanding is—and reinforced by conversations with Admiral Mullen and General Cartwright—we have no plan to do this. So that the only argument one could raise with respect to it is to say, "Why constrict the flexibility of a future President with respect to deployments that he might make, even though no current plan exists for making them?" I have sympathy for that argument, but I don't think it is central, because it does not inhibit anything that the military chiefs have asked for or that has ever been in our plans.

Now, on the second question: the degree of missile defense. I don't think any country, any President, or any administration can adopt a strategy that leaves the country totally vulnerable to any kind of attack. So, it seems to me there is a fair degree of consensus that one should have missile defense against accidental launches, terrorist attacks, and the kind of attacks that the emerging proliferating regimes develop. So, the area of controversy would be to what degree one should also protect against less-than-all-out attacks from major countries, since there also seems to me a consensus that a total defense against an all-out attack is, at present, not possible. So, it's in this range of the degree of protection against less-than-all-out attacks, we should move toward missile defense, and the degree to which this might primarily serve to trigger another offensive buildup by a major opponent. That is the range within which the debate will be taking place. But, I don't think the treaty is relevant to that debate.

Senator CASEY. I wanted to ask you a question that's not central to the ratification issue, but is a point that you've raised. And that's the connection between the very real concern that we have about nuclear terrorism and this particular treaty.

I was very fortunate to see the film, "The Nuclear Tipping Point," where you were—you and others were raising real concerns about where we are in the world, in terms of the threat posed by nuclear terrorism. And I was struck by one of your statements, where you said, "With the classical notion of deterrence, there are consequences before which an aggressor would recoil. In the world of suicide bombers, that calculation does not compute in any comparable way." Your statement. And then later, you said, "Once nuclear weapons are used, we will be driven to take global measures to prevent it from happening again." So, some of us have said, "Let's ask ourselves, 'If we have to do it afterward, why don't we do it now?'"

If you could elaborate on those statements, and especially in the connection between the very real threat of nuclear terrorism and this process of ratification.

Dr. KISSINGER. Let me describe the problem of deterrence as I have experienced it in my own life.

I started writing about this when I was a young professor at Harvard, almost by accident, because I commented on a personal letter that a friend had received regarding the then new doctrine of massive retaliation. I have always been in favor of a strong national defense. But, I must also tell you that the most searing issue I faced, in my own mind, when I was Security Advisor or Secretary

of State, is what I would do if the President asked me that—he had exhausted all his diplomatic options and the time had come to move to the—to nuclear war. Because the consequences of nuclear war go beyond anything that any leader has ever had to face previously.

And so we've, for all this period, been caught in the dilemma that we need a strong defense and we need to find some way to limit its consequences. And that's what these discussions are about.

How one strikes this balance has to be rediscovered every decade or so. And I don't know—I may have forgotten what the precise point of your question was.

Senator CASEY. Oh, about the nuclear terrorism itself, and how that affects our debates about the——

Dr. KISSINGER. Well, it's——

Senator CASEY [continuing]. START Treaty——

Dr. KISSINGER [continuing]. The point I made, "What happens if nuclear weapons are used?" If we woke up one morning and found that 500,000 people had been killed somewhere in which, I think, there would be perhaps overwhelming pressures for two things: One, to avoid it happening in this country, if it hasn't happened in this country; and second, to prevent it from ever happening again. I don't think one will be able to live with the consciousness that this could happen as a regular feature of international diplomacy. So, I raise this question: "Why don't we ask ourselves the question now of what we would do then, before it has happened?"

Senator CASEY. Thank you.

The CHAIRMAN. Thank you.

Secretary Kissinger, it's a sobering thought. An important one.

Senator CORKER. Mr. Chairman.

The CHAIRMAN. Senator Corker.

Senator CORKER. Mr. Secretary, thank you for your testimony and your service. I've certainly respected your career.

I found your opening comments semirevealing. I mean, in essence, you haven't spent a lot of time on the treaty itself, and haven't seen the protocols, and do not anticipate, though, that anything is going to be in the written document that is problematic, but believe that we should ratify it. And the reason I find that revealing is, it seems to me that what you're saying is, the treaty itself is not particularly important, that what is important is the dialogue that we have with Russia, and that we need to continue that dialogue, and, regardless of what the document says, that that dialogue is more important than the document.

Dr. KISSINGER. Senator, I have not addressed the protocols because they are not yet available. But, in order to prepare myself for the testimony, I have consulted the following officials: Admiral Mullen, Secretary Gates—regarding modernization—interdepartmental briefing team including General Cartwright and headed by Under Secretary Ellen Tauscher and another briefing team from the National Security Council headed by Gary Samore. As for the treaty itself, I called it a "modest step and—of somewhat reduced numbers." Then I listed a number of things which I would have—about which I have some questions, some of which I have mentioned here. But, then that raises the issue, is that a reason not to ratify it? Well, some of them can be fixed by dialogue between

the committee and the administration. But, the fact that I might have avoided this distinction between nondeployable—nondeployed deployable weapons, and that I might have put this 100 into this limit, rather than make one limit of 700 and another limit of 100 which might have been more designed to permit a claim of substantial reductions than of the architecture of the treaty, all that, in my view, is no reason not to ratify the treaty. But it should be clearly understood that the missile defense issue and the modernization issue are not affected by the treaty, that the treaty supplies a modest progress toward reduction and perhaps a possibility to build Russia into the nonproliferation process.

Senator CORKER. So, it seems to me that, though, in many ways, you look at this, just—if I look at the—everything that you've said, that this is sort of form over substance, that us continuing to negotiate with Russia helps us, as it relates to other nonproliferation efforts. And even thought the treaty is modest and we don't really know, necessarily, everything that the outcome is going to be, but we should continue to support these negotiations.

Let me ask you this question. It seems to me that we put a lot of weight on the negotiations with Russia as it relates to nonproliferation. I wondered, in your previous life, if the conditionality of our relationship with countries is of greater problem, as it relates to nonproliferation. In other words, our friends, we know, have nuclear weapons, and we wink and nod at that, or create unusual relationships, as we have with India. Has that—is that more of a problem, as it relates to dealing with nonproliferation with other countries, than the positive, if you—which is the greater issue, us dealing with Russia, or that other issue?

Dr. KISSINGER. Well, the history of our relationship with Russia has been that of a strategically adversarial relationship. And throughout the cold war, all policymakers had to consider the possibility that a conflict with Russia might occur, or at least would affect the calculations of key countries. So, there is that history.

On the other hand, there is—this adversarial relationship need not be frozen and, therefore, one could hope, or expect, that Russia would build itself into an international system.

I'm disappointed at the conduct of Russia with respect to the Iranian issue. And I'm disappointed that they have specifically excluded the air defense system that they have agreed to sell to Iran from the sanctions that they have joined.

So, improvement is still very important in our relationship with Russia. I'm saying that this treaty should contribute to inducing Russia to conduct itself in a more restrained fashion internationally. It can contribute to such a dialogue but, in the end, Russia will have to be judged, like other nations, on the degree to which it builds itself into a peaceful international system.

Now, of course, countries with a different history, like France—we treat their nuclear establishments in a different way. But, I would argue that the further spread of nuclear weapons, regardless of the domestic structure of the regime, will create instabilities which will make the danger of nuclear war greater and, in time, intolerable. In the cold-war period, there was only one deterrent balance one had to worry about. In a multipolar nuclear world—in a world with multiple deterrent forces, countries have to cal-

culate so many deterrent balances simultaneously, and they may not have the technical means of controlling their weapons, and they may have value systems that are less stringent with respect to the loss of life than ours—that some accident or miscalculation becomes more probable. Therefore, we must oppose the spread of nuclear weapons, regardless of the domestic structure of the countries that are acquiring them.

Senator CORKER. But, we really—but, we don't. And we continue to sort of go down a path of everybody knowing things, but not acknowledging things. And I just wonder how that affects our nonproliferation efforts.

And I know my time is up.

I've noticed, in the past, that you have—or, in recent times, you've said that you have a vision of a—you believe that we should have a nuclear-free world. And as I look at the tremendous weight that you placed on that answer to your friend and—about the—you know, if you were faced with—or, I guess, later in life, faced with going to the nuclear board, and what your answer would be. I mean, I'd love to hear, at some point—and I realize, today, my time is up and we'll move on to another topic—but, it seems to me that there's a—having nuclear weapons, on one hand, keeps countries from engaging with each other militarily, and, on the other hand, as you mentioned, people, domestically—not having the ability to keep them from being used inappropriately, creates other issues. And it seems to me there's a tension there that's interesting, that I know we won't get to today.

But, I find your remarks interesting, and would love to talk with you more, offline.

Dr. KISSINGER. Let me make a comment on that point, Senator. The—if you read the statements that the so-called "Gang of 4" have made, they've usually described the nuclear-free world as a vision that might happen at the end of a process. But, while this process is going on, we are still living in a nuclear world in which the issues of deterrence and security will have to be respected and taken seriously.

And we have also said—and it has been particularly well expressed by Senator Nunn—that vision is like climbing a mountain which is covered in clouds, and you don't really know what the summit looks like and what obstacles you'll find, but that doesn't mean you can't establish a way station along the way, in the territories that you can see, and discover what you might see later on.

So, the vision, it's what might be the end process, but the policy choices are the choices that are before your committee. And let the various administrations that have dealt with them, and this administration that is dealing with them, has to consider in a concrete, and not in a visionary, way.

The CHAIRMAN. Thank you, Dr. Kissinger.

Senator Cardin.

Senator CARDIN. Thank you, Mr. Chairman.

Secretary Kissinger, we thank you very much for your extraordinary service to our country. And it's a real pleasure to have you before our committee.

I want to get the benefit of your thoughts as to this treaty and its way that it's being judged as toward the relationship of Russia

and the United States. I'd be interested in your assessment as to why Russia believes that ratification of this treaty, from its point of view, benefits its country.

Some could argue that Russia is interested in getting a strategic advantage over the United States on nuclear weapons, and whether this treaty has that impact, or whether Russia wants to improve its relationship with the United States or improve its international leadership on these types of issues. And I would welcome your thoughts as to why you believe Russia was interested in extending the START Treaty, and the specifics as to what it sees as its advantage.

Dr. KISSINGER. Of course, one should not look at this treaty in isolation. This treaty is an evolution of treaties, that have been made by a series of American and Russian administrations, which suggests that an unconstrained nuclear arms race has appeared too dangerous to leaders of both American political parties and almost every incarnation of Russian leaders over the last 30 years.

Russia now, in it since the collapse of the Soviet Union, has faced a problem of identity. Through much of Russian history, the Russian state has been identified with its foreign expansion and with what the outside world certainly considers a kind of imperial expansion. This collapsed in the 1990s. And, since then, Russia has attempted to redefine a new role.

Undoubtedly, there are some elements of imperial nostalgia. Equally, there are elements of recognition that, with frontiers of thousands of miles of demographic imbalance with China, of ideological challenge from Islam, and new frontiers in Europe, that the era of the Russian global expansion is coming to an end.

So, how can Russia define itself in these circumstances? For them, being taken seriously by the United States is an important element. At the same time, there is probably also—temptation of creating a situation that enables Russia to assert its power around its periphery. And this undoubtedly contributes to their reluctance—and, in fact, so far, refusal—to discuss tactical nuclear weapons, at all.

So, one should not look at this treaty as a means by which Russia seeks to achieve a great advantage over the United States. The most they can achieve is to mitigate the decline of its global role by a measure of parity with the United States.

It is certainly true that they have limited themselves to what the economy undoubtedly imposes on them, anyway. But, I don't know what we would gain by the slightly higher ceilings of less than 100 missiles that have been talked about.

Senator CARDIN. Thank you for that response.

As we look forward to our relationship with Russia, confronting other nuclear threats around the world, you commented briefly about Iran and your disappointment about certain provisions not being included in the sanction legislation. Do you believe that Russia will be a reliable partner with the United States in dealing with the threat of Iran becoming a nuclear state? Or, for that matter, we could expand that to North Korea or problems develop in Pakistan or India. Is Russia focused with us, or not?

Dr. KISSINGER. In the mid-term future, a nuclear Iran is a greater danger to Russia than it is to the United States, because

it is contiguous. And the border populations of Russia, which are mostly Islamic, are also adjoining Iran. And, based on my own conversations with Russian leaders, I'm convinced that they are very concerned about Iran.

On the other hand, they are reluctant to be drawn into a conflict in which they might bear the brunt while we begin to ease out of it. And, second, their economy creates temptations to benefit from sales to Iran, even while they recognize the long-term dangers.

But, if present trends continue, and if Iran continues to build its nuclear establishment, I don't see how Russia can avoid facing some of the consequences.

Senator CARDIN. Thank you, Secretary Kissinger. Appreciate it.

The CHAIRMAN. Thank you, Senator Cardin.

Senator Risch.

Senator RISCH. Thank you, Mr. Chairman.

Secretary Kissinger, thank you for your many years of service to the United States.

I noted, in your opening statement, you observed that, "We must recognize that the danger of a strategic nuclear conflict with Russia is negligible."

And I think that that fact is virtually universally recognized or accepted on our side. And the result of that, I think, is that there are a lot of people in the same place you are, that they haven't really looked at the treaty that closely, because they're more interested in the form than they are the substance, because, obviously, that form has served us very well over the last four decades.

The question I have for you is this. Obviously, we are where we are today, and it's very different than where we were 40 years ago, as far as our relationship with Russia is concerned. Do you anticipate, or do you foresee, any circumstances in the future where that might change and we'd go back to a much more hostile relationship than what we have today? What are your thoughts on that?

Dr. KISSINGER. Well, if Russia were to try to rebuild its empire in Central and Eastern Europe, it would undoubtedly be opposed by the United States. That would produce the conflicts that occurred during the cold war. And I can imagine other circumstances of Soviet expansion which we would surely resist. But, in the cold war, the adversarial relationship was almost congenital, in the sense that Russia attempted to intervene in every part of the globe. There was a period, in the 1970s, where Cuban troops were sent around to Africa, Russian troops marched into Afghanistan, and pressure was exerted on China. I don't think Russia has the capability for that kind of foreign policy today.

But, the reason to approve this treaty is not to placate Russia. We conducted negotiations with Russia on these weapons at the height of the adversarial relationship, because we thought that it was essential to have a dialogue with Russia, with a country that had this huge capability, if only to avoid war by accident. Also, the nature of these weapons was so unique that they could not be dealt with in the manner of foreign policy before World War I.

I can imagine that we will have disagreements with Russia in the decades ahead, but I do not believe that they will reach the intensity of the cold-war period. I consider it possible that Russia and we will develop congruent views of what a peaceful international

order should look like. But, under no conditions should a treaty be made as a favor to another country, or to make another country feel better. It has to be perceived to be in the American national interest.

Senator RISCH. Thank you for those observations, Mr. Secretary.

The other point, in your opening statement, that caught my eye was your comments about modernization. Your observation that the United States is the only nuclear power that is not going through modernization, I think, is an important observation. And I appreciate that, and there are a lot of us in this body that are very concerned about that, particularly in light of the fact that we are going to further reduce our numbers. Modernization is absolutely critical.

So, I appreciate your thoughts on that, and I hope you'll continue to keep——

Dr. KISSINGER. Well, I strongly support a robust modernization program. And I put several criteria into my statement that apply to that.

Senator RISCH. Thank you, Secretary Kissinger.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Risch.

Senator Kaufman.

Senator KAUFMAN. Mr. Chairman, thank you for having this hearing.

And, Mr. Secretary, thank you for testifying, and for your long service.

Can you talk, a few minutes, about what the implications would be of failure to ratify this treaty by the U.S. Senate?

Dr. KISSINGER. Well, it would signal a reversal of an American policy that has been carried on for several decades, and it would be particularly upsetting, in the light of the rhetoric of the incumbent administration, if it were disavowed by the Senate in its first major initiative on this subject. It would impose on us the necessity of taking some concrete steps to indicate that we are now conducting a different policy, to define its character, and seek public acceptance for it. The likelihood of the rejection would be that both sides would carry out the provisions anyway, without a formal treaty, as happened with respect to SALT II. But, then there would be no verification in Russia, and we would be much less certain about the framework of the strategic balance.

Senator KAUFMAN. Well, what do you think it would affect, in terms of United States-Russian relations?

Dr. KISSINGER. In?

Senator KAUFMAN. United States-Russian relations. How do you think that would be affected if we——

Dr. KISSINGER. It would certainly lead to some less cooperation in the proliferation field. The likelihood is that, after some years, things would get back to about the point where we are now, and some other agreement would emerge. When negotiations have gone on for 50 years, in one way or another, and when they have been carried out by every American administration, in some manner, and by every Russian administration, in some manner, you would not simply move into an uncontrolled environment.

But, I want to make absolutely clear that I am not here because of whatever benefit Russia gets out of it. The reason for ratifying the treaty is the benefit to America's national interest and global peace.

Senator KAUFMAN. How about what the impact would be if we fail to ratify on nonproliferation efforts, do you think?

Dr. KISSINGER. Ratifying the nonproliferation?

Senator KAUFMAN. No, not ratifying this treaty would have no efforts to——

Dr. KISSINGER. That would——

Senator KAUFMAN [continuing]. Get nonproliferation——

Dr. KISSINGER. Nonproliferation has to be a central American objective, for the reasons that I gave. And the ability to achieve these objectives depends on the credibility of your government. It would be more difficult for us to achieve the objective that, again, has been proclaimed on a bipartisan basis for many decades if we abandoned a treaty negotiated by this administration and that formalizes numbers substantially agreed to by the Bush administration before it.

Senator KAUFMAN. Can you talk about why it's so difficult to get a technical—I mean, a tactical nuclear weapons agreement with Russia?

Dr. KISSINGER. Russia—part of the reason is that the strategic perspectives of the two sides are different. Russia has major countries on its borders whose populations outnumber Russia's. It substitutes tactical nuclear weapons for manpower. Second, Russia has had a long history of invasion from foreign countries. Third, undoubtedly there are vestiges of the imperial and Communist tradition in their system. So, negotiations with Russia are always difficult.

As I pointed out in my formal statement, we cannot go further toward strategic reductions without including tactical nuclear weapons. But this statement applies to follow-on agreements. With respect to the current agreement, the argument always has to be, does the overall direction that this treaty represents justify proceeding, particularly when weighed against the consequences of nonratification? And second, will we carry out those things, like modernization and in the missile defense area, that we can do on our own, and that are not constrained by the treaty, and where we should not use the treaty as a means of—by inventing arguments that they are constrained?

Senator KAUFMAN. Thank you very much.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you very much, Senator Kaufman.

Dr. Kissinger, just a few questions to wrap up here and perhaps take advantage of you, if we can, for a moment, on some broader issues.

You recently wrote, regarding the Nuclear Posture Review, that you agree with the basic thrust of trying to reduce our reliance on nuclear weapons, "where we can safely do so," I think is the language it uses. And, of course, that makes sense, and that's what we've been trying to do. But, you took issue with the statement that the United States would not respond to chemical or biological

attacks with nuclear weapons, and you said that should be left ambiguous.

I agree with you. I think the constructive ambiguity has been, in fact, a fairly effective way to deal with this through the years. But, it was the last administration, the previous administration, that actually gave up on ambiguity, in 2001, in that Nuclear Posture Review, when it dropped the negative security assurances that had existed under President Carter, President Clinton, and President Bush—George H.W. Bush—and it then proposed using nuclear weapons to take out the chemical or biological capacities of an enemy.

The question is, sort of, twofold. I think the current Nuclear Posture attempts to restore some of that old ambiguity, but the question is, Can you restore the ambiguity after you've gotten rid of that? Can you put the genie back in the bottle, or not? Or maybe you can, just by the statement. Maybe the mere statement of a new administration, in fact, recreates the ambiguity.

I'm wondering if you might comment on that. Can you get it back? Is it better to live with it than without it?

Dr. KISSINGER. Well, I thought that the statement in the NPR was unnecessary. What it said, if I remember it correctly, was that we would not retaliate against non-nuclear-weapon states, that use biological or chemical weapons, with nuclear weapons. I thought that this could be read to say to non-nuclear-weapon states, "You don't need nuclear weapons, because you can use biological and chemical weapons." So, I thought that interpretation was—could be dangerous.

And, second, I thought it was a mistake that one provide a roadmap for our use of nuclear weapons in such extreme circumstances.

Now, can this be retrieved? There will, of course, always be an element of uncertainty, having made the original statement, even if it is revoked. But, the President can undoubtedly find authoritative ways of saying it, and people tempted to use chemical and biological weapons will not be sitting there parsing it so finely, because the consequences of our retaliating would be very severe.

What I think would be important is that a clear tone be established about firm resistance—one, to proliferation, and second, to weapons of mass destruction—that do not leave any impression that, within the administration, there is a big contest going on that has an unresolved outcome. This is within the power of the President to accomplish.

The CHAIRMAN. With respect to this treaty that you've testified on today, last month you were quoted, in the Christian Science Monitor, as saying that, "It's a useful step that deserves ratification." Is it fair to say that—I think, listening to your testimony today, that that is still your bottom line with respect to this treaty?

Dr. KISSINGER. Yes, that's the essence. That's the essence of my position. And it is based on the belief that it is in the interest of the United States and it's not done to placate some other group of powers.

The CHAIRMAN. Mr. Secretary, I do want to take advantage of your being here, for a moment—I think we'd be remiss if we didn't—in looking at the back part of your testimony, which is, I think, important. And you say there, that, "The contribution of the

Russian-American relationship to world peace must be judged, importantly, in political terms, on the global issues, like nuclear proliferation, environment, and energy."

I wonder if you'd just share with the committee, for a moment, based on your long experience of dealing with these issues, and your observations now, sort of, Where do you think we are in our foreign policy? Is there a missing ingredient? What could we do better? Should there be a focus that we're not paying enough attention to? And to what degree is the global economic situation going to have an impact on the implementation of our foreign policy goals?

Dr. KISSINGER. Well, I mean, I'm doing this off the top of my——

The CHAIRMAN. You're very good at that, Mr. Secretary. [Laughter.]

Dr. KISSINGER. As a general proposition, I would be happier if the administration didn't find it necessary, in every statement it makes on foreign policy, to attack the previous administration. I think this has—this is—whatever the differences were, I think it should stand on its own direction and try to build as broad a basis of foreign policy as they can. It also weakens necessary continuity because it raises the question whether successors to this administration will disavow it as it so frequently does its predecessor.

Then, on the general view of foreign policy, I probably would look at foreign policy more from a point of view of balancing incentives and penalties based on the national interest than on the belief that one can build a consensual basis of foreign policy largely on the emotional rapport with the American leadership. The world contains countries with vastly different cultures and vastly different stages of development. So, it would be very difficult to believe that stability can be brought about entirely by a single formula. But, this is my basic approach to foreign policy. But, I have also made every effort to be nonpartisan about the administration, and I think what we need is the broadest possible basis of bipartisan foreign policy.

On issues like Iran, I believe that the consequences of failure of negotiation need to be brought home more emphatically than they have been. But, I would also point out, I'm not volunteering this, I'm doing this in response to the chairman's question. [Laughter.]

The CHAIRMAN. I thank you.

It's a subject that I'd enjoy—I'm sure we all would—sort of, following up with you sometime, perhaps privately. I don't want to abuse the privilege that brought you here today.

We're very grateful to you for coming in to help build the record.

Senator Lugar, do you have any additional comments? Questions?

Senator LUGAR. Mr. Chairman, let me just take advantage of the opportunity to mention, as you note, Dr. Kissinger, that a 123 Agreement with Russia has been proposed by the administration. It sort of backs up some of the dialogue we've had today in this hearing about working with the Russians, potentially, to provide fissile materiel to other countries for peaceful use in their power industries, and therefore trying to retain some control over the use of fissile materiel worldwide. Given the fact that Russia and the United States possess so much of the world's supply of fissile mate-

riel, we have some mutual interest in working constructively together to try to control the use of it.

But, do you have any views on the 123 Agreement that you would share with us?

Dr. KISSINGER. Let me first make a general comment about Russia. In the decades ahead, I think a cooperative relationship with Russia seems to me in the benefit—to the benefit of both countries. The historic Russia that existed has no scope anymore for its traditional expansionist policy, and it has to fit itself into some kind of cooperative international system. With the changing situation in Europe and in Asia, new possibilities for partnership with Russia exist. But it will be a difficult process with many ups and downs.

On fissile materiel, it seems to me crucial that the fissile materiel that has been and is being produced will be brought under some kind of international regimen. Otherwise, the spread of peaceful uses of nuclear technology is going to create incentives to divert into nuclear weaponry. On this, we and Russia have a particular opportunity—and indeed, over time, necessity. So, I would be sympathetic, without having studied that agreement in detail.

Senator LUGAR. Thank you, sir.

And let me just comment, finally, Mr. Chairman, that I think our conversation with the Secretary today has been important with regard to many issues, but it particularly illustrates that the New START Treaty has brought to the fore the possibilities for discussion of half a dozen foreign policy issues which relate to Russia, but go beyond the treaty. As you've perhaps observed, Dr. Kissinger, it's been a long time since this committee or the Senate actually held a process in which debate and deliberations took place on a new arms control treaty. People have been making reports as to how many Senators were around the last time such a thing occurred. And what has struck me is that—and I appreciate the point that you've made with regard to bipartisanship in foreign policy—these hearings and the discussion of the START Treaty have sometimes offered a platform for discussion of half a dozen different administration foreign policy initiatives, some of which have greater accord between the two parties than others.

What I've feared a bit is that we sometimes fail to get back to the deliberations as to whether this treaty should be ratified, as opposed to "this treaty should or should not be ratified, if, in fact, five or six other things occur." That is problematic. So, I appreciate your comments specifically about the importance of ratifying this treaty and the basis that we have, therefore, for carefully considering, with or without Russia, nonproliferation efforts or our own buildup, as we see fit. I think it's going to be important, at least for a moment, to isolate some of our attention on the treaty, notwithstanding all these other arguments that we may be having.

And we thank you for coming, with your broad experience, having dealt in a bipartisan way, really, for decades, as you had to, both inside and outside administrations because that's an important ongoing part of our history.

Dr. KISSINGER. Well, thank you both for the manner in which this hearing has been conducted.

The CHAIRMAN. Senator Lugar, thanks for focusing in on the task at hand. We appreciate it.

And, Secretary Kissinger, we're enormously grateful.

Again, let me just comment that I know the Secretary is going to celebrate his 87th birthday this Thursday, so we join in wishing you well. Happy birthday. Many happy returns. And thank you for coming here today.

We stand adjourned. Thank you.

[Whereupon, at 11:12 a.m., the hearing was adjourned.]

ADDITIONAL MATERIAL SUBMITTED FOR THE RECORD

PREPARED STATEMENT OF HON. RUSSELL D. FEINGOLD, U.S. SENATOR FROM WISCONSIN

Secretary Kissinger, thank you for being here today. There has been confusion during the previous hearings on this treaty about the relative importance of reducing the Russian and United States strategic arsenals, particularly compared with the importance of pursuing missile defenses and reducing tactical nuclear weapons. I would like to use this hearing to get some clarity on what is really needed for us to maintain a credible deterrent, what we can realistically expect from missile defenses, and the risks associated with maintaining an arsenal larger than what we need for sufficient deterrence.

You have written that we are in a new era, where the threat of proliferation and the danger that terrorists would gain access to nuclear materiels requires us to prioritize bilateral efforts to reduce the size of our arsenals. Some of my colleagues on this committee who oppose this treaty do not seem to have taken this call for action to heart.

RESPONSES OF DR. HENRY KISSINGER TO QUESTIONS SUBMITTED BY SENATOR FEINGOLD

Question. Please describe the danger of terrorists accessing nuclear weapons and materiels and why this threat requires us to work to reduce the size of our arsenals so that they are no larger than is needed to maintain a deterrent.

Answer. Al-Qaeda and other terrorist organizations have made it clear that they seek to acquire nuclear weapons. We should have no doubt that, should they obtain one, they will be inclined to use it: A nuclear weapon in the hands of a terrorist is the ultimate weapon of terror. The simple credible threat to use a nuclear weapon would give terrorists considerable leverage to blackmail states and advance their goals. We do not know how to deter a terrorist use of a nuclear weapon. The condition that undergirds deterrence against states—namely, the possibility of putting another society at existential risk—does not obtain with regard to terrorists.

As a result, it is imperative to secure nuclear weapons and their components, including fissile materiel, against efforts by terrorist organizations to acquire them. One key element of such an effort is reducing the size of nuclear arsenals to the minimal level consistent with strategic deterrence and strategic stability because that reduces to the greatest extent possible the number of targets that need to be secured against terrorists. Where that level is, is a matter of debate, but it lies without doubt well below the current levels of the American and Russian arsenals and below the levels stipulated in the new START agreement before the Senate.

Question. Some of my colleagues on this committee have argued that we gave up something for nothing with this new treaty, particularly with regard to the limitations on nuclear delivery vehicles. My own assessment differs significantly from that view. For example, we have agreed to go from 880 to 800 launchers under this treaty. This leaves us with a clear advantage over the Russians, who—according to the Congressional Research Service—are estimated to have 620 launchers and limits on their ability to produce a higher number. Meanwhile, according to independent reports, we have the capacity to upload far more warheads onto our launchers than the Russians.

- a. Given this calculus, would you agree with the assessment that this treaty actually preserves our own strategic advantage?

Answer. The issue is not whether this new treaty preserves our own strategic advantage; it is whether this treaty preserves strategic stability. In my judgment, the numbers of nuclear warheads and delivery vehicles stipulated in the treaty and the

verification and monitoring regimes provided for by it reduce to an acceptable level the risk that Russia could break out of this treaty and undermine strategic stability to our disadvantage.

- b. Would you also agree that the reduction in launchers we have agreed to in the treaty still leaves us with more than enough to provide a credible deterrent, including a deterrent to Russia's tactical nuclear weapons?

Answer. The number of launchers agreed to in the treaty is, in my judgment, sufficient to provide a credible deterrent against Russia's use of strategic or tactical nuclear weapons. But, as I noted in my testimony, I do not believe we could go to lower numbers without making Russia's tactical nuclear weapons an element in the overall limits. We have reached levels, from which further reductions in strategic weapons, absent reductions in Russia's tactical arsenal, would raise questions about the credibility of our guarantees of extended deterrence among our allies in Europe and Asia.

- c. On balance, would it be fair to say that the very modest concessions we made in this treaty are far outweighed by the need to retain the ability to do inspections and to maintain strategic stability through having a treaty?

Answer. As I said in my testimony, in deciding on ratification, the concerns have to be measured against the consequences of nonratification. This treaty is an evolution of treaties that have been negotiated in previous administrations of both parties. Its principal provisions are an elaboration or a continuation of existing agreements. Therefore, a rejection of this treaty would indicate that a new period of American policy had started that might be founded largely on unconstrained reliance on our nuclear weapons. That would create an element of uncertainty in the calculations of both adversaries and allies, it would erode strategic stability, and it would have an unsettling impact on the international environment. In my judgment, whatever concessions we might have made in negotiating this treaty are outweighed by the imperative to maintain and enhance strategic stability, as this treaty does.

- d. Could we go further in reducing our launchers, consistent with Russian levels, and still have a credible deterrent?

Answer. As I noted in my testimony, how much further we can go in reducing our launchers and still retain a credible deterrent and maintain strategic stability is a matter that requires further study. Reductions below the ones stipulated in the new treaty would require us to take into account Russia's tactical nuclear weapons and, depending on the size of the reductions contemplated, might also require us to take into account the arsenals of other nuclear weapons states, notably China, and the possible proliferation of nuclear weapons to additional states. We have reached, or will soon reach, the point where strategic stability—and credible deterrence—is not a bilateral equation, as it has been since the beginning of the cold war, but a more complicated, multilateral one.

Question. Some of my colleagues on this committee have stated that we need to make sure that we do not constrain our ability to deploy missile defenses to deal with the emerging threats, for example, Iran. I agree. However, there seems to be a misunderstanding about whether this treaty has any bearing on our ability to develop this system. In your view, is Russia likely to withdraw from the treaty if we develop a limited missile defense system clearly designed to address the threat posed by a particular rogue nation with a small number of nuclear weapons?

Answer. Russia has reserved the right to withdraw from this treaty if it concludes that the United States is developing and deploying a missile defense system that threatens its strategic arsenal. Russia will seek to use that threat in ways that ensure that any American missile defense system remains limited both in scope and capabilities. That said, financial constraints have led Russia to reduce its strategic arsenal over the past two decades and will probably continue to do so during the 10-year term of this treaty. A Russian decision to withdraw from the treaty for any reason would risk putting Russia at a strategic disadvantage—both in terms of numbers and capabilities and of its ability to monitor our nuclear arsenal. As a result, I believe the risks of a Russian withdrawal to be quite low.

STRATEGIC ARMS CONTROL AND NATIONAL SECURITY

THURSDAY, JUNE 10, 2010

U.S. SENATE,
COMMITTEE ON FOREIGN RELATIONS,
Washington, DC.

The committee met, pursuant to notice, at 10:11 a.m., in room SD–419, Dirksen Senate Office Building, Hon. John F. Kerry (chairman of the committee) presiding.

Present: Senators Kerry, Shaheen, Kaufman, Lugar, Corker, and Barrasso.

OPENING STATEMENT OF HON. JOHN F. KERRY, U.S. SENATOR FROM MASSACHUSETTS

The CHAIRMAN. The hearing will come to order.

This morning we are very, very privileged to welcome two men who have served at the highest levels in the White House and over a long period of time. Gen. Brent Scowcroft is one of the country's leading strategic thinkers. After a storied, three-decade career in the Air Force, he served as National Security Adviser to Presidents Ford and George H.W. Bush. And Stephen Hadley was National Security Adviser during the last administration and has been a dedicated and involved public servant during one of the most challenging periods in our recent history.

Both General Scowcroft and Mr. Hadley have long experience with strategic arms control. They both worked on the START I and START II accords and they have both testified many times before this committee on strategic issues during the 1980s and 1990s. Mr. Hadley also served as Deputy National Security Adviser during the negotiation and ratification of the Moscow Treaty.

This is our sixth hearing on the New START Treaty and the degree of bipartisan support from the witnesses who have testified so far has been significant. Henry Kissinger recommended ratification because he said it is in America's national interest. James Baker testified that the treaty appears to take our country in a direction that can enhance our national security while reducing the number of nuclear warheads on the planet. William Perry said the treaty advances American security objectives, and James Schlesinger called ratification "obligatory."

The reasons for supporting this treaty are, in my judgment, powerful. Together the United States and Russia have more than 90 percent of the world's nuclear weapons. By making the size and structure of their nuclear arsenals transparent and predictable, the New START Treaty will stabilize the strategic relation-

ship between Washington and Moscow. And by strengthening the relationship, the treaty can open the door to cooperation on other issues of mutual concern.

The most important of those issues is stopping the spread of nuclear weapons to rogue states and terrorists. James Baker, who spent many years negotiating with the Soviets and the Russians, told this committee last month that the New START Treaty can improve the United States-Russian relationship and help stem nuclear proliferation in countries like Iran and North Korea.

Already New START has yielded benefits. Yesterday Russia reversed its prior position and voted to impose further U.N. sanctions on Iran for its nuclear activities. I am 100 percent convinced that it is no stretch at all to say that our negotiations on the New START Treaty helped to make yesterday's outcome possible.

New START is already encouraging greater cooperation from other states. Last month at the conference reviewing the Nuclear Non-Proliferation Treaty, the United States was able to isolate Iran and prevent it from diverting attention from its own troubling behavior. At the end of the conference, we secured unanimous support for a document that strengthened the treaty. We were able to do this because by reducing the role that nuclear weapons play in our own security policy, we have increased our credibility with the more than 180 states that do not have nuclear weapons. Today, far more than in recent years, those nations are rallying behind the United States in its efforts to keep nuclear weapons out of the hands of rogue states, entities, or terrorists. This is an obviously positive development, but if we reject this treaty, that will be quickly reversed. As Henry Kissinger testified 2 weeks ago, rejection of the treaty would suggest we were emphasizing a new unilateral reliance on nuclear weapons. It would risk injecting a new element of uncertainty into the calculations of our adversaries and allies.

This committee has been working to answer all the questions that members have about the treaty. Some members have raised concerns about the treaty's impact on missile defense, but all of the witnesses that have testified before this committee so far—witnesses from both sides of the aisle with decades and decades of collective national security experience—have testified that this treaty does not limit America's ability to defend itself from rogue state missile attack.

In addition, they have testified, as I am confident they will next week when the negotiators testify before the committee, that there are no side agreements, no back door agreements, no unwritten agreements, none whatsoever. This treaty is what it is on its face.

The committee has been assured repeatedly by our top defense officials that the treaty does not limit our ability to develop and deploy new missile defense systems, and next week we are going to have the opportunity to hear directly from the head of the Missile Defense Agency.

So we will take the time needed to review and debate this treaty. That is appropriate. And all of our colleagues on this committee have the right to ask all the questions that they want and need to have confidence in their vote.

We have an aggressive schedule of hearings planned over the next several months, but we also recognize this: Each day without a treaty in force, we lose the concrete benefits that the treaty provides for American security. Why? Because the verification mechanisms depend on the ratification of the treaty. The arrangements that we had in place to monitor Russia's strategic nuclear forces lapsed in December when the original START Treaty expired. And with every day that has passed since then, our ability to see what Russian forces are doing is diminished. This treaty will restore the information exchanges, label each missile and bomber with a unique identifying number that allows us to better track it, and permit onsite inspections with a very rigorous, tight surprise-announcement schedule. These are obviously critical measures, and the desire to put them in place as soon as possible is one reason why we plan to hold a full committee vote on the treaty before the August congressional recess.

When Dr. Kissinger was here, he said that consideration of the treaty had not been bipartisan, but nonpartisan. And I take that as a compliment to the work of Senator Lugar, our colleagues on the committee and the way we ought to approach this. It is in that spirit that we have invited our two distinguished witnesses today and we look forward to hearing their views.

Senator Lugar.

OPENING STATEMENT OF HON. RICHARD G. LUGAR, U.S. SENATOR FROM INDIANA

Senator LUGAR. Mr. Chairman, it is a privilege to join you in welcoming our distinguished witnesses, former National Security Advisers, Brent Scowcroft and Stephen Hadley. Having served for 29 years in the U.S. Air Force and in the White House under Presidents Nixon, Ford, and George H.W. Bush, General Scowcroft was at the forefront of United States strategic policy during many critical periods. Steve Hadley was a leader in shaping U.S. arms control policy and managing our relationship with Russia while in the White House and as Assistant Secretary of Defense.

In recent weeks, the Foreign Relations Committee has heard, as you pointed out, Mr. Chairman, testimony on the New START Treaty from former Secretaries of State, Henry Kissinger and James Baker, and former Secretaries of Defense, James Schlesinger and William Perry, as well as from the Obama administration's national security team. The committee has also met in closed session with the New START Treaty's negotiators and will continue to hold hearings throughout this month.

Following commitments made at the 2001 Crawford summit, Presidents Bush and Putin signed the Moscow Treaty in 2002. This strategic arms control treaty built upon the reductions codified in START I by committing both parties to reduce operationally deployed strategic nuclear warheads to between 1,700 and 2,200 by December 31, 2012.

At the first strategic arms control treaty negotiated after the collapse of the Soviet Union, the Moscow Treaty advanced an agenda with Russia based on mutual interests and ensured that the United States and Russian arms control cooperation did not stagnate.

The Moscow Treaty relied entirely upon the verification and transparency measures established by START I, which expired on December 5, 2009. In President Bush's letter of transmittal to the Senate accompanying the Moscow Treaty, he noted that START I would remain the foundation for confidence, transparency, and predictability in further strategic offensive reductions.

Thus, while reductions of deployed strategic warheads have continued apace for both parties since December, our confidence regarding Russian nuclear strategic offensive forces has been narrowed. Without a binding treaty, there will be no basis for onsite verification of the reductions and limitations from previous arms control treaties or the broader status of Russia's nuclear posture.

As I have stated before, verification is a key to Senate consideration of arms control treaties. The Bush administration recognized the perils posed to our national security absent verification measures. Near the end of his term, President Bush concluded a strategic framework declaration with Russia which stated—and I quote—"we will continue development of a legally binding post-START arrangement."

Most of the basic strategic concerns that have motivated Republican and Democratic administrations to pursue nuclear arms control with Moscow during the last several decades still exist today. We are seeking mutual reductions in nuclear warheads and delivery vehicles that contribute to stability and reduce the costs of maintaining the weapons. We are pursuing transparency of our nuclear arsenals backed up by strong verification measures and formal consultation methods. We are attempting to maximize the safety of our nuclear arsenals and encourage a global cooperation toward nonproliferation goals. And we are hoping to solidify United States-Russian cooperation on nuclear security matters while sustaining our knowledge of Russian nuclear capabilities and intentions.

The committee is pleased to have both of you as distinguished witnesses once again to examine the New START Treaty in relation to these objectives, and I look forward to our discussion and your testimony.

Thank you very much, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Lugar.

General Scowcroft, if you would lead off and then, Mr. Hadley, if you would follow. Thank you.

STATEMENT OF LT. GEN. BRENT SCOWCROFT, USAF (RET.), PRESIDENT, THE SCOWCROFT GROUP, WASHINGTON, DC

Mr. SCOWCROFT. Thank you very much, Mr. Chairman, Senator Lugar, members of the committee. I greatly appreciate the opportunity to appear before this committee to discuss ratification of the New START Treaty.

I do not consider myself an expert on arms control, but I have been, as the chairman remarked, involved in some degree in every strategic nuclear weapons agreement between the United States and the Soviet Union and Russia since SALT I in 1972 and through START II which did not come into force.

Based on that, let me say just a word about what I think has been our philosophy in strategic arms control from the beginning,

and that is it has really had three phases. The first SALT Treaty was designed to stop the increase in weapons. It did almost nothing else but just put a stop to the growth in weapons which really had been the impetus for the treaty.

SALT II was designed to then try to equilibrate, if that is a good word, the forces of the two sides so that they could be comparable in terms of what to do about them because our force structures were very different and how do you equate the two structures together. SALT II did not make it through the ratification process. That was picked up at Vladivostok with President Ford, and there was a general understanding about the equivalency measures to use. That effort was brought down by the Backfire bomber and nuclear armed cruise missiles. But then it was restored in START I which did do that measure.

Now, part three was after you decide how to compare these two sides, then you can make reductions which both sides think are comparable, maybe not one for one, but comparable in capability. And that is really what we are about to do.

Now, START II tried that because it was not only to reduce the numbers, but also to increase the stability of the forces. And one of the measures in START II, which was not agreed upon, was to eliminate MIRVed ICBMs as being an incentive for a first strike in a crisis.

So that has generally been the pattern of all these: SALT I, SALT II, START I, and START II.

I do not have extensive comments to make. I largely agree with the opening statements of a number of your witnesses such as Henry Kissinger and Bill Perry. I believe this treaty will achieve the purposes for which it is intended, and I support its ratification.

As I understand it and based on the comments of the chairman and Senator Lugar, this treaty was not designed to move strategic arms control in a great leap forward. Instead, it was designed to preserve or renew the myriad verification rules, counting rules, definitions, and other measures to give both sides the confidence in the process to move ahead, and that I think this treaty has done.

A number of assertions have been raised about technical difficulties of the treaty, such as rail-mobile ICBM. I have not read the vast detail or material accompanying the treaty, but I have seen nothing which on the surface seems to me alarming.

I do recommend, however, that the committee satisfy itself on ambiguities and loopholes that might exist through a discussion with the administration negotiators. There will also be an NIE on verification shortly forthcoming from the intelligence community, as well as the required State Department verification documents, and I recommend they be studied carefully by the committee.

This treaty makes no provision, of course, for the maintenance of our deterrent capability. I believe it is essential that our strategic nuclear capability be safe, reliable, and capable, including assuring a continued outstanding capability of the entire nuclear complex. I urge the early appropriation of the administration requests in this regard.

Several of the criticisms of the treaty deal with what it does not do, and as I said, this treaty was not designed to move the process forward but to preserve the confidence-building measures that the

two sides over a half a century have built to assure themselves that they could have confidence as they move ahead that they were not going to be cheated in some way.

However, one of the additional measures for which this treaty has been criticized would certainly, I think, be a candidate for follow-on negotiations and that is dealing with short-range nuclear weapons. They have not been included in the strategic nuclear arms negotiations in the past, in part because the strategic issues were pressing in and of themselves and were complicated enough by themselves that the addition of tactical weapons were likely to overburden the process. But those shorter range systems now have relatively greater impact, and the numbers are so imbalanced that the next negotiations must almost certainly take them into consideration.

In summary, Mr. Chairman, I support ratification of the treaty, examination by the committee of administration negotiators of all the alleged loopholes and ambiguities, review of administration verifiability documents when they are submitted, and funding of all necessary measures to keep our nuclear weapons safe, reliable, and capable and our nuclear complex modern and effective.

Thank you very much.

The CHAIRMAN. Thank you very much, General.

Mr. Hadley.

STATEMENT OF HON. STEPHEN J. HADLEY, SENIOR ADVISER FOR INTERNATIONAL AFFAIRS, UNITED STATES INSTITUTE OF PEACE, WASHINGTON, DC

Mr. HADLEY. Mr. Chairman, Senator Lugar, members of the committee, thank you for the opportunity to appear before the committee to discuss the New START Treaty.

I have a five-page statement. If I might, I would like to submit that for the record and just summarize some of the key points here if I may.

The CHAIRMAN. Without objection, the full statement will be put in the record, and we look forward to your summary.

Mr. HADLEY. The statement tries to talk a little bit about the historical context and make the point that the New START Treaty is the latest step in a two-decade United States-Russian effort since the end of the cold war to reduce the nuclear arsenals of the two nations. And General Scowcroft has outlined that clearly. The one I was most recently associated with was the 2002 Moscow Treaty which required a further reduction of almost 40 percent, down to between 1,700 and 2,200 deployed weapons. The expectation at the time was that the United States would deploy about 2,200 strategic nuclear weapons, while the Russians would probably deploy about 1,700.

The point I would make is that the result of these treaties and this two-decades-long effort is a cumulative reduction in the number of strategic nuclear weapons deployed by each country by over 80 percent from the end of the cold war. That is a remarkable achievement for which I think our two nations do not get enough credit.

The New START Treaty stands on the shoulders of these past efforts. Its principal contribution is really not in making further

reductions. While it reduces the limit on deployed strategic nuclear weapons to 1,550, this is a modest, but only modest, reduction, about 10 percent, from the 1,700 that Russia was expected to deploy under the Moscow Treaty.

Now, a number of people have said that because of the counting rules, the number of strategic nuclear weapons deployed under the New START Treaty could theoretically be higher than the number deployed under the Moscow Treaty. I do not think the committee should be too much concerned by this fact. In fact, the bomber counting rules of the New START Treaty do not, to me, appear to convey any intrinsic advantage to either country, and I suspect that the actual levels of strategic nuclear weapons deployed by the two sides will have as much, if not more, to do with budget levels and modernization programs as it will with the counting rules.

I think the best case for the New START Treaty is that it replaces the set of counting rules, definitions, and verification measures that were provided by the START I Treaty until it expired in December 2009. Both Democrats and Republicans have accepted the need for such provisions in order to build confidence and allay suspicion.

As it reviews the New START Treaty, I would hope the committee would give priority to four issues. General Scowcroft talked about a couple of them.

First, of course, is whether the definitions, counting rules, and verification measures are adequate to ensure not only compliance with the terms of the treaty, but also to rule out strategic surprise, what might undermine the stability of the relationship. And the answer to this question, of course, is going to have to await the monitoring and verification reviews now being conducted by the intelligence community and the State Department.

Second, does the treaty permit the United States to maintain the forces it needs to safeguard its security? The Moscow Treaty limited only deployed strategic nuclear weapons. The New START Treaty also limits the ballistic missiles and bombers that deliver those weapons. Will the ceilings on delivery vehicles allow the United States to deploy a robust triad of strategic nuclear forces adequate to meet our security needs? The committee is going to hear witnesses on this. My own guess is that the answer will probably be, yes, that it is adequate.

The New START Treaty requires that conventional warheads placed on ICBMs or SLBMs be counted as strategic nuclear warheads under the New START weapons ceiling, and that will effectively force a tradeoff between nuclear and nonnuclear warheads. The question for the committee will be, despite these limitations, Will the United States be able to deploy the long-range conventional strike capability it needs? And you will, of course, hear from administration witnesses on that.

Are there any gaps and loopholes in the treaty that put the United States at a strategic disadvantage? General Scowcroft and critics have talked about the rail-mobile ICBM issue. I think my own view is that this and other similar ambiguities need to be addressed if necessary by conditions or reservations to the treaty, and they can be addressed in that way.

Third, to enhance deterrence, the New START Treaty needs to be accompanied by a joint commitment by the Congress and the administration to a specific 10-year program that will recapitalize our nuclear infrastructure, modernize our strategic nuclear delivery systems, and ensure safe, secure, and reliable nuclear weapons to include building replacement weapons if that is the best way to achieve the latter objective. I believe these concerns can be addressed by legislation developed and enacted by the Congress in parallel with the treaty ratification process.

Finally, as part of the ratification process, the Congress and the administration must make absolutely clear that the treaty will not be permitted to prohibit or limit in any way what the United States might want to do on missile defense. Cold war thinking took as an article of faith that the United States and Russia could not both build ballistic missile defenses and reduce their strategic nuclear forces at the same time. Yet, just 5 months after the United States announced its withdrawal from the ABM Treaty in December 2001, Russia and the United States concluded the Moscow Treaty. The message of these two initiatives was the same. Since Russia and the United States no longer presented an existential threat to each other, they now had a common interest in cooperating to make their nuclear deployments smaller, safer, and more secure and to work together on developing ballistic missile defenses against common threats.

Regrettably, the language of the New START Treaty and accompanying administration and Russian statements reflect somewhat of a regression from this position by suggesting that some level of United States missile defenses, perhaps anything beyond the current levels even, could justify withdrawal from the treaty. The Senate in its ratification process needs to make clear that it will accept no limits whatsoever on U.S. ballistic missile defenses. Ballistic missile defense should instead become an area of strategic cooperation between Russia and the United States to counter ballistic missiles that threaten both countries.

In summary, by leading the way in addressing these and other concerns—and I believe these concerns should be addressed and can be addressed in the ratification process, the committee can ensure that the New START Treaty makes its modest but nonetheless useful contribution to the national security of the United States and to international stability.

Thank you very much.

[The prepared statement of Mr. Hadley follows:]

PREPARED STATEMENT OF STEPHEN J. HADLEY, SENIOR ADVISER FOR INTERNATIONAL AFFAIRS, U.S. INSTITUTE OF PEACE, WASHINGTON, DC

Mr. Chairman, Senator Lugar, and members of the committee, thank you for the opportunity to appear before this committee to discuss the New START Treaty.

I would like to begin with a little historical context.

The New START Treaty is the latest step in a two-decade United States/Russian effort since the end of the cold war to reduce the nuclear arsenals of the two nations.

The 1992 START I Treaty permitted each country to deploy 6,000 accountable strategic nuclear weapons. Because of START I counting rules for bomber weapons, this meant that each side could have about 8,000 deployed strategic nuclear weapons—about a 30-percent reduction from the roughly 10,000 to 12,000 such weapons deployed by each side when the Berlin Wall fell in 1989. As importantly, the START I Treaty established a comprehensive set of definitions, counting rules, and verifi-

cation measures to increase the transparency and reduce the uncertainty associated with the nuclear activities of the two nations.

The 1993 START II Treaty effectively limited each country to between 3,000 and 3,500 deployed strategic nuclear weapons. This required a cut of roughly 60 percent from actual START I levels. Although the START II Treaty never entered into force, both countries nonetheless reduced their forces so that by 2001 each country was roughly at or approaching START II levels.

The 2002 Moscow Treaty required a further reduction of almost 40 percent down to between 1,700 and 2,200 deployed weapons. The treaty specified a range to reflect differences in the strategic nuclear forces of the two nations. The expectation at the time was that the United States would deploy about 2,200 strategic nuclear weapons while Russia would deploy about 1,700.

The result of these three treaties was a cumulative reduction in the number of strategic nuclear weapons deployed by each country of over 80 percent from the end of the cold war. That is a remarkable record, and the two nations have not received the credit they deserve in the context of meeting their obligations as nuclear weapon states under the Non-Proliferation Treaty.

The New START Treaty stands on the shoulders of these past efforts. Its principal contribution is not in making further reductions. While it reduces the limit on deployed strategic nuclear weapons to 1,550, this is only a modest reduction—about 10 percent—from the 1,700 that Russia was expected to deploy under the Moscow Treaty. Because the counting rules under the New START Treaty attribute only 1 weapon per heavy bomber, the number of strategic nuclear weapons deployed under the New START Treaty could theoretically be higher than the number deployed under the Moscow Treaty which counted the number of weapons operationally deployed on each bomber (up to 16 or 20 per bomber for the United States and up to 6 or 16 for Russia). This fact does not in itself appear to convey an intrinsic advantage to either country. Moreover, actual deployment levels may be more driven by budget levels and modernization efforts than by counting rules.

The best case for the New START Treaty is that it replaces the set of counting rules, definitions, and verification measures that were provided by the START I Treaty until it expired at the end of 2009. Both Democrats and Republicans accepted the need for such provisions in order to build mutual confidence and allay suspicion. For this reason, in 2008 the Bush administration tabled a legally binding treaty text that retained appropriate verification and other measures from START I but simplified to reflect post-cold-war realities and to reduce burden and cost.

As it reviews the New START Treaty, the committee should give priority to four key issues.

First, are the definitions, counting rules, and verification measures adequate to ensure compliance with the terms of the treaty and to rule out strategic surprise? An answer to this question must await the monitoring and verifications reviews now being conducted by the Intelligence Community and the State Department.

Second, does the treaty permit the United States to maintain the forces it needs to safeguard its security?

—The Moscow Treaty limited only deployed strategic nuclear weapons. The New START Treaty also limits the ballistic missiles and bombers that deliver those weapons. Will the ceilings on delivery vehicles allow the United States to deploy a robust triad of strategic nuclear forces adequate to meet our security needs?

—The New START Treaty does not prohibit long-range conventional strike, but it does limit such systems. Conventional warheads placed on ICBMs or SLBMs will be counted as strategic nuclear warheads under the New START weapons ceiling, thus forcing a tradeoff between nuclear and nonnuclear warheads. Despite these limitations, will the United States be able to deploy the long-range conventional strike capability it needs?

—Are there any gaps or loopholes in the treaty that put the United States at a significant disadvantage? The one most mentioned by critics involves rail-mobile ICBMs. While such systems are not prohibited under the treaty, and neither country currently deploys them, the Russians have done so in the past. Should the Russians do so again, critics allege that such systems would not be captured by the language of the treaty. This and other similar ambiguities need to be addressed, if necessary by a condition or reservation to the treaty.

Third, to enhance deterrence, the New START Treaty needs to be accompanied by a joint commitment by the Congress and the administration to a specific 10-year program that will recapitalize our nuclear infrastructure, modernize our strategic nuclear delivery systems, and ensure safe, secure, and reliable nuclear weapons—to include building replacement weapons if that is the best way to achieve this latter objective. At a time when other nuclear weapon states are modernizing their

nuclear forces—and Iran and North Korea are actively pursuing nuclear weapons—a failure by the United States to recapitalize and modernize is not leading by example to a nonnuclear world but gambling with our national security. I believe these concerns can be addressed by legislation developed and enacted by the Congress in parallel with the treaty ratification process.

Finally, as part of the ratification process, the Congress and the administration must make absolutely clear that the treaty will not be permitted to prohibit or limit in any way what the United States might want to do on missile defense. Cold-war thinking took as an article of faith that the United States and Russia could not both build ballistic missile defenses and reduce their strategic nuclear forces at the same time. Yet just 5 months after the United States announced its withdrawal from the ABM Treaty in December 2001, Russia and the United States concluded the Moscow Treaty. The message of these two initiatives was the same: Since Russia and the United States no longer presented an existential threat to each other, they now had a common interest in cooperating to make their nuclear deployments smaller, safer, and more secure—and to work together on developing ballistic missile defenses against common threats.

Regrettably, the language of the New START Treaty and accompanying administration and Russia statements reflects a clear regression from this position by suggesting that some level of United States missile defenses—perhaps anything beyond even current levels—could justify Russian withdrawal from the treaty. Even more troubling, the Bilateral Consultative Commission seems to have been given authority to adopt without Senate review measures to improve the viability and effectiveness of the treaty which could include restrictions on missile defenses. The Senate in its ratification process needs explicitly to proscribe the Commission from doing so. More fundamentally, however, the Senate needs to make clear that it will not accept a return to the false offense/defense linkage of the cold war—and that it will accept no limits whatsoever on U.S. ballistic missile defenses. Ballistic missile defense should instead become an area of strategic cooperation between Russia and the United States to counter ballistic missiles that threaten both countries.

In summary, by leading the way in addressing these and other concerns, this committee can ensure that the New START Treaty makes its modest but nonetheless useful contribution to the national security of the United States and to international stability.

Thank you very much.

The CHAIRMAN. Thank you very much, Mr. Hadley.

Let me begin by following up on a number of points you made, but first on the question of ambiguity. You point out in your prepared testimony that some critics have alleged that if Russia were to again build the rail-mobile missiles, which no one expects them to do, but somehow if they did, those missiles might not count under New START's limits. Now, it is true some critics have alleged this, but I am curious as to why those claims impress you at all given, No. 1, that article 2, paragraph 1(a) of the treaty sets a limit of 700 "deployed ICBMs, deployed SLBMs, and deployed heavy bombers." Paragraph 12 of part 1 of the Protocol defines a deployed ICBM as an ICBM that is contained in or on a deployed launcher of ICBMs, and paragraph 13 of part 1 of the Protocol defines deployed launcher of ICBMs as "an ICBM launcher that contains an ICBM and is not an ICBM test launcher, an ICBM training launcher, or an ICBM launcher located in a space launch facility."

So it seems to me, analyzing those very specific definitions, that a rail-mobile ICBM, if either side decided to deploy one, very clearly fits under the 700 limit and a nondeployed launcher of a rail-mobile ICBM similarly fits under the 800 limit. Am I wrong?

Mr. HADLEY. You are not wrong. I think as I have read the critics, it comes to the fact that all the provisions of the START I Treaty that dealt with rail-mobiles have been eliminated, and what remains are the provisions dealing with mobiles that seem tailored to land-mobile systems. They talk about the definition of a

launcher on a self-propelled vehicle which is a very good description of a land-mobile, but not a particularly good description of a rail-mobile. I think it is——

The CHAIRMAN. Let me interrupt for a minute. Rail-mobile or land-mobile or whatever mobile, the limit is 700 deployed ICBMs, SLBMs, and heavy bombers. So you have got a limit of deployed missiles in one of the three potential categories.

Mr. HADLEY. Right.

The CHAIRMAN. Then there is a definition of what "deployed" means, that it is contained in or deployed on a launcher—rail launcher, submarine launcher, whatever. And then it says if it contains that ICBM and it is not a test launcher, et cetera, you know, if it is meant to be part of that strategic effort, which we get to see because we inspect and because all of these are numbered and targeted, I do not see any ambiguity there, nor do the negotiators incidentally, nor do the Russians.

Mr. HADLEY. I think that is all positive, and I think in some sense, Mr. Chairman, you have shown the way out of this which is to emphasize the breadth of that language that would seem to catch any launcher even if it was on a rail platform, but then deal with the fact that there are not provisions in the treaty about notifications, inspections, and all the other procedures about how to handle rail-mobiles by making clear that should either side deploy such a system, the sides would then need to sit down and develop the applicable regimes for including them operationally in the inspections and all those other things that are called for in the treaty. I think again, I called it an ambiguity, not a flaw, and I think there is a way in which—you have suggested a way in which it can be addressed in the ratification process.

The CHAIRMAN. I think that we will have the verification folks here for a hearing shortly, and we will pursue this with them. But under the verification/notification process, there is a 4-hour—you notify where you want to go and that can be to a rail facility. It can be any facility. So, I think we are going to find the answer to that. It is an appropriate question to raise, but I think we will find that that is going to be satisfied.

Now, also you asked the question, will the ceilings on delivery vehicles allow the United States to deploy a robust triad of strategic nuclear forces. Bob Gates was here a few weeks ago, together with Admiral Mullen, and both of them—you have served with both of them, and I know you have great respect for both of them—both of them said that this does allow us to deploy a robust triad. That is their testimony. Do you have any reason to doubt their testimony?

Mr. HADLEY. No. When I was briefed, what I was told was that despite some of the discussion in the press, the number that they thought they needed for the triad was in the 650 to 700 range. I think, as they will tell you, if you go much below those numbers, I think they start having concerns and problems. But I think when you hear further from them, that is what they will tell you. And as I said in my opening statement, I think it is probably going to turn out that the committee will judge that the numbers are adequate.

The CHAIRMAN. What do you judge?

Mr. HADLEY. Without going through all the analysis that you really need your military and Defense Department people to do—and I am not in that business anymore. But as I look at it, I think when they come to you—and I think they will say to you it is adequate. I do not have any grounds at this point to say it is not.

The CHAIRMAN. And in your statement you also said that New START reduces the limit on deployed warheads by only about 10 percent from the 1,700 that Russia was expected to deploy under the Moscow Treaty.

Mr. HADLEY. Right.

The CHAIRMAN. But the Moscow Treaty does not actually require any reduction of Russia's warheads below 2,200. Does it? There is a range.

Mr. HADLEY. That is correct.

The CHAIRMAN. So if you compare limits to limits—the limit is 2,200 on the up side—there actually is a 30-percent reduction here in terms of the limit. Correct?

Mr. HADLEY. That is correct. What I said in my statement was the reason we did a range in the Moscow Treaty was to accommodate the expectation that the Russians could not get much above 1,700 and we did not want to get below 2,200, but we did not want to make it look like a one-sided treaty. So we basically had the range. And all I was saying, Senator, was the expectation is that we would be on one end, and the Russians would be at the other.

The CHAIRMAN. Fair enough.

But I agree with your judgment, and I do not think the administration is claiming otherwise—and I think General Scowcroft has appropriately characterized this as a step forward. It is a limited one. It is a modest advance, but it is not breaking some enormous new ground with the exception that some of the inspection pieces are more rigorous and the counting of the warheads is more rigorous, and I think we got some advantage out of that.

Senator Lugar, I have to apologize. I just need to step downstairs and meet with Secretary Geithner for a few minutes, but I will be back. Thank you.

Senator LUGAR [presiding]. Thank you, Mr. Chairman.

I just want to pick up a thought that came in your testimony, and that is that despite the fact we are talking about limits—and I think General Scowcroft talked about the very beginning of this process in which both the United States and the former Soviet Union had very large numbers of missiles and warheads and other strategic weapons. And perhaps there was a feeling on either side at that point that for various reasons we wanted to produce more. At least reason prevailed at this point, and that was the gist of, I guess, the conversations that we had enough, and the question then was how do you scale down appropriately so there is not a disadvantage for either party. The rest of the world looked at all of this with awe because these were huge amounts of destructive potential and no sign necessarily that we were at least foreswearing ever using them.

Now, year by year and treaty by treaty, some ratified and some not, and so forth, we have scaled down now to the Moscow Treaty.

But I just note as a practical matter—and I want your comments—that in Russia, at least, there have been real stresses with

regard to their defense budget. This is obvious in the so-called conventional forces, the number of people under arms and so forth. We have not witnessed the same type of debate. By and large, our defense appropriation debates are ones in which we want to make sure that the troops are fully supported, that American defense is never in question. Yet, at the same time in recent weeks and months, Secretary Gates has indicated there probably are limits to what our defense budget can be, given the huge deficit that our country is running. It is a curious fact that when we have Senate debates on the floor and most of us decry the fact that we are running abnormal deficits and a $13 trillion national debt, that this does not come under consideration.

But I sort of pose the question to both of you as statesmen who have seen a long stretch of this and simply the practice of this, that we are in the process, I think advisedly so, of making certain that even though this is not covered by the START Treaty, it is not prohibited, that we make certain that our warheads would work, the delivery vehicles and our laboratories that have not been run down, but nevertheless, we are losing scientists. We are losing potential—that this is refurbished. So this is going to be expensive, and it is an expense outside of the treaty but one that we feel that we need to have.

Inside the treaty, it may be that we will want to maintain all of the 1,700 or whatever we are entitled to, as well as every single delivery vehicle. But is it possible that given the way the world works presently, even our own budget, that we will find it possible to get along even with smaller limits if, in fact, we have relationship with the Russians and, in fact, some look-see, some verification that gives confidence? As I shared with you before we came into the hearing, I have a scoreboard in my office—and I appreciate the Defense Department monthly, now for two decades, sending over reports. This month we took six warheads off of missiles. We destroyed two missiles. We got rid of another submarine and so forth. Interestingly enough, those reports have continued since December 5.

Now, this is a surprise to many that something is still going on with Americans and Russians working together without the verification measures and without the treaty, but it is in our practical interest to do so and has been for a long time. Many of the reductions have come not because of the treaties, because really very practical statesmen in the military and civilian components in both governments have said we really do not need all of this and we are going to get rid of it, treaty or no treaty. The treaty does not prohibit downsizing, but a lot of this has occurred. It is a very practical measure.

Can you give some insight as to what is likely to be the evolution of affairs? How many weapons—1,700, 2,200, however you count them—are really required for us to have the strategic defenses that we believe that we need in this respect, plus the options of going into other types of things that are not prohibited by the treaty?

Mr. HADLEY. I think that we are at an interesting point in this 20-year history, and it is why I think you will hear from administration witnesses that they are OK with the current level, but if the level goes down, then it raises difficult questions. And it does.

One is, can you continue economically and practically to maintain a triad of land-based, sea-based, air-based systems? What are the implications if we were to go to a dyad? That is a big idea. It needs some thinking. For those countries that depend on our nuclear deterrence, to provide extended deterrence to protect them, how will they see something very visible in our coming down further and maybe going to a dyad?

A question that you and others have raised: What do you do about continuing to go down on so-called strategic nuclear weapons when there are all these tactical nuclear weapons out there, anywhere from 2,200 to 3,800? And if you are living in Eastern or Central Europe, a so-called tactical nuclear weapon, if you are within range, looks pretty strategic to you. So what are we going to do about those?

What are we going to do about the fact that there are other countries with strategic nuclear deterrents? Some of them are bringing them down, but some of them, like China, are increasing. And then, of course, there is the problem of the nuclear wannabees, Iran and North Korea.

So I think we are at the point where people will, I think, feel comfortable as to where we are, but if you are going to go dramatically further down, it is going to raise a lot of questions that it is not beyond the mind of man to work them through, but they need to be worked through. It is not just a ratchet that you can keep bringing down 40 percent every 5 to 10 years. We are at a point where a lot of difficult questions need to be addressed.

Mr. SCOWCROFT. I would only add, Senator Lugar, that the number required depends significantly on the targeting philosophy. How many are needed for these various roles? Now, that is something we cannot talk about in this venue, but it is a very important issue and it is something I know personally that Presidents have wrestled with over and over again. What do we need to do in the event we have to use these very difficult weapons?

The other aspect of it is that in an atmosphere of reductions, you mentioned the Russians now. Now, they find themselves embarrassed with their conventional forces and they seemingly are placing increasing reliance on their nuclear forces. We, I think, have found in the past that they are not substitutable, and in the world we have today, we need competent conventional forces for the tasks we have before us, and you cannot simply say, no, we will rely on nuclear forces. This is something I think we all need to look at very seriously as the world changes and what this balance needs to be, and there is no absolute.

Senator LUGAR. Well, my time is up. I would just say that to the extent that we have an opportunity to talk about the tactical weapons with the Russians, this is going to require another set of negotiations. The importance of ratifying this treaty is so that we might get on with that. I am not saying things we are discussing now are unimportant, but we have a whole agenda still ahead of us and the need, it seems to me, to have partners who are willing to negotiate in our defense and theirs.

Let me now recognize Senator Shaheen.

Senator SHAHEEN. Thank you, Mr. Chairman.

Good morning. Thank you both for being here.

General Scowcroft, I am not sure that I accurately wrote down what I thought you said this morning, so let me try and paraphrase if I can. I think you said something like this treaty is designed to give both sides confidence again in the process of arms control. And then you pointed out that it does not address tactical weapons and how important that is.

Can you relate this treaty to the potential for us to address tactical weapons? What happens if we do not ratify this treaty and what would that do to our ability to address the tactical weapons piece that you are suggesting should come next?

Mr. SCOWCROFT. Senator, I think the principal result of nonratification would be to throw the whole nuclear negotiating situation into a state of chaos. The reason this treaty is important is over the decades we have built up all these counting rules, all these verification procedures, and so on so that each side feels, yes, we can take these steps. If you wipe those out, you are back to zero again. And they have taken since the late 1960s to put together. So that is the real part of it.

Tactical weapons are going to have to, in part, stand on their own. I might say I heard a Russian recently berating us for still having tactical nuclear weapons deployed in Europe. Now, the ratio is mind-boggling. So it is a complicated issue, but it needs to be addressed because many of the missions now that used to be covered by strategic weapons can now be covered by these shorter range weapons. So it has to be brought in in the future, not right now, but as we move forward.

Senator SHAHEEN. Thank you.

I see you are nodding, Mr. Hadley. Do you agree with that?

Mr. HADLEY. I do but I think it is going to be a challenge to deal with tactical nuclear weapons in a negotiation precisely because it is kind of a 10 to 1 advantage for the Russians. And the risk is that they will want compensation for an asymmetric reduction and want to take it by limiting defenses or limiting our conventional strike.

And I hope the administration would consider looking at what President George H.W. Bush did—and Brent was at the center of that in 1991—about proposing that the two sides reciprocally, without formal negotiation, just bring their levels down. And we did that and that is what got the tactical nuclear weapons out of our ground forces and off our deployed naval surface forces.

And we did that because in the wake of the breakup of the cold war, both the Russians and we were worried about Russian tactical nuclear weapons in countries that were now no longer part of the former Soviet Union, and the two countries had an interest that it was in their interest, and the interest of stability, and because verification of tactical nuclear warheads is a very difficult proposition, that it was in their mutual interest of stabilizing the situation just to bring them down. And we did. And it may be that that is a model that at least I hope the administration would look at to do it in a little different way to take into account the real asymmetries there are in the deployments of the two sides.

Senator SHAHEEN. But you are not suggesting that we can get to that without ratifying this New START Treaty, are you?

Mr. HADLEY. No. As I say, I think the case for this New START Treaty is in the counting rules, definitions, verification measures, and as I tried to indicate in my testimony, I think the questions that have been raised can be addressed by the committee in the ratification process and should be.

Senator SHAHEEN. You both talked about the importance of that verification and the fact that we lost the ability to do the inspections and the verification when the old START expired in December. Can you talk a little bit more about the value of this New START's verification regime and why it is so important for us to be able to do the inspections and see what is going on with the Russians?

Mr. SCOWCROFT. This treaty changes a number of the verification measures. It makes some of them tougher, makes some of them—removes some of them. And I think that is based on the character of our own national means of verification and the character of weapons themselves. But if we agree on numbers and types and so on and there is no way to check on the other as to whether or not those agreements are being carried out, we do not have a level of confidence with the Russians now that would allow either side to go forward. So that is what is needed.

You know, besides just these rules, it restores the sense that the United States and Russia have a community of interest here as the possessors of 95 percent of all the world's nuclear weapons to deal responsibly with them, and I think that is part of what this treaty is about.

Senator SHAHEEN. Mr. Hadley, do you want to add anything relative to verification——

Mr. HADLEY. I do not think there is any disagreement on that. We in the Bush administration in 2008, I think as Senator Lugar mentioned, tabled a legally binding treaty of counting rules, definitions, and verification measures that took the START I provisions, adapted them to reflect that we were in a post-cold-war world and, quite frankly, to ease some of the cost and operational burden where we thought we could and still do two things, which is, one, make sure that the parties are each in compliance with the treaty, and then generally to contribute to stability by making sure there is not going to be some kind of strategic surprise in the process.

Senator SHAHEEN. So just to finalize that point, so ratification of this treaty is going to be important if we are going to get back to that kind of a verification and inspection regime.

Thank you.

The CHAIRMAN [presiding]. Senator Corker.

Senator CORKER. Thank you, Mr. Chairman. I appreciate it. No problem.

I want to thank you both for your service and for being here today and being coherent in your presentations. Thank you very much.

If I understand and paraphrase I guess what has been said today, as it relates to arms reduction, I mean, this really is not much of a treaty. It is more about continuing the process and understanding how we verify and do those types of things. This really is not much of a step toward reductions. It is more just keeping the

process going and may lead to other things. Is that, generally speaking, what both of you have said?

Mr. SCOWCROFT. Yes, I think that is very much the case, Senator. What it does is clear the way for whatever the two sides want to do now in proceeding with this overall plan to now reduce the numbers and reduce them in a way that improves the stability of the balance between us. Without this treaty, you cannot move forward to that other step.

Senator CORKER. There are some people that—I mean, I think it is recognized by all that the limitations on the Russian side were limitations that were going to be met by them anyway because of just their decreasing abilities within their country budgetarily and other reasons, that the only real restrictions are coming on our side where we are actually reducing our capabilities per the treaty. But it seems to me that both of you all are all OK with that. Is that correct?

Mr. HADLEY. Yes. I think you do need to see this treaty in context of really a 20-year effort spanning Republican and Democratic administrations. Even if budgetary and modernization considerations push the forces down, this does provide some transparency, some predictability in the relationship. Quite frankly it is an indication of one more thing where Russia and the United States have found it in their common interest to work together cooperatively, and that is an important contribution to the overall environment of Russian and United States relations.

So in this context, it is a logical next step, and again, I would urge the committee to deal with some of the questions that have arisen. I think they can be addressed, and when they are, I think the treaty should be ratified and it will make a modest but useful contribution in this overall process.

Senator CORKER. And for people like you that obviously care deeply about national security, as I think everybody up here does too, the fact that the only real reductions that are taking place are on our side—and that may be a good thing for us. The offsetting effort that I think you are both saying we should all vigorously pursue is making sure that the arsenal we have left is modernized. The real opportunity for us in this country today with this treaty, because we are not really getting any reductions from Russia, is to use the event of this treaty to modernize what we have in this country and ensure that that takes place. Is that correct?

Mr. SCOWCROFT. Yes, I think so, Senator. You know, the reductions we have to take are pretty minimal. We may, for example, convert a few bombers from the nuclear to the conventional role, and we will probably have to leave around 100 silos or submarine missile launchers empty. We do not have to retire them, but they will not be deployed. So it is fairly minimal. And as Mr. Hadley said, we have been at the high end of the balance going down. The Russians have been at the low end. So I do not think this is a significant issue.

Mr. HADLEY. Brent is right. We are not—except for maybe a couple dozen Minuteman IIIs, I think when the administration testifies, you will find we are not carving up delivery platforms. We are able to reach those levels by doing the kinds of adjustments that Brent talked about, taking bombers, putting them in the conven-

tional force, reducing the number of missiles on some of our submarines. So I think it is a pretty modest reduction, but I would underscore very strongly the importance of a firm commitment by the Congress and the United States to a modernization effort of our infrastructure, our delivery platforms, and our weapons so that it is clear to everybody that we have the capacity to stay in this business because that is part of deterrence to show that our commitment is and can be enduring. It is terribly important.

Senator CORKER. Well, thank you for underlining that, and I hope that all of us will pursue modernization. It is something that is very important.

On missile defense, you know, there have been these conflicting statements. I mean, basically a treaty is only as good as the two people who agree to it, and either one of them can step aside. It is not like a law that is created. And so when you have these statements right after the treaty is agreed to that seem to be in opposite directions, it is concerning.

We had a hearing the other day in a secure setting, and I appreciate so much the chairman continuing to have so many hearings. I finally think I have figured out what that disconnect is. We, per the Russians—and this is not classified, so I am not breaking any rules. These, per the Russians—I think the Russians agree that we can continue to have missile defense systems against a few rogue countries, and that is kind of what we are doing right now. We are pursuing missile defense systems against those rogue countries we are concerned about. And today we are not concerned about Russia. I think what they are saying is, though, if we develop any capabilities—any capabilities—as it relates to defense against Russia, they can get out of this treaty. So that is what they are saying on their side. I finally realized what it is—whether it is back room or conversations that always take place, I think there is an understanding that Russia can get out of this treaty if we develop any missile defense capabilities against them. So we are in a situation where we are saying we can continue to develop missile defense, but we know the obvious outcome of what would be if it is against Russia; they will get out.

Does any of that in any way trouble you? Are we OK with being in that scenario?

Mr. HADLEY. I think you have characterized it rightly. The problem in a way is the worst casers on both sides. In connection with the deployments in Poland and the Czech Republic, we spent several years trying to demonstrate to the Russians that those deployments were directed at ballistic missiles coming out of Iran that could threaten Russia, Europe, or the United States. And we tabled document after document and offered various kinds of inspections to give them confidence that it was not directed against them.

But if you are a worst caser, you can find in almost any deployment something that leads you to say "aha," see it threatens us. And the problem is we are getting back into that mindset of suspicion and uncertainty of the cold war, and I think the record is a little bit untidy and the way forward is for this committee in the ratification process with the administration to make clear that we accept no limits on our missile defense capabilities and that rather than being directed at Russia, in fact, this is an opportunity for

Russia and the United States to work together on ballistic missile defense to design a system in Europe that can protect all three. And I think if we can generate that kind of cooperation, we can build some confidence so that you do not have this sort of worst-case analysis all the time.

But as Senator Lugar once told me a couple decades ago in an arms control treaty hearing that was up for ratification, the record is a little muddy if you take the preamble language, the Russians' statement and our statement. We need to be very clear that we do not accept any implicit limits on our ability to go forward with missile defense and at the same time offer to the Russians the opportunity to work with us to build defenses against ballistic missiles that threaten each and both of us.

Senator CORKER. Thank you both for your testimony and for your public service. I look forward to seeing you many times, I hope, in the future.

Thank you.

The CHAIRMAN. Thank you, Senator Corker.

Senator Kaufman.

Senator KAUFMAN. I too—we all say it, but we really mean it—thank you for your service. The two of you are a great asset for the country and thank you for coming up and helping to keep us straight on this very, very important treaty.

START I we had—the Russians and the United States could unilaterally get out of. Right? I mean, the United States could unilaterally—just as we said in this treaty that we can unilaterally get out of the treaty, we could.

Mr. SCOWCROFT. Oh, yes. Either side can. They can use ballistic missile defense or anything else.

Senator KAUFMAN. Why would you think it is suspicious and why do we need a long explanation of the fact that the Russians are just saying that they can get out of this treaty? I hear this but it was in START I. It is kind of a standard thing. You talk about suspicion. You know, the suspicion is out there. I do not think we have suspicions of the cold war. I just think we have some folks who want to look at this treaty and say this is really suspicious behavior when, in fact, it has been in every one of the treaties we have done.

Mr. Hadley.

Mr. HADLEY. You are right. This has the same kind of language that is in all the arms control agreements that says that if—and I cannot quote you the language, but if there are developments that arise, a party may withdraw on the basis of its supreme national interest.

The problem is that in terms of the preamble and in terms of some Russian statements, there is the suggestion that while the current level of United States defense effort is appropriate, if we should change it qualitatively or quantitatively, they want to put a marker down right now that they have the right and will get out. What people worry about is that there is an effort to put pressure on us not to go forward with missile defense. And so we need to take that gloss off the language.

Senator KAUFMAN. The simplest explanation is the best. I think it is pretty clear they are doing this for domestic political consump-

tion. That is the reason they are doing it. And as you said so eloquently about Senator Lugar, who we have all learned a lot from, the preamble and these unilateral statements, if you take them into account, do not mean a whole lot in terms of international treaties. Is that fair to say?

Mr. HADLEY. It is true. I think they are doing it for domestic political purposes. I think they are doing it to put some pressure on us, and I think, quite frankly, they still believe, I think wrongly, that there is active opposition to ballistic missile defense in the United States and they want to give those folks another debating point.

Senator KAUFMAN. It is a lot of stuff to do in a preamble and unilateral statements.

General Scowcroft.

Mr. SCOWCROFT. I think also, Senator, there is a lot of confusion in our discussion between ballistic missile defense against rogue states and ballistic missile defense between Russia and the United States. And we use those terms interchangeably. There is ambiguity in the systems themselves. But if you make those clear and if each side agrees that they are clear, that would simplify the thing a lot because, as Steve says, there is a lot of room for cooperation on defenses against rogue nations.

Senator KAUFMAN. Right. But I want to make sure that everyone is clear because you raised some things here, that the main thing the U.S. Government wants to do is maintain our ability to do a missile defense. And I, frankly, have a hard time kind of looking through the ashes of this or even looking at the preamble and unilateral. I mean, critics and everything—I have been around this town for a long time. There is a really slender thread on which to base a suspicion that there is really something going on here that we have got to watch out for.

Mr. HADLEY. Though a lot of us have earned bruises and scars around the issue of ballistic missile defense over the last couple decades. So maybe a little paranoia is not unreasonable given the history.

Senator KAUFMAN. And that brings me to the other point because I have sat in these hearings and the chairman has had some extensive hearings on this from the very beginning. And I do not know what else this administration can do outside of running a billboard in downtown Washington to say that missile defense is not included in this treaty. I mean, they have said it over and over in hearing after hearing and everyone we have had up here to testify wherever they are in the administration, whether it is the military or Ambassador Gottemoeller or whoever else it is, they start out discussions with, "let us make it perfectly clear," because they realize that this is an issue that is very sensitive. So I do not know what else they can do to kind of convince folks that this is not part of the deal.

Either one of you, do you think there is some kind of secret deal that is going on, which is what is also implied by many of the critics?

Mr. SCOWCROFT. No. I would say that on both sides, this is an issue of domestic politics. The treaty is amply clear. It does not re-

strict us. Would the Russians like it to restrict us? Yes, of course. I do not think there is substance to this argument.

Senator KAUFMAN. Mr. Hadley.

Mr. HADLEY. I do not think there are secret understandings. I think it is a muddy record. I think the administration has and will make it clear that they do not accept any limitations. I think the trick is that it is not just the program they want to pursue that is OK. I think it needs to go further and say no limitations whatsoever on either their program or the program of some other administration. And I think the way to do it is to have the administration on the record and then for the Senate of the United States as part of the ratification to be on the record that they do not accept any limitations on our ability to pursue ballistic missile defense either.

Senator KAUFMAN. I think maybe the Senate part of it, but I do not see how this administration can do anything more to communicate the fact. I mean, it is really better I think—this is just a matter of personal opinion on how to deal with this problem—to do what they have done, which is to say it is not in this treaty. It was not part of negotiations. It was never part of negotiations as opposed to start picking it out and saying, well, we need a special counterforce or something in here to do. And I think that calls attention to—but that is just a matter of strategy.

Mr. Hadley, I would like to also address the 10-year plan. I think everyone here is for nuclear modernization. I mean, sometimes I hear my colleagues talk about nuclear modernization, that there is a group of people up here that do not want to modernize our nuclear weapons. I sit here in the hearings in the Foreign Relations Committee. I just do not see anybody that does not want to modernize nuclear weapons.

As usual, I think Senator Lugar raises an excellent point and that is we are in a tough economic situation. To put together a 10-year plan on just about anything right now is going to lock us into spending money, and especially in an area where if we ever have to change it, we are sending a message that our economic issues are overcoming our strategic concerns. Can you just comment on that a little bit?

The other thing, by the way, to finish up on that—and then that will be the end of my questions—is then put it to the House to have to pass on. If you would just comment on—you would not have these two linked or locked so that we could not go ahead with the treaty until we got the House and the Senate and the President to sign the modernization. It would just be a parallel thing. Is that correct?

Mr. HADLEY. I think the dilemma, as you describe it, is that we are in a time of great budgetary pressure, yet I do think it is important for deterrence to show our commitment to stay in this nuclear game since our security and the security of a lot of others depends on it. So I think it would be important to try to get agreement on a 10-year plan legislatively to raise its priority, show our commitment, and make it hard to take the money out of that program. I think it is an issue of prioritization.

And then second, it starts by finding a way to get year-one money actually out the door so we can start this process.

I think we ought to try to do those two things, but I recognize it is very difficult in the times we are in.

Senator KAUFMAN. And thank you both again.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Kaufman. You always ask a good set of questions. We appreciate it.

Just two quick wrap-ups, if I can, General Scowcroft and Mr. Hadley, coming back to the missile defense thing for a minute. I just want to make sure the record is crystal clear from your own testimonies. And, General Scowcroft, you just made a very important comment about it with respect to the domestic politics.

Bob Gates at our hearing last month said the following: "We are putting our money where our beliefs are." As Secretary Clinton pointed out, our fiscal year 2011 budget will add about $700 million more on missile defense. We have a comprehensive missile defense program and we are going forward with all of it.

Does that satisfy you, Mr. Hadley, that the administration has spoken on that issue?

Mr. HADLEY. Yes, with one caveat. I think you are going to find and probably have already found, Mr. Chairman, that people will ask you, well, does it just mean that they have cleared the administration's missile defense program with the Russians and they are OK, or are we really saying that there are no restrictions whatsoever on missile defense so that if events occur and this administration changes its ballistic missile defense program or another administration comes in and has a different one, that they will not be faced with argumentation that says, oh, no, this program was OK under the treaty but yours is not? So I think, Mr. Chairman, it really needs to be "no limitation whatsoever."

The CHAIRMAN. But both Secretaries and the Chairman of the Joint Chiefs of Staff further testified—I just read you one paragraph—to the effect that there are no limitations whatsoever on what the United States can deploy, that we are pursuing the program we need to now according to the national security community's judgments about what is necessary to protect America and that they are free to change that at any point in time.

Mr. HADLEY. And I have been told that by administration officials as well, and I think that is a good——

The CHAIRMAN. Have you been told that by the administration?

Mr. HADLEY. Right. And I think the next step is, as part of the ratification effort, for the Senate of the United States to say that you see it the same way.

The CHAIRMAN. Well, I think if we ratify the treaty, we will be saying that we see it the same way. I mean, that is what advice and consent to ratification are. But I am not sure anything is necessary beyond the full hearing record and all of the questions that have been asked and the answers that have been given by the administration with respect to those things. I mean, they make it pretty clear. I think you spent—how long did you spend trying to convince the Russians that the program was not directed at them?

Mr. HADLEY. A long time, Mr. Chairman. A lot of effort.

The CHAIRMAN. So I am not sure that we are going to necessarily convince them of that. I think they have put us on notice that if they finally make a determination that it is a threat to their deter-

rent, what they may do to protect their interests, but that has been true of the arms race since it began in the 1940s.

Mr. HADLEY. Mr. Chairman, not to prolong it, I think given the history and the debates we have had in this country over 30–40 years on missile defense, if there is a way in the ratification process for the Senate of the United States, Republicans and Democrats with a, hopefully, overwhelming vote for the treaty that says we agree, no limitations means no limitations, I think that would help put these debates of the past to rest.

The CHAIRMAN. Well, I am confident that there are ways to do that without necessarily changing the treaty.

Mr. HADLEY. I am not suggesting that.

The CHAIRMAN. There are ways to do that. I am glad you are not suggesting that and that is important in this process.

And finally, just on the 10-year plan again, the President has requested $7 billion for fiscal year 2011 for stockpile sustainment and infrastructure investments. That is a 10-percent increase over last year and they have laid out the path for their $80 billion of investment. I have talked with Senator Kyl. We are working with Senator Inouye and others to guarantee that money will be available. I assume if it is, you are satisfied that we are serious about moving forward with the modernization program. General Scowcroft, are you comfortable on the modernization?

Mr. SCOWCROFT. Yes, I am. I am comfortable. I did not use the term "modernization" in my comments. I said safe, reliable, assurance. Modernization for the sake of modernization, in light of the comments that Senator Lugar has made about the overall defense budget, is a separate question. Some things need to be modernized in order to be safe, secure, and reliable. Other things do not need to be. And I would not put modernization itself as a key to what we need to do. We need to be assured that the system will work the way we want it to work.

The CHAIRMAN. That is a very important distinction, and I really appreciate your drawing that because I think it is vital to the debate.

Senator Lugar, do you have any additional comments or questions?

Senator LUGAR. Thank you, Mr. Chairman. I have no additional questions. I just simply want to thank the witnesses and likewise our colleagues for raising questions and providing answers today to some issues that have clearly been disturbing in other hearings. This, it seems to me, was a hearing in which we made progress. I am hopeful that the public record will indicate the questions and answers. I think it will be helpful to our colleagues as they come to a decision.

Thank you again, both of you, for your thoughtful testimony.

The CHAIRMAN. Thank you, Senator Lugar. That is important and I agree with you. I think it has contributed. Thank you very, very much. It was helpful today. We appreciate it.

And the record will remain open for the rest of the week in the event there are any additional questions, but I think you have probably escaped that burden.

Thanks very much for being here. We stand adjourned.

[Whereupon, at 11:30 a.m., the hearing was adjourned.]

THE NEGOTIATIONS

TUESDAY, JUNE 15, 2010

U.S. SENATE,
COMMITTEE ON FOREIGN RELATIONS,
Washington, DC.

The committee met, pursuant to notice, at 2:30 p.m., in room SD–419, Dirksen Senate Office Building, Hon. Edward E. Kaufman, presiding.

Present: Senators Kaufman, Lugar, and DeMint.

OPENING STATEMENT OF HON. EDWARD E. KAUFMAN, U.S. SENATOR FROM DELAWARE

Senator KAUFMAN. This afternoon the Foreign Relations Committee meets to consider the New Strategic Arms Reduction, or START, Treaty. This the eighth time—the eighth time—the committee has met to discuss this topic since the treaty's signing, including classified meetings. We have heard from the Secretary of State, Secretary of Defense, and the Chairman of the Joint Chiefs of Staff. We have also heard from former Secretaries of State and Defense in both Republican and Democratic administrations, former National Security Advisors, and others, all of whom have voiced their support for the ratification of the treaty.

This is a good treaty. From the historical perspective, it is another step contributing to our decades-long process of responsible, safe, and secure nuclear arms reduction.

First, it gives our military enough warheads and means to deliver them to meet our current and future defense requirements.

Second, it in no way limits U.S. missile defense strategy. We intend to deploy a missile defense system that will protect the United States, Europe, and Russia from attacks from rogue states, and our strategic relationship with Russia will continue to rely on the deterrence theory that has kept us safe for half a century.

I want to repeat missile defense is not part of the New START because President Medvedev and President Obama agreed in April 2009 that missile defense would not be part of the START follow-on treaty. This was reiterated in the July 2009 United States-Russian Joint Statement and by every witness who has come before the committee. As the lead negotiators of the treaty, I look forward to hearing our witnesses' perspective on this issue and others.

Third, the treaty contains an important clause that will allow us to withdraw at any time in accordance with changing calculations pertaining to national and global security. Such language is boilerplate in international arms reduction treaties and was included in

START I and START II and the Moscow Treaty. This is nothing new about this. This is a standard provision that has been in the START I, START II, and Moscow Treaty. It allows us to put the interest of the American people first and it is a military priority.

Finally, the treaty provides long-needed verification standards which represent significant improvement over the old START Treaty. This is possibly the most important portion of the treaty because the required notifications and inspections, combined with the work of our intelligence community, give us the confidence to reduce the number of deployed warheads. The new verification system allows for more detailed inspections for the first time allowing United States inspectors to open a Russian missile and view nuclear warheads. When the Senate first began considering nuclear arms reduction between the United States and the Soviet Union, I could never have imagined the time when Americans and Russians would have agreed to such access and transparency.

Another element of the treaty which strengthens our verification abilities are the unique identifiers on every missile from its moment of creation to its moment of destruction. Combined with notifications and national technical means, this gives us an unprecedented ability to understand the Russian strategic force. Additionally, it enhances our ability to identify any possible cheating.

These verification measures are of particular importance and of urgency. The original START verification provision expired with that treaty 7 months ago, leaving us with the bare minimum of notifications for New START to which both sides provisionally agreed. If the treaty should be rejected by the Senate, however, these provisional notifications will become null and void. As we speak, the United States military and strategic decisionmakers know less about the Russian strategic force than they did in December because of the expiration of the first START Treaty. It is in our, the United States, short-term and long-term strategic interest to restore inspections and notifications and strengthen our verification regime.

In closing, I welcome—truly welcome—our distinguished witnesses, Rose Gottemoeller, who is Assistant Secretary of State for Verification and Compliance and the chief negotiator of the treaty; Ted Warner, who is a former Assistant Secretary of Defense and was representative of the Department of Defense to negotiations. Together they are uniquely qualified to answer questions about what was included in negotiations and what was not, which will constitute an important part of our record here today. This is the second time they have testified before the committee since the treaty was ratified, the first being a classified hearing last week. It is a testament to the importance of their perspectives that we have brought them back to continue conversations for the record today.

There is an old expression that when a shark stops swimming, it drowns, and I think that perfectly summarizes where we stand with regard to arms control and why we have to keep swimming.

Some witnesses have testified who have wholeheartedly supported the treaty, and some have voiced specific areas of concern, but each has insisted that nonratification would be a setback for global security. In the words of Lt. Gen. Brent Scowcroft, "The

principal result of nonratification would be to throw the whole nuclear negotiating situation into a state of chaos."

The decades of cooperative limits and reductions provided by SALT and subsequently by the robust verification systems in the first START Treaty provided the United States and Russia with the confidence needed to reduce nuclear weapons because both sides knew it was in their national interest. Failure to ratify this essential follow-on treaty would represent an unraveling of past cooperation between the United States and Russia on arms reduction and pose a significant setback for nuclear security.

Thank you again.

Senator Lugar.

OPENING STATEMENT OF HON. RICHARD G. LUGAR, U.S. SENATOR FROM INDIANA

Senator LUGAR. Well, thank you very much, Mr. Chairman. I join you in welcoming our good friends, Assistant Secretary of State Rose Gottemoeller and chief negotiator for the START Treaty and Dr. Edward Warner, the Secretary of Defense's representative for negotiations on the treaty. We appreciate again the closed session, and we look forward to raising questions in the public session that will be helpful to our members and to the broader group of Americans who are watching carefully this ratification procedure.

Today we will explore technical issues related to the treaty's negotiations. Tomorrow we look forward to examining with Defense Department witnesses its deeper military implications, including modernization and missile defense issues.

Last week, the committee heard in the closed-door testimony from both of you, and that session was extremely valuable in advancing our understanding of missile defense considerations in the treaty. We gained a much better picture of the intent of our negotiators, and I hope that we will continue to make progress on that issue today. What were the understandings of the negotiators relative to missile defense and the meaning and effect of these provisions, especially concerning the grounds for withdrawal from the New START Treaty? Did the Russians say, as has often been asserted, that these provisions were merely for their domestic political consumption, or do they view them as a binding obligation on the United States that will inhibit future missile defense development and deployment on our part?

Tomorrow we will be able to ask Defense Department witnesses, Dr. James Miller and General O'Reilly of the Missile Defense Agency, about their conversations with the Russians on missile defense. But today we will hear from the negotiators about what their goals were in agreeing to the missile defense language in the treaty.

We also have heard testimony about tactical nuclear weapons, in particular, from former Secretary of Defense James Schlesinger and former National Security Adviser Brent Scowcroft. What consideration was given to tactical nuclear weapons during negotiations on the New START Treaty, and how would the treaty contribute to achieving binding limits on tactical weapons in the future? It will be important for Dr. Warner to share with us the views of the Defense Department and how these were reflected in the final treaty. Does the New START Treaty provide the flexibility

sufficient to deal with strategic changes and to meet our deterrence missions?

Bomber counting rules under New START have been criticized, but in this area the treaty appears to continue guidance first set down by President Reagan. The START I Treaty counted 10 warheads for 150 U.S. bombers and 8 warheads for up to 180 Russian bombers. Bombers in excess of these limits counted for the number of warheads deployed on each. New START counts just one weapon for every bomber.

Now, President Reagan's position was to minimize the counting of bombers reflecting their stabilizing nature. Counting bomber warheads at all in START I was a concession. Testifying before this committee on START I in 1992, Ambassador Ronald Lehman stated "even as we establish lower ceilings on the most destabilizing ballistic missile system, we sought flexible treatment of bombers and cruise missiles, and we've succeeded in achieving our objective."

In counting one weapon per bomber, the New START Treaty advances the legacy of bomber stability and flexibility initiated by President Reagan. Verification of compliance and our ability to monitor the limits of this treaty remain central to the Senate's evaluation. Secretary Gottemoeller has stated that she believes that the New START Treaty fixes a number of the compliance issues we faced under START. Our witnesses should discuss at length how the verification regime has been modified under New START and why these changes will fulfill our current verification requirements.

As I noted during our May 18 hearing with Secretaries Clinton and Gates and Admiral Mullen, the administration must make a special effort to produce the National Intelligence Estimate and formal verification assessment related to the treaty. The verification assessment is the direct responsibility of the State Department, and I asked the Secretaries that day to devote their personal energies to accelerating the delivery of these reports to the Senate.

Today I would ask Secretary Gottemoeller and Dr. Warner to do the same. The President has declared the New START Treaty to be a top legislative objective and has called for Senate approval this year. Failing to deliver these reviews related to START in an expedited fashion would diminish the perceptions of the priority of the treaty and complicate Senate debate.

The task facing members of this committee is to continue to clarify areas of ambiguity so that we can craft a responsible and transparent resolution of ratification. I believe that such a resolution can command strong support in the Senate and that we can act on this treaty with confidence this year.

I thank you again, Mr. Chairman, for chairing our hearing.

Senator KAUFMAN. Thank you, Senator.

Now we will hear from our witnesses. I understand Ambassador Gottemoeller is going to go—I think if you limit your remarks to no more than 10 minutes, the full written statement can be inserted in the record.

Thank you.

STATEMENT OF HON. ROSE GOTTEMOELLER, ASSISTANT SECRETARY OF STATE FOR VERIFICATION, COMPLIANCE, AND IMPLEMENTATION, CHIEF U.S. NEGOTIATOR IN POST-START NEGOTIATIONS, DEPARTMENT OF STATE, WASHINGTON, DC

Ms. GOTTEMOELLER. Thank you very much, Mr. Chairman, and thank you for your very extensive remarks to introduce the session. Senator Lugar, thank you also for your extensive remarks. I think it launches us well on our discussions today.

I did want to underscore, Mr. Chairman, that I am not actually appointed to the post of Ambassador for this position. I am the Assistant Secretary and also the chief negotiator of this treaty. But thank you for the title.

Thank you again, sir, and I am very happy to have this opportunity today to provide my perspective as the chief negotiator of 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 the New START Treaty, and to respond to your questions.

Mr. Chairman, with your permission, I would like to give an abbreviated version of my remarks today and submit the rest of them for the record.

Senator KAUFMAN. Without objection.

Ms. GOTTEMOELLER. Thank you, sir.

I believe that there is every reason for the Senate to provide its advice and consent to ratification of the New START Treaty. The treaty is a continuation of the international arms control and nonproliferation framework that the United States has worked hard to foster and strengthen for the past 50 years. It will provide ongoing transparency and predictability regarding the world's two largest deployed nuclear arsenals while preserving our ability to maintain the strong nuclear deterrent that remains an essential element of U.S. national security and the security of our friends and allies.

Our negotiations benefited from our long experience with implementing the INF Treaty, the START Treaty, and the Moscow Treaty. We began with a far better understanding of each other's strategic forces than we had when we were negotiating the original START agreement in the 1980s and early 1990s. Several members of both delegations had extensive experience implementing the START Treaty, including inspections of strategic facilities. The U.S. negotiating team was especially rich in experienced inspectors, as Dr. Warner can attest.

Indeed, my colleague, Ted Warner, and I are two representatives of a strong interagency negotiating team that cooperated very effectively in agreeing through a thorough interagency process on the concept and substance of this treaty. The strength of the treaty rests on the fact that we took into account the broad perspectives of the State Department, the Defense Department, the uniform military, the Energy Department, and other agencies at the outset and at every step throughout the negotiating process.

As I often noted during the negotiations, the New START Treaty is a hybrid of START and the Moscow Treaty. New START has its conceptual roots in both treaties. It contains a comprehensive verification regime, as does START, to provide for predictability, but it also recognizes that at the current time we are no longer in

a cold-war relationship with the Russian Federation. Thus, it allows each party to determine for itself the composition and structure of its strategic offensive arms and to decide how reductions will be made. This flexibility is the great contribution of the Moscow Treaty and it will be important to our national security as we move forward to further reductions.

The warhead counting rules in this treaty are a significant innovation. The parties will receive realistic accounting of the number of reentry vehicles actually emplaced on each party's deployed ICBMs and SLBMs and the opportunity to monitor the declared numbers through onsite inspections. Mr. Chairman, you already made reference to this in your remarks.

While neither party carries any nuclear armaments on its bombers on a day-to-day basis, the parties agreed to an attribution rule of one warhead per nuclear-capable heavy bomber rather than count them as zero. And Senator Lugar, thank you for your comments with regard to the bomber counting rules. As you said, this attribution rule strikes a balance between the fact that neither side loads nuclear armaments on its bombers on a day-to-day basis and the fact that these bombers have a nuclear mission. Furthermore, heavy bombers have long been considered to be more stabilizing than ICBMs or SLBMs because, as slow-flying weapons systems, compared to ballistic missiles, they are not well-suited to first-strike missions.

The treaty's verification regime will give us an important window into the Russian strategic arsenal, and I will turn to Dr. Warner for a more extensive discussion of the verification regime, but I would like only to note that the verification regime will provide each party confidence that the other is upholding its obligations while also being simpler and less costly to implement than START.

The treaty protects our ability to develop and deploy a conventional prompt global strike capability, should we decide to pursue such a capability. We were firm during the negotiations that the treaty must allow for strategic missiles and conventional configuration and also that future nonnuclear systems of strategic range that do not otherwise meet the definitions of the treaty should not be considered new kinds of strategic offensive arms for the purposes of this treaty.

The administration shares the Congress' concern that there should not be any constraints on U.S. efforts to defend ourselves or our allies from missile attacks launched by third parties. The treaty does not constrain our current or planned missile defenses and in fact contains no meaningful restrictions on missile defenses of any kind. The preamble's acknowledgment of the interrelationship between offensive and defensive arms is not new. It has been acknowledged for decades in prior strategic arms control treaties.

Moreover, for decades it has not been the policy of the United States of America to undermine the Soviet or Russian strategic offensive forces with ballistic missile defenses. Ronald Reagan, at the time he announced the Strategic Defense Initiative in 1983, said, "We seek neither military superiority nor political advantage. Our only purpose, one all people share, is to search for ways to reduce the danger of nuclear war." Beginning with George H.W. Bush, our missile defense policy has focused on defending the

United States, our troops, our friends and allies from limited ballistic missile threats.

Regarding the unilateral statements on missile defense associated with the treaty, the United States has made clear our intention to continue improving and deploying our missile defense systems in order to defend ourselves and our allies against limited attacks. We did not agree with the Russian Federation's unilateral statement, and the Russian statement in no way changes the legal rights or obligations of the parties under this treaty. The fact that Russia felt compelled to make its unilateral statement is, in fact, a striking piece of evidence that they were unable to restrict our missile defenses in the agreement itself.

To those who may have concerns regarding alleged backroom deals during the treaty negotiations, let me state unequivocally today on the record before this committee that there were no—I repeat no—backroom deals made in connection with the New START Treaty, not on missile defense nor on any other issue. Everything we agreed to is in the treaty documents transmitted to the Senate on May 13 of this year.

The New START Treaty represents a significant step forward in building a stable, cooperative relationship with Russia, but this treaty is not about Washington and Moscow alone. It advances the security of the entire world by giving added stability and transparency to the relationship between the world's two largest nuclear powers, and by demonstrating that we are living up to our obligations under Article 6 of the Non-Proliferation Treaty, we enhance our credibility to convince other governments to help strengthen the international nonproliferation regime and confront proliferation.

Mr. Chairman, in sum, I believe that the New START Treaty is in the interest of the United States and is the right treaty for today.

Thank you very much.

[The prepared statement of Ms. Gottemoeller follows:]

PREPARED STATEMENT OF ROSE E. GOTTEMOELLER, ASSISTANT SECRETARY OF STATE FOR VERIFICATION, COMPLIANCE, AND IMPLEMENTATION, DEPARTMENT OF STATE, WASHINGTON, DC

Mr. Chairman, Senator Lugar, and members of the Foreign Relations Committee, I am very happy to have this opportunity today to provide my perspective as chief negotiator of the Treaty Between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms, the "New START" Treaty, and to respond to your questions.

I believe there is every reason for the Senate to provide its advice and consent to ratification of the New START Treaty. The treaty is a continuation of the international arms control and nonproliferation framework that the United States has worked hard to foster and strengthen for the last 50 years. It will provide ongoing transparency and predictability regarding the world's two largest deployed nuclear arsenals, while preserving our ability to maintain the strong nuclear deterrent that remains an essential element of U.S. national security and the security of our allies and friends.

Presidents Obama and Medvedev described it best when, upon signing the treaty on April 8 in Prague, President Obama called it "an important milestone for nuclear security and nonproliferation, and for United States-Russia relations" and President Medvedev declared it a "win-win situation."

A little over a year ago, the administration set out to negotiate the New START Treaty with the goal of replacing the expiring START Treaty with a new agreement mandating lower levels of strategic offensive arms. We were also determined to move beyond cold-war mentalities and chart a fresh start in our relations with Rus-

sia. The 2010 Nuclear Posture Review concluded that U.S. national security would not be negatively affected by a reduction in our nuclear arsenal, especially considering that the most immediate threats we face today are nuclear proliferation and terrorism. The United States could sustain a stable deterrence with significantly fewer deployed warheads and strategic delivery vehicles than permitted under earlier arms control agreements. It further recognized that we need to cooperate with Russia as our partner to meet these threats and other global challenges.

The negotiations benefited from our long experience with implementing the INF Treaty, the START Treaty, and the Moscow Treaty. We began with a far better understanding of each other's strategic forces than we had when we were negotiating the original START agreement. Several members of both delegations had extensive experience implementing the START Treaty, including inspections of strategic facilities. The United States negotiating team was especially rich in experienced inspectors, as Dr. Warner can attest.

Indeed, my colleague, Ted Warner, and I are two representatives of a strong interagency negotiating team that cooperated very effectively in agreeing, through a thorough interagency process, on the concept and substance of the treaty. The strength of this new treaty rests on the fact that we took into account the broad perspectives of the State Department, the Defense Department, the uniformed military, the Energy Department, and others at the outset and at every step throughout the negotiation process.

As I often noted during the negotiations, the New START Treaty is a hybrid of START and the Moscow Treaty—New START has its conceptual roots in both treaties. It contains a comprehensive verification regime as does START, to provide for predictability, but it recognizes that we are no longer in a cold-war relationship. Thus, it allows each Party to determine for itself the composition and structure of its strategic offensive arms and how reductions will be made. This flexibility is the great contribution of the Moscow Treaty, and it will be important to our national security as we move forward to further reductions.

The three central numerical limits in the New START Treaty will affect the Parties in different ways because our strategic forces are structured differently. Each Party must make decisions regarding its force structure with respect to all three limits. For example, Russia currently has fewer operational launchers than the United States, but it has a number of inactive submarines and ICBM launchers that it will have to eliminate in order to meet the aggregate limit of 800 deployed and nondeployed launchers and nuclear-capable heavy bombers.

The warhead counting rules in this treaty are a significant innovation. The Parties will receive a realistic accounting of the number of reentry vehicles actually emplaced on each Party's deployed ICBMs and SLBMs, and the opportunity to monitor the declared numbers through onsite inspections. While neither Party carries any nuclear armaments on its bombers on a day-to-day basis, the Parties agreed to an attribution rule of one warhead per nuclear-capable heavy bomber rather than count them at zero. This attribution rule strikes a balance between the fact that neither side loads nuclear armaments on its bombers on a day-to-day basis and the fact that these bombers have a nuclear mission. Furthermore, heavy bombers have long been considered to be more stabilizing than ICBMs or SLBMs because, as "slow-flyers" compared to ballistic missiles, they are not well suited to be used as first-strike weapons.

The treaty's verification regime will give us an important window into the Russian strategic arsenal. The regime includes extensive provisions that contribute to verification of the Parties' compliance, including notifications, data exchanges, agreed conversion and elimination procedures, inspections, demonstrations, and exhibitions. It also includes some significant innovations over the START verification regime, such as the provision of unique identifiers for all ICBMs, SLBMs, and heavy bombers, and reentry vehicle onsite inspections that are designed to monitor the exact number of reentry vehicles emplaced on individual missiles.

The verification regime will provide each Party confidence that the other is upholding its obligations, while also being simpler and less costly to implement than START. The regime reflects the improved United States-Russian relationship since the end of the cold war and reduces the disruptions to operations at strategic nuclear forces facilities imposed by START.

The treaty protects our ability to develop and deploy a conventional prompt global strike capability, should we pursue such a capability. As eminent Russian foreign policy expert Dr. Sergei Karaganov has noted, it was not possible for Russia to secure a ban on United States development and deployment of high-precision non-

nuclear strategic systems.[1] We were firm during the negotiations that the treaty must allow for strategic missiles in conventional configuration, and also that future nonnuclear systems of strategic range that do not otherwise meet the definitions of the treaty should not be considered "new kinds of strategic offensive arms" for purposes of the treaty.

The administration shares the Congress' concern that there should not be constraints on U.S. efforts to defend ourselves and our allies from missile attacks launched by third parties. The treaty does not constrain our current or planned missile defenses, and in fact contains no meaningful restrictions on missile defenses of any kind. The preamble's acknowledgement of the interrelationship between offensive and defensive arms is not new; it has been acknowledged for decades in prior strategic arms control treaties.

Moreover, for decades it has not been the policy of the United States to undermine the Soviet or Russian strategic offensive forces with ballistic missile defenses. Ronald Reagan, at the time he announced the Strategic Defense Initiative in 1983, said, "We seek neither military superiority nor political advantage. Our only purpose—one all people share—is to search for ways to reduce the danger of nuclear war." Beginning with George H.W. Bush, our missile defense policy has focused on defending the United States, our troops, our friends and allies, from limited ballistic missile threats.

Regarding the unilateral statements on missile defense associated with the treaty, the United States has made clear our intention to continue improving and deploying our missile defense systems, in order to defend ourselves and our allies against limited attacks. We did not agree to Russia's unilateral statement, and the Russian statement in no way changes the legal rights or obligations of the Parties under the treaty. The fact that Russia felt compelled to make its unilateral statement is, in fact, a striking piece of evidence that they were unable to restrict our missile defenses in any meaningful way in the agreement itself. Russian Deputy Foreign Minister Ryabkov said in an interview published in the newspaper Russia Today on April 19, "We have never ever believed that it would be possible through this treaty, the scope of which covers exclusively strategic offensive arms, to be able to limit capabilities of another Party in the area of strategic defence."[2]

In addition, Russian President Medvedev said in an interview with ABC News on April 9, "I would not want to create the impression that any change would be construed as grounds for suspending a treaty that we have only just signed. Moreover, we agreed—I discussed this with President Obama, and our respective administrations discussed it—that we should cooperate on building a global missile defence system. But if events develop in such a way as to ultimately change the fundamental situation Russia would be able to raise this issue with the USA."[3]

To those who may have concerns regarding alleged back-room deals during the treaty negotiations, let me state unequivocally today on the record before this committee that there were no/no secret deals made in connection with the New START Treaty; not on missile defense or any other issue. Everything we agreed to is in the treaty documents transmitted to the Senate on May 13. I also want to make clear that Article XV of the treaty authorizes the Bilateral Consultative Commission to make changes in the protocol without resorting to the treaty amendment procedures only where such changes do not affect substantive rights or obligations under the treaty. This provision is similar to the provisions contained in, and successfully implemented under, the START Treaty.

The New START Treaty represents a significant step forward in building a stable, cooperative relationship with Russia. But this Treaty is not just about Washington and Moscow. It advances the security of the entire world. By giving added stability and transparency to the relationship between the world's two largest nuclear powers and by demonstrating that we are living up to our obligations under Article VI of the Nuclear Non-Proliferation Treaty (NPT), we enhance our credibility to convince other governments to help strengthen the international nonproliferation regime and confront proliferators.

Mr. Chairman, in sum, I believe that the New START Treaty is in the interests of the United States and is the right treaty for today. It will restore the transparency and predictability that START provided, preserve the flexibility enshrined in the Moscow Treaty, contribute to our efforts to reinvigorate the Nuclear Non-Proliferation Treaty, and take us another step toward achieving the ultimate goal of a nuclear weapons-free world.

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[1] http://karaganov.ru/en/publications/preview/206.
[2] http://rt.com/Top__News/2010-04-19/ryabkov-nuclear-programme-iran.html.
[3] http://eng.news.kremlin.ru/transcripts/l.

Senator KAUFMAN. Dr. Warner.

STATEMENT OF DR. EDWARD L. WARNER III, SECRETARY OF DEFENSE REPRESENTATIVE TO POST-NEW START NEGOTIATIONS, DEPARTMENT OF DEFENSE, WASHINGTON, DC

Dr. WARNER. Thank you, Mr. Chairman, Senator Lugar. It is a privilege to appear before this committee once again to discuss the New START Treaty.

I served as the representative of the Secretary of Defense on the New START negotiating team and was involved in the effort from its very beginning in April 2009 through the signing of the treaty almost a year later. The Department of Defense stands firmly behind this treaty. It strengthens strategic stability, enables the United States to modernize its triad of strategic delivery systems and protects our flexibility to deploy important nuclear and nonnuclear capabilities. Because of this, the treaty has the full support of the U.S. defense leadership. This includes the Secretary of Defense, the Chairman of the Joint Chiefs of Staff, the service chiefs, and the Commander of the U.S. Strategic Command, the command responsible for sustaining our strategic nuclear deterrent. In light of my role in the negotiation of the New START Treaty, I would like to focus my remarks today on the defense-related aspects of the agreement and on the inspections framework of the treaty which I was responsible for negotiating on the U.S. side. In my role, I had particular responsibility to ensure that the national defense interests of the United States were properly incorporated into our negotiating positions and in any provisions of the treaty that were agreed. I am confident that we did so.

Throughout the negotiations, my colleague representing the Joint Chiefs of Staff, Mr. Mike Elliott, and I were in close contact with the Defense Department leadership. We did not agree to the inclusion of any provisions without securing their approval. Indeed, the final treaty, protocol, and supporting annexes very much reflect the input of the senior Department of Defense leaders to an effective governmentwide process. This included the personal involvement of the Secretary of Defense and of Admiral Mullen, the Chairman of the Joint Chiefs of Staff, who participated directly at key junctures in the negotiation of the treaty itself.

Let me address some of the key national defense issues that are contained within this treaty.

First, the United States sought to conclude a treaty that would significantly limit and reduce United States and Russian strategic offensive arms while preserving strategic stability in a manner that provides predictability and is supported by an effective, extensive verification system. While pursuing stabilizing reductions in strategic offensive forces, the U.S. negotiators sought to protect our ability to field a flexible, effective, strategic triad of nuclear delivery systems and to enable the modernization of these delivery systems and the nuclear weapons that they carry. The United States negotiators also sought agreement on ceilings on strategic warheads and strategic delivery vehicles that were lower than those in the Moscow Treaty but sufficient to meet the needs of the Nation as established and assessed within the recently completed nuclear posture review.

We did achieve these objectives. The agreement of the Department of Defense leadership to the limits was based on the force analyses that were conducted during the nuclear posture review by the U.S. Strategic Command and reviewed throughout the Pentagon by the services, the Joint Chiefs of Staff, and the Office of the Secretary of Defense.

It was also conditional upon Russian agreement to allow removal of converted B–1B bombers, cruise missile submarines, so-called SSGNs, and eventually a number of conventionally armed B–52H bombers from accountability under the treaty. This is one of the examples of the flexibility in the treaty where it does allow conversion of systems from nuclear to nonnuclear roles and specifies particular procedures, including inspection activities associated with such conversions.

Second, the treaty affords us the freedom to deploy, maintain, and modernize our forces as we deem appropriate. As outlined in the section 1251 report to the Congress, the administration plans to maintain and modernize all three legs of the triad. By the time the treaty reductions go into effect 7 years after the treaty enters into force, the Department intends to field strategic nuclear forces within the central limits of the treaty that include up to 420 deployed Minuteman III ICBMs, 240 deployed Trident II D5 submarine-launched ballistic missiles, or SLBMs, and up to 60 B–2A and B–52H nuclear-capable heavy bombers. Over the next decade, DOD plans to invest over $100 billion in sustaining and modernizing our strategic nuclear delivery systems, and the Department of Energy plans to invest over $80 billion in sustaining and modernizing the nuclear weapons stockpile and the nuclear weapons complex that supports that stockpile.

Third, protecting our ability to develop and deploy the most effective missile defenses possible was one of the most important U.S. objectives during the treaty negotiations, and we clearly did so. Under the treaty, the United States is free to pursue its current and planned ballistic missile defense programs, as well as any other courses of action we might choose to pursue. The one exception, as has been previously pointed out, is the ban on the conversion of ICBM or SLBM launchers for use as missile defense interceptor launchers and vice versa. As previously explained and as will be, I am sure, discussed by General O'Reilly in his appearance here tomorrow, such a course of action would be costly and impractical. Nothing in this treaty or in the Russian unilateral statement concerning missile defenses, which is not legally binding, will constrain us from developing and deploying the most effective missile defenses possible to protect the United States homeland from limited missile attack and to protect U.S. forces deployed abroad and partners and allies from growing regional ballistic missile threats. Nor will the treaty impose additional costs or burdens on these missile defense efforts.

And fourth, the administration was also intent on protecting the U.S. ability to develop and deploy conventional, prompt global strike systems. We, therefore, agreed to a permit-and-count regime whereby conventionally armed ICBMs or SLBMs would be permitted but counted under the strategic delivery vehicle and strategic warhead ceilings. In addition, the United States stated during

the negotiations it would not consider future strategic range nonnuclear systems that do not otherwise meet the definitions of this treaty to be new kinds of strategic offensive arms for purposes of this treaty and thus captured by its provisions. We are confident that this arrangement accommodates our defense requirements regarding the possible development and deployment of conventional prompt global strike capabilities for the 10-year lifetime of the treaty.

Achieving an effective verification framework was another key U.S. and Department of Defense objective in the negotiations. Let me, therefore, turn very briefly now to my role as the U.S. chairman of the Inspections Working Group during the negotiation of the treaty.

During the course of the negotiations, we met more than 90 times with our Russian counterparts to hammer out an effective tailored inspections framework for the treaty. In this effort, I was aided, as Rose noted, by a cadre of veteran inspectors who brought many years of combined experience, both carrying out inspections in Russia and hosting such inspections here in the United States. We brought that experience to the negotiating table.

Our objectives were to craft an inspection framework that continues the appropriate verification and transparency functions provided for under START while streamlining the overall process and reducing unnecessary burdens in line with the July 2009 joint understanding signed by Presidents Obama and Medvedev. We achieved these objectives.

The treaty provides that each party may conduct up to 18 short-notice, onsite inspections each year. These inspections are divided into two groups. Type one inspections will be conducted at the operating bases for ICBMs, SLBMs, and nuclear-capable heavy bombers and will include inspection of both deployed and nondeployed systems. Type two inspections are focused on nondeployed strategic systems, as well as formerly declared facilities, and confirming the results of the elimination or conversion of strategic offensive systems. These inspections will be conducted at places such as storage sites, test ranges, formerly declared facilities, and conversion or elimination facilities. Each side is allowed to conduct up to 10 type one inspections and up to 8 type two inspections annually. Type one inspections combine many of the aspects associated with two different types of inspections that were conducted separately under START, thus requiring fewer inspections annually at the operating bases while achieving many of the results of the previous START inspection regime with a smaller number of annual inspections.

The inspection activities contribute to the verification of the treaty's central limits by confirming the accuracy of declared data. Inspections may also be used to confirm weapon system conversions and eliminations and to confirm that formerly declared facilities are not being used for purposes inconsistent with the treaty, that is, they are not being used to support strategic offensive arms anymore.

The use of unique identification or identifier numbers, notifications, and the regularly updated comprehensive database on all strategic offensive arms and the use of national technical means of

verification will complement onsite inspections in providing for a robust treaty verification regime.

Thank you, Mr. Chairman, Senator Lugar, for the opportunity to discuss this very important treaty.

[The prepared statement of Dr. Warner follows:]

PREPARED STATEMENT OF DR. EDWARD L. WARNER III, SECRETARY OF DEFENSE REPRESENTATIVE TO THE NEW START NEGOTIATIONS, DEPARTMENT OF DEFENSE, WASHINGTON, DC

Mr. Chairman, Senator Lugar, distinguished members of the committee, thank you for the opportunity to speak today regarding the New Strategic Arms Reduction Treaty. I served as the Representative of the Secretary of Defense on the New START Treaty negotiating team and was involved in the effort from the beginning of our discussions with the Russians in late April 2009 through to the signing of the treaty almost a year later.

The Department of Defense stands firmly behind this treaty. The agreement strengthens strategic stability, enables the United States to modernize its triad of strategic delivery systems, and protects our flexibility to develop and deploy important nuclear and nonnuclear capabilities needed for effective deterrence and defense. Because of this, the treaty has the support of the U.S. defense leadership—including the Secretary of Defense, the Chairman of the Joint Chiefs of Staff, the Service Chiefs, and the Commander of the U.S. Strategic Command, the command responsible for the U.S. strategic nuclear deterrent.

In light of my role in the negotiation of New START Treaty, I would like to focus my remarks today on the national defense-related aspects of the agreement and on the inspections framework for the treaty, which I was responsible for negotiating on the U.S. side.

As the Representative of the Secretary of Defense for the talks, I had a particular responsibility to ensure that the national defense interests of the United States, as viewed by the leadership in the Department of Defense, were properly incorporated into our negotiating positions and in any provisions that were agreed for inclusion in the treaty and its supporting documents. I am confident that we did so. Throughout the negotiations, my colleague representing the Joint Staff and I were in close contact with Defense Department leadership, and we did not agree to the inclusion of any provisions without securing their approval. Indeed, the final treaty, protocol, and supporting annexes very much reflect the input of senior DOD leaders to an effective governmentwide process, including the personal involvement of the Secretary of Defense and Admiral Mullen, the Chairman of the Joint Chiefs of Staff, at key junctures in the negotiation of the treaty.

Let me address some of the key national defense-related issues in the treaty and how the U.S. side handled them.

First, the United States sought to conclude a treaty that would significantly limit and reduce United States and Russian strategic offensive arms while preserving strategic stability in a manner that provides predictability and is supported by an effective verification system.

While pursuing stabilizing reductions in strategic offensive forces, the U.S. negotiators sought to protect our ability to field a flexible, effective strategic triad composed of ICBMs, SLBMs, and nuclear-capable heavy bombers, and to enable modernization of our strategic delivery systems and the nuclear weapons they carry. The United States negotiators also sought agreement on ceilings on strategic warheads and strategic delivery vehicles that were lower than those in the Moscow Treaty, but sufficient to meet the needs of the Nation as established by the Nuclear Posture Review.

We achieved these objectives. The New START Treaty will entail stabilizing limits on deployed strategic nuclear forces and nondeployed ICBM launchers, SLBM launchers, and heavy bombers, as well as associated verification measures. We agreed to these limits based on analysis conducted in the Nuclear Posture Review prior to and during the course of the negotiations, which determined that the ceilings would be sufficient to allow us to meet U.S. strategic deterrence requirements and to maintain the triad of delivery systems. The agreement of the Defense Department leadership to the limits was also conditional upon Russian agreement to allow removal of converted B–1s, cruise missile submarines (SSGNs), and, eventually, a number of conventionally armed B–52Hs from accountability under the New START Treaty.

We achieved agreement on these points as well.

The treaty affords us the freedom to deploy, maintain, and modernize our forces as we determine appropriate in a manner consistent with the central limits of the treaty. As outlined in the report to Congress issued in compliance with section 1251 of the National Defense Authorization Act, 2010, the administration plans to maintain and modernize all three legs of the triad. By the time that the treaty reductions go into effect, 7 years after entry into force, the Department intends to field strategic nuclear forces within the central limits of the treaty that include: up to 420 deployed Minuteman III ICBMs; 240 deployed Trident II D5 SLBMs; and up to 60 deployed B–2A and B–52H heavy bombers equipped for nuclear armaments. Over the next decade, DOD plans to invest over $100 billion in sustaining and modernizing our strategic nuclear delivery systems, and the Department of Energy plans to invest over $80 billion in sustaining and modernizing the nuclear weapons stockpile and the nuclear weapons complex.

Protecting our ability to develop and deploy the most effective missile defenses possible was one of the most important U.S. objectives during the treaty negotiations, and we clearly did so. Under the treaty, the United States is free to pursue its current and planned ballistic missile defense programs, as well as any other courses of action we might choose to pursue. The one exception, as has been previously pointed out, is the conversion of ICBM or SLBM launchers for use as missile defense interceptor launchers, or vice versa. As previously explained, such a course of action would be costly, and is not part of our plans for future missile defense programs.

Nothing in this treaty or in the Russian unilateral statement concerning United States missile defenses, which is not legally binding, will constrain us from developing and deploying the most effective missile defenses possible, nor will the treaty impose additional costs or burdens on these efforts.

The administration was also intent on protecting the U.S. ability to develop and deploy conventional prompt global strike systems. We therefore agreed to a "permit and count" regime whereby conventionally armed ICBMs or SLBMs would be permitted but counted against the strategic delivery vehicle and strategic warhead ceilings. In addition, the United States stated during the negotiations that it would not consider future, strategic range nonnuclear systems that do not otherwise meet the definitions of this treaty to be "new kinds of strategic offensive arms" for purposes of the treaty. We are confident that this arrangement accommodates our defense requirements regarding the possible development and deployment of conventional prompt global strike capabilities for the lifetime of the treaty.

Overall, the New START Treaty will strengthen stability and predictability. It will allow us to sustain a strong nuclear triad, to deploy ballistic missile defenses to meet growing regional missile threats, to defend the U.S. homeland against the threat of limited ballistic missile attack, and to maintain the flexibility to deploy the nuclear and nonnuclear capabilities needed for effective deterrence.

Achieving an effective verification framework was another key U.S. and Department of Defense objective in the negotiations. Let me therefore turn now to my role as the U.S. Chairman of the Inspections Working Group during the negotiation of the treaty. In this capacity, I led the U.S. side in negotiating the inspections framework that will form a central pillar of the treaty's verification regime. During the course of the negotiations, we met more than 90 times with our Russian counterparts to hammer out an effective, tailored inspections framework for the treaty. In this effort, I was aided by a cadre of veteran inspectors who brought many years of combined experience in implementing inspections under the START and INF Treaties to the development of our negotiating positions and to the negotiating table.

The inspections framework that we negotiated with Russia is an essential part of the treaty's overall verification regime. Our objectives were to craft an inspection framework that continues the appropriate verification and transparency functions provided for under START, while streamlining the overall process and reducing unnecessary burdens, in line with the July 2009 Joint Understanding signed by Presidents Obama and Medvedev. We achieved these objectives.

The treaty provides that each Party may conduct up to 18 short-notice, onsite inspections each year. These inspections are divided into two groups. Type one inspections will be conducted at the operating bases for ICBMs, SLBMs, and nuclear-capable heavy bombers and will include inspections of both deployed and nondeployed systems. Type two inspections are focused on nondeployed strategic systems, as well as formerly declared facilities, and confirming the results of the elimination or conversion of strategic offensive systems. These inspections will be conducted at places such as storage sites, test ranges, formerly declared facilities, and conversion or elimination facilities. Each side is allowed to conduct up to 10 type one inspections and up to 8 type two inspections annually. Type one inspec-

tions combine many of the aspects associated with two different types of inspections that were conducted separately under START, thus requiring fewer inspections annually at the operating bases while achieving many of the results of the previous START inspection regime with a smaller number of annual inspections.

These inspection activities contribute to the verification of the treaty's central limits by confirming the accuracy of declared data on the numbers of deployed and nondeployed ICBMs, SLBMs, and nuclear-capable heavy bombers and of the warheads located on or counted for them. Inspections may also be used to confirm weapon system conversions and eliminations and to confirm that formerly declared facilities are not being used for purposes inconsistent with the treaty.

Unique identifiers, notifications, the regularly updated comprehensive database, and the use of national technical means will complement inspections in providing for a robust treaty verification regime.

Thank you for the opportunity to testify on New START. I would be happy to answer any questions.

Senator KAUFMAN. Thank you.

We will begin the question period. Each Senator will have 7 minutes and if there is time, we will do a second round.

Assistant Secretary Gottemoeller, in practical terms, how will the New START Treaty limit Russia's forces and options in terms of things that they can do because they signed the treaty?

Ms. GOTTEMOELLER. Thank you for the question, sir.

In fact, the Russian forces are spread across three categories in the central limits: warheads, delivery vehicles, and launch systems. The Russians, of course, have been experiencing over time some degradation in their strategic forces, and so they have already been, in fact, taking some reductions in their strategic delivery vehicles due to the fact that some systems are reaching obsolescence.

I do want to emphasize, however, that for the Russians they have, as we do, a fairly significant number of launchers such as submarines and ICBMs and their launch silos that will be reduced and eliminated under this treaty. So it will cause some significant restructuring and reductions in the Russian launchers, in addition to which the treaty will require them overall to submit to a verification regime, as it will cause us to submit to a verification regime, which will give both sides a significant view into the strategic nuclear forces of both parties. So that, I think, is significant in that it helps to guide decisionmaking in both governments. It helps to prevent worst-case decisionmaking and the kind of financial decisions, resource decisions that might go with that, but furthermore gives both sides a very, I think, clear notion of what kinds of threats we are facing, and as systems are eliminated over time, it gives us a sense that that threat is beginning and steadily declining. So for both sides, it is a net increase to a sense of strategic security, and in fact, of course, that is why both sides enter into such strategic reduction negotiations and eventual achievement of such agreements in order to essentially achieve an enhancement in national security.

So I would underscore, I think, those two things, that it does help us to understand the structuring of the Russian strategic forces and will cause some elimination over time in their launchers, and furthermore, it will also enhance predictability by giving us a clear view into their strategic forces and vice versa.

Senator KAUFMAN. And as a negotiator, what makes you confident the new verification process will be effective?

Ms. GOTTEMOELLER. I think, sir, more than anything it is our 15-year history of implementing the START Treaty and, behind that,

our experience in implementing the INF Treaty since 1988. Those were the first treaties that brought us into an onsite inspection regime, got us our boots on the ground, as Senator Lugar likes to say, gives us the opportunity to actually get inside the strategic nuclear forces of the Russian Federation, the bomber forces, the submarines, and the ICBM forces, and really helps us to understand what is going on there.

It is the very experience of implementing those treaties and understanding how both sides implement. Have there been compliance concerns over time? Yes. START was a very complex treaty, over 500 pages. From time to time, both parties had difficulties with complying with some of the constraints and obligations of the treaty. We have been trying to do everything we can to ensure that such questions are not coming forward into this new treaty. But as a matter of fact, in general terms both sides implemented the START Treaty well, and it is that history that gives us a good sense going forward that this treaty is well worthwhile in its implementation particularly of the verification regime.

Senator KAUFMAN. Thank you.

Dr. Warner, you are quoted as saying that in the new regime, the notification unique identifiers will enable us to follow a missile from the cradle to the grave. How precisely will that contribute to verification?

Dr. WARNER. Well, there is a combination of three elements, Senator, that come together here. One is the massive database, the comprehensive database. There is a requirement of both sides to really register the data about all strategic offensive arms that, in fact, fall within the provisions of the treaty. Within 45 days after entry into force, both sides will exchange data on these systems, where they are located, and so forth.

In combination with this is this idea of unique identifiers, an alphanumeric designator assigned uniquely to each ICBM, each SLBM, and each nuclear-capable heavy bomber, just each heavy bomber as a matter of fact. These numbers, if a system is newly created, will be present from birth all through their operational lifetime in storage facilities and test ranges, at operational bases, and we will also be tracking them down to conversion or elimination at the end of their lifetime. And that is what we mean.

The third part of the combination here, a troika of reinforcing verification provisions, was database, the unique identifiers, and then the necessity for notifications. Every time that a system changes status from deployed to nondeployed or is moved between facilities from a production plant to a test range to a storage facility to an operating base and so forth, notifications must be provided to the other side within 5 days of the completion of that activity. The notification again will include the unique identifier.

So it is this combination of identifiers, notifications, and comprehensive database that give us this ability to track, and it is on that basis that we launch our inspections. Inspectors go to a facility knowing in their case in advance where they want to go, doing their homework, preparing, knowing the information. Then they are able to verify the accuracy of that information through the inspection itself.

Senator KAUFMAN. Senator Lugar.

Senator LUGAR. I would like to ask either one of you to give an answer to this question. The United States maintained a permanent, continuous, boots-on-the-ground inspection capacity in START I to monitor Russian missile production. Why was this not continued under the New START?

Ms. GOTTEMOELLER. Perhaps I'll begin, Senator Lugar, and then perhaps Dr. Warner would like to continue with some comments.

You are referring to the site that was located at the Votkinsk production facility in the Russian Federation. It was first established again under the intermediate range nuclear forces treaty and continued under the START Treaty.

As START was nearing the end of its implementation in 2007–08, the United States and the Russian Federation began to confer about what would be the transition from New START, whether there would be a new legally binding treaty, what negotiations would ensue, and furthermore began to prepare for an orderly transition from the START Treaty to whatever would follow. In the course of those discussions, in 2008 it was discussed what continuing obligations would both sides like to see with regard to the verification regime, and during that period, the continuing permanent presence, continuous monitoring site at Votkinsk did not come into those discussions. And so there was a preparation that began to essentially bring about an orderly shutdown of the facility at Votkinsk and to move to the next stage, whatever that would be.

So in essence, as the United States and the Russian Federation in 2007 and 2008 were considering the future and what they would like to do, one key decision that was made was both parties decided they did not want to extend the START Treaty per se for an additional 5-year period, which would have been one way to go about extending the Votkinsk facility, but in addition to which they simply decided to enter into an agreement on the orderly shutdown of that facility. So that process was unfolding at the time that we began our new negotiations.

I would just like to comment, sir, that indeed we did work very hard to try to continue some permanent presence during the early course of the negotiations, but we also looked very hard at what was actually required to verify the obligations, the central limits of this treaty, and took a very good look at the combination of notifications associated with the production and being able to track missiles coming out of the Votkinsk plant through their unique identifiers. That was an absolute requirement for us to be able to track from the time that the systems left the production plant until they arrived at their either deployment site, storage site, or the test range. And so there was very thorough consideration given to what would be satisfactory in terms of following and tracking systems as they left Votkinsk.

In fact, we did achieve that under the treaty. We have 48 hours advance notification of the departure of solid rocket missiles from the production facility. This essentially allows our national technical means to be cued and to be watching as systems leave the production facilities. So we do feel that there is a very thorough way to continue to track missiles under this treaty.

Senator LUGAR. I thank you for that response. I would mention, without getting into criticism of either administration, that in fact

a comment was made with regard to the last administration that time is running out. We are coming down the trail toward December the 5th. There did not appear to be accurate negotiations going on with the Russians at that period of time. And so that on December 5 when the last observers left Votkinsk, there was at least some anxiety on the part of some of us as to what follows because a transition was inevitable and before you and this administration could negotiate a new treaty. But it appears to me that you have taken into consideration the lay of the land at that point and at least picked up the particulars of this treaty in terms of what needs verification and the means of doing it.

My second question really comes down then to these new means. For either one of you, please outline for us the difference between START I and New START on the provision of telemetric data. Why is New START different from START I? Will the United States ever need to return to the kind of telemetric data exchange with Russia contained in START I? And why do you believe your negotiations concluded with a successful outcome on telemetry?

Ms. GOTTEMOELLER. Again, sir, I will start on this question and my colleague may wish to add something.

Telemetry or the exchange of telemetric information is not required to verify the central limits of this treaty. The START Treaty was formulated somewhat differently. There were some particular provisions of the treaty that required telemetric data in order to be able to verify them. Particularly, I will just give one example. That is the attribution rule. START used an attribution rule, that is, if a system was tested with 10 warheads, it was always counted with 10 warheads. And in order to determine that attribution for a particular missile, telemetric information was required. In this new treaty, we use a completely different kind of counting rule. I noted it is an innovative and different kind of approach, but it does not require telemetric information to confirm.

So telemetry under this treaty is a useful transparency measure. Both Presidents, after some very serious discussion of the matter, came to agree that it was a good transparency measure under this treaty and will continue to unfold with the exchange of up to five missile flight tests per year, that is, telemetric information on up to five missile flight tests. We believe—and because there is an annual review possible in the bilateral consultative commission for the telemetry regime under this treaty, we believe that over time it will prove its utility because both sides will have an opportunity to make adjustments in the telemetric data exchange throughout the life of the treaty. Sir, I am confident that it will prove its utility in this treaty, but as a transparency measure rather than a verification measure.

Senator LUGAR. Dr. Warner, do you have any further comment?

Dr. WARNER. The only point that I might add is—Rose got to it at the latter part—for the audience telemetric information is really information monitoring the performance of missiles during flight tests. And the issue here is when you are flight testing an ICBM or SLBM, both sides use telemetry in order to monitor and understand how the missile performed in flight.

One of the other issues—Rose's answer was exactly correct. The point is it is not needed for verification of this treaty.

The other primary area was in the START Treaty, there were limits on throw weight, the aggregate, really size and lifting capacity of ballistic missiles. There is no such—and that could only be monitored as an effective manner to see what was the size of the missiles being tested. Again, there is no limit on throw weight. Because of that idea of flexibility, sides should be able to determine the composition of its forces as it sees fit. Without that needed, there was no need to have to exchange telemetric information of that nature.

Senator LUGAR. Thank you.

Senator KAUFMAN. Assistant Secretary Gottemoeller, how did you craft the New START Treaty to avoid future compliance disputes?

Ms. GOTTEMOELLER. Mr. Chairman, this was actually a process that was begun in the latter years of implementation of the START Treaty. There is and was a Joint Compliance and Inspection Commission that worked very hard throughout the life of the treaty on implementing the treaty and ensuring that issues of difference between the two sides on compliance with the treaty were resolved over time. It is one of the core functions of that particular body. And by the way, in the new treaty, we have a bilateral consultative commission that will have, as one of its core functions, that very same type of work.

But what we did with the JCIC in the latter stages of the START Treaty was begin to resolve some longstanding questions between the two sides. For example, there were questions related on the U.S. side to the reentry vehicle onsite inspection of the Minuteman III. The Russians addressed those questions to us. We addressed questions to the Russians with regard to the reentry vehicle onsite inspection of the SS–27. And in the course of work in the JCIC and some demonstrations and exhibitions, both sides were able to reassure the other regarding these reentry vehicle onsite inspections, so that by the time START was going out of force, we had achieved what are called clean RVOSI inspections on both sides. That is, the inspectors had no comments for each other. And so that was a real accomplishment.

And we took that spirit into the negotiations because we wanted to ensure that the new treaty had a real problem-solving attitude from the very outset. So we transferred the attitude of problem-solving and trying to work through questions in the JCIC to the negotiating table in Geneva and really tried to take some of the solutions that they were coming up with. The SS–27 RVOSI is a very good example because it looked at some of the covers that had been used during previous inspections that had been problematic that the Russians had put into use, and we really worked with them and they worked with us to come up with a cover that would be acceptable for a reentry vehicle onsite inspection of the SS–27 and then could be brought forward again into the new treaty as a cover that will be used in the new treaty.

So that is the way we, I guess I would say, tried to bring a new attitude to this effort, and I do believe that we have succeeded.

Dr. WARNER. In my inspections working group, we had to do the negotiation of these things in detail, and I would just note very briefly this is where we got an invaluable contribution of these

former inspectors. These were people—some of them had also participated in the JCIC deliberations on these matters. They had attended the demonstration that resolved these matters. They had been there, if I get the chronology right, in the first place when the problems had arisen.

So we were very careful. And if you look into the protocol and then the annexes, especially in the annexes, which are at a level of detail that most people do not want to wander into, those annexes are basically a handbook for the conduct of inspections, the ones that affect the inspection activities. We got right down to the specifics of the character of the covers for reentry vehicles, how they could be displayed, displayed ahead of time, then used, make sure they did not hamper the ability to count accurately the number of reentry vehicles there.

So again, very much in the spirit of what Secretary Gottemoeller spoke of, we brought that to specific manifestation in literally the individual provisions. These were often hammered out with considerable intensity, but in the end, we did, in fact, achieve—and I think both sides came to understand that they had a better—I do not know—"guarantee" may be too strong, but better assurances that we were setting in motion a set of provisions that could, in fact, be implemented very effectively.

Senator KAUFMAN. Dr. Warner, as we talked about earlier, START I expired in December. From a military perspective, how important is it to get back in the verification business?

Dr. WARNER. I think it is very, very important. I had the opportunity to speak with General Chilton, Commander of Strategic Command, within the last couple of days. He certainly shares that assessment. I think we all do.

It has now been 6 months more since the expiration. In truth, we did not fall off a cliff. We had lots of accumulated information, but with each passing month, that information gets more dated. In the Russian case, for instance, a new, very important system has been introduced since the end of that, the long-awaited mobile MIRVed ICBM called the RS–24. We will have an opportunity, once START begins to have an exhibition of that system to understand it in great detail, and we will have an opportunity to track it and others through onsite inspections.

So the insights that are available to us cannot be overestimated. I have spent much of my professional life as a student of first Soviet and then Russian military affairs, including strategic nuclear affairs. And I remember very well the "Through a Glass Darkly" kind of assessments that we had to make in the 1970s, in the 1980s about these systems. The appearance of onsite inspections and the opportunity to get this firsthand exposure to these systems—by the way, the cooperative threat reduction program that is named for Senator Lugar and his former colleague, Senator Nunn, was also crucial in this regard because it came into being here in the early 1990s and it too brought this kind of direct exposure. In this case, it was often exposure to systems leaving the inventory, but nevertheless, this is a qualitatively different basis for being able to understand Russian strategic nuclear forces. We need to get back into the position where we will have those insights available to us.

Senator KAUFMAN. Thank you.

Senator Lugar.

Senator LUGAR. Let me ask either one of you for a response to this question. The key to our consideration to the New START Treaty will be a discussion of various cheating scenarios which the intelligence community will discuss with us next month. Secretary Gottemoeller and Dr. Warner, how do you design the verification regime under this treaty to deter and detect cheating, and are the most useful elements of START I that enabled detection of cheating retained in New START?

Ms. GOTTEMOELLER. Senator Lugar, again I will let Mr. Warner deal with most of that question as it relates to the verification regime.

But I did want to say one thing to begin with, and that is I wanted to reiterate the point that I made at the outset, that this was a very thorough interagency effort. We worked very hard to ensure that we were airing all concerns across the interagency and thinking through very carefully what the various effects could be on our national security in terms of threats to the United States from Russian strategic forces and in terms of potential threats from cheating scenarios. So we did do a very thorough job in my view on an interagency basis of getting everybody to our table in-house, so to speak, and making sure that such concerns were aired. So I do feel like we did our due diligence and more in the preparation of the verification regime of this treaty.

So now let me hand over to Dr. Warner for his comments.

Dr. WARNER. I have not participated with the intelligence community on whatever analyses they are doing on cheating scenarios and the like, so I certainly cannot speak to what the specifics of what they are examining.

But as a general proposition, I think the overall comprehensiveness of the verification regime, that comprehensive database, the unique identifiers, notifications, and then the ability to do the sampling with onsite inspections—it is the combination of all of that that gives you the confidence that were a side try to cheat, it would run significant risks of having it detected.

I should make mention, of course, which I have not noted, the role of national technical means, the euphemism we use for our overhead satellite reconnaissance of various types for the use of other sort of standoff systems. We still monitor Russian strategic nuclear force activity very intensively with our own intelligence collection systems. So the combination of the intelligence collection systems and this extensive verification regime, in combination—and then the inspections where you do, in fact, verify the accuracy of the declared data, meaning that entire database as a whole—when you got those opportunities, it just raises the strong possibility that were either side to cheat, it would be detected, and were it to be detected, the political ramifications would be very considerable.

Now, in this question of verification, they often argue what you want to be able to ensure you can do is to detect any militarily significant change in a way where you would have time to react. That is kind of the standard that I think the intelligence community will apply to itself, and they will give their evaluation.

But I think that we have in combination between our national technical means, our independent sources of information, and those that are boned up with the treaty, between the two, either side, were it to try to cheat—and they think of it from their point of view. I am simply giving it equal time, if you will. But certainly if the Russians were going to cheat on this in any substantial way, they would have a very strong possibility of having that detected and would be very harmful I think for their political interests.

Senator LUGAR. Let me thank you for your generous comment about the cooperative threat reduction, the so-called Nunn-Lugar program.

I would just mention that on the verification side, one of the things that I am certain Senator Nunn and I visited with over the years was the fact that the Russians frequently were very forthcoming with thoughts of their own which were not required. By that I mean, for example, an invitation to Sevmash was totally unexpected. No American had ever seen the typhoons up there. I was asked to go up there. The Russians took a picture of me standing in front of one, which is more than our intelligence had ever seen. This was not covered by START, but it was a part of the relationship.

And the importance of having a treaty is to have a relationship which in fact Americans and Russians are very likely to come and say, as they did with the typhoons, we do not have the money to dismantle these. We do not have the technical skills in terms of the size of the force that we need. But it is an important thing for both of us to take 200 missiles that could be nuclear-armed off of submarines that have run up and down your coast for 20 years. This was not a part of the treaty, but it is a part of the whole consideration here.

And I mention this because occasionally people say, well, why do we need a treaty at all? What is the point of all of this? I have seen vividly the point of this. In terms of our national security, a lot of things would never have happened without there being this relationship. It is a very personal one that came about because of that format.

So I appreciate your mention of that as an auxiliary part of verification because I perceive that it is an important one. Likewise, being invited down into the tombs where all the warheads were situated, almost like corpses in a morgue, but with a small tablet at the top telling them when the warhead was created, what the servicing had been of it, what the dangers might be of something happening to that without proper servicing and hope that we would help eliminate the oldest ones first so something would not happen in Russia unexpectedly, quite apart of the purpose of the warhead to begin with, these are also realities of our discussion now which I was tempted by your comment to launch into.

Let me cease-fire for the moment because another Senator has joined us, and we appreciate that. I yield, Mr. Chairman.

Senator KAUFMAN. Senator DeMint.

Senator DEMINT. Thank you, Mr. Chairman and Ranking Member Lugar.

Thank you both for your service.

I would like to hone in for just a few moments on the missile defense aspect of the negotiations. It appeared that there was a disagreement between what the Russians were saying about the linkage between missile defense and the reduction of offensive weapons. We had a good hearing with Secretary Clinton and Secretary Gates. It became apparent to me—and I would just like to confirm with you—that the reason for the disagreement is when the Russians speak of missile defense, they feel the START Treaty is a clear limitation of the United States ability to develop any strategic defense system against multiple missiles such as those that could be fired by the Soviet Union. When we speak of having flexibility with missile defense, we mean it is a nominal defense system that could shoot down an isolated missile by a rogue nation or one that was fired accidentally by a superpower.

I just want to clarify with you, being involved with the negotiation, is it your understanding that the START Treaty is an agreement that the United States will not attempt to develop a missile defense system capable of shooting down multiple missiles fired by the Soviet Union. Is that your understanding? I will just allow either witness here to answer that.

Ms. GOTTEMOELLER. Thank you, Senator. I appreciate your very thoughtful questions, as always.

I wanted to underscore a remark that I made in my testimony that I thought would just bear repeating at this moment, and that is, that for decades it has not been the policy of the United States to undermine Soviet or Russian strategic offensive forces with ballistic missile defenses. Ronald Reagan, at the time he announced the Strategic Defense Initiative in 1983, said, "We seek neither military superiority nor political advantage. Our only purpose, one all people share, is to search for ways to reduce the danger of nuclear war." Beginning with George H.W. Bush, our missile defense policy has focused on defending the United States, our troops, our friends and allies from limited ballistic missile threats.

One other point I would like to just stress at this juncture, if I may, sir, is that regarding the unilateral statements, the United States made clear in our unilateral statement our intention to continue improving and deploying our missile defense systems in order to defend ourselves and our allies against limited attacks. We did not agree with Russia's unilateral statement, and I can tell you that, sir, as our negotiator.

Senator DEMINT. I just want to make sure we are clear, and I appreciate what you said. I know Reagan's vision was to use missile defense to render nuclear missiles obsolete, that we would not be in danger of them.

Ms. GOTTEMOELLER. Yes, sir, and he made reference to speaking to arms control——

Senator DEMINT. In the Bush administration, they realized our technology was not there and we were not capable of moving, at least at that point, to a system that could deal with multiple missiles, but it was never George W. Bush's policy, as I understand from his people, that we would not have that as an ultimate goal. So I do not accept the premise that going into the future that the United States should accept a mutual assured destruction policy, which I am assuming that is what you are telling me. That is what

Secretary Clinton, Secretary Gates—the START Treaty is a continuation of the mutually assured destruction pact with Russia. Is that your understanding?

Ms. GOTTEMOELLER. Perhaps, sir, with your permission I will allow my Defense Department colleague to provide——

Senator DEMINT. And I do not have much time. So I really would like some direct answers. Is the START Treaty a continuation of mutually assured destruction?

Dr. WARNER. The START Treaty's concept of strategic stability includes the idea of having a secure second strike, the ability for both sides to be able to retaliate substantially or devastatingly against one another. That has been characterized as mutual assured destruction.

Senator DEMINT. And it is your understanding that it is the American policy that we will not attempt to develop a missile defense system that could shoot down multiple missiles. Is that your understanding?

Dr. WARNER. Well, that of course is the choice of each new administration. That is not embodied in the New START Treaty.

Senator DEMINT. But that is clearly the understanding of the Russians, that we will not develop any defense system that threatens their offensive capability.

Dr. WARNER. They made clear that should we develop a system that would threaten their ability to have deterrence, to have strategic retaliatory deterrence, that they would consider leaving the treaty. That was their unilateral statement, sir.

Senator DEMINT. Right. Well, it is a very important issue to us because I think if we told the American people that we are going to continue with the cold-war strategy with Russia of mutually assured destruction, that if they shoot at us, we will destroy them, they will destroy us, and that we will not attempt to use our technology to develop a system that could not only protect us against the Soviet Union but multiple missiles from China or some other nation that was capable of developing multiple systems, I do not think that is something that the American people would like. I know it is something I do not like. But implicitly, if not explicitly, that is apparently the terms of the agreement with the START Treaty.

Dr. WARNER. First of all, I do not think there is even in our missile defense policy—the treaty set aside. We are committed to being able to protect the homeland against limited missile attack. Limited missile attack has not been specifically defined. So it certainly could include multiple missiles. It does not say only one missile, but it does, as Secretary Gates spoke in his colloquy with you on this matter—it is not the search for a comprehensive shield, but it is against limited missile attack. So I agree with that.

Senator DEMINT. The disagreement here really compels me to ask for the negotiating record so that I can understand more clearly what has been discussed. In the meeting that you referenced, Secretary Clinton said going back to George Washington, that negotiating records were not shared. In fact, George Washington shared the negotiation records of the Jay Treaty. The Senate committees were availed the negotiating records of the 1972 Anti-Ballistic Missile Treaty, the 1987 Intermediate Range Nuclear

Forces, and we have the Senate Arms Control Observer Group who tells us that we actually got the negotiating records from the first START Treaty. Now, we can quibble about that. I asked for these and I was told that is unprecedented. It is not unprecedented.

Is there any reason that the Senate committee cannot review the negotiating records?

Ms. GOTTEMOELLER. Sir, first of all, I did want to underscore that we, in preparing our package for ratification, worked very hard to ensure that our article-by-article analysis, 200-plus pages, really gives you a full viewing of the obligations that the United States would be assuming under this treaty. Certainly we have done everything we can to ensure that we are providing you the information that you will need, including extensive briefings and continuing to provide information both in closed and open sessions. So I do want to underscore for you our commitment to continuing to provide all the information you need to make your decisions about this treaty and also to answer any questions that you have.

My understanding of the precedents are different from yours, I will say. It is my understanding that the negotiating record was not, in fact, provided for the START Treaty, the START II Treaty, or the SORT Treaty, known as the Moscow Treaty. As a matter of usual practice, negotiating records are not provided. For example, looking into it, we understand that in the 110th Congress, there were 90 treaties ratified by the Senate, and in none of those cases were the negotiating records provided. So it is my understanding, as a normal practice, that they have not been provided.

Senator DEMINT. Well, we can discuss and debate that. The issue here is: There is a serious disagreement between what the Russians say and what we say that this treaty entails, and it is about one of the most important aspects of the defense of our country, which is a missile defense system. We are saying we have complete flexibility to develop a nominal system. The Russians say there is clear linkage and we cannot develop anything that threatens their ability to destroy us. That is not an acceptable scenario, and I will continue to ask for the full negotiating records so that I can determine, as well as my colleagues on the committee, what has this country agreed to when it comes to missile defense.

And there are clearly definitional differences here. When we speak of missile defense, it is very different from what the Russians consider missile defense.

So again, I have gone way over time. I thank you for your indulgence, Chairman, and I again thank the witnesses for their hard work.

Senator KAUFMAN. Never an indulgence, Senator. Never an indulgence.

It is true, though, that the basic decision that was announced in April 2009 that President Medvedev and President Obama said that missile defense was not part of this treaty.

Ms. GOTTEMOELLER. Correct, sir.

Senator KAUFMAN. And it is also correct that in terms of START treaties—the INF Treaty we did have access, but START I we did not, although this is new to me, but I will look into this that they did. But clearly under START II and the Moscow Treaty, on both those treaties, we did not have access to negotiating records.

Ms. GOTTEMOELLER. That is correct, sir.

Senator KAUFMAN. And it is also true that after the INF Treaty in the record of the Senate Foreign Relations Committee, it reads, when the INF treaty negotiating record, having been provided under these circumstances, both the administration and the Senate now face the task of ensuring that Senate review of negotiating records does not become an institutionalized procedure. First, a systematic expectation of Senate perusal of every key treaty's negotiating record could be expected to inhibit candor during future negotiations and induce posturing on the part of the U.S. negotiators and their counterparts during sensitive sessions. The overall effect of fully exposed negotiations, followed by a far more compelling Senate review, would be to weaken the treatymaking process and thereby damage the American diplomacy.

That is not me speaking. That was in the record after the implementation of the INF Treaty.

Senator DEMINT. Mr. Chairman, I will summarize the information I have and forward it to you, as well as Senator Lugar. But certainly having our public hearings here inhibit some of the things that we might say——

Senator KAUFMAN. Sure.

Senator DEMINT [continuing]. But it certainly enhances the democratic process. So I thank you very much.

Senator KAUFMAN. Thank you for your participation, Senator.

I just have one final question and that is we spent a lot of time talking about the benefits of the treaty and, as I said, every single person that has come to testify has said they are in favor of ratifying the treaty. But I do think it is important to put into perspective—I have asked this from a number of witnesses, and Senator Lugar has asked about the ones that I have not asked just so people can put it in perspective. What would be the implications of failure to ratify this treaty? Let me start with you, Secretary Gottemoeller and then Dr. Warner.

Ms. GOTTEMOELLER. Sir, I really think that there are three major implications. I will start with the most fine-grained one and move to the highest level.

In my view, the immediate fine-grained is with regard to the phrase we have used several times in this hearing, that is, with regard to boots on the ground, with regard to our ability to get inside the Russian strategic nuclear forces and understand what is going on in those forces. We would not have available to us the verification and inspection regime of this treaty, including onsite inspection.

Would we be completely bereft of knowledge? No. Dr. Warner mentioned our national technical means which would continue to operate, but it is the interplay between national technical means and the important verification regime of this treaty that I think really gives us a thorough understanding of what is going on in the Russian strategic forces.

The second point has to do with the predictability with regard to what is going on in the Russian strategic forces and our understanding of where they are going in the future, what their numbers will look like. This, in turn, is our planning and helps us to understand what scarce resources we need to spend on our nuclear forces

and what we can continue to spend in other areas of the defense establishment. As we have very important continuing requirements for our soldiers in Iraq and Afghanistan and so forth, it is an important, I think, mechanism for us to be able to decide what our priorities are with regard to our defense budget.

The third is this more top-level issue and that is the role of the United States on the international stage. I made reference in my opening comments to our ability to lead in the implementation of the Non-Proliferation Treaty regime. I can only say to you, sir, this effect is not a direct, easily linked effect, but I have seen it myself operate both at the NPT review conference, in the unfolding of the U.N. Security Council resolution over Iran in the past 10 days, and furthermore in the little known regime in Vienna, the Open Skies regime, which is an important part of our European arms control regimes. In fact, we were able to achieve significant successes in recent weeks. Because, I think, of the strong leadership that the United States showed with the Russian Federation in concluding the START Treaty, it enables us to get things done in the international arena. And so I would say that it would also have an effect on our international leadership role.

The final point. I was asked in recent hearings and Secretary Clinton was asked as well about the future. What about getting at nonstrategic nuclear weapons, so-called tactical nuclear weapons? Sir, I believe our chances of proceeding to reductions on tac nukes would be zero if we do not ratify and put this treaty into force.

Senator KAUFMAN. Thank you.

Dr. Warner.

Dr. WARNER. Ms. Gottemoeller has covered most of the issues here. The one broad one that I would go back to is basically just Russian-American cooperation on broader measures, even beyond arms control. I mean, this has been a signal event in the relationship between our two countries since the Obama administration has come into office. The failure to ratify and move ahead with this will certainly set back the prospects for United States-Russian cooperation. Again, is this a catastrophe? Of course, not. But it would sacrifice opportunities to have the Russians work with us on a variety of issues, whether it is countering terrorism, countering proliferation, U.N. Security Council resolutions, the role of the Russians in the six-party talks on North Korea. I mean, all these areas of cooperation.

We have built a very tangible partnership within the scope of the national interests of these two great powers, but very effective working relationships have been developed from the Presidential level, at the Secretary of State level, Foreign Minister level. All of that will be more difficult if, in fact, we do not follow through and implement this important treaty.

Senator KAUFMAN. Thank you.

Senator Lugar.

Senator LUGAR. Well, thank you very much, Mr. Chairman.

Now, let me follow along questions raised by the Senator from South Carolina which he raised at an earlier hearing and referenced responses by Secretary Gates.

As I understand your responses and as I remember historically, at least at the time that the START Treaty proposition began, a

scoreboard we have in my office shows there were 13,300 nuclear warheads aimed at the United States. There may have been more or less, but that was the best verification we had at that moment. We have eliminated almost 6,000 of those, but that is still leaves 6,000-plus to go.

I cannot recall at any point during this period of time that either Russia or the United States seriously discussed creating a sufficient missile defense that would stop several thousand missiles, all aimed with additional warheads on them, at the United States. In other words, neither side was able really to do very well with missile defense at all. The numbers of starts and flourishes and finishes of that are legend, although we keep trying. We keep trying now to maybe make certain a single warhead that was aimed at the United States might be stopped if, for instance, the North Koreans got a long-range missile, for example.

But this is a new concept altogether that is coming in on a debate on a fairly limited treaty. Granted, it is an important one.

Now, perhaps we should have a national debate on this subject. Perhaps, as the Senator has said, mutually assured destruction is unacceptable. It is a horrible thought. It is still possible. This is one reason this is serious business. But I do not know any serious thinker with regard to defense matters or technical matters who has envisioned the thought of a comprehensive missile defense system that would stop multiple warheads coming into the United States.

Now, I say this having gone down into a silo in Siberia one time and visiting with the Russian who was monitoring this. It was a chilling experience because on the wall there were pictures of American cities, 10 of them, as I recall. There were 10 warheads on this one missile. They were all going to go different directions to hit the 10 cities in America. This was one single missile with those warheads. Our ability to develop a means of stopping even that 10-warhead situation seemed to me to be not in the cards then. Now, maybe there has been such an evolution of thought, unknown to most of us, that we ought to be thinking about this now.

But I mention this because I think that proponents of the treaty are going to have to face this particular issue, if in fact this is being raised. If this treaty somehow inhibits in any way the defense of our country and accepts or ensures mutually assured destruction, why, that becomes a rather volatile message that somehow or other we were derelict in our duties, myopic with regard to the world in which we are.

So I raise this question really quite openly to the two of you. In your knowledge at any time, in any Presidency, any administration, has there been serious thought given to the thought we would develop a comprehensive missile defense system for our country, not just protecting our NATO allies from the Iranian missile or various topical things we have, but our country? And furthermore, if we thought about such a thing, was there also thought on the part of our military leaders that the Russians might be unlikely to let us have a decade or 2 to get it all set up, in other words, that they would remain passive in the midst of all of this? That might have been one thing that deterred us from undertaking such a sys-

tem to begin with, given the huge number of warheads both sides had at the end of the cold war.

Do either of you have any comments on this discussion?

Dr. WARNER. Certainly my recollection is that was the vision of Ronald Reagan for a time under the Strategic Defense Initiative which was popularly known as Star Wars because it had both space and ground-based components. There was an aspiration—an aspiration to explore many ways simultaneously to try to have multilayered defense through all phases of a ballistic missile's travel from the boost phase to the midcourse phase to the terminal phase.

The fact of the matter was that despite all the research and money put against it, it was, I think, the conclusion of virtually all that we were nowhere near being able to accomplish that objective against a substantial inventory of adversary missiles, particularly given the fact that the adversary would employ countermeasures of one sort or another, decoys, chaff, a variety of measures, faster-burning rocket motors to prevent boost-phase intercept and so forth.

In the Bush 1 administration, near the end of that administration, they backed off. They continued to be loyal in the SDI effort, to continue to try to find that magic shield, if you will, or that comprehensive shield.

In the latter years of the Bush administration, they went to a process called GPALS, the Global Protection Against Limited Strikes. They began to say, look, we cannot do the comprehensive job. Let us shift toward limited. Their version of limited was still very ambitious. It included some space-based interceptors, what they called Brilliant Pebbles. It did include what has become the root of the systems we are pursuing today, the ground-based interceptor for midcourse intercept to go against a few.

By the time it came to the Clinton administration, it began to focus—and by the way, it was in the Bush administration they began to be worried about third countries. This was not so much about Russia or China. It was more about the proliferation of missiles falling into hands of hostile regimes like North Korea, like what has become the Iranian effort. So that transition occurred. In the Clinton administration, it went very much to a limited homeland missile defense.

Now, were we there by choice or by necessity? At a minimum, we were there by necessity. We cannot effectively defend against a very substantial volley of attack by a sophisticated adversary. So given that fact, we are de facto in a situation of mutual deterrence. Now, that can be characterized as mutual assured destruction. Well, in the presence of nuclear weapons, that is certainly what it in fact means. If mutual deterrence means both can retaliate, even after being exposed to a first strike, they retaliate effectively in a very devastating manner. We are not there because we like it. We are there because it is just the way it is. That situation does prevail.

So the missile defense, followed by the most recent Bush administration and by this administration has two components. It defends the homeland. It defends the homeland against limited attacks, but it could try to defend against an accidental or unauthorized launch that came out of Russia or China. It would depend

on how sophisticated the missiles that had accidentally been launched would be whether it would be effective. We would certainly try to use them. We would not sit idly by. But it is designed for limited defense against these kind of first generation capabilities of these emerging adversarial nations.

The second phase, of course, is theater missile defense, and that has been present across many administrations. We do seek to protect our troops, protect our friends and allies on a regional basis against shorter range missiles. We used those defenses in their first manifestation in the gulf war. We had them available but did not have to use them in the war with Iraq that occurred just a few years ago, and we are certainly strengthening that capability.

But it is just a reality that you cannot have this comprehensive defense. We have been able to ratchet those offensive forces down very dramatically, but it is a legitimate issue to say as they come down, what is the offense/defense situation. And that will remain a concern or consideration as we look into the future.

Senator LUGAR [presiding]. I would just add that parallel with this is, of course, an intense look at our strategic posture review and whether our warheads work, whether our missiles—in other words, the credibility of our retaliation comes down to the fact that we have all of these weapons. And now we want to make certain that they work. So as I understand the Defense Department is asking for several billion dollars more over the course of the next few years to either upgrade or make certain or to relook at all of this so that there is credibility on our part, and a major reason why we do not anticipate another nation is going to strike is because we do have a plethora of these weapons with which to retaliate.

Dr. WARNER. It is that combination of delivery systems, of modern, effective retaliatory delivery systems, and the weapons themselves. And an important issue that has been raised by the Members of the Senate is this question of the reliability, the safety, effectiveness, and reliability of our nuclear weapons stockpile. And I made reference to it. It will be discussed tomorrow. There is a major investment being made into life extension programs for the weapons that go into—for missiles and for the bombs that can be delivered by, for instance, the B–2 bomber. And there is a major investment to be made in the physical infrastructure and the human capital infrastructure of the system that maintains our nuclear stockpile of reliable, effective weapons.

Senator LUGAR. Secretary Gottemoeller, do you have a comment?

Ms. GOTTEMOELLER. Senator Lugar, I would just like to underscore one point that we have not yet addressed this afternoon, and that is that the United States has been talking very extensively to Russia about missile defense cooperation. And indeed, although we emphasized throughout these negotiations in Geneva on the New START Treaty that this treaty was only about strategic offensive armaments, not about strategic defenses, nevertheless my Under Secretary, Ellen Tauscher, has been working very extensively with the Russians to develop missile defense cooperation, and that was a theme that in another venue we would be very keen to work with them on developing missile defense cooperation because we do take note in the preamble to the treaty that as the numbers of strategic offensive forces are reduced, the interrelationship between strategic

offensive arms and strategic defensive arms will become more important and that, therefore, we will have to take account of these trend lines and so will the Russian Federation. But the view is that a considerable cooperative program could be developed in the course of the coming years that would lead both sides to be able to work together to tackle missile problems both on a regional basis and perhaps on a national basis as well.

Senator LUGAR. Well, that would be an ideal outcome and a way of ratification that we began to work with Russia seriously on missile defense in which both of us undertook steps and cooperation as opposed to there being an adversarial relationship taken for granted that was a great peril to both of our nations. It could be the peoples of both countries would appreciate that new turn of events in much the same way that you hope—and I do too—that a new treaty negotiation would get into the tactical nuclear weapons in a serious way because this is a question raised by some who are not certain about ratification of this treaty. That is, the Russians are left with a 10-to-1 ratio, or however they characterize it in terms of tactical nuclear weapons, and nothing really is resolved in this treaty. This is still down the trail.

One response has been, well, it will not be resolved until we really get back to the table again, and to set the table, the ratification of this treaty is required as an interim step in all of this as I understand it.

I mention once again, as I did at the outset, in part as conclusion, that some Members of the Senate who are undecided about ratification on the treaty are still focused on what is in the report we are going to have from the intelligence agencies, quite apart from the additional report from the State Department.

Now, it could very well be that officials in both of these instances feel that there has never been that much urgency in the past, that when they got around to it, they would forward the reports. I would just say that given the timetables of the Senate schedule and our requests of Senator Reid, the majority leader, for a time to consider this treaty during this calendar year, quite apart from the stretch of time after the Fourth of July recess or the stretch of time between Labor Day and dismissal for the elections, with or without a lame duck session, we are really coming down to a point of urgency that all the cards on the table and all the information is available.

Now, in terms of history, whenever it comes forward, it will be interesting to somebody. But in terms of ratification of this treaty now, this is why I keep droning on and on about the need to get on with it. I am hopeful this has not caused great bureaucratic distress, but if so, I am prepared to try to create some of that just to make sure that we are serious about something that is going to be required.

It may be, as you pointed out, that the diplomatic record as a matter of precedent is not available so there is not posturing during the negotiations and so forth. But at the same time, the intelligence record is usually available, and we are going to have probably more closed hearings to try to discuss that, in addition to open hearings that will give citizens an opportunity to form an opinion.

Well, we thank both of you very much for your preparation for both hearings, the closed hearing and this very important open hearing and likewise for your continued counsel of the committee. Thank you for your leadership in formulating this treaty.

Having said that, on behalf of the chairman, I will state that we will keep the record open for questions and statements for 1 week from today.

That then would conclude our committee record of this particular session. And having said that, the committee is adjourned.

[Whereupon, at 4:05 p.m., the hearing was adjourned.]

ADDITIONAL MATERIAL SUBMITTED FOR THE RECORD

RESPONSES OF ASSISTANT SECRETARY ROSE GOTTEMOELLER AND DR. EDWARD L. WARNER III TO QUESTIONS SUBMITTED BY SENATOR LUGAR

THE PREAMBLE

The article-by-article analysis states that, with regard to the seventh preambular paragraph, "In the U.S. view, follow-on negotiations with Russia should address nonstrategic nuclear weapon and nondeployed nuclear weapon stockpiles."

Question. What is the view of the Russian Federation with regard to future negotiations regarding nonstrategic, that is, tactical nuclear weapons?

Answer. As agreed by Presidents Obama and Medvedev in April 2009, the New START Treaty was negotiated in order to reduce and limit the two nations' strategic offensive arms; therefore the issue of tactical nuclear weapons was not part of the negotiations. President Medvedev has expressed interest in further discussions on measures to further reduce both nations' nuclear arsenals. As President Obama commented in Prague when he signed the New START Treaty, we intend to pursue further reductions in strategic and nonstrategic/tactical nuclear weapons, including nondeployed weapons, in future discussions with Russia. Such discussions will follow appropriate consultations with our allies.

Question. In connection with the New START Treaty, during its negotiation, did the United States raise the issue of Russia's tactical nuclear weapons?

Answer. No. From the outset, the New START Treaty negotiations were to be about strategic offensive arms. This direction from President Obama and President Medvedev was contained in their Joint Statement issued in London on April 1, 2009, as the negotiations were about to begin.

Question. What is the position of the Russian Federation regarding limitation or reduction of "nondeployed nuclear weapon stockpiles"?

Answer. To date, there have been no treaties with Russia that include limitations on or reductions of nondeployed nuclear weapons stockpiles. We intend to explore limitations on and reductions in strategic and nonstrategic/tactical nuclear weapons, including nondeployed weapons, in future discussions with Russia.

Question. Does Russia maintain a significant number of nondeployed nuclear weapons or stockpiles of such?

Answer. A classified response to be provided separately.

Question. How do you define a "nondeployed nuclear weapon stockpile."

Answer. The term "nondeployed nuclear weapon stockpile" is not used in the New START Treaty. Generally speaking, the term "nondeployed nuclear weapon stockpile" refers to all nuclear warheads and armaments that are not physically emplaced or located on a deployed delivery vehicle.

Question. The preamble notes that the Parties are "endeavoring to reduce further the role and importance of nuclear weapons." For the United States, what steps have been taken consistent with this statement, and what steps has Russia taken, in the opinion of the administration, that are consistent with this statement?

Answer. The U.S. 2010 Nuclear Posture Review Report outlines concrete steps for reducing the role and numbers of nuclear weapons in U.S. security strategy. Given changes in the security environment and the strong and improving U.S. conventional military capabilities, the United States can deter adversaries and assure

allies of our continuing commitment with reduced reliance on nuclear weapons and at the lower nuclear force levels represented by the New START Treaty.

As stated in the Nuclear Posture Review Report, the United States would only consider the use of nuclear weapons in extreme circumstances to defend the vital interests of the United States or its allies and partners. The United States will continue to strengthen missile defenses, counter-WMD capabilities, and other conventional capabilities, and to reduce the role of nuclear weapons in deterring nonnuclear attacks, with the objective of making deterrence of nuclear attack on the United States or our allies and partners the sole purpose of U.S. nuclear weapons. The United States will not develop new nuclear warheads.

By signing the New START Treaty, Russia has joined us in endeavoring to reduce the role and importance of nuclear weapons. Russia's implementation of the New START Treaty will result in the lowest levels of deployed strategic nuclear weapons and their delivery vehicles since the early days of the cold war.

Question. Paragraph 10 of the preamble states the Parties are "Mindful of the impact of conventionally armed ICBMs and SLBMs on strategic stability."

- For the United States, what would be the impact on strategic stability of such systems?
- What numbers and kinds of such systems (ICBMs or SLBMs) have the greatest impact on strategic stability?
- For the Russian Federation, what is the impact on its strategic stability of conventionally armed ICBMs and SLBMs?

Answer. In our efforts to reduce the role of nuclear weapons and to develop the capability to precisely strike time-sensitive, high value targets, the United States is considering the development of prompt conventional global strike capabilities. The number of such systems, if the United States elects to deploy them, will be small and they will not threaten strategic stability. The deployment of a nonnuclear prompt global strike system would provide the United States with a capability that we currently lack: the ability to hit precisely a target anywhere on the earth in less than 1 hour using a nonnuclear warhead. At the same time, depending on technical and operational details, such systems could raise a number of challenges, including potential overflight of other countries, and the ability to distinguish between the launch of nonnuclear-armed as opposed to nuclear-armed systems.

While our analysis of potential U.S. nonnuclear prompt global strike systems is still underway, DOD has concluded that any deployment of conventionally armed ICBMs or SLBMs, which would count under the treaty's limits, should be limited to a niche capability. DOD is also exploring the potential of conventionally armed, long-range systems not associated with an ICBM or SLBM that fly a nonballistic trajectory (e.g., boost-glide systems). Such systems would have the advantage that they could "steer around" other countries to avoid overflight and have flight trajectories distinguishable from an ICBM or SLBM.

If the United States chooses to acquire conventional prompt global strike systems, such systems would not be acquired for use against Russia. Moreover, because any U.S. plans for acquiring conventional prompt global strike systems would be limited to small number of such systems, Russia could be assured that they would not pose a threat to the survivability of the Russian nuclear deterrent.

It appears that Russia believes the deployment of conventionally armed ICBMs and SLBMs would have an impact on strategic stability, if they were accurate and numerous enough to hold at risk a significant portion of Russia's deployed strategic deterrent systems. Russian commentators have raised the concern that the threshold for launching conventionally armed ICBMs and SLBMs might be lower than that for launching a nuclear-armed missile, and that this would be destabilizing. Finally, Russian observers have also expressed concerns about the possibility that one would not be able to determine whether a conventionally armed ICBM or SLBM in flight was, in fact, conventionally armed, and whether it was being targeted on a third country or on Russia.

Question. The preambular paragraphs note the Parties' deep appreciation for the contributions of Belarus, Kazakhstan, and Ukraine as nonnuclear weapon states to strengthening the NPT regime. What role did Nunn-Lugar/Cooperative Threat Reduction assistance play in ensuring that these three states became nonnuclear weapon states?

Answer. The Nunn-Lugar/Cooperative Threat Reduction (CTR) program was instrumental in ensuring that these three states became nonnuclear weapon states. The program provided these states with essential confidence that they would not be saddled with the entire bill for the denuclearization process. Some key examples: The program funded the shipment of 1,900 warheads from Ukraine to Russia for

eventual dismantlement. This was an important precedent, which led to the longer term Nuclear Weapons Transportation Security (NWTS) program with Russia. To date, NWTS has completed 477 rail shipments of nuclear weapons from operational sites to dismantlement facilities or from less secure to more secure central storage sites.

Additional projects under the CTR program included the development of Government-to-Government Communications Links (GGCL), defense conversion projects, and security enhancements (e.g., Kevlar blankets to protect nuclear weapons in transit and refurbished railcars with security sensors) for the shipment of the nuclear warheads from Belarus, Kazakhstan, and Ukraine back to Russia.

START I AND NEW START TERMS AND DEFINITIONS

Question. Under New START, the term "air base" means "a facility, other than a production facility for heavy bombers, a heavy bomber flight test center, or a training facility for heavy bombers, at which heavy bombers or former heavy bombers are based and their operation is supported." Under START I, this definition included "other than a production facility for heavy bombers, a heavy bomber flight test center, or a training facility for heavy bombers" but that language is omitted from the definition of "air base" in New START. What is the significance of this omission? Why does New START appear to narrow the definition?

Answer. Under New START, the term "air base" means a facility at which "deployed" heavy bombers are based and their operation is supported. The term does not include any reference to production facilities for heavy bombers, repair facilities for heavy bombers, or heavy bomber flight test centers because a heavy bomber based at such a facility would not be considered to be a "deployed heavy bomber," as that term is defined in the New START Treaty (definition #12); i.e., "a heavy bomber equipped for nuclear armaments, other than a test heavy bomber or a heavy bomber located at a repair facility or at a production facility." In START, the term "air base" also included bases for "former" heavy bombers; i.e., those not equipped for nuclear armaments, and this category was not carried over into New START.

Question. Under New START Terms and Definitions 3, why is the reference to the provisions of the Inspection Protocol not included in the definition of "aircrew member"?

Answer. The reference to the Inspection Protocol was deemed useful in the START Treaty because definitions in START were contained in an Annex to the treaty and not located within the same instrument as the inspection procedures. In New START, both the definitions and the inspection-related provisions are contained in the same instrument, the Protocol, with little likelihood of ambiguity. Therefore, this definition was simplified, with no change in the meaning of the underlying provisions.

Question. Under New START Terms and Definitions 9, the definition of the term "conversion or elimination facility" does not include language in START I describing launch canisters "that remain after flight tests of ICBMs for mobile launchers of ICBMs, or ICBMs for mobile launchers of ICBMs or first stages of such ICBMs that remain after static testing." Why was this language excluded?

Answer. It is important to recognize that conversion or elimination may be carried out at any declared facility, not just at the facilities declared to be "conversion or elimination facilities." That being said, under the New START Treaty, conversion or elimination facilities may be used to eliminate all types of launch canisters, and not only those that remain after flight tests. Therefore, the New START Definition 9 states simply that, for ICBMs or SLBMs, a conversion or elimination facility is "a specified facility for the elimination of ICBMs, SLBMs, and launch canisters." In addition, under New START, static testing is another means of eliminating an ICBM or SLBM. It can be carried out at a conversion or elimination facility, or at a specified location where static testing is conducted. There is also no requirement to transport to a conversion or elimination facility any launch canister that remained after a flight test from a test range, for instance; such a launch canister could be eliminated in situ, that is, at the test range.

Question. Under New START Terms and Definitions 12, why was the phrase "other than a test heavy bomber or a heavy bomber located at a repair facility or at a production facility" included in the definition of a "deployed heavy bomber"? It was not in START I. Why were "training heavy bombers" excluded?

Answer. The reason for the inclusion of this phrase was based on the definition of the term "air base" in New START; i.e., a facility at which "deployed" heavy bombers are based and their operation is supported. Because that term does not in-

clude an exemption for production facilities for heavy bombers, repair facilities for heavy bombers, or heavy bomber flight test centers, as was done in the corresponding definition in START (definition #1), it was necessary to include those exemptions in the definition of "deployed heavy bomber." Training heavy bombers were not included in New START because neither Party has them.

Question. Under New START Terms and Definitions 13, what is the significance of defining a "deployed ICBM" as "in or on a deployed launcher of ICBMs"? Why does the definition of a "deployed ICBM" no longer include ICBMs that are "considered to be contained" in a deployed launcher of ICBMs, as was the case under START I?

Answer. Deployed ICBMs for silo launchers are contained "in" their launchers, while deployed ICBMs for mobile launchers are contained "on" their launchers.

The definitions for when ICBMs are deployed and nondeployed are different in New START from the START Treaty. In New START, a deployed ICBM or deployed SLBM is an ICBM or SLBM that is contained in or on a deployed launcher of ICBMs or SLBMs. When ICBMs or SLBMs are removed from their launchers for any reason—for example, for maintenance—both the missile and launcher become nondeployed for purposes of the treaty, and a notification of this change in status is provided within 5 days, leading to a corresponding adjustment in the New START Treaty's database. Under START, each deployed launcher of ICBMs was considered to contain one deployed ICBM, whether or not it actually contained an ICBM. The concept of "considered to contain" is not used in New START.

Question. Under New START Terms and Definitions 14, a "deployed launcher of ICBMs" is defined as an "ICBM launcher that contains an ICBM and is not an ICBM test launcher, an ICBM training launcher, or an ICBM launcher located at a space launch facility." Why are silo launchers or deployed mobile launchers of ICBMs no longer referenced in this definition, as they were in START I?

Answer. The term "ICBM launcher" (definition #28) means a device intended or used to contain, prepare for launch, and launch an ICBM, and thus includes both silo launchers of ICBMs and mobile launchers of ICBMs. Upon review of the corresponding START Treaty definitions, it was determined that there was no treaty-based need to distinguish between silo and mobile launchers when using the defined term "ICBM launcher" in this context.

Question. Under New START Terms and Definitions 15, why does the definition of "deployed launcher of SLBMs" now include the phrase "that contains an SLBM, and is not intended for testing or training"?

Answer. The definitions for when SLBMs are deployed and nondeployed are different in New START from the START Treaty. Under New START, only launchers that contain missiles are considered to be deployed. When SLBMs are removed from their launchers for any reason—for example, for maintenance—both the missile and launcher become nondeployed for purposes of the treaty, and a notification of this change in status is provided within 5 days, leading to a corresponding adjustment in the New START Treaty's database. Under START, each deployed launcher of SLBMs was considered to contain a deployed SLBM, whether or not it actually contained an SLBM.

The phrase "not intended for testing or training" reflects the definition of the term "nondeployed launcher of SLBMs" (definition #50); i.e., an SLBM launcher, other than a soft-site launcher, that is intended for testing or training, or an SLBM launcher that does not contain a deployed SLBM. Thus, the phrase is used as a way to distinguish between deployed and nondeployed launchers of SLBMs, and, to be consistent with the two defined terms, the phrase must be stated in the negative and affirmative, respectively.

Question. Under New START Terms and Definitions 16, why does the definition of "deployed mobile launcher of ICBMs" no longer include mobile launchers of ICBMs that are "considered to contain" ICBMs, as was the case in START I?

Answer. The definitions for when ICBMs are deployed and nondeployed are different in New START from the START Treaty. Under New START, a deployed ICBM is an ICBM that is contained in or on a deployed launcher of such missiles. When ICBMs are removed from their launchers for any reason—for example, for maintenance—both the missile and launcher become nondeployed for purposes of the treaty, and a notification of this change in status is provided within 5 days, leading to a corresponding adjustment in the New START Treaty's database. Under START, each deployed mobile launcher of ICBMs was considered to contain a deployed ICBM, whether or not it actually contained an ICBM.

Question. Under New START Terms and Definitions 17, why does the term "deployed SLBM" no longer refer to SLBMs that are "considered to be contained" in a deployed launcher of SLBMs, as was the case in START I?

Answer. The definitions for when SLBMs are deployed and nondeployed are different in New START from the START Treaty. Under New START, only launchers that contain missiles are considered to be deployed. When SLBMs are removed from their launchers for any reason—for example, for maintenance—both the missile and launcher become nondeployed for purposes of the treaty, and a notification of this change in status is provided within 5 days, leading to a corresponding adjustment in the New START Treaty's database. Under START, each deployed launcher of SLBMs was considered to contain a deployed SLBM, whether or not it actually contained an SLBM.

Question. Under New START Terms and Definitions 20, why does the definition of "facility" include basing areas? Why does this definition eliminate references to rail garrisons, restricted areas, parking sites, and static display sites that were included in START I?

Answer. Unless a Party declares a base or other area to be a "facility," treaty-limited items are not permitted to be located at that location. A basing area had to be considered a "facility" under New START because it is a place where deployed mobile launchers of ICBMs are based and at which fixed structures for mobile launchers of ICBMs are located.

The terms "rail garrison," "restricted area," "parking site," and "static display" site are not used in New START and thus are not included in the definition of "facility."

Question. Under New START Terms and Definitions 21, what is the significance of defining a "fixed structure for mobile launchers of ICBMs" as a "unique structure, within a basing area, designed to contain mobile launchers of ICBMs" instead of a fixed structure for both road-mobile launchers and rail mobile launchers of ICBMs as was the case in START I?

Answer. Neither side has rail-mobile launchers of ICBMs, so a reference to them was deemed unnecessary. The START term "fixed structure for road-mobile launchers of ICBMs" (definition #31) was defined as a "unique structure, within a 'restricted area', that can contain road-mobile launchers of ICBMs." Because the concept of "restricted area" is not used in New START, the corresponding concept of "basing area" was substituted for "restricted area" in New START, and the editing of the phrase, "can contain," to "designed to contain" was intended to clarify, rather than change, the intent of that phrase as it is used in New START.

Question. Under New START Terms and Definitions 24, why does the definition of "heavy bomber equipped for nonnuclear armaments" omit references to "nonmodern heavy bombers" and the conversion requirements of the New START Conversion and Elimination Protocol? Why does it define nonnuclear armaments as any armaments other than "long-range nuclear ALCMs, nuclear air-to-surface missiles, or nuclear bombs"?

Answer. In START, only nonmodern heavy bombers could be converted to heavy bombers equipped for nonnuclear armaments, which limited such conversions to heavy bombers of a type, any one of which was initially based at an air base more than 10 years prior to the time at which the determination of "modern" versus "nonmodern" status is being made. At the time of signature of the START Treaty, no such bombers existed for either side. The New START Treaty no longer has this limitation.

New START Treaty Terms and Definitions (definition #53) define nuclear armaments as "long-range nuclear ALCMs, nuclear air-to-surface missiles, or nuclear bombs." To ensure that there was no ambiguity, the words "nonnuclear armaments" that appear in the phrase, "equipped for nonnuclear armaments" are clarified to mean exactly the obverse of what "nuclear armaments" means.

Question. Under New START Terms and Definitions 27, why are rail-mobile launchers and road-mobile launchers not specifically mentioned in the definition of an ICBM base? Why do "basing areas" replace START I's "restricted areas" in this definition?

Answer. Neither side has rail-mobile launchers of ICBMs, so a distinction between rail-mobile launchers and road-mobile launchers was unnecessary.

The term "restricted area" is not used in New START. The corresponding concept of "basing area" was substituted for "restricted area." Under START, deployed road-mobile launchers of ICBMs and their associated missiles could be based only in restricted areas, the number and type of such launchers and missiles was limited

within a restricted area, the size of the restricted area was limited to no more than 5 square kilometers, and restricted areas could not overlap. There are no equivalent restrictions in the New START Treaty related to basing areas.

Question. Under New START Terms and Definitions 30, what is the significance of omitting references to monitors and the Inspection Protocol in the definition of an "in-country escort"?

Answer. In START, a monitor was defined as "an individual specified by one of the Parties to conduct continuous monitoring activities" (definition #66). Under New START, there are two types of inspection activities as well as exhibitions, but there are no continuous monitoring activities as were carried out under START. With respect to the omission of the reference to the Inspection Protocol, the reference to the Inspection Protocol was deemed useful in the START Treaty because definitions in START were contained in an Annex to the treaty and not located within the same instrument as the inspection procedures. In New START, both the definitions and the inspection-related provisions are contained in the same instrument, the Protocol, with little likelihood of ambiguity. Therefore, this definition was simplified, with no change in the meaning of the underlying provisions.

Question. Under New START Terms and Definitions 34, what is the significance of excluding a "facility" in the definition of an "inspection site"?

Answer. The inclusion of words, "facility" and "location," in the corresponding definition in START (definition #51), was due to a linguistic issue raised by the Russian side during the negotiation of that treaty. Based on Russian usage, in certain contexts the word "facility" in English was translated by a Russian word that in other contexts would mean "location," and in other contexts by the Russian word that meant "facility." Thus, to ensure that there was no ambiguity, both words, "facility and location," were used in START. During the negotiation of the New START Treaty, however, the Russian side agreed that it was not necessary to make this distinction and agreed to use the word with the widest application; i.e., "location."

Question. Under New START Terms and Definitions 39, why does the definition of a "launch canister" capture SLBMs?

Answer. When the START Treaty was agreed, Russia did not have any SLBMs that employed launch canisters. However, Russia's new Bulava SLBM is maintained, stored, and transported in a launch canister.

Question. Under New START Terms and Definitions 45, the term "mobile launcher of ICBMs" is defined as an "erector-launcher mechanism for launching ICBMs and the self-propelled device on which it is mounted." Why does this definition exclude the terms road-mobile launcher and rail-mobile launchers of ICBMs as was the case in START I?

Answer. Neither side has rail-mobile launchers of ICBMs, so a distinction between rail-mobile launchers and road-mobile launchers was unnecessary.

Question. Under New START Terms and Definitions 46, what is the significance of the decreased percentages associated with the length of the assembled missiles without front sections, the length of first stages, and the diameter of accountable first stages?

Answer. Under the START Treaty there were a number of restrictions that applied to new types of ICBMs or SLBMs that do not apply under the New START Treaty. These restrictions were driven by START's attribution-based approach for warhead counting. For example, under the START Treaty, a Party could not attribute a new type of ICBM or SLBM with a number of warheads greater than the lowest number of warheads attributed to a type of ICBM or SLBM, respectively, for which the attribution had been reduced. It was agreed in START that only significant changes to ICBMs or SLBMs should trigger these new type restrictions.

The New START Treaty contains no such attribution rules. Therefore, the Parties agreed that the percentage changes previously associated with a new variant under START (see START's 25th Agreed Statement) would be the criteria for declaring a new type under New START.

The New START Treaty requires exhibitions of each new type of ICBM or SLBM. The reduced amount of change necessary to meet the new type criteria reflects a tighter standard for requiring the conduct of new type exhibitions after changes are made from existing types of ICBMs and SLBMs.

Question. Under New START Terms and Definitions 48, what is the significance of adding "on a deployed launcher of ICBMs" to the definition of "nondeployed ICBMs"? What is the significance of excluding ICBMs "not considered to be contained" in a deployed launcher of ICBMs from the definition?

Answer. Deployed ICBMs for silo launchers are contained "in" their launchers, while deployed ICBMs for mobile launchers are contained "on" their launchers.

A deployed ICBM or SLBM is an ICBM or SLBM that is contained in or on a deployed launcher of such missiles. When ICBMs or SLBMs are removed from their launchers for any reason—for example, for maintenance—both the missile and launcher become nondeployed for purposes of the treaty, and a notification of this change in status is provided within 5 days, leading to a corresponding adjustment in the New START Treaty's database. Under START, each deployed launcher of ICBMs was considered to contain one deployed ICBM, whether or not it actually contained an ICBM.

Question. Under New START Terms and Definitions 51, why does the definition of "nondeployed mobile launcher of ICBMs" include the phrase "unless otherwise agreed by the Parties" which was not included in START I's definition? Why are mobile launchers "not considered to contain" ICBMs excluded from this definition?

Answer. A classified response will be provided separately.

Question. Under New START Terms and Definitions 52, why does the definition of the term "nondeployed SLBM" exclude SLBMs "not considered to be contained" in a deployed launcher of SLBMs?

Answer. There is no concept of "considered to contain" or "not considered to contain" a missile in New START. A deployed SLBM is an SLBM that is contained in a deployed launcher of such missiles. When SLBMs are removed from their launchers for any reason—for example, for maintenance—both the missile and launcher become nondeployed for purposes of the treaty, and a notification of this change in status is provided within 5 days, leading to a corresponding adjustment in the New START Treaty's database. Under START, each deployed launcher of SLBMs was considered to contain one deployed SLBM, whether or not it actually contained an SLBM.

Question. Under New START Terms and Definitions 57 part A.i, why are SLBMs included in the New START definition of a "production facility"? In part C, why is the phrase "self-propelled chassis, trailer chassis, railcar, or flatcar" omitted from this definition?

Answer. SLBMs are included in the New START definition of a "production facility" because Russia's new Bulava SLBM is maintained, stored, and transported in a launch canister. When the START Treaty was agreed, Russia did not have any SLBMs that employed launch canisters.

Neither side has rail-mobile launchers of ICBMs, so the references to trailer chassis, railcars, or flatcars were not included in New START. The phrase, "self-propelled device," was deemed to be more inclusive than "self-propelled chassis" that was used in START and was therefore substituted. This is also the phrase used in the definition of "mobile launcher of ICBMs" (definition #45).

Question. Under New START Terms and Definitions 58, why are missiles referred to as "launched" instead of "flight-tested" in this definition?

Answer. The START Treaty definition of "flight test" (definition #32) was "the launch and subsequent flight of a missile;" there was no definition of "launch" in START. Under the New START Treaty, the term "launch" (definition #38) means the initial motion and subsequent flight of an ICBM or SLBM. The term "launch" as used in this treaty has the same meaning that the term "flight test" had in START. Despite the change in terminology, the Parties' understanding of their treaty obligations with regard to such limitations under New START will remain the same as they were in START. The term "launch" does not require flight for a minimum distance or period of time.

Question. Under New START Terms and Definitions 65, why is the "silo launcher of ICBMs" no longer defined as a "fixed" site?

Answer. The word "fixed" was considered to be redundant within the context of the remainder of the definition: an ICBM launcher "*in* a silo structure *located in* the ground" (emphasis added). There is no change in the intent of the sides as to what is a silo launcher of ICBMs.

Question. Under New START Terms and Definitions 74, why is the phrase "that can provide its payload with an additional velocity of more than 1,000 meters per second" omitted? Why does a "self-contained dispensing mechanism" qualify as an exception in New START?

Answer. The velocity criterion was used in START (definition #105) to distinguish a stage from other propulsive devices, such as self-contained dispensing mecha-

nisms. By specifying in the New START definition that the "self-contained dispensing mechanism" was not a stage, there was no need to include this criterion, but the result is identical under START and New START as to what is considered to be a stage.

Question. Under New START Terms and Definitions 76, why is a provision added that addresses "submarines that had been previously equipped with SLBM launchers but after conversion are incapable of launching SLBMs"?

Answer. This acknowledges the existence of submarines that have been converted from ballistic missile submarines to submarines equipped with launchers of cruise missiles, which are known as SSGNs by the United States and are further described in the Second Agreed Statement in Part Nine of the Protocol. Such submarines may be located at submarine bases where SSBNs are based, but the converted, former SLBM launchers in them are not accountable as launchers of SLBMs under New START.

Question. Under New START Terms and Definitions 78, what is the significance of defining "telemetric information" in terms of "initial motion and subsequent flight that is broadcast" instead of all information broadcasted and recorded during flight tests?

Answer. The START Treaty definition of "flight test" (definition #32) was "the launch and subsequent flight of a missile." As noted in the answer to question #32, there was no definition of "launch" in the START Treaty. "Launch" is defined (definition #38) in the New START Treaty as "the initial motion and subsequent flight of an ICBM or SLBM." Despite the change in terminology, the Parties' understanding of their treaty obligations under New START will remain the same as those in START. The change in terminology from "flight test" in the START Treaty to "launch" in the New START Treaty makes the New START Treaty consistent with the terminology used in the Ballistic Missile Launch Notification Agreement of 1988. The term "launch" as used in the New START Treaty has the same meaning that the term "flight test" had in START.

The START Treaty definition of "telemetric information" (definition #111) was "information that originates on board a missile during its flight test that is broadcast or recorded for subsequent recovery." The New START Treaty definition of "telemetric information" (definition #78) is "information that originates on board a missile during its initial motion and subsequent flight that is broadcast." This should be read to mean that the only substantive change from the START Treaty definition to the New START Treaty definition of "telemetric information," which substitutes the meaning of the term "launch" for the term "flight test," is the deletion of the phrase "or recorded for subsequent recovery." This means that encapsulated information recorded during the test launch of an ICBM or SLBM is not considered to be telemetric information for purposes of the New START Treaty, while it was considered to be telemetric information for the purposes of the START Treaty.

Question. Under New START Terms and Definitions 80, why is the phrase "unless otherwise provided for in the treaty" eliminated from the definition of a "test launcher"?

Answer. Under the START Treaty, the reason for that phrase was so that rail-mobile test launchers could conduct limited movements for the purpose of testing outside a test range. Since neither side has rail-mobile launchers, and there is no equivalent provision concerning movement of a test launcher outside of a test range, this phrase was not carried forward into New START.

Question. Under New START Terms and Definitions 82, why is the reference to heavy bombers made in START I eliminated from the definition of a "training facility"?

Answer. Since neither Party has training heavy bombers, the Parties agreed that there was no need for the category of "training facilities for heavy bombers."

Question. Under New START Terms and Definitions 85, why does the definition of "transit" omit references to ICBMs and SLBMs of a retired or former type? Why does this definition omit provision C (from START I, term 119) addressing a "launch canister that remains after the flight test of an ICBM for mobile launchers of ICBMs"?

Answer. The New START Treaty did not retain the START concepts, or the terms associated with those concepts, of ICBMs and SLBMs of a retired type or a former type, so the definition of transit does not include references to such types of ICBMs or SLBMs.

The New START Treaty does not require the movement to an elimination facility of launch canisters that remain after the flight test of an ICBM for mobile launchers of ICBMs, so there is no requirement for a notification of their transit from one facility to another. However, paragraph 4 of Section II of Part Three of the Protocol provides for the elimination of such launch canisters when their associated missiles are eliminated. Launch canisters that remain after the flight test of an ICBM can be eliminated in situ, that is at the test range,

Question. Under New START Terms and Definitions 87, why is provision B (from START I, term 121) regarding long-range nuclear ALCMs omitted from the New START definition of "variant"? Why are ICBMs and SLBMs distinguished as "ICBMs of one type or SLBMs of one type" instead of "ICBMs or SLBMs of the same type"?

Answer. There is no requirement in New START that technical data for long-range nuclear ALCMs be provided, so there is no need to distinguish between ALCMs that have different characteristics within the same type.

The change in wording with respect to ICBMs and SLBMs was for textual clarification only and does not change the intent of the sides on what constitutes a variant of an ICBM or SLBM.

Question. Under New START Terms and Definitions 88, why are "fixed structures for mobile launchers of ICBMs and support equipment" not included in the definition of "version"? What is the significance of adding the words "functional differences" to this definition?

Answer. The START Treaty definition of "version" (definition #122) included the categories of "fixed structures for mobile launchers of ICBMs" and "support equipment" that could be further classified, upon declaration by the inspected Party, into different versions of that category based on external differences from other such items for a particular type of ICBM or SLBM. Such "versions" would be considered to be equally authoritative models of a given category. Because no versions of either fixed structures or support equipment were declared during the 15 years of implementing the START Treaty and were not envisioned during New START, these categories were not carried into the new treaty.

Under New START, the term "version" refers only to mobile launchers of ICBMs, and, because versions can be declared at the option of the inspected Party, that Party was given the choice of establishing differences based on either external differences or functional differences, which would then be subject to inspection. The Russian delegation during the negotiations made clear that all such versions of mobile launchers would have visible distinguishing features.

Question. Under New START Terms and Definitions 90, why was the word "launched" added to the description of a "weapon-delivery vehicle"?

Answer. The START Treaty definition (definition #124) of "weapon-delivery vehicle" used the defined term "flight test" to cover both the flight test and launch of a missile. The START Treaty definition of "flight test" (definition #32) was "the launch and subsequent flight of a missile;" there was no definition of "launch" in START. Under the New START Treaty, the term "launch" means the initial motion and subsequent flight of an ICBM or SLBM. The term "launch" as used in the New START Treaty has the same meaning that the term "flight test" had in START. Despite the change in terminology, the Parties' understanding of their treaty obligations will remain the same as in START. The term "launch" does not require flight for a minimum distance or period of time.

ARTICLE I

Question. The article-by-article analysis notes that the term "strategic offensive arm" is not defined in the New START Treaty. It was not defined in START I, either, and yet both treaties reduce and limit such arms. Why have the Parties consistently determined not to define this term, instead opting for references to existing types of weapons the Parties determine to be strategic offensive arms?

Answer. The term "strategic offensive arms" is well understood by the Parties to mean strategic delivery vehicles and their launchers. "Strategic" indicates that, in general, the forces covered are those of intercontinental range, in contrast to intermediate-range weapons, ground-launched variants of which are covered by the treaty between the United States of America and the Union of Soviet Socialist Republics on the Elimination of Their Intermediate-Range and Shorter-Range Missiles (INF Treaty), and shorter range weapons. "Offensive" is in contrast to defensive strategic arms, such as ballistic missile defense systems.

The term "strategic offensive arms" was also used, but not defined, in the Interim Agreement Between the United States of America and the Union of Soviet Socialist Republics on Certain Measures With Respect to the Limitation of Strategic Offensive Arms" (SALT I) of May 26, 1972, the Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Strategic Offensive Arms (SALT II) of June 18, 1979, the Treaty Between the United States of America and the Russian Federation on Further Reduction and Limitation of Strategic Offensive Arms (START II) of January 3, 1993, and the Treaty Between the United States of America and the Russian Federation on Strategic Offensive Reductions (Moscow Treaty) of May 24, 2002.

As a practical matter, the "strategic offensive arms" constrained by the New START Treaty are existing delivery systems of strategic range—ICBMs, SLBMs, ICBM launchers, SLBM launchers, and heavy bombers equipped for nuclear armaments, each of which is defined in the New START Treaty. The New START Treaty does not include a general definition for strategic offensive arms because it might inadvertently fail to address all the theoretical, or as yet undeveloped, systems that could or should be considered as strategic offensive arms subject to this treaty, or may inadvertently include a system that was not intended to be covered by the New START Treaty.

To overcome the need for such a definition, for the purposes of the reductions and limitations provided for in this agreement, the United States and Russia have simply listed the specific types of systems to be limited and defined those systems so as to capture their modernized replacements.

The New START Treaty also provides that, if a Party believes a new kind of strategic offensive arm is emerging, it can raise the issue within the Bilateral Consultative Commission for consideration as to whether the new arm is a new kind of strategic offensive arm that should be subject to the treaty. There is no requirement in the treaty for the deploying Party to delay deployment of the new system pending such resolution.

ARTICLE II

Question. The article-by-article analysis states that: "A deployed ICBM or SLBM is an ICBM or SLBM that is contained in or on a deployed launcher of such missiles. Similarly, a deployed launcher of ICBMs is a launcher that contains an ICBM and is not an ICBM test launcher, an ICBM training launcher, or an ICBM launcher located at a space launch facility. A deployed launcher of SLBMs is an SLBM launcher installed on a submarine that has been launched, that contains an SLBM, and is not intended for testing or training."

- For each existing type of both Russian and U.S. ICBM, SLBM, heavy bomber, ICBM and SLBM launcher listed in paragraph 8 of Article III, describe how each system will be counted as deployed and nondeployed under the criteria described above.

Answer. For the Russian Federation, existing types of ICBMs are the RS–12M, RS–12M2, RS–18, RS–20, and RS–24, and existing types of SLBMs are the RSM–50, RSM–52, RSM–54, and RSM–56. When a missile is installed in or on a launcher, that missile will be deployed, as will its launcher. When the missile is removed from its launcher, that missile and its launcher will both be nondeployed.

For the United States, existing types of ICBMs are the Minuteman II, Minuteman III, and Peacekeeper, and the existing type of SLBM is the Trident II. When a missile is installed in or on a launcher, that missile will be deployed, as will its launcher. When the missile is removed from its launcher, that missile and its launcher will both be nondeployed.

For the Russian Federation, existing types of heavy bombers are the Tu–95MS and Tu–160. For the United States, existing types of heavy bombers are the B–52G, B–52H, B–1B, and B–2A. All heavy bombers equipped for nuclear armaments are counted as deployed heavy bombers unless they are test heavy bombers, or they are heavy bombers equipped for nuclear armaments that are located at a repair facility or at a production facility. This provision recognizes the reality that heavy bombers located at a repair or production facility are not available for operational deployment and thus are placed in a nondeployed status.

- Clause (b) of paragraph (1) of Article II requires, within 7 years from the date of entry into force, that the Parties deploy no more than 1,550 warheads on deployed ICBMs, SLBMs and deployed heavy bombers. How will this limit be verified using NTM and measures contained in the treaty to verify that this is the total number of warheads deployed by Russia?

Answer. The aggregate number of warheads emplaced on deployed ICBMs and SLBMs is declared for each ICBM and submarine base as part of the regular data exchange required by the treaty. Type One inspections are conducted at ICBM and submarine bases for the purpose of spot checking the declarations regarding the number of warheads emplaced on deployed ICBMs and SLBMs by counting reentry vehicles. During Type One inspections, inspectors will be informed of the number of warheads emplaced on each individual ICBM or SLBM located at the ICBM or submarine base, respectively, at the time of the inspection and will have the right to select one deployed ICBM in or on its launcher or one SLBM in its SLBM launcher for inspection for the purpose of confirming the number of warheads declared to be emplaced on that missile, and to confirm the Unique Identifier for that missile.

The numbers of deployed and nondeployed heavy bombers equipped for nuclear armaments are limited in that they are included within the aggregate limits on deployed strategic delivery vehicles and deployed and nondeployed ballistic missile launchers and heavy bombers. Each deployed heavy bomber is attributed with one warhead.

The combination of notifications, UIDs, inspections, NTM, and independent intelligence will greatly facilitate the ability of the United States to maintain an accurate accounting of all declared ICBMs, SLBMs, their warheads, and heavy bombers.

For more information on the use of NTM and treaty verification measures, please see the classified National Intelligence Estimate on the Intelligence Community's ability to monitor the New START Treaty.

- In particular, please explain how the criteria noted in (a) would apply to mobile launchers of ICBMs.

Answer. When a missile is installed on a mobile launcher of ICBMs, that missile will be deployed, as will the launcher. When the missile is removed from its launcher, that missile and its launcher will be nondeployed.

- Language in the article-by-article analysis regarding the preamble notes that a future treaty may govern "nondeployed nuclear weapon stockpiles." Does this administration contemplate that warheads the United States does not deploy (those not emplaced on a delivery system) would be the subject of any negotiations with Russia concerning its tactical nuclear weapons?

Answer. Just over a year ago in Prague, President Obama stated his commitment to take concrete steps toward a world without nuclear weapons. The New START Treaty is an important first step which will set the stage for further cuts. But it is just one step. As the Nuclear Posture Review Report makes clear, and as the President reiterated in Prague on April 8 of this year, the United States intends to pursue with Russia additional and broader reductions in our strategic and nonstrategic/tactical nuclear weapons, including nondeployed weapons.

Question. The article-by-article analysis states that: "Previous practice under START was to use attribution rules to determine the number of warheads counted for each type of ICBM and SLBM. Under this practice, each deployed missile of a given type was counted as if it carried a particular number of warheads, even if the individual missile carried fewer reentry vehicles than its attributed number of warheads. Under the Moscow Treaty, each Party used its own methodology for counting which of its warheads it considered to be "deployed" and thus subject to the treaty's limits. Under the New START Treaty, one set of warhead counting rules will be used by both Parties and the warhead count will reflect the number of reentry vehicles actually emplaced on each ICBM and SLBM."

- Did attribution rules applied in START I correspond with missile throw-weight?
- What is the maximum number of warheads each existing type of Russian ICBM or SLBM listed in paragraph 8 of Article III could carry, based on information provided under START I, or other information?
- If you do not obtain telemetric information on developmental Russian ICBM or SLBM systems that have not been previously attributed any number of warheads, and there is no obligation to attribute warheads nor an RV limit per Russian ICBM or SLBM, how will you know that the number of warheads you find on any such system is the accurate and only number of warheads that are deployed on all missiles of that type?
- How would you determine margins of warhead uncertainty for new kinds and types of Russian ICBMs and SLBMs if there is a doubt as to its warhead capacity?

Answer. Classified responses to be provided separately.

Question. The article-by-article analysis states that: "In accordance with the Eighth Agreed Statement in Part Nine of the Protocol, the Parties have agreed that nonnuclear objects on the front sections of ICBMs or SLBMs declared to carry at least one nuclear-armed reentry vehicle will not be counted as warheads. This statement is premised on the shared assumption that there is no military utility in carrying nuclear-armed and conventionally armed reentry vehicles on the same ICBM or SLBM. In practice, this means that objects such as penetration aids and inert ballast objects that may be carried on an ICBM or SLBM will not count toward the treaty's warhead limits. Inspectors will have the opportunity to confirm that these objects are not nuclear through the use of radiation detection equipment during the reentry vehicle portion of Type One inspections."

- What is the likelihood that U.S. inspection teams would actually be permitted access to a Russian ICBM or SLBM that carried penetration aids?
- Which Russian New-START-accountable missiles are known to contain penetration aids and inert ballast objects?

Answer. Classified responses to be provided separately.

STRATEGIC STABILITY

The administration has said New START reduces and limits strategic offensive arms "in a manner that enhances strategic stability."

Question. Is the use of multiple independently targetable reentry vehicle (MIRV) systems by either the United States or Russia destabilizing?

Answer. De-MIRVing silo-based ICBMs enhances the stability of the nuclear balance by reducing the incentives of either side to strike first against these high-value, fixed targets. For this reason, the United States will continue to de-MIRV its Minuteman III ICBMs. The United States will also seek to encourage Russia to de-MIRV its silo-based ICBMs.

However, the use of MIRVed ICBMs or SLBMs on mobile launchers of these missiles is considered to be comparatively stabilizing because mobile launchers deployed at sea or in the field are difficult to find and strike and are thus more survivable. Consequently, these MIRVed missiles on mobile launchers assist the Parties in fielding sufficiently capable, survivable, second-strike capabilities which are critical for maintaining the mutual deterrence that is a critical component of strategic stability.

Question. The Nuclear Posture Review states that "All U.S. ICBMs will be de-MIRVed to a single warhead each to increase stability," yet Russia is permitted to MIRV its New-START accountable ballistic missiles, and has announced plans to field a number of road-mobile, MIRVed systems during the duration of the New START Treaty. Given this situation, is the New START Treaty more or less stabilizing a treaty than were its predecessors, which attempted to move Russia away from more destabilizing, MIRVed systems?

Answer. The New START Treaty reflects the strategic balance that exists today and is projected to exist over the lifetime of the treaty. The Soviet Union's aggressive deployment of highly MIRVed, hard target-kill capable silo-based ICBMs during the 1970s and 1980s prompted the United States to seek to shift the Soviet Union away from such systems during the START negotiations of the 1980s. In large part due to the U.S. achievement of this objective in START, during the course of START implementation Russia dismantled and plans to continue dismantling much of its highly MIRVed, hard target-kill capable silo-based ICBM force.

While Russia continues to possess such MIRVed, silo-based ICBMs, the force's age and smaller size meant that the United States determined it was less important to prioritize discouraging the deployment of such systems. Instead, the treaty prioritizes the ability of the Parties to determine the composition of their own forces, reflecting the assessment that both sides will continue to emphasize survivable systems—including but not limited to MIRVed strategic missiles located in SSBNs on the U.S. side and on both SSBNs and road-mobile ICBMs on the Russian side—which, when deployed at sea or in the field, do not pose the destabilizing "use or lose" concerns posed by MIRVed silo-based ICBMs.

UNIQUE IDENTIFIERS (UID)

During the committee's May 18 hearing, Secretary Gates stated "Unique identifiers, for the first time, will be assigned to each ICBM, SLBM, and nuclear-capable heavy bomber, allowing us to track the disposition and patterns of operation of accountable systems throughout their lifecycles." Admiral Mullen stated that "[Unique identifiers] are going to be visible and verifiable and every single weapon would

have it." Later, Admiral Mullen stated "actually, UIDs are mechanical, they're not technically detectable."

Question. The New START Inspection Annex notes that UIDs "shall be applied by the inspected Party, using its own technology . . . Such a unique identifier shall not be changed. Each Party shall determine for itself the size of the unique identifier," and inspectors are supposed to be able to verify them.

- Will such UIDs be visible from national technical means (NTM)?
- How will you confirm that there are no duplicate UIDs applied to New-START-accountable Russian systems?

Answer. Unique identifiers (UIDs) will not be visible from NTM. UIDs will be read by inspectors during Type One and Type Two inspections to confirm the accuracy of the declared data. In the New START Treaty, unique alphanumeric identifiers will be applied to all ICBMs, SLBMs, and heavy bombers. These unique identifiers will be included in the database and in applicable notifications, so that individual strategic delivery vehicles may be tracked. During inspections, the Parties will be able to confirm these unique identifiers, which will provide additional confidence over time regarding the validity of the information in the database and notifications, thus reducing the likelihood that duplicate UIDs will be applied to strategic systems.

RESPONSES OF ASSISTANT SECRETARY ROSE GOTTEMOELLER TO QUESTIONS SUBMITTED BY SENATOR LUGAR

NEW START REENTRY VEHICLE ONSITE INSPECTION (RVOSI)

Question. You have claimed that RVOSI under New START is improved over START I, and indeed that it may remedy compliance issues encountered in START I RVOSI.

- Did START I permit the use of shrouds, hard and soft covers for missile front sections?

Answer. The START Treaty permitted the inspected Party to cover reentry vehicles (RVs) and other equipment, including the mounting platform, with covers in such a manner that these covers did not hamper inspectors from ascertaining that the front section of a particular missile contained no more RVs than the number of RVs attributed to a missile of that type under the treaty. Both hard and soft covers were permitted, with inspectors having the right to only view soft covers and to view and measure hard covers.

- Does New START permit the Parties to use shrouds, hard and soft covers for existing types of weapons listed in paragraph 8 of Article III. If so, please explain how Russia will likely employ such covers and on which systems.

Answer. Like START, the New START Treaty establishes the inspected Party's right to cover RVs and other equipment, including the mounting platform, with individual covers in such a manner that such covers must not hamper inspectors in accurately identifying the number of RVs emplaced on the front section of a missile. In addition, as set forth in the Inspection Activities Annex, soft reentry vehicle covers are to be viewed, hard covers are to be viewed and measured, and combined covers (a cover made of both hard and soft components that when fully assembled has a fixed shape) are to be viewed and measurements of the fully assembled cover are to be permitted for the base diameter and height of the fully assembled combined covers prior to their use during the inspection.

Until the treaty enters into force and the first reentry vehicle inspection is conducted as part of the Type One inspection in Russia, we cannot be certain how Russia intends to cover its reentry vehicles on each of its systems under the New START Treaty. However, the New START Treaty has a provision that requires that before a hard or combined RV cover is used for the first time during a reentry vehicle inspection, the fully assembled cover must first be demonstrated, including the right to measure the cover. This approach is intended to help address issues early on if Russia elects to use reentry vehicle covers that hampered the ability of U.S. inspectors to accurately count the number of RVs emplaced on an ICBM or SLBM during the implementation of START.

- Is it true that there were substantial compliance issues involving Russian shrouds, hard and soft covers under START I that effectively prevented verification of RVs emplaced under such covers?

Answer. During the life of the START Treaty, Russian RV covers and their method of emplacement did, in some cases, hamper U.S. inspectors from ascertaining that the front section of the missiles contained no more RVs than the number of warheads attributed to a missile of that type under the treaty. Russian cooperation in the use of RDE and other measures has been helpful in addressing most, but not all, of the difficulties encountered by U.S. inspectors. Further discussion of issues related to Russia's compliance with reentry vehicle onsite inspections are addressed in the July 2010 Compliance Report and the June 2010 National Intelligence Estimate on the Intelligence Community's ability to monitor the New START Treaty.

- How does use of radiation detection equipment, which is not unique under New START (it was permitted by JCIC decision under START I) enable you to deal with potentially problematic shrouds, hard and soft covers that Russia may employ?

Answer. Under New START, radiation detection equipment (RDE) may be used at the discretion of the inspected Party to demonstrate that additional objects declared by the inspected Party as nonnuclear, which could also be located on the front sections of deployed ICBMs and SLBMs equipped with no less than one nuclear-armed RV, are in fact, nonnuclear. If these nonnuclear objects can be confirmed by inspectors to be nonnuclear, such additional objects will not count against the aggregate warhead limit in accordance with the Eighth Agreed Statement of Part Nine of the Protocol. Such objects may be covered or uncovered. No radiation measurements of actual reentry vehicles were conducted under the START Treaty and none will be conducted under the New START Treaty.

NEW KINDS OF STRATEGIC OFFENSIVE ARMS

*Question.*The article-by-article analysis of paragraph 2 of Article V states: "The Parties understand that they may use the BCC to discuss whether new kinds of arms are subject to the treaty. The United States stated during the negotiations its view that not all new kinds of weapon systems of strategic range would be "new kinds of strategic offensive arms" subject to the New START Treaty. Specifically, the United States stated that it would not consider future, strategic range nonnuclear systems that do not otherwise meet the definitions of this treaty to be "new kinds of strategic offensive arms" for purposes of the treaty. The Parties understand that, if one Party deploys a new kind of strategic range arm for delivering nonnuclear weapons that it asserts is not a "new kind of strategic offensive arm" subject to the treaty, and the other Party challenges that assertion, the deploying Party would be obligated to attempt to resolve the issue within the framework of the BCC. There is no requirement in the treaty for the deploying Party to delay deployment of the new system pending such resolution."

- a. Did the Russian Federation indicate agreement with the U.S. approach to "strategic range nonnuclear systems that do not otherwise meet the definitions of this treaty?"

Answer. The Russian Federation did not make a definitive statement regarding this matter. The provision on new kinds of strategic offensive arms in the New START Treaty recognizes that, during the life of the treaty, the Parties could develop new kinds of strategic-range systems not currently in existence and provides a mechanism for the Parties to discuss such systems should they emerge. If such a system does not meet the definitions in the treaty, a Party could raise the issue of whether the new system should nonetheless be made subject to the treaty. The United States stated its view (similar to the U.S. view stated during the START negotiations) that it would not consider future, strategic-range nonnuclear systems that do not otherwise meet the definitions of this treaty to be "new kinds of strategic offensive arms" for purposes of the treaty.

- b. If the answer to (a) is yes, is this agreement contained in any of the documents submitted to the Senate with the New START Treaty?

Answer. Not applicable.

- c. If the answer to (a) is yes, but the answer to (b) is no, please provide a detailed explanation of how Russian agreement on this issue was communicated.

Answer. Not applicable.

- d. What other issues, if any, prompted U.S. interpretive statements in the negotiations that were not contained in any of the treaty documents before the Senate?

Answer. None.

RESPONSES OF ASSISTANT SECRETARY ROSE GOTTEMOELLER AND DR. EDWARD L. WARNER III TO QUESTIONS SUBMITTED BY SENATOR BARRASSO

MISSILE DEFENSE

Question. In the New START Treaty, the preamble states that "Recognizing the existence of the interrelationship between strategic offensive arms and strategic defensive arms, that this interrelationship will become more important as strategic nuclear arms are reduced, and that current strategic defensive arms do not undermine the viability and effectiveness of the strategic offensive arms of the Parties."

- Did the administration oppose the provision during negotiations?
- Why was this language included in the preamble?
- What did the United States get in exchange for the inclusion of this provision?

Answer. The preamble language referred to is simply a statement of fact acknowledging the interrelationship of strategic offensive and defensive arms. It also affirms that currently deployed strategic defensive arms do not undermine the viability and effectiveness of either Party's strategic offensive arms. This preambular statement was negotiated and agreed between the Parties in accordance with the Joint Understanding signed by President Obama and President Medvedev on July 6, 2009. As stated in the Article-by-Article Analysis of the treaty, this statement is part of the shared view of the Parties of the importance of predictability and strategic stability.

This statement in the preamble creates no constraints regarding future U.S. strategic defense programs, including those for any form of missile defense. Neither the preamble nor Russia's unilateral statement will constrain our efforts to develop and deploy the most effective missile defenses possible.

Question. There seems to be some disagreements between the United States and Russia on the interpretation of the missile defense language in the treaty.

- Why is there this misunderstanding?
- Did these different views come up during the negotiations?
- Did you reach an agreement during the negotiations on these differences?

Answer. There is no difference of opinion between the United States and Russia with respect to the meaning of the treaty's provisions as they relate to missile defense. Both Parties understand that the New START Treaty does not constrain U.S. plans for fielding and continuing to develop missile defenses. Both the United States and the Russian Federation also understand that the only constraint on missile defense in the New START Treaty is the provision in paragraph 3 of Article V, prohibiting the placement of missile defense interceptors in ICBM or SLBM launchers and the conversion of missile defense interceptor launchers to launch ICBMs or SLBMs.

The Russian unilateral statement in no way changes the legal rights or obligations of the Parties under the treaty, and our unilateral statement in response makes it clear that the United States intends to continue to improve and deploy the most effective missile defense capabilities possible, in order to defend the U.S. homeland from limited ballistic missile attacks and to defend U.S. deployed forces and our allies from growing regional ballistic missile threats.

While, as Secretary Gates acknowledged during the SASC hearing on June 17, "there is no meeting of the minds [between the United States and the Russian Federation] on missile defense," the United States did not use the New START Treaty negotiations to discuss missile defense with the Russians. From the outset, the United States and Russia agreed that the New START Treaty would focus on the reduction and limitation of strategic offensive arms. Thus, missile defense discussions fell outside the scope of the New START Treaty negotiations.

Question. Article V prohibits the conversion of launchers for ICBMs and SLBMs into launchers for missile defense interceptors.

- Did the administration oppose the provision during negotiations?
- Why was this language included in the treaty?
- Which country proposed the language of Article V?
- What did the United States get in exchange for the inclusion on this provision?
- What is the reason and policy consideration for including any type of limit on U.S. strategic missile defense in the treaty?

Answer. Paragraph 3 of Article V of the treaty prohibits the conversion of ICBM or SLBM launchers to launchers for missile defense interceptors and the conversion of missile defense interceptor launchers to launch ICBMs or SLBMs. The paragraph also "grandfathers" the five former ICBM silos at Vandenberg Air Force Base that were converted to house Ground Based Interceptors (GBI) several years ago.

The U.S. side agreed to this Russian-proposed provision in the treaty for several reasons. It resolves a longstanding ambiguity that arose during implementation of

the START Treaty. Specifically, it ensures that our five previously converted ICBM silo launchers at Vandenberg that now are used for missile defense interceptors will not be a continuing subject of dispute with Russia and will not count against the New START Treaty's limits on nondeployed ICBM launchers.

This provision will have no operational impact on U.S. missile defense efforts. As Lieutenant General O'Reilly, Director of the Missile Defense Agency, has testified, the United States has never had any plans to convert additional ICBM silos to missile defense interceptor launchers. Doing so would be much more expensive than building smaller, tailor-made GBI silos from scratch. Moreover, as Lieutenant General O'Reilly has also stated, newly built GBI silos are easier both to protect and maintain.

With regard to the conversion of SLBM launchers into missile defense interceptor launchers, as Lieutenant General O'Reilly stated in his testimony, the Missile Defense Agency had examined earlier the concept of launching missile defense interceptors from submarines and found it operationally an unattractive and extremely expensive option. He added that the United States already has a very good and significantly growing capability for sea-based missile defense on Aegis-capable surface ships, which are not constrained by the New START Treaty.

For these reasons we were comfortable including this militarily insignificant provision within the New START Treaty, and have been unequivocal in stating that the treaty does not constrain the United States from deploying the most effective missile defenses possible, nor does it add any additional cost or inconvenience. Rather, the treaty enables this President and his successors to develop the missile defenses needed to defend our Nation, our deployed forces abroad, and our allies.

Lieutenant General O'Reilly also noted that the New START Treaty offers certain advantages for development of the U.S. ballistic missile defense system: "Relative to the recently expired START Treaty, the New START Treaty actually reduces constraints on the development of the missile defense program. Unless they have New START accountable first stages (which we do not plan to use), our target [offensive missiles used as targets during tests of our missile defense interceptors] will no longer be subject to START constraints, which limited our use of air-to-surface and waterborne launches of targets which are essential for the cost-effective testing of missile defense interceptors against MRBM and IRBM targets in the Pacific area. In addition, under New START, we will no longer be limited to five space launch facilities for target launches."

Question. Under Article V of the New START Treaty, the five U.S. ICBM silo launchers at Vandenberg Air Force Base in California are excluded.

- Why were the five U.S. ICBM silo launchers at the Vandenberg Air Force Base in California specifically excluded from the provision?
- Was any consideration made to excluding other U.S. ICBM silos?

Answer. Paragraph 3 of Article V of the treaty prohibits the conversion of ICBM or SLBM launchers to serve as launchers for missile defense interceptors and the conversion of missile defense interceptor launchers to launch ICBMs or SLBMs. The paragraph also "grandfathers" the five former ICBM silos at Vandenberg Air Force Base, CA, that were converted to house and launch the Ground Based Interceptors (GBI) several years ago.

As stated in the article-by-article analysis of the treaty, this statement has the effect of ensuring that the paragraph's prohibition does not apply to the five converted former ICBM launchers at Vandenberg. It also resolves a longstanding ambiguity that arose during implementation of the START Treaty. Specifically, it ensures that these five previously converted ICBM silo launchers at Vandenberg Air Force Base that now are used for missile defense interceptors will not be a continuing subject of dispute with Russia and will not count against the New START Treaty's limit on nondeployed ICBM and SLBM launchers and heavy bombers equipped for nuclear armaments.

There are no other missile defense interceptor silos that have been converted from ICBM silo launchers. And as Lieutenant General O'Reilly, Director of the Missile Defense Agency, has testified, the United States has never had any plans to convert additional ICBM silos to missile defense interceptor launchers.

GENERAL ISSUES

Question. What were the priorities for the administration regarding the New START Treaty? Which of the priorities were accomplished?

Answer. The administration's top priorities going into these negotiations were to reach agreement on a new bilateral treaty between the United States and Russia to replace the expiring START Treaty that would reduce and limit strategic nuclear

forces, promote strategic stability by ensuring transparency and predictability regarding U.S and Russian strategic nuclear forces over the life of the treaty, ensure effective verification of the treaty's provisions, advance our nuclear nonproliferation agenda, and set the stage for further nuclear arms limitations and reduction agreements. In addition, we sought to ensure the continuing sufficiency of our nuclear deterrent for ourselves and our allies at lower levels, and to ensure we would have flexibility regarding how we would structure our strategic forces within the treaty's overall limits and to maintain the capability to deploy conventional prompt global strike capability, including on our ICBMs and SLBMs, should we elect to do so.

We believe that when the New START Treaty enters into force, each of these goals will have been achieved.

Question. Which of the treaty provisions did the administration receive the most resistance on from the Russians? Why?

Answer. A classified response to be provided separately.

Question. How has the New START Treaty improved relations with Russia?

Answer. Concluding the New START Treaty was one of the most immediate tasks in putting the United States-Russia relationship back on a track of stability and cooperation. The completion of the New START Treaty shows that the United States and Russia can work together on many issues of mutual interest, including top priorities like nuclear security and nonproliferation. The treaty gives the United States and Russia a better opportunity to work together and to gain mutually assured stability. That our two countries were able to conclude this mutually beneficial agreement is both a reflection of improved relations, as well as a foundation for further cooperation and dialogue across a broad range of issues. The process of negotiating the New START Treaty involved a year-long, focused, professional interaction, which sometimes occurred at the very highest levels of our governments and demonstrated our ability to successfully work together in a mutually respectful way toward a common goal. Such interactions have contributed significantly to the "reset" of our relationship with Russia.

Conclusion of the New START Treaty has improved bilateral relations and thus facilitated cooperation on other top priorities, including collective international efforts to prevent Iran from acquiring a nuclear weapons capability, as demonstrated by our combined support for the passage of UNSC Resolution 1929, which imposes new sanctions on Iran.

Implementation of the treaty will result in continued close, professional contact between our governments both at the Bilateral Consultative Commission in Geneva and on the ground in Russia and the United States during inspections and exhibitions. The openness and transparency fostered by these interactions will continue to foster improved U.S. relations with Russia.

Question. Did the United States get any Russian cooperation on Iran as a result of signing this treaty?

Answer. Our renewed focus on improving our relations with Russia, including last year's negotiations on the New START Treaty, has led to a greater understanding and increased cooperation between the United States and Russia in a number of areas. This renewed relationship is key to curbing nuclear threats across the globe.

We are working very closely and in cooperation with Russia on our shared goal of preventing Iran from acquiring a nuclear weapons capability. Russia does not support an Iran with nuclear weapons and—in addition to other constructive contributions to international nuclear nonproliferation efforts—has joined the November 2009 International Energy Agency (IAEA) Board of Governors resolution condemning Iran's lack of cooperation with the IAEA, its refusal to suspend enrichment, and its failure to comply with its Safeguards Agreement.

Since early 2009, the United States, Russia, and our partners in the P5+1 have offered to constructively engage Iran—but Iran failed to take advantage of this opportunity. Since 2006, there have been six U.N. Security Council resolutions (UNSCRs) calling on Iran to suspend enrichment. Iran has refused to meet with the P5+1 about its nuclear program despite our efforts and its commitment to do so last October. Russia supported UNSCR 1929 passage on June 9, the sixth UNSCR of its kind, imposing additional sanctions on Iran. Russia also continues to provide key assistance in the ongoing IAEA proposal discussions to refuel the Tehran Research Reactor.

We continue to discuss with Russia our concerns about advanced weapons sales to states such as Iran. We appreciate Russia's restraint in the transfer of the S–300 missile system to Iran.

Question. Please indicate and explain which provisions in the New START Treaty are most beneficial to the United States.

Answer. The New START Treaty as a whole provides predictability and transparency regarding the strategic nuclear relationship between the United States and Russia. One of the most important concrete benefits the United States derives from the treaty is the transparency regarding Russian strategic forces. The New START Treaty's verification regime and transparency measures allow each side to gain important insights into the other side's strategic forces. Without this window, our knowledge of Russia's strategic forces will decline over time. Treaty information will reduce uncertainty about the future direction of Russian strategic forces and assist in improved planning for our future defense needs. But the benefits are not all one-way: Shared knowledge of U.S. and Russian strategic forces is crucial for maintaining strategic stability between the two major nuclear powers.

The United States also benefits from the requirement that Russia maintain lower force levels or reduce its forces to meet the treaty's central limits. In the absence of a treaty, Russia could, if it so desired, field greater numbers of strategic delivery vehicles and strategic nuclear warheads than are permitted under the New START Treaty. While the New START Treaty should be evaluated in terms of the entirety of the treaty regime rather than with regard to its individual provisions, there are numerous examples of provisions that are particularly beneficial to the United States, including:

(1) The provision in paragraph 2 of Article II of the New START Treaty, which gives us the right to determine for ourselves the composition and structure of our strategic offensive arms, was also very important to the United States.

(2) The flexibility in the conversion or elimination regime allowing the United States to decide what procedures would be most suitable to achieve required reductions in ways that would be cheaper and less burdensome. In the case of SLBM launchers, the United States will have the flexibility to convert individual launchers such that they are no longer capable of launching SLBMs. This allows the United States to reduce the number of deployed and nondeployed SLBM launchers under the treaty's limits without having to eliminate an entire SSBN.

(3) The counting rules for deployed warheads associated with ICBMs and SLBMs are also very useful for the United States. Under these rules, the actual number of reentry vehicles emplaced on the missiles is counted toward the treaty's aggregate limit on warheads. U.S. ICBMs and SLBMs will routinely be deployed with a lesser number of reentry vehicles emplaced on them than the number of warheads that was attributed to them under START, so this more accurate way of counting warheads associated with ICBMs and SLBMs will benefit the United States.

Question. What did the United States get from the negotiations on the New START Treaty?

Answer. The United States concluded a treaty with the Russian Federation that will provide verifiable limitations and reductions in the strategic offensive arms of the United States and the Russian Federation as well as ongoing transparency and predictability regarding the world's two largest nuclear arsenals, while preserving the ability of the United States to maintain the strong nuclear deterrent that remains an essential element of U.S. national security and the security of our allies and friends. We got a treaty that includes an effective verification regime to assess Russian compliance with the treaty's limits and other constraints while also allowing us the flexibility to determine for ourselves the composition and structure of our strategic offensive arms and how we will make our reductions to meet the treaty's limits. Finally, we also got a treaty that will help provide a safer, more secure, and more stable strategic nuclear environment for our citizens.

Question. How many United States negotiators participated in the negotiations of the New START Treaty?

Answer. The U.S. delegation to the negotiations with the Russian Federation on the New START Treaty was led by Assistant Secretary of State Rose Gottemoeller. Her team included two Deputy Negotiators, and three additional senior representatives from agencies of the interagency policy community. The negotiating team also consisted of agency advisors, administrative staff, and linguists. The peak number of delegation personnel in Geneva at one time during the New START negotiations was approximately 50 but this was not a static number and varied over time.

In addition, President Obama, Secretary Hillary Clinton, and Under Secretary Ellen Tauscher of the Department of State, Chairman of the Joint Chiefs of Staff Admiral Mullen, National Security Advisor Gen. James Jones, and other senior officials in the administration participated in negotiations with their counterparts as needed.

VERIFICATION

The original START Treaty had an extensive verification regime which included onsite inspections, methods for providing telemetry, and transparency measures. Reports indicate that Russia continued to violate verification provisions on the counting of ballistic missile warheads, monitoring of mobile ballistic missiles and telemetry. The new treaty will be making numerous changes to the verification and inspection procedures.

Question. Do you believe that we will see similar problems with Russia regarding violations of verification procedures?

Answer. Although the New START Treaty is less complex than the START Treaty, different interpretations by the Parties might arise regarding how to implement the inspection activities and other verification provisions of the New START Treaty. Should such a situation arise, the Parties will seek to resolve their differences in the Bilateral Consultative Commission.

Question. What were the most common violations by Russia with regards to the verification and inspection provisions under the START Treaty?

Answer. The most common Russian violations encountered during START involved problems regarding reentry vehicle onsite inspections (RVOSI) and with regard to the exchange of telemetric information.

RVOSI: In some cases, Russian reentry vehicle covers and their method of emplacement hampered U.S. inspectors from ascertaining that the front section of the ICBMs and SLBMs being inspected contained no more reentry vehicles than the number of warheads attributed to a missile of that type under the START Treaty. Russian cooperation in the use of radiation detection equipment and other measures were helpful in addressing some, but not all, of the difficulties encountered by U.S. inspectors.

Telemetry: Russia in some instances failed to comply with START Treaty requirements regarding the provision of telemetric information on missile flight testing.

Additional details on compliance issues may be found in the 2010 Compliance Report, which was submitted to Congress on July 1, 2010. The portions of the report related to START Treaty implementation issues were updated through the expiration of the START Treaty on December 5, 2009.

Question. What is the total number of Russian violations of the verification and inspection procedures under the START Treaty?

Answer. Issues related to Russia's compliance with verification and inspection procedures under the New START Treaty are addressed in the Report on Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments (the Compliance Report) that was provided to the Senate on July 1, 2010.

Question. What verification and inspection measures were put in place to ensure that these or similar violations do not occur in the future?

Answer. With regard to RVOSI: The New START Treaty establishes the inspected Party's right to cover reentry vehicles and other equipment with individual covers, but with the caveat that such covers must not hamper inspectors in accurately identifying the number of reentry vehicles emplaced on a front section. This provision is intended to ensure that covers are not used in such a manner that would obscure the actual number of reentry vehicles on a front section. It is similar to the START provision for covers that did not hamper inspectors, but specifies individual covers and makes the distinction between the New START verification task of determining the actual number of warheads versus the START provision of confirming that there were no more than the attributed number. In addition, as set forth in the Inspection Activities Annex, reentry vehicle covers are to be viewed, and in some cases measured, by inspectors prior to their use during the reentry vehicle inspection portion of a Type One inspection.

With regard to telemetry: The obligations in the New START Treaty are different from those in START. None of the new treaty's specific obligations, prohibitions, or limitations requires analysis of telemetric information to verify a Party's compliance. Nevertheless, to promote openness and transparency, the Parties have agreed to exchange telemetric information on an agreed equal number (up to five annually) of launches of the testing party's choice of ICBMs and SLBMs (which could include launch vehicles that contain the first stage of an ICBM or SLBM).

Question. What information will the United States no longer be able to obtain under the New START Treaty that we were able to obtain under the previous START Treaty?

Answer. The United States will not obtain recordings of telemetric information from the Russian Federation for each ICBM or SLBM flight test, as was the case under the START Treaty.

Cooperative measures, under which heavy bombers or mobile ICBMs were, upon request, placed in the open for viewing by national technical means of verification, are not required by the new treaty.

Although the New START Treaty requires 48 hours advance notice for solid-fueled ICBMs and SLBMs exiting the Votkinsk Production Facility, there will no longer be continuous monitoring of the facility, including the presence of monitors, as was the case under the INF and START Treaties.

For more details, please see the classified National Intelligence Estimate on "Monitoring the New START Treaty," published on 30 June 2010.

RAIL MOBILE MISSILE LAUNCHERS

There has been a variety of views on whether rail-mobile missile launchers will count under the New START Treaty. Secretary Schlesinger has indicated that rail-mobile ICMBs may not count under the new treaty.

Question. Does the New START Treaty specifically address rail-mobile missile launchers?

Answer. Rail-mobile ICBMs are not specifically mentioned in the New START Treaty because neither Party currently deploys ICBMs in that mode. Nevertheless, the treaty covers all ICBMs and ICBM launchers, and would include any rail-mobile system, should either Party decide to develop and deploy such a system.

Question. Were rail-mobile missile launchers specifically mentioned and discussed during the New START Treaty negotiations?

Answer. During the New START negotiations, the Parties discussed the fact that neither side currently deploys rail-mobile ICBMs and, therefore, agreed that there was no need to reference such systems in the new treaty.

Question. Could rail-mobile missile launchers be deployed in Russia and not count against the New START Treaty limits?

Answer. No. The treaty covers all ICBMs and ICBM launchers, including a rail-mobile system, should either Party decide to develop and deploy such a system.

The New START Treaty defines an ICBM launcher as a "device intended or used to contain, prepare for launch, and launch an ICBM." This is a broad definition intended to cover all ICBM launchers, including rail-mobile launchers.

A rail-mobile launcher containing an ICBM would meet the definition of a "deployed launcher of ICBMs," which is "an ICBM launcher that contains an ICBM" and, along with any nondeployed rail-mobile launchers of ICBMs, would fall within the limit of 800 on deployed and nondeployed launchers of ICBMs and SLBMs and deployed and nondeployed heavy bombers. The ICBMs contained in rail-mobile launchers would count as deployed and therefore fall within the 700 ceiling on deployed ICBMs, SLBMs, and heavy bombers.

If a Party chose to develop and deploy rail-mobile ICBMs, such missiles and their launchers would therefore be subject to the treaty and its limitations. Specific details about the application of verification provisions would be worked out in the BCC. Necessary adjustments to the definition of "mobile launchers of ICBMs"—to address the use of the term "self-propelled chassis on which it is mounted" in that definition—would also be worked out in the Bilateral Consultative Commission.

Question. If rail-mobile missile launchers are not provided for under the treaty, how will the United States be able to track and monitor the number and movement of these weapons?

Answer. Neither the United States nor Russia currently deploys rail-mobile launchers. If a Party chose to develop and deploy rail-mobile ICBMs, such missiles and their launchers would be subject to the treaty. Appropriate detailed arrangements for incorporating rail-mobile ICBM launchers and their ICBMs into the treaty's verification and monitoring regime could be worked out in the Bilateral Consultative Commission.

Question. Under the New START Treaty, are there verification and inspection provisions to gather the information needed to track and monitor possible rail-mobile missile launchers?

Answer. If a Party chose to develop and deploy rail-mobile ICBMs, such missiles, their warheads, and their launchers would be subject to the treaty, including its notification, verification, and inspection provisions. Necessary adjustments to the definition of "mobile launchers of ICBMs"—to address the use of the word "self-pro-

pelled" in that definition—would be addressed in the Bilateral Consultative Commission (BCC). Similarly, application of the treaty's verification and inspection provisions to rail-mobile launchers would be addressed in the BCC.

Question. What type of measures will be used to monitor other activities outside the New START Treaty?

Answer. Please see the classified National Intelligence Estimate on "Monitoring the New START Treaty," published on 30 June 2010.

RESPONSES OF DR. EDWARD L. WARNER III TO QUESTIONS SUBMITTED BY SENATOR BARRASSO

FORCE STRUCTURE

Question. The force structure of our nuclear triad is critical to maintaining an effective deterrent. In 2008, Secretary Gates issued a white paper recommending a U.S. strategic nuclear force structure baseline of around 862.

- Who provided you with the guidance to reduce our strategic nuclear delivery vehicles down to 700?

Answer. All New START Treaty guidance reflects administration-approved, interagency-developed guidance.

This guidance was developed based on input from the Nuclear Posture Review (NPR), which made it an early task to develop U.S. positions for the New START Treaty negotiations. The Office of the Secretary of Defense, the Joint Staff, the Military Departments, and U.S. Strategic Command conducted analyses during the NPR to inform the relevant U.S. Government Departments and Agencies and the New START Treaty negotiation team.

- What was the rationale and policy consideration for reducing our strategic nuclear delivery vehicles down to 700?

Answer. The United States agreed to the New START Treaty's central limits based on strategic force analyses conducted in support of the Nuclear Posture Review (NPR) and high-level deliberations within the Department of Defense and the relevant U.S. Government Departments and Agencies. The NPR strategic force analysis performed by the U.S. Strategic Command staff and these deliberations concluded that U.S. strategic forces fielded within the limits contained in the New START Treaty would be sufficient to support U.S. deterrence requirements, including extended deterrence for our allies, in the current and projected international security environment.

Specifically, the NPR determined that the United States should retain a nuclear triad and determined the appropriate number of strategic delivery vehicles based on four requirements: supporting strategic stability through maintenance of an assured second-strike capability that is able to meet the national nuclear deterrence guidance; retaining sufficient force structure in each leg to allow the ability to hedge effectively by shifting weapons capabilities from one triad leg to another, if necessary, due to unexpected technological problems or operational vulnerabilities; retaining a delivery capability margin above the minimum-required nuclear force structure for the possible addition of nonnuclear, prompt-global strike capabilities that would be accountable within the treaty limits; and providing the basis for maintaining the needed strategic offensive capabilities over the next several decades or more, including retaining a sufficient cadre of trained military and civilian personnel and adequate infrastructure to support the strategic nuclear deterrence mission. Based on this analysis, the inclusion in the treaty of provisions for excluding conventional-only B–1B bombers and U.S. SSGN submarines from accountability under the New START Treaty, the New START definitions of "deployed" and "nondeployed" ICBMs and SLBMs, and the potential conversion of a subset of the B–52H fleet to a conventional-only capability, the Secretary of Defense, the Joint Chiefs of Staff, and the Commander, U.S. Strategic Command supported reductions to the central ceilings of 700 deployed strategic delivery vehicles and 800 deployed and nondeployed ICBM launchers, SLBM launchers, and nuclear-capable heavy bombers.

- In your opinion, how has the threat environment changed to allow the United States to negotiate down to 700 delivery vehicles?

Answer. Fundamental changes in the international security environment in recent years—including the growth of unrivaled U.S. conventional military capabilities, major improvements in U.S. missile defenses, and the easing of cold war rivalries—enable us to deter potential adversaries and reassure allies and partners at lower

nuclear force levels. The decision to agree to the limits of 700 deployed strategic delivery vehicles and 800 deployed and nondeployed ICBM launchers, SLBM launchers, and nuclear-capable heavy bombers was also based on the assumption that the Russian Federation would reduce its strategic nuclear forces to comply with the New START Treaty limits. U.S. strategic forces fielded within these limits were assessed to be sufficient to support an assured second strike capability that will meet the national nuclear deterrence guidance, provide a hedge capability in the event of unexpected technological problems, operational vulnerabilities, or a significant deterioration in the international security environment, retain a margin for possible fielding of conventionally armed prompt-global strike capabilities accountable within these limits under the New START Treaty, and maintain the necessary capabilities in personnel and infrastructure to support the New START-compliant U.S. strategic nuclear force.

Therefore, we were able to agree to the treaty's ceilings, assured that a U.S. strategic nuclear force fielded within these limits will be fully capable of sustaining stable deterrence and meeting our traditional deterrence and reassurance goals.

Question. How many strategic nuclear delivery vehicles will Russia need to destroy from its arsenal in order for Russia to meet the New START Treaty limit of 700 nuclear deployed ICBMs, SLBMs, and heavy bombers equipped to carry nuclear weapons?

Answer. A classified response to be provided separately.

Question. The New START Treaty contains a combined limit of 800 deployed and nondeployed ICBM launchers, SLBM launchers, and heavy bombers. In addition, the New START Treaty provides a separate limit of 700 deployed ICBMs, deployed SLBMs, and deployed heavy bombers.

- What was the purpose and reasoning for creating a separate category for deployable but not deployed missiles?
- What is the benefit and disadvantage of creating the separate category?

Answer. There is no separate category in the treaty for "deployable but not deployed missiles." While there is no limit on nondeployed ICBMs or SLBMs, there is an aggregate limit of 800 deployed and nondeployed ICBM launchers, deployed and nondeployed SLBM launchers, and deployed and nondeployed heavy bombers equipped for nuclear armaments, which is intended to limit the ability of the Parties to "break out" of the treaty limits by constraining the number of nondeployed ICBM and SLBM launchers and nondeployed heavy bombers available for deployment. Each Party must operate within this aggregate limit as it considers whether to build and store new launchers and heavy bombers, and whether to eliminate, convert, or retain older launchers and heavy bombers. Limiting "break out" capability is a measure that helps to ensure neither Party upsets the strategic stability between the United States and Russia that the treaty is intended to preserve.

Question. The New START Treaty contains a combined limit of 800 deployed and nondeployed ICBM launchers, SLBM launchers, and heavy bombers. In addition, the New START Treaty provides a separate limit of 700 deployed ICBMs, deployed SLBMs, and deployed heavy bombers.

- Why is there a different counting rule for bombers?

Answer. For the purposes of counting toward the aggregate limit of 700 for deployed ICBMs, deployed SLBMs, and deployed heavy bombers equipped for nuclear armaments, the counting rule is the same—each deployed ICBM, each deployed SLBM, and each deployed heavy bomber equipped for nuclear armaments is counted as one. Similarly, for the purposes of counting toward the aggregate limit of 800 for deployed and nondeployed ICBM launchers, SLBM launchers, and heavy bombers equipped for nuclear armaments, the counting rule is the same—each deployed or nondeployed ICBM launcher, each deployed or nondeployed SLBM launcher, and each deployed or nondeployed heavy bomber equipped for nuclear armaments is counted as one.

For the purposes of counting toward the 1,550 aggregate limit for warheads on deployed ICBMs and deployed SLBMs, and nuclear warheads counted for deployed heavy bombers, one nuclear warhead is counted for each deployed heavy bomber. This attribution rule was adopted because on a day-to-day basis neither the United States nor the Russian Federation maintains any nuclear armaments loaded on its deployed heavy bombers. If the counting approach adopted for deployed ballistic missiles had been applied to deployed heavy bombers, each deployed heavy bomber would have been counted with zero nuclear warheads. The New START Treaty approach strikes a balance between the fact that neither side loads nuclear armaments on its bombers on a day-to-day basis and the fact that these bombers, nonetheless,

have the capability to deliver nuclear armaments stored in nuclear weapons storage bunkers on or near their air bases.

Additionally, as was the case under START, the New START Treaty "discounts" bomber weapons because heavy bombers are considered to be more stabilizing than ICBMs or SLBMs because, as "slow-flyers" compared to ballistic missiles, they are not well suited to be used as first-strike weapons. Consequently, the number of weapons counted for bombers in arms control agreements has traditionally been much less than the bombers are capable of carrying, i.e., bomber weapons are "discounted" by the treaties.

Question. During Dr. Henry Kissinger's testimony before the Senate Committee on Foreign Relations, he emphasized the importance of understanding the needs for warheads and delivery vehicles in order to handle third party contingencies that may arise while still maintaining a credible deterrent position with Russia.

- What is the number of warheads needed to handle third party or country contingencies involving proliferation and terrorism while maintaining a credible nuclear deterrent with Russia? How many delivery vehicles are needed?

Answer. The Nuclear Posture Review analyses and deliberations concluded that the force levels permitted by the New START Treaty, as well as the maintenance of a stockpile of nondeployed nuclear warheads, would be sufficient to support U.S. deterrence requirements, including extended deterrence for our allies, against a range of potential adversaries in the current and projected international security environment.

- Was this information considered during the negotiations with Russia?

Answer. Yes.

TACTICAL WEAPONS

Question. Recently, Former Secretary James R. Schlesinger testified before this committee that the Russians have consistently resisted efforts to deal with the imbalance of tactical weapons. He stated that, "The likelihood of their being willing to do so in light of New START is sharply diminished, for we have now forfeited substantial leverage."

- Were tactical weapons addressed during the negotiations with Russia?
  - If so, what exactly was discussed during those negotiations? What did the United States propose regarding tactical weapons?
  - If not, why did the United States not push for tactical weapons to be a part of the treaty negotiations?
- Did the United States get a commitment from Russia to reduce tactical weapons?
- Did the United States get a commitment from Russia on initiating negotiations on tactical weapons?
- What would be the rationale for the United States to forfeit substantial leverage on this issue?

Answer. No. As agreed by Presidents Obama and Medvedev, the purpose of the New START Treaty was to reduce and limit the two nations' strategic offensive arms; therefore the issue of tactical nuclear weapons was not raised. A more ambitious treaty that addressed tactical nuclear weapons would have taken much longer to complete, adding significantly to the time before a successor agreement, including verification measures, could enter into force following START's expiration in December 2009. Because of their limited range and different roles, tactical nuclear weapons do not directly influence the strategic balance between the United States and Russia. Though numerical asymmetry in tactical nuclear weapons exists, this asymmetry must be considered within the context of our total nuclear and nonnuclear capabilities, including the strategic force levels as structured to conform to New START. President Medvedev has expressed interest in further discussions on measures to further reduce both nations' nuclear arsenals. We intend to raise strategic and nonstrategic/tactical nuclear weapons, including nondeployed nuclear weapons, in those discussions.

VIEWS FROM THE PENTAGON

WEDNESDAY, JUNE 16, 2010

U.S. SENATE,
COMMITTEE ON FOREIGN RELATIONS,
Washington, DC.

The committee met, pursuant to notice, at 9:35 a.m., in room SD–419, Dirksen Senate Office Building, Hon. John F. Kerry (chairman of the committee) presiding.

Present: Senators Kerry, Feingold, Casey, Shaheen, Kaufman, Lugar, and Risch.

OPENING STATEMENT OF HON. JOHN F. KERRY, U.S. SENATOR FROM MASSACHUSETTS

The CHAIRMAN. Good morning. The hearing will come to order. And thank you all for coming.

Today, we're pleased to welcome three individuals with long and distinguished careers in defense of American security. And they're here to testify about the United States nuclear posture, modernization of the nuclear weapons complex, and our missile defense plans.

Dr. James Miller is the Principal Deputy Under Secretary of Defense for Policy, advising Secretary Gates on a wide range of vital strategic issues. He has extensive experience, both inside and outside of government, on WMD security. Gen. Kevin Chilton is an accomplished Air Force officer, a pilot, and the rare witness who has flown on the space shuttle. He is now the Commander of U.S. Strategic Command in charge of America's nuclear deterrent. And Lt. Gen. Patrick O'Reilly is the Director of the Missile Defense Agency, which gives him responsibility for the systems that we're developing and deploying to protect America and our forces, and indeed even some other countries, from missile attack. He has also served as a physics professor, I might add, at West Point.

This is our eighth hearing on the New START Treaty. And members of the Obama administration, the treaty's negotiators, and many former officials, Republicans and Democrats, have urged us to ratify the New START agreement.

James Baker and William Perry said that ratifying the New START Treaty is crucial if few want to keep nuclear weapons out of the hands of rogue states and terrorists. Henry Kissinger and Stephen Hadley explained that New START is fundamental to the United States-Russian relationship. James Schlesinger called ratification "obligatory." And Brent Scowcroft warned that if we don't ratify the treaty, we'd throw all of our diplomatic efforts to control nuclear weapons into "a state of chaos."

Each of our witnesses has emphasized the importance of reinstituting the monitoring and verification measures that lapsed when the original START Treaty expired last December. I believe that all of the arguments that our witnesses have made are powerful arguments, and important with respect to the ratification process.

But, today's hearing is particularly important because we have the opportunity to talk with the people who are tasked with the operational details of both the offensive and defensive side of our nuclear strategy.

The New START Treaty limits offensive forces, but some of our colleagues have raised the question, with respect to the treaty, as to whether or not it might affect our missile defense plans.

From everything that I have heard—and I believe Senator Lugar would agree with me, that everything that we have heard from all of our witnesses—this treaty does not undercut our ability to protect our country from missile attack. It doesn't undercut us in any way whatsoever.

Numerous witnesses, including the Secretary of Defense and the Chairman of the Joint Chiefs of Staff, have testified that the treaty will not affect America's ability to defend itself from an Iranian or North Korean missile, now or in the future.

But, today we have an even better opportunity to ascertain opinion and judgment with respect to those issues, because we will hear from the head of the Missile Defense Agency. And we can pose the question, yet again, with respect to the potential of the treaty to pose any impediment to our missile defense plans.

Some members have also expressed concern about this issue because, in the preamble, the New START Treaty acknowledges the relationship between offensive forces and strategic defensive forces. I happen to believe that that's the most obvious sort of acknowledgment of an existing relationship that you could make without effect—and I mean without effect—despite the fact that the Russians have issued a unilateral statement saying that if our missile defenses ever threaten their deterrent, they could withdraw from the treaty. Well, they can. And so can we. And so could either party, historically, with the other treaties that we've been party to.

But, those aren't reasons to oppose the treaty and the verification measures and gains that we get with respect to our deterrence. Obviously, the preamble is not legally binding. And that should have some impact, I would think.

Finally, Secretary Gates testified before the committee: "Neither the last administration nor this one have any plans to build a missile defense that would undermine Russia's nuclear deterrent."

The New START Treaty is intended to strengthen strategic stability. It reduces the number of nuclear weapons that the United States and Russia deploy, while increasing the transparency and the predictability of strategic forces. Of course, as we reduce the number of nuclear weapons that we deploy, yes, it becomes even more crucial that we have the ability to maintain the safety and the reliability of our nuclear deterrent. That is why the Obama administration has submitted an $80-billion plan to maintain the effectiveness of our nuclear weapons and to revitalize our Nation's nuclear weapons infrastructure over the next decade.

What's more, the administration plans to invest $100 billion over the next 10 years to maintain and modernize our nuclear delivery systems. By any measure, that's a significant investment. And I'm particularly glad we have General Chilton here today to address the plans for our nuclear forces.

So, together, our witnesses today can explain the difficult work of maintaining America's strategic offenses and defenses, and state unequivocally why the New START Treaty improves America's security. This is an open hearing, but I would say, to any of the witnesses, if at some point that you need to reference sensitive material, we could move to a classified setting at the appropriate time, or at the end of the hearing even, in order to establish that record.

So, we thank you all for being here today. And we very much look forward to your testimony.

Senator Lugar.

OPENING STATEMENT OF HON. RICHARD G. LUGAR, U.S. SENATOR FROM INDIANA

Senator LUGAR. Well, thank you very much, Mr. Chairman.

Today, as you've mentioned, the committee holds its eighth open hearing—or rather, seventh open hearing, eighth hearing overall—on the New START Treaty, and we're fortunate to have before us three distinguished Defense Department witnesses who will discuss strategic modernization and missile defense: Dr. James Miller, Gen. Kevin Chilton, and Gen. Patrick O'Reilly.

The New START Treaty comes to the Senate at a time when Senators also are considering a new Nuclear Posture Review, a Ballistic Missile Defense Review, and the implications of the Obama administration's phased adaptive approach to missile defense in Europe.

Article V of the New START Treaty explicitly provides that, "Modernization and replacement of strategic offensive arms may be carried out." The treaty is an opportunity for the Senate and the administration to engage in a serious debate about future plans for our nuclear warheads and their delivery vehicles.

In September 2008, General Chilton and Admiral Mullen wrote, "The United States is the only nuclear-weapons state not currently modernizing its nuclear capabilities and supporting infrastructure." The United States has not produced a new Minuteman ICBM since 1975. And the last new B–52 bomber was produced in 1964. Indeed, under the current plan, the B–52 will have been flying for 80 years when it's finally retired. The United States has not tested a nuclear weapon since 1992, and, unlike Russia and China, extends the lifetimes of its warheads through selective replacement, refurbishment, and recertification.

With the New START Treaty, the administration submitted a 10-year modernization plan as it was required to do under section 1251 of the National Defense Authorization Act for Fiscal Year 2010. The plan notes that, over the next decade, $80 billion will be invested in sustainment and modernization of a nuclear weapons complex, and $100 billion in nuclear weapons delivery systems. Most funding on the 1251 report would go to sustaining existing warheads and delivery vehicles, not building new ones.

The Nuclear Posture Review states that this administration will "give strong preference to options for refurbishment or reuse." Replacement of nuclear warhead components would be "undertaken only if critical. The stockpile management program goals could not otherwise be met, and it is specifically authorized by the President and approved by the Congress."

Greater discussion is warranted, in Congress and the executive branch, about modernization of nuclear delivery systems beyond the 10 years covered in the 1251 report. We have some time to consider options now, but we should be planning how to respond to the decline of multiple systems. For example, there is no clear plan for the maintenance of a nuclear-capable air-launched cruise missile for our heavy bombers. With each bomber accounting for just one warhead under the New START, bombers would play an especially important and stabilizing role in our nuclear triad of air-, land-, and sea-based nuclear forces.

We also have a chance today to explore the military considerations related to missile defense. Last September, President Obama announced that plans to build a so-called "third site," for ground-based midcourse interceptor missiles in Poland and a supporting radar installation in the Czech Republic were to be scrapped. Instead, the United States will focus on a phased adaptive approach that would provide, according to the administration, more capability in a shorter period of time against more mature Iranian short- and medium-range ballistic missile threats.

Yesterday, our treaty negotiators told us that missile defense language, including the unilateral Russian and American statements accompanying the New START Treaty, in no way inhibits future missile defense deployments, and that there are no secret deals with Moscow on missile defense. General O'Reilly and Dr. Miller both have spoken to Russian officials about our missile defense plans and programs. I'm hopeful they will establish a clear outline of discussions in this area.

Again, I thank our witnesses for testifying today. And I look forward to their insights.

I thank you, Mr. Chairman.

The CHAIRMAN. Thank you very much, Senator Lugar.

Secretary Miller, if you would lead off, General Chilton, and then General O'Reilly. Thank you.

STATEMENT OF DR. JAMES N. MILLER, JR., DEPUTY UNDER SECRETARY OF DEFENSE FOR POLICY, DEPARTMENT OF DEFENSE, WASHINGTON, DC

Dr. MILLER. Mr. Chairman, Senator Lugar, thank you for the opportunity to testify.

It is a pleasure to join General Chilton——

The CHAIRMAN. Pull the mic up a little closer to you. Thanks.

Dr. MILLER. OK.

The CHAIRMAN. Just pull it up—if you bend it there.

Dr. MILLER. Is this better, sir?

The CHAIRMAN. Bend the mic up. Yes, there you go. Good.

Dr. MILLER. OK.

The CHAIRMAN. Thanks.

Dr. MILLER. Mr. Chairman, Senator Lugar, thank you for the opportunity to testify. It is a pleasure to join General O'Reilly and General Chilton here today.

The committee asked for a Department of Defense perspective on the New START Treaty, so let me provide that up front.

DOD's view of the treaty is that it will allow us to sustain effective deterrence and strengthen strategic stability with Russia at reduced force levels. It will improve transparency and mutual confidence with key data exchange and verification provisions. It will enable the United States to retain and modernize a robust triad of strategic delivery systems. It will allow us the freedom to mix our strategic forces over time. And it will protect our ability to deploy nonnuclear capabilities, including prompt global strike and ballistic missile defenses. In short, the New START Treaty will make the United States and our allies and partners more secure.

I'd like to briefly summarize some highlights of my prepared statement and then ask that the full statement be entered into the record.

The CHAIRMAN. The full statement of each witness will be placed in the record as if read in full. And we'll appreciate your summary comments.

Dr. MILLER. Thank you.

An early priority of the year-long Nuclear Posture Review, which concluded in April, was to develop U.S. positions for the New START Treaty negotiations. The Secretary of Defense, the Joint Chiefs of Staff, General Chilton were all deeply involved in the NPR and all deeply involved in decisions on New START Treaty limits.

The NPR's early, extensive, and continued attention to New START produced guidance to negotiators that ensured the treaty would meet key strategic objectives for the United States. In particular, I'd like to note several.

First, the treaty's limits of 1,550 accountable warheads will allow the United States to sustain effective nuclear deterrence, including sufficient survivable nuclear forces for an assured devastating second-strike capability.

Second, the treaty's limit of 700 deployed ICBMs, SLBMs, and heavy bombers will support strategic stability by allowing the United States to retain a robust triad.

The treaty's limit of 800 deployed and nondeployed launchers of ICBMs, launchers of SLBMs, and nuclear-capable heavy bombers, combined with additional New START provisions—for example, allowing conversions of bombers to a conventional-only role—will allow the United States to minimize irreversible changes to our strategic force structure.

Fourth, by providing the freedom to mix U.S. strategic forces, the treaty will allow us to rebalance, as necessary over the timeline of the treaty, to adapt to any future technical or geopolitical changes that could affect a given leg of the triad.

Fifth, the treaty allows us to maintain our stockpile of nondeployed warheads in an upload capacity with our strategic delivery systems, which provide a hedge against adverse technical developments or a serious deterioration in the international security environment.

The treaty's data exchange and verification provisions will increase transparency and confidence in the numbers and status of Russia's nuclear forces without imposing significant burdens on our ability to operate United States nuclear forces. And, as noted before, the treaty does not constrain our ability to develop and deploy nonnuclear prompt global strike capabilities, nor does the treaty constrain our ability to develop and deploy effective missile defenses.

The Department has developed a baseline force plan for New START that fully supports U.S. security requirements without requiring any changes to current or planned basing arrangements. I'd like to say, very briefly, what this baseline force involves. It includes retaining all 14 current *Ohio*-class strategic submarines, and deploying no more than 240 Trident II D5 SLBMs. It also includes retaining up to 420 deployed Minuteman II—Minuteman III, excuse me—ICBMs, all with a single warhead. And finally, the baseline force includes up to 60 nuclear-capable B–2 and B–52 heavy bombers, while converting remaining B–1B and some B–52H heavy bombers to a conventional-only capability, under which they won't be accountable under the treaty's central limits.

And, as was noted by Senator Lugar, over the next decade DOD plans to invest well over $100 billion to sustain exiting strategic delivery systems and capabilities, and to modernize these systems, and, as the chairman noted, over $80 billion to sustain our nuclear infrastructure and our nuclear stockpile.

DOD is currently studying the appropriate mix of long-range strike capabilities, including heavy bombers, as well as nonnuclear prompt global strike systems, in follow-on analysis to the Quadrennial Defense Review and to the NPR. The results of this ongoing work will be reflected in the Department's FY12 budget submission.

While our analysis of nonnuclear prompt global strike is still underway, DOD has concluded that any deployment of conventionally armed ICBMs or SLBMs with a traditional trajectory, which would count under the treaty limits, should be limited to a niche capability. That's based on military considerations. The required number could easily be accounted for under the treaty's limits while still retaining a robust nuclear triad.

DOD is also exploring the potential of conventionally armed long-range systems that fly a nonballistic trajectory; for example, boost-glide systems. We are confident that such nonnuclear systems, which do not otherwise meet the definitions for the New START Treaty, would not be accountable as "new kinds of strategic offensive arms" for the purposes of the treaty.

Maintaining an adequate stockpile of safe, secure, and effective nuclear warheads is a core U.S. objective identified in the 2010 Nuclear Posture Review and requires a reinvigoration of our nuclear security enterprise. The New START Treaty does not in any way constrain our ability to pursue the additional investments needed, and the administration is committed to doing so.

Now on ballistic missile defenses, where General O'Reilly will add some additional information. The New START Treaty does not constrain the United States from deploying the most effective missile defenses possible, nor does it add any additional cost or incon-

venience. It enables this President and his successors to develop the missile defenses needed to defend the Nation, our deployed forces abroad, and our allies and partners, from the threat of ballistic missile attack.

The New START Treaty's preamble states that there is an interrelationship between strategic offensive and strategic defensive arms, and that strategic defensive forces do not threaten to undermine the effectiveness of either party's strategic offensive arms. Given that the United States has only 30 ground-based interceptors—and with the past administration, it was 44—the same statement would be true—and that Russia will likely field well over 1,000 ICBM and SLBM warheads under the treaty, missile defenses of the United States can increase very significantly, and the same would be true: no effect on stability.

It's also important to note that the preamble does not require the United States to anything, nor does it prohibit anything.

Article V of the treaty prohibits any future conversion of ICBM silos or SLBM launchers to house and launch BMD interceptors, or vice versa. As LTG O'Reilly will explain further, such conversion would be neither cost-effective nor necessary. Consequently, the Article V limitation on launcher conversion does not constrain the realistic options available to this or any future President.

As was noted, Russia made a unilateral statement about missile defense, in connection with this treaty. It's not—this statement is not part of the treaty and not legally binding.

The United States also made a unilateral statement associated with New START which makes clear that our missile defense systems are not intended to affect the strategic balance with Russia, and that we will continue to improve our missile defense capabilities to provide for effective missile defenses against limited attacks.

As the 2010 Ballistic Missile Defense Review, our budgetary plans, the U.S. unilateral statement, extensive testimony by administration officials, and other public statements make clear, the United States can and will continue to expand and improve missile defenses, as necessary.

One final issue I'd like to raise. Some have asked whether if Russia were to again deploy a rail-based ICBM, such as its former rail-based SS–24, if that system would be accountable under New START. The answer is "Yes." The treaty's central terms and definitions cover all ICBMs and all ICBM launchers, which would, therefore, include any rail-mobile systems. In the event that Russia deploys rail-mobile ICBMs in the future, the launchers and the ICBMs they carry would be—and the warheads, as well—would be accountable under the New START Treaty.

In conclusion, the New START Treaty is strongly in the national security interests of the United States. The Department of Defense fully supports the treaty.

Thank you. And I look forward to answering your questions.

[The prepared statement of Dr. Miller follows:]

PREPARED STATEMENT OF DR. JAMES N. MILLER, JR., DEPUTY UNDER SECRETARY OF DEFENSE FOR POLICY, DEPARTMENT OF DEFENSE, WASHINGTON, DC

Mr. Chairman, Senator Lugar, distinguished members of the committee, thank you for the opportunity to testify today. It is a pleasure to join Gen. Kevin Chilton,

commander of U.S. Strategic Command, and Lt. Gen. Patrick O'Reilly, Director of the Missile Defense Agency, in discussing the New Strategic Arms Reduction Treaty (START) and key military capabilities, including our strategic nuclear force structure, nonnuclear prompt global strike, and ballistic missile defenses.

The New START Treaty will strengthen strategic stability with Russia at reduced nuclear force levels, improve transparency with key data exchange and verification provisions, enable the United States to retain and modernize a robust triad of strategic delivery systems, allow the freedom to alter our mix of strategic forces over time, and protect our ability to develop and deploy non-nuclear prompt global strike and missile defenses. In short, the New START Treaty will make the United States, and our allies and partners, more secure.

NUCLEAR POSTURE REVIEW AND NEW START

An early priority of the year-long 2010 Nuclear Posture Review (NPR) was to develop U.S. positions for the New START negotiations, including how many strategic delivery vehicles and deployed warheads were needed to field an effective, credible, and flexible nuclear deterrent for the duration of the treaty. The Secretary of Defense, the Joint Chiefs of Staff, and General Chilton were all deeply involved in the NPR, and in decisions on New START Treaty limits.

The NPR's early, extensive, and continued attention to New START resulted in guidance to negotiators that ensured the treaty would meet key strategic objectives for the United States. In particular:

- The treaty's limit of 1,550 accountable warheads will allow the United States to sustain effective nuclear deterrence, including sufficient survivable nuclear forces for an assured devastating second-strike capability.
- The treaty's limits of 700 deployed intercontinental ballistic missiles (ICBMs), submarine launched ballistic missiles (SLBMs), and nuclear-capable heavy bombers will support strategic stability by allowing the United States to retain a robust triad of strategic delivery systems—while downloading all Minuteman III ICBMs to a single warhead.
- The treaty's limit of 800 deployed and nondeployed launchers of ICBMs, launchers of SLBMs, and nuclear-capable heavy bombers will allow the retention of up to 100 ICBM and SLBM launchers, and nuclear-capable bombers, in a nondeployed status. When combined with the New START counting rule that a launcher is deployed only when mated with a missile, and the treaty's provisions on conversion of heavy bombers to a conventional-only configuration, this will allow the United States to minimize irreversible changes to nuclear force structure.
- By providing the freedom to mix U.S. strategic nuclear forces as we see fit, the treaty will allow the United States to rebalance its strategic forces as necessary to adapt to any future technical and geopolitical challenges that could affect a given leg of the triad.
- The treaty allows us to maintain our stockpile of nondeployed warheads and an "upload" capacity for strategic delivery systems, which provide a hedge against adverse technical developments or a serious deterioration in the international security environment. More broadly, the treaty does not in any way constrain the ability of the United States to sustain our nuclear weapons stockpile, and rebuild the nuclear security enterprise that supports it.
- The treaty's data exchange and verification provisions will increase transparency and confidence in the numbers and status of Russia's nuclear forces, without imposing significant burdens on our ability to operate U.S. nuclear forces.
- As I will discuss in more detail, the treaty does not constrain our ability to develop and deploy non-nuclear prompt global strike capabilities.
- As I will also discuss in more detail, the treaty does not constrain the ability of the United States to develop and deploy effective ballistic missile defenses, including the ability to improve these defenses both qualitatively and quantitatively.

U.S. NUCLEAR FORCE STRUCTURE UNDER NEW START

The Department of Defense has developed a baseline nuclear force structure that fully supports U.S. security requirements without requiring changes to current or planned basing arrangements. Specifically, under baseline plans, the administration plans to field a force that meets New START limits by:

- Retaining 14 *Ohio* class SSBNs and deploying no more than 240 Trident II D5 SLBMs at any time.
- Retaining up to 420 deployed Minuteman III ICBMs, all with a single warhead.

- Retaining up to 60 nuclear-capable B–2A and B–52H heavy bombers, while converting remaining nuclear-capable B–1B and some B–52H heavy bombers to conventional-only capability.

This force structure—which provides a basis for future planning—affords the flexibility to make appropriate adjustments as necessary.

The Department of Defense plans to sustain and modernize U.S. strategic delivery capabilities, as outlined in detail in the classified report submitted to Congress in response to section 1251 of the National Defense Authorization Act of 2010. To this end, over the next decade, the United States will invest well over $100 billion to sustain existing strategic delivery systems capabilities and modernize some strategic systems.

NONNUCLEAR PROMPT GLOBAL STRIKE

DOD is currently studying the appropriate long-term mix of long-range strike capabilities, including heavy bombers as well as nonnuclear prompt global strike systems, in follow-on analysis to the 2010 Quadrennial Defense Review and the NPR. The results of this ongoing work will be reflected in the Department's fiscal year 2012 budget submission.

The deployment of a nonnuclear prompt global strike system would provide the United States with a capability that we currently lack: the ability to hit a target anywhere on the earth in less than 1 hour using a nonnuclear warhead. At the same time, depending on technical and operational details, such systems could raise a number of challenges, including potential overflight of other countries, and the ability to distinguish the launch of nonnuclear as opposed to nuclear-armed systems.

While our analysis of nonnuclear prompt global strike is still underway, DOD has concluded that any deployment of conventionally armed ICBMs or SLBMs, which would count under the treaty's limits, should be limited to a niche capability. For example, if the Conventional Trident Modification program were deployed, it would involve two missiles for each of 12 to 14 submarines, or 24–28 strategic delivery vehicles total. This number of SDVs could easily be accounted for under the limit of 700 deployed SDVs under the treaty, while still retaining a robust nuclear triad.

DOD is also exploring the potential of conventionally armed, long-range systems not associated with an ICBM or SLBM that fly a nonballistic trajectory (e.g., boost-glide systems). Such systems would have the advantage that they could "steer around" other countries to avoid overflight and have flight trajectories distinguishable from an ICBM or SLBM. We would not consider such nonnuclear systems that do not otherwise meet the definitions of the New START Treaty to be accountable as "new kinds of strategic offense arms" for the purposes of the treaty.

SUSTAINING THE NUCLEAR WEAPONS STOCKPILE AND INFRASTRUCTURE

In addition to sustaining U.S. delivery systems, maintaining an adequate stockpile of safe, secure, and reliable nuclear warheads is a core U.S. objective identified in the 2010 NPR, and requires a reinvigoration of our nuclear security enterprise. To this end, the Department of Defense transferred $4.6 billion of its top-line to the Department of Energy's National Nuclear Security Administration (NNSA) through fiscal year 2015. This transfer will assist in funding critical nuclear weapons life extension programs and efforts to modernize the nuclear weapons infrastructure. The initial applications of this funding, along with an additional $1.1 billion being transferred for naval nuclear reactors, are reflected in the Defense and Energy Departments' FY 2011 budget requests. The NNSA budget request for weapons activities for FY 2011 represents a 10-percent increase over FY 2010, and increased funding levels are planned for the future, as reflected in the administration's recent section 1251 report.

BALLISTIC MISSILE DEFENSES

As made clear in the report of the 2010 Ballistic Missile Defense Review, the ballistic missile threat to our deployed military forces and to our allies and partners is growing rapidly, with significant implications for our ability to project power abroad, to prevent and deter future conflicts, and to prevail should deterrence fail. One of the most significant threats to the U.S. homeland is the continued efforts of Iran and North Korea to develop weapons of mass destruction and long-range ballistic missiles to deliver them. The protection of the United States, our deployed forces, and our allies and partners from the threat of ballistic missile attack is a critical national priority.

A core U.S. aim during the New START negotiations was to protect the U.S. ability to deploy the most effective missile defenses possible. U.S. negotiators achieved

this objective. The New START Treaty does not constrain the United States from deploying the most effective missile defenses possible, nor does it add any additional cost or inconvenience. Rather, the treaty enables this President and his successors to develop the missile defenses needed to defend the Nation, our deployed forces abroad, and our allies and partners from the threat of ballistic missile attack.

The New START Treaty addresses missile defenses in two places: the Preamble and Article V. First, the Preamble of the Treaty states that there is an interrelationship between strategic offensive and strategic defensive arms, and that current strategic defensive forces do not threaten to undermine the effectiveness of the Parties' strategic offensive arms. Given that the United States has only 30 Ground Based Interceptors and Russia will likely field well over 1,000 ICBM and SLBM warheads under the treaty, U.S. missile defenses can increase very significantly and the same would remain true. It is also important to note that the treaty's Preamble statement does not require or prohibit either side from doing anything.

Second, Article V of the treaty prohibits any future conversion of ICBM silos or SLBM launchers to house and launch BMD interceptors—or vice versa. As Lieutenant General O'Reilly will explain further, such conversion would be neither cost-effective nor necessary. For example, converting 10 ICBM silos to house GBIs would cost about $550 million, compared to $360 million for building 10 new silos. The placement of midcourse missile defense interceptors in converted SLBM launchers would be operationally impractical and very expensive. Consequently, the Article V limitation on launcher conversion does not constrain U.S. plans or programs.

In addition, Russia made a unilateral statement about missile defense in connection with the treaty. This statement is not part of the treaty and is not legally binding.

The United States also made a unilateral statement associated with the New START Treaty, which makes clear that our missile defense systems are not intended to affect the strategic balance with Russia, and that we will continue to improve our missile defense capabilities to provide for effective defense of our homeland against limited missile attacks and of our deployed forces, allies, and partners against growing regional threats. We have also explained that the missile defense capabilities associated with the European Phased Adaptive Approach will not affect the United States-Russian strategic balance.

As the 2010 Ballistic Missile Defense Review, our budgetary plans, and the U.S. unilateral statement made in connection with New START all make clear, the United States will continue to expand and improve missile defenses as necessary.

ACCOUNTABILITY OF RAIL MOBILE ICBMS AND THEIR LAUNCHERS

Before concluding, I would like to address an additional issue that has arisen recently regarding the treaty. Some have asked whether a Russian rail-mobile ICBM system, should Russia again deploy a system such as its former rail-based SS–24, would be accountable under New START. The answer is yes. Such systems were not specifically addressed in the treaty because, unlike the situation when the previous START Treaty was being negotiated, neither party currently deploys rail-mobile ICBMs. Nevertheless, the treaty's terms and definitions cover all ICBMs and ICBM launchers, including railmobile systems. Therefore, in the event that Russia deploys rail-mobile ICBMs in the future, the launchers and the ICBMs they carry would be accountable under the New START Treaty.

CONCLUSION

The New START Treaty promotes stability and transparency in our strategic relationship with the Russian Federation. It allows us to maintain and modernize a robust triad of strategic delivery systems, and if desired, deploy nonnuclear prompt global strike capabilities. The New START Treaty does not affect our ability to revitalize our nuclear security enterprise or improve our ballistic missile defense capabilities both qualitatively and quantitatively. For these reasons, the Department of Defense fully supports this agreement.

The CHAIRMAN. Thank you, Secretary Miller.

General Chilton.

STATEMENT OF GEN. KEVIN P. CHILTON, USAF, COMMANDER, UNITED STATES STRATEGIC COMMAND, OFFUTT AIR FORCE BASE, NE

General CHILTON. Chairman Kerry, Senator Lugar, it's truly a pleasure to appear before your committee and testify here today.

It's also a great pleasure to testify again with Dr. Miller, whom I've testified with before—and also with Lieutenant General O'Reilly. These two great gentlemen have worked very important national security issues for our country, and I'm always pleased to be in their presence.

Mr. Chairman, I want to begin by assuring you that I was fully consulted during the treaty negotiation process, and I support ratification of New START.

Today, I would like to briefly discuss three reasons why our Nation will be safer and more secure with this treaty than without it, and to highlight current challenges that must be addressed to ensure the long-term safety, security, and effectiveness of the U.S. strategic deterrent.

Mr. Chairman, throughout the Nuclear Posture Review process and New START negotiations, U.S. Strategic Command's team played important analytic and advisory roles. As the combatant command responsible for strategic deterrence planning, advocating for related capabilities, and executing operations at the President's direction, no military organization has a greater interest in the treaty's specifics than we do. The breadth and depth of our involvement gives me great confidence that both the NPR and START bodies of work enhance America's ability to continue to deter potential adversaries, assure our allies, and sustain strategic stability.

I believe that there are three reasons why the New START agreement represents a positive step forward.

First, New START limits the number of Russian ballistic missile warheads and strategic delivery vehicles that can target the United States.

Second, New START retains sufficient flexibility in managing our deterrent forces to hedge against technical or geopolitical surprise.

And third, New START will reestablish the strategic nuclear arms control verification regime that provides access to Russian nuclear forces and a measure of predictability in Russian force deployments over the life of the treaty.

It is equally important, I believe, to remember what New START will not do. Secretary Gates noted here last month that the treaty will not constrain the United States from deploying the most effective missile defenses possible, nor impose additional cost or barriers on those defenses.

As the combatant command also responsible for synchronizing global missile defense plans, operations, and advocacy, I note that this treaty does not constrain any current missile defense plans.

In closing, let me say a word about the need to sustain a safe, secure, and effective nuclear deterrent. As Secretary Gates also noted in his statement before you last month, America's nuclear arsenal remains a vital pillar of our national security, deterring potential adversaries and reassuring allies and partners. Today the deterrent is indeed safe, secure, and effective. But, it is also in need.

The Nuclear Posture Review and administration plans recognize needs in infrastructure, human capital, life extensions, and delivery platform developments, and they include support for improving our nuclear enterprise, sustaining today's nuclear triad of delivery platforms, and exploring future triad platforms.

In order to sustain the deterrent and implement the NPR, we must commit to long-term investment—investments that begin with several increases outlined in the President's fiscal year 2011 budget—most notably, a 13-percent increase in NNSA funding, full-rate production of the W76–1 warhead for our submarine leg of the triangle, full-scope nuclear and nonnuclear life extensions of the B–61 bomb to sustain its strategic deterrent and extended deterrent roles, and initiating studies to develop life-extension options for the W–78 ICBM warhead. These investments are not only important, they are essential, in my view.

Chairman, thank you, again, for the opportunity to be here with you today. And I look forward to your questions during this session.

[The prepared statement of General Chilton follows:]

PREPARED STATEMENT OF GEN KEVIN P. CHILTON, USAF, COMMANDER, UNITED STATES STRATEGIC COMMAND, OFFUTT AIR FORCE BASE, NE

INTRODUCTION

Chairman Kerry, Senator Lugar, and members of the committee, thank you for the opportunity to meet with you today. United States Strategic Command was closely consulted before and during negotiations on the New Strategic Arms Reduction Treaty (START), and I look forward to discussing the treaty with you today. I would like to note at the outset how proud I am of the extraordinary work the command performed in support of these negotiations. We have an amazing team, and their diligence, expertise, and tireless work continue to ensure our ability to deliver global security for America.

NEW START

New START will enhance the security of the United States of America, and I support its ratification. Our Nation will be safer and more secure with this treaty than without it. Let me briefly explain why, from the perspective of the combatant commander responsible for planning and executing strategic deterrence and nuclear operations.

First, New START limits the number of Russian ballistic missile warheads that can target the United States, missiles that pose the most prompt threat to our forces and our nation. Regardless of whether Russia would have kept its missile force levels within those limits without a New START treaty, upon ratification they would now be required to do so. The New START bomber counting rules are unlikely to result in a reduction in Russian nuclear bomber forces, but these platforms have much less potential to be destabilizing, and we will retain the option to sustain equivalent capabilities.

Second, New START retains sufficient flexibility in managing our deterrent forces to hedge against technical or geopolitical surprise. To support the New START negotiation effort, U.S. Strategic Command analyzed the required nuclear weapons and delivery vehicle force structure and posture to meet current guidance. The options we provided in this process focused on ensuring America's ability to continue to deter potential adversaries, assure our allies, and sustain strategic stability for as long as nuclear weapons exist. This rigorous approach, rooted in deterrence strategy and assessment of potential adversary capabilities, supports both the agreed upon limits in New START and recommendations in the Nuclear Posture Review (NPR). We will retain a triad of strategic nuclear delivery systems, and if we have a technical failure in one of our nuclear systems, we can rearrange our deployed force posture and structure within the treaty limits to compensate.

Third, New START will reestablish a strategic nuclear arms control verification regime that provides intrusive access to Russian nuclear forces and a measure of predictability in Russian force deployments over the life of the treaty. Such access and predictability contribute to our ability to plan confidently our own force modernization efforts and our hedging strategy. Without New START, we would rapidly lose insight into Russian strategic nuclear force developments and activities, and our force modernization planning and hedging strategy would be more complex and more costly. Without such a regime, we would unfortunately be left to use worst-case analyses regarding our own force requirements. Further, we would be required

increasingly to focus low density/high demand intelligence collection and analysis assets on Russian nuclear forces.

DETERRENCE CAPABILITIES

The nuclear enterprise remains, today and for the foreseeable future, the foundation of U.S. deterrence strategy and defense posture. The NPR recognizes this and makes a series of recommendations that I strongly urge the Congress to fully support. Specifically, the NPR recommends moving forward with a number of nuclear enterprise sustainment projects, including strengthening our nuclear command and control structure; continuing development and deployment of our triad of delivery systems; maintaining a safe, secure, and effective stockpile; and revitalizing the National Nuclear Security Administration's aging infrastructure. America's triad of diverse and complementary delivery systems provides unique synergies that make our deterrent highly credible and resilient in the face of a variety of potential technological and geopolitical developments. The NPR endorses DOD efforts to explore future triad systems, specifically to extend the Minuteman III ICBM through 2030 and conduct studies now to inform decisions on a follow-on ICBM; to replace the *Ohio* class SSBN at end of life for existing ships; and to study future long-range bomber capabilities. It also supports moving forward with full rate production for the W76–1 warhead for our submarine leg of the triad; full-scope life extension of the B61 bomb (including enhancing safety, security, and use control) to sustain its strategic deterrence and extended deterrence roles; and initiating studies to develop life extension options for the W78 ICBM warhead, including the possibility of also adapting the resulting warhead for sea launched ballistic missiles and thereby reducing the number of warhead types.

Additionally, the NPR and the President's budget recognize the need to improve, sustain, and ensure all necessary elements of a safe, secure, and effective deterrence enterprise, including weapons, delivery systems, warning and communications capabilities, and their supporting human capital and technological infrastructures, and to make sustained investments to adequately preserve these capabilities for the foreseeable future. These investments are required in order to confidently reduce the overall U.S. stockpile while sustaining the credibility of our nuclear stockpile, which is fundamental to effective deterrence. Investments that revitalize NNSA's aging infrastructure and intellectual capital strengthen our security with the facilities and people needed to address technological surprises, geopolitical change, and a range of cutting-edge national security challenges. In order to sustain the deterrent and implement the NPR, we must commit to long-term investments that begin with several increases outlined in the President's Fiscal Year 2011 Budget, most notably a 13-percent increase in NNSA funding. These investments are not only important—they are essential.

CLOSING

Every day, U.S. Strategic Command remains focused on providing the President and future Presidents with the options and flexibility needed for deterrence. Today, our deterrent is safe, secure, and effective; our forces are trained and ready; and the Command is faithfully and fully carrying out its mission each and every day. I am confident that the combination of New START ratification, implementation of the NPR's recommendations, and funding of associated investments will enable the men and women of U.S. Strategic Command to continue delivering global security for America today and in the future. Thank you again for the opportunity to testify before this committee.

The CHAIRMAN. Thank you, General.

General O'Reilly.

STATEMENT OF LTG PATRICK J. O'REILLY, USA, DIRECTOR, MISSILE DEFENSE AGENCY, WASHINGTON, DC

General O'REILLY. Good morning, Chairman Kerry and Senator Lugar.

It is an honor to testify before you today on the impact of New START on the U.S. missile defense program.

The Department of Defense's recent Ballistic Missile Defense Review set our objectives for developing and fielding increasingly more capable sensors, ground-based midcourse defense, terminal

high-altitude area defense, Aegis ballistic missile defense, and international missile defenses, to counter the growing global proliferation of ballistic missiles.

The U.S. missile defense program includes developing new space-based sensors, expanding our command-and-control networks, improving our ground-based interceptor reliability and testing, and giving the Aegis system a capability against future intercontinental ballistic missiles launched from today's regional threats, to increase the robustness of our homeland defense.

Throughout the treaty negotiations, I frequently consulted with the New START team on all potential impacts to missile defense. The New START does not constrain our plans to execute the U.S. missile defense program. Although Article V of the New START prohibits the conversion of ICBM or submarine-launched ballistic missiles—launchers—to missile defense launchers, while grandfathering five former ICBM silos already converted for launching ground-based interceptors, MDA has never had a plan to convert additional ICBM silos.

In 2002, we first began converting ICBM silos to operational silos for launching ground-based interceptors because we had not yet developed a silo specific for GBI launches. Since then, we have developed a GBI silo that costs $20 million less than converting ICBM silos, and is easier to protect and maintain. Likewise, the conversion of submarine-launched ballistic missiles, or SLBMs, into missile-defense interceptors, or the modification of submarines to carry missile defense interceptors, would be very expensive and impractical. Furthermore, submerged submarines are not easily integrated into our missile defense command-and-control network.

The New START Treaty actually reduces previous START Treaty's constraints on developing a missile defense program, in several areas. For example, MDS's intermediate-range target booster system, used in key tests to demonstrate homeland defense capabilities, and components of the new European phased adaptive approach, are accountable under the previous START Treaty because it employed the first stage of the now-retired Trident I SLBM. Under New START, the Trident I missile is not accountable, so we will have greater flexibility in using it as a missile defense test target with regards to launcher locations, telemetry collection, and data processing; thus, allowing more efficient test architectures and operationally realistic intercept geometries.

Thank you, Mr. Chairman. And I look forward to answering the committee's questions.

[The prepared statement of General O'Reilly follows:]

PREPARED STATEMENT OF LTG PATRICK J. O'REILLY, USA, DIRECTOR, MISSILE DEFENSE AGENCY, WASHINGTON, DC

Good morning, Chairman Kerry, Senator Lugar, other distinguished members of the committee. It is an honor to testify before you today on the impact of the New START Treaty on the U.S. missile defense program.

The Department of Defense's recent Ballistic Missile Defense Review set our objectives for developing and fielding increasingly more capable sensors, Ground-Based Midcourse Defense, Terminal High Altitude Area Defense, Aegis Ballistic Missile Defense, and international missile defenses to counter the growing global proliferation of ballistic missiles. The program includes developing new space-based sensors, expanding our command and control networks, improving Ground-Based Interceptor (or GBI) reliability and testing, and giving the Aegis system a capability

against future ICBMs launched from today's regional threats, to increase the robustness of our homeland defense.

Throughout the treaty negotiations, I frequently consulted the New START team on all potential impacts to missile defense. The New START Treaty does not constrain our plans to execute the U.S. Missile Defense program. Although the new treaty prohibits the conversion of ICBM or Submarine Launched Ballistic Missile (SLBM) launchers to missile defense launchers while "grandfathering" the five former ICBM silos at Vandenberg Air Force Base (VAFB) already converted for Ground-Based Interceptors, MDA never had a plan to convert additional ICBM silos at VAFB. In 2002, we began converting ICBM silos to operational silos for launching GBIs because we had not developed a silo specifically for GBIs at that time. Since then, we have developed a GBI silo that costs $20M less than converting ICBM silos and is easier to protect and maintain.

Likewise, the conversion of Submarine Launched Ballistic Missiles into missile defense interceptors, or the modification of our submarines to carry missile defense interceptors, would be very expensive and impractical. Furthermore, submerged submarines are not easily integrated into our missile defense command and control network.

The New START Treaty reduces constraints on the development of the missile defense program in several areas. For example, MDA's intermediate-range LV–2 target booster system, used in key tests to demonstrate homeland defense capabilities and components of the new European Phased Adaptive Approach, was accountable under the previous START Treaty because it employed the first stage of the now-retired Trident I SLBM. Under New START, this missile is not accountable, thus we will have greater flexibility in conducting testing with regard to launch locations, telemetry collection, and processing, thus allowing more efficient test architectures and operationally realistic intercept geometries.

The CHAIRMAN. Thank you very much, all of you, for your testimony, which is helpful.

Let me just try to just bear in on a few points particularly relevant to the ratification process.

I'd like to ask both the Generals, in their role as active commanders of relevant commands, to address this issue: General Chilton and General O'Reilly, as this negotiation began, as we reentered the discussions with the Russians about New START, did each of you have a specific set of concerns which you articulated to the negotiators? And, if so, were those concerns met in the course of the negotiations?

General Chilton.

General CHILTON. Chairman, I guess I would say that I didn't have any particular concerns that I transmitted. Our job was to support the negotiations. And I guess I would say my concerns were more internal to DOD as we started to think about where we wanted to go, both with NPR and START. And if you recall, maybe 2 years ago, there were initial ideas of just putting numbers on the table, so let's reduce the total force to 1,000. And my position was, don't give me a number, give me a strategy and a policy that you want me to execute. Let us do the analysis, and we'll come back and tell you what it will take to do that. And that, at the end of the day, was the approach that we took, that the Department took.

And so, that allowed us to do the military analysis to support the civilian leadership guidance and present that forward so that as the negotiators went into negotiation, they had solid underpinnings for the positions that were being presented forward.

And so, a little bit of a different answer to your question, but I didn't go to the negotiators and demand, you know, "You need to hold the line here."

The CHAIRMAN. No. I——

General CHILTON. Except——

The CHAIRMAN [continuing]. Understand that.

General CHILTON. Yes.

The CHAIRMAN. But, as they came to you and sought your counsel and advice and input——

General CHILTON. Right.

The CHAIRMAN [continuing]. What, if any, strategic concerns did you express? Any?

General CHILTON. Well——

The CHAIRMAN. Or did you simply take their concept and then you ran the numbers and evaluated their concept?

General CHILTON. No. We actually began, before the negotiations, looking at—because we did the NPR in concert——

The CHAIRMAN. Right.

General CHILTON [continuing]. With START. And so, as we looked at the Nuclear Posture Review we began with—the first criteria that was established was, "Look, STRATCOM, go off with current guidance, current strategy, and tell us what it will take to support that today."

And then we had to make two assumptions, at that point. One was that as the treaty was negotiated and lower positions were taken on both sides—is that, one, an assumption was made that the Russians would not cheat, that they would abide by that. I mean, I think you have to make that assumption as you do your work in support of it. And the second one was that the follow-on work in NPR would not demand an increase in total U.S. strategic forces.

And then, based on those assumptions and the direction to follow current guidance, we were able to provide the support that they needed.

The CHAIRMAN. The verification procedure, which we both want, is to guarantee that neither side cheats, correct?

General CHILTON. Senator, what we want is transparency and insight so that we can understand that each side is complying with the treaty, that's correct.

The CHAIRMAN. And in your judgment, from the strategic interests of the country, is there an adequate capacity in this treaty to do that?

General CHILTON. Senator, I guess I would defer to the NIE that's going to come out from the intelligence community, since that is their job, to assess that strictly. And from a broader context, though, what I would worry about would be any ability for Russia to make a strategically significant change or breakout from the treaty without us being able to detect it.

And I would just define "strategically significant" as one that would surprise us to the point that we couldn't react to it.

What gives me some confidence, just looking at it from the DOD perspective, is that we have preserved a hedge capability, both for technical failure and for geopolitical surprise, that I think makes me comfortable with where we are at this time.

But, as to the specifics of verification, I would defer to the intelligence community, Senator.

The CHAIRMAN. Fair enough. And we will be hearing from them also.

General O'Reilly.

General O'REILLY. Sir, I did not have concerns, going into this, as much as objectives, which I expressed to the parties that were negotiating on our part.

And that was primarily—a major part of the missile defense development is the actual testing of our missile defense systems. It is not a minor fact that we are emulating and duplicating long-range ballistic missiles, which are very difficult to develop. And we wanted to ensure that our resources were more effectively focused on developing our missile defense capabilities, not on the targets.

So, I was asking if there was an ability to have greater capability to use retired missile—or offensive missiles in a role that we could use them as targets. Because we were so involved in the previous treaty, with our targets, the negotiating team was very familiar with what those limitations were, and they knew which systems that we could employ most cost-effectively in our flight testing. And that was a significant objective of mine. And we were, as General Chilton said, very closely coupled to the negotiating team on all issues that would affect our use of particular targets and flight testing.

And then second of all was the general ability to develop the most capable, cost-effective missile defense, and ensuring there was not limitations on it which would affect our plans, especially as we just finished last year's Comprehensive Ballistic Missile Defense Review, which set forth what those objectives were.

The CHAIRMAN. So, in your judgment, will this treaty prevent the Missile Defense Agency from pursuing any aspect of the phased adaptive approach to missile defense in Europe that the administration has outlined?

General O'REILLY. No, sir, it will not prevent or affect in any way our plans.

The CHAIRMAN. And is there, to your knowledge, any kind of side deal or unspoken agreement with respect to missile defense in this, that you're aware of?

General O'REILLY. No, sir. I have no knowledge of that.

The CHAIRMAN. And General Chilton?

General CHILTON. No, sir. No knowledge.

The CHAIRMAN. In the view of the Strategic Command, is the New START counting rule better than the rule that was obtained under the START Treaty originally?

General CHILTON. Senator, I think it is, for the time we're in right now. The flexibility that we have, with regard to the numbers of 700 deployed and a total of 800 deployed and nondeployed, gives us operational flexibility, with regard to our force. So, when we do maintenance on a missile or we have a submarine come into port, we can use that nondeployed category as a way of balancing our force and ensuring we have the deterrent available that's required at any given time.

Additionally, the counting of the warheads also adds to operational flexibility for us, as opposed to attribution of a number of warheads to a particular delivery-system type.

So, these two points that add flexibility to us, I think, are an improvement over the START—the original START Treaty for us.

The CHAIRMAN. Thank you.

Senator Lugar.

Senator LUGAR. Thank you, Mr. Chairman.

I have three very technical questions, which I raise specifically to make a record with your testimony.

And the first involves this. Some suggest New START constitutes a political limit on future defensive deployments, given that a Russian withdrawal from the New START is tied to missile defense.

Well, I'd like to ask Dr. Miller and General O'Reilly this. If ratified this year by both sides, New START would expire sometime in 2020. Based on announced plans, am I correct that the third phase of the phased adaptive approach could provide protection against intermediate-range ballistic missiles and will be deployed in 2018, and the fourth phase, which could provide protection against ICBMs using the Standard Missile 3 Block 11B interceptor missile, will be deployed in 2020? Could we field defensive capabilities during the treaty's duration, particularly in 2018 to 2020, to which the Russians might object?

Dr. MILLER. Senator Lugar, both General O'Reilly and I, along with others, have briefed the Russians, at various times and in various fora, on the phased adaptive approach for Europe. My first one was with Ambassador Kislyak the day of the announcement, in September, of the phased adaptive approach. We've gone through each of the phases, including, in detail, phases three and four.

And your description is correct. As we move to the later phases, it will be the Standard Missile 3 2A, and then 2B for phases three and four.

We have no plans, within this timeframe, that would take our ballistic missile defenses to a place that would threaten strategic stability with Russia. We have made that clear, as a matter of policy, in the Ballistic Missile Defense Review, that we don't intend to do so. But, the reality is that we don't have the technical ability to deploy the sophisticated defenses that would be necessary to really make a dent or to try to negate the extensive Russian nuclear strategic arsenal.

Senator LUGAR. General O'Reilly.

General O'REILLY. Sir, I, also, have briefed Russian officials in Moscow on the capabilities and limitations of our missile defense plans throughout all four phases of the phased adaptive approach. And based on fundamental physics and first-principle engineering, it is well understood of where we have capability and where we don't have capability, especially in regards to their strategic arsenals.

And, throughout those conversations, it was very clear to me, through their questions and responses, that they fully understood my presentation.

Senator LUGAR. Let me follow on with this question. In testimony before the House Armed Services Committee last April, the administration was asked if the United States had provided an assurance to Russia that the fourth phase of the plan—or, of the phased adaptive approach would not threaten Russian strategic nuclear forces, to which the witness replied, "To my knowledge, no."

Now, I ask, once again, Dr. Miller and General O'Reilly, when did either of you discuss missile defense, either the phased adaptive approach or as specific elements, with the Russians? In particular, did either of you discuss the fourth phase of the adaptive

approach? And did any Russians state that capabilities you discussed constitute a threat to the strategic nuclear force potential of the Russian Federation?

Dr. MILLER. Senator Lugar, as I noted before, my first briefing of any Russian on the phased adaptive approach was in September 2009, just—as part of the rollout, just after the announcement.

I did—I've briefed Russians, a number of times since, on all of the phases, and at no time did any Russian with whom I was meeting state that phase three or four was perceived to be a threat to undermine their strategic deterrent.

They have asked for a lot of information about these systems. We have provided it. General O'Reilly has provided extensive technical analysis of the capabilities of the system, in layperson's terms. With those systems deployed in Europe, the Standard Missile 3 would be in a tail-chase if it were to go after a Russian ICBM. It wouldn't have the range or the velocity to get there. There are other reasons, as well, that it would be unable to do so.

But, I'd like to state, sir, that the purpose of the missile defense deployment in Europe with the phased adaptive approach is to provide effective missile defense in the early phases of Europe, including of our deployed forces there. And in the—in phase four, defense against an ICBM that could come from Iran or somewhere else in—potentially, in the region.

We built the system to provide effective missile defenses against the threats that we perceive as—today and potentially emerging in the future. And, as it turned out, those missile defenses did not—do not pose a threat to their—to the Russians. But it's important to understand which was the objective. The objective was effective missile defense against the threats that we see today, and that we believe may emerge, from Iran and others in the region.

Senator LUGAR. General O'Reilly.

General O'REILLY. Sir, I also have briefed Russian officials in Moscow, a rather large group of them in October 2009. I went through the details of the—all four phases of the phased adaptive approach, especially phase four. And while the missiles that we have selected as interceptors in phase four, as Dr. Miller says, provide a very effective defense for a regional-type threat, they are not of the size that have a long range to be able to reach their strategic missile fields. And it's a very verifiable property of these missiles, given their size and the Russian expertise in understanding what the missiles' capabilities will be, given the size of the missiles that we're planning to deploy and develop. It was not a very controversial topic of the fact that a missile, given this size of a payload, could not reach their strategic fields.

And, as Dr. Miller said, even if they flew a missile within range of our phase-four interceptors, given the time we would see the missiles and the velocity of their much larger strategic missiles and our smaller ones, we would not be able to catch up with those missiles in order to have an intercept. And they seemed to be very knowledgeable of this, and acknowledged my points that I made.

Senator LUGAR. Now, I'd like to raise my final question. Some suggest we should place interceptor technology into existing silos and perhaps even on existing strategic submarines, which New START would not permit.

General Chilton and General O'Reilly, in the absence of New START, we could take Minuteman ICBMs and Trident SLBMs out of their launchers and replace them with interceptor missiles. If we did, wouldn't we reduce our missiles, launchers, and deployed nuclear warheads further below even New START limits on strategic offensive arms? And what are the dangers of placing interceptor missiles in ICBM fields or commingling them with our strategic offensive forces, generally?

General Chilton and then General O'Reilly.

General CHILTON. Sir, I would not support going down in those—in either of those directions, for a couple of reasons.

One, the missile tubes that we have are valuable, in the sense that they provide the strategic deterrent. And I think the value of the nuclear deterrent far—per missile—far outweighs the value of a single missile defense interceptor. So, I would not want to trade Trident D5, and how powerful it is and its ability to deter, for a single missile defense interceptor.

From an ICBM-field perspective—and General O'Reilly, I know, can address the cost and technical piece of this—but, there would be some issues that would be raised if you were to launch a missile defense asset from an ICBM field, with regard to the opposite side seeing a missile come off and wondering, "Well, was that a missile defense—was that a defensive missile or is that an offensive missile?" So, just in my opinion, I don't see that either of those two options would be particularly beneficial as you laid them out.

Senator LUGAR. General O'Reilly.

General O'REILLY. Sir, from a technical basis and being responsible for the development of our missile defenses, I would say that either one of those approaches, of replacing ICBMs with ground-based interceptors or adapting the submarine-launched ballistic missiles to be an interceptor, would be—would actually be a setback—a major setback to the development of our missile defenses; one, because of the extensive amount of funding required, and resources, to redesign both the fire-control system, the communications system, but especially the interceptors. They're of completely different size and completely different functionality, different fuels, so they are incompatible, our interceptors are, with submarines. And also, the submarine-launched ballistic missiles have a launch environment which is significantly different than what our interceptors have today. And the front end, the most critical part of our interceptors, would have to be completely redesigned in order to withstand the shocks and the other launch environments.

So, in both cases, there would have to be an extensive redesign of our systems, and some of the basic, fundamental engineering that we've been doing over the past decade would have to be redone in order to adapt them for either one of those applications.

Senator LUGAR. Thank you.

Thank you, Mr. Chairman.

Dr. MILLER. Senator Lugar, could I just add, very briefly, a couple of quick points?

The first is that the possibility of deploying an interceptor in a submarine, or the possibility of alternative deployments of interceptors on land, were both looked at extensively prior to us agreeing to this position in the New START Treaty, including studies going

back several years, in terms of operational effectiveness and cost. And the conclusions that were reached then informed the negotiations and our willingness to accept this provision.

And second is that the senior leadership of DOD was well apprised of these, and comfortable with these, with Article V, section 3.

Senator LUGAR. Thank you, sir.

The CHAIRMAN. Thank you, Senator Lugar.

Let me just give everybody a heads-up. We have a vote or two, I think, at 10:40. We may have time, here, to get through the next two rounds, if that's all that appears.

So, Senator Feingold.

Senator FEINGOLD. Thanks so much, Mr. Chairman.

And I'd like to also welcome the witnesses.

There's been some confusion, during the previous hearings on this treaty, about the relative importance of reducing the Russian and United States strategic arsenals, particularly compared with the importance of pursuing missile defenses and reducing tactical nuclear weapons. And I'd like to take this opportunity to get a little clarity on what is really needed for us to maintain a credible deterrent, and the risks associated with maintaining an arsenal larger than what we actually need for sufficient deterrence.

This treaty makes significant changes to the verification regime that was in place for nearly two decades under the original START Treaty, and I intend to review this issue carefully. I'm looking forward to receiving the National Intelligence Estimate in order to better understand the implications of the new verification regime.

But, General Chilton, some of my colleagues on this committee have argued that we gave up something for nothing with this new treaty, particularly with regard to the limitation on nuclear delivery vehicles. Now, my own assessment so far differs significantly from that view. For example, we've agreed to go from 880 to 800 launchers under this treaty. This leaves us with a clear advantage over the Russians, who, according to the CRS, are estimated to have 620 launchers, and limits on their ability to produce a higher number than that.

Meanwhile, according to independent reports, we have the capacity to upload far more warheads onto our launchers than the Russians.

So, General, given this calculus, would you agree with the assessment that this treaty actually preserves our own strategic advantage?

General CHILTON. Senator, I wouldn't go as far as to say that a strategic advantage existed before or after the treaty, but a strategic balance continues to exist between both sides. I don't think we would come to a resolution in the negotiations if both sides didn't feel that way. And I certainly feel that we have adequate forces, adequate ready forces, to——

Senator FEINGOLD. So, it—so, to use your language, it preserves the balance that we had before.

General CHILTON. I believe so. And I believe we can adequately use Strategic Command to fulfill our mission to provide strategic deterrence adequate to defend this Nation.

Senator FEINGOLD. OK. On balance, would it be fair to say that the very modest concessions we made in the treaty are far outweighed by the need to retain the ability to do inspections and to maintain strategic stability through having a treaty?

General CHILTON. Senator, I would say that the importance of the treaty is threefold. One, it allowed us to preserve our ability to provide a strategic deterrent. Two, it also put limits on the Russians that would not have been there had this treaty not been negotiated. START I had expired. And so, there were no limits on where the Russians might go. And, third, the treaty provides us with insight into the Russian program that we would not have had without this new treaty. All three of these things, I think, are the big advantages of this new treaty, which I support.

Senator FEINGOLD. General, as I mentioned before, the reductions mandated by this treaty are really quite modest. There's no limit on the number of warheads we can keep in reserve. And some have argued that we're maintaining far more launchers that needed to maintain a credible deterrent. Indeed, some experts argue that, with just over 300 strategic nuclear weapons, we would have 10 times the amount of explosive power that Secretary McNamara thought we needed to incapacitate the Soviet Union. Do you agree that this treaty allows us to maintain a nuclear arsenal that is more than is needed—that is more than is needed to guarantee an adequate deterrent?

General CHILTON. Sir, I do not agree that it is more than is needed. I think the arsenal that we have is exactly what is needed today to provide the deterrent.

And I say this in light of—when we talk about the nondeployed portion of the arsenal, it is sized to be able to allow us to hedge against both technical failures in the current deployed arsenal and any geopolitical concerns or changes in the geopolitical environment that might cause us to need more weapons deployed.

The reason we have to maintain this large inventory is because we no longer have the ability to produce nuclear weapons in this country. The infrastructure has been allowed to decay and get to a point where we cannot do that. The Russians, on the other hand, have an ability to produce nuclear weapons. That is how they hedge. And so, this is why I think the NPR findings and the investments in the nuclear infrastructure, in the personnel and expertise that is required to sustain the stockpile, are so important, so that, by the time we get to the next decade, we'll be in a position to look at our nondeployed arsenal and consider future reductions to that. But, today I think we have what we need to support the deterrent.

Senator FEINGOLD. General, you talked a little bit about verification already. There's some concern that we'll not be able to make up for a lack of onsite inspections at the missile assembly facility in Votkinsk through other intelligence sources, and this may somehow enable Russia to develop a breakout capability. Reports indicate that Russia has not been producing large numbers of missiles for some time, and may actually have some struggle maintaining the number of missiles even permitted under the treaty.

How accurate is that? And, if so, is it fair to say that it would be very difficult for Russia to increase its missile production without our detecting it?

General CHILTON. Sir, I'd have to defer to the intelligence community estimates on that, because they are the ones who will be asked to show that they can verify that these types of things couldn't happen.

I would point out, though, there are three parts of the treaty that attempt to address this area. One is the requirement for a declaration of current status and data exchanges. Two is the requirement for notification of any change to that status. And three is the application of specific identification numbers to delivery platforms. And these help mitigate the closing of the Votkinsk observation area. But, again, I'd defer to the NIE final report on their comfort with verification in this area.

Senator FEINGOLD. And I look forward to reviewing that.

General O'Reilly, Secretary Gates testified that it is not our policy to develop missile defenses to counter Russia's deterrence—deterrent, because this would be cost-prohibitive and deeply destabilizing. Could you just lay out for us what it might cost to develop a missile defense system capable of rendering Russia's arsenal useless, and how Russia would respond to such an initiative that we took forward?

General O'REILLY. Sir, the precise answer on that would depend on the firing doctrine which the combatant commanders—specifically, NORTHCOM, in this case—would use. But, if they used—for example, as a minimum, we usually set aside at least two interceptors for every missile in the air—threat missile—that we're concerned about. And therefore—and in some cases, some doctrines have four missiles—interceptors—dedicated toward one intercept. So, you would need at least two to four times the number of interceptors than you would the launch platforms. And that means maintaining missile fields—well over 1,000. And currently, our plans are to have a capability to counter and protect the United States against any regional threat that could develop the ICBM capability. So, right now, our plans are to have 30 deployed missiles.

So, this tremendously larger inventory of interceptors would be needed, and the command-and-control, the sensor-and-fire control, would be tremendously more complex than what we're developing today.

Senator FEINGOLD. Thank you.

And thank you, Mr. Chairman.

The CHAIRMAN. Thanks, Senator Feingold.

Dr. MILLER. Senator, if I—Mr. Chairman, if I could just add, very briefly—General O'Reilly answered exactly right what it might take to begin to try to render the Russian arsenal, as President Reagan has said, "impotent and obsolete." If we think about it, we need to understand that we're talking about thousands of reentry vehicles, we're talking about sophisticated countermeasures. The Russians would have the option for alternative delivery systems, including today's systems of bombers and cruise missiles and so on. And they'd have the ability to grow those over time, so that the—there would be—you would expect an offense-defense interaction, as well, so that the—at this time, it is—we don't see a possibility that, with any investment of resources over the duration of the treaty—barring a fundamental breakthrough that we don't, at this point, see in technology—we don't see the possibility of rendering

their nuclear arsenal useless. Our missile defense research continues. If—obviously, if something were to someday arise that would allow that, it would be—it would be an important change, but we don't see it on the horizon.

Senator FEINGOLD. Thank you.

The CHAIRMAN. Senator Risch.

Senator RISCH. Thank you.

General O'Reilly, I assume you've read the third-party statements, or the—what are they called? The statements that each part—the unilateral statements that each party makes—I assume you've read those.

General O'REILLY. Yes, sir.

Senator RISCH. You would agree with me that we have deep differences with the Russians on what this treaty actually means when it comes to defending ourselves. Would you agree with that?

General O'REILLY. Sir, I don't have the insight to think how they interpret that, but the relationship between offense and defensive capabilities is understood, and the impact on—as Dr. Miller just said, the impact on the ability to affect that strategic balance was understood.

Senator RISCH. But, would you agree with me that they said, in their unilateral statements, that they believe the treaty is such that we cannot defend ourselves using missile defense systems? Would you agree with me that that's what their unilateral statement says?

General O'REILLY. Sir, my understanding of the statement is, is that we would not develop ballistic missile defense systems to counter their strategic balance of forces with us.

Senator RISCH. And you understand our position is that that's not what the treaty says. Are you in agreement with that?

General O'REILLY. My understanding is, sir, that the treaty does not limit my ability to develop the most cost-effective missile defenses possible.

Senator RISCH. And we have so stated. Is that correct?

General O'REILLY. Yes, sir, within the policies that the Ballistic Missile Defense Review has outlined.

Senator RISCH. And, as a result of that, would you now agree with me that we have a difference, as far as the Russians are concerned, as to what this treaty actually says when it comes to our ability to defend ourselves?

General O'REILLY. Sir, my—actually looking at the treaty itself, the legally binding aspects of the treaty, I do not see any limitation on my ability to develop missile defenses.

Senator RISCH. Well, that's not absolutely true, though, is it? Can you use the silos that we have right now to defend ourselves?

General O'REILLY. Sir, given our plans, I would not use a silo that is less hardened, more—it would not be—I don't think it affects our ability to defend and develop the capability against missile defenses, sir. I think the options that are prohibited would be ones that we would not choose—I wouldn't choose, and any other director of Missile Defense—because it is—it gives us less capability than what we are currently pursuing now.

Senator RISCH. But, your statement that the treaty does not limit you in that regard isn't true, is it? I mean, there are limitations

in the treaty, as far as our ability to defend ourselves using, for instance, those silos.

General O'REILLY. Sir, there are no limitations in the treaty that affect our plans for developing missile defense. There are limitations, as I've stated before, in Article V, that state the ability to limit—for us not to convert an ICBM silo, which I would never recommend, for many different reasons; and the same for SLBMs. So, yes, there are constraints against aspects of developing missile defense that I do not believe are prudent or operationally effective.

Senator RISCH. So, is it your position, then, that we do not have a disagreement with the Russians, as far as what this treaty says regarding our ability to defend ourselves from a missile attack?

General O'REILLY. In the treaty itself, sir, I see no limitations to us for the plan that we are pursuing.

Senator RISCH. I understand that. You've read the unilateral statements. Do you agree with me that the two parties, in their unilateral statements, disagree with what the treaty says regarding that point?

General O'REILLY. Sir, I don't have the ability to understand how they interpret it, but I have briefed the Russians, personally in Moscow, on every aspect of our missile defense development. I believe they understand what that is. And that those plans for development are not limited by this treaty.

Dr. MILLER. Senator, might I—sir, might I——

Senator RISCH. On that—on——

Dr. MILLER [continuing]. Comment——

Senator RISCH. No.

Dr. MILLER [continuing]. Briefly?

Senator RISCH. Just a minute, please.

General, if they understand, why are they making unilateral statements that say they've won and that they have bested us in our ability to defend ourselves from a missile attack? Why are they saying that in a unilateral statement?

General O'REILLY. Sir, I don't interpret their unilateral statements in saying that they've "bested us" or they have some advantage over us. I do believe what it says is, is that if there is an imbalance in our strategic forces, then they would reconsider staying with this treaty. However, the treaty itself does not constrain any of our plans.

Senator RISCH. Well, General, I can tell you, you're the first witness to come before this committee that has interpreted their unilateral statement, written in the clearest of language, that they believe that they have an advantage over us when it comes to the—our ability to defend ourselves from a missile attack.

Thank you.

Sir, did you want to comment?

Dr. MILLER. Thank you, Senator, yes, very briefly.

I just—I'd say there is no question that the Russians have made statements, not just with respect to this treaty, but over the last years and decades, that indicate that they would like to constrain our missile defenses. I think the Secretary of Defense noted that in his testimony. Their unilateral statement makes a connection between missile defenses and offense, in the context of strategic stability, that, on its face, one could accept it, because it says that

they would be concerned if it gave rise to a threat to the strategic nuclear force potential of the Russian Federation. We don't have the capacity to build defenses that will do that in—over this timeframe.

At the same time, we have made clear, in multiple face-to-face meetings with the Russians, at all levels, we have made clear, as a statement of policy, on the Ballistic Missile Defense Review, it's backed up by our budget—$9.9 billion this year—and in multiple statements, that we will continue to improve and expand our missile defenses, as necessary, to provide missile—to provide defense of this country, and to provide defense of our deployed forces overseas, and to support that of our allies and friends. We do not have the capacity to provide an umbrella over the United States entirely against a large, sophisticated Russian threat, and we see no way of getting there within the—certainly within the timeline of this treaty.

Senator RISCH. Do you agree with me that they interpret the treaty different than we do in that regard?

Dr. MILLER. Sir, I would put it differently. I think that there are at least some on the Russian side that would like to use the discussion of the treaty to attempt to constrain our options on missile defense. We have made it absolutely clear—as I said, in multiple venues, not just on unilateral statements—that we will not go there.

Senator RISCH. So, as far as you'll go is, you will at least admit that there are some on the other side who interpret this differently than we do. Would you go that far?

Dr. MILLER. Senator Risch, I don't believe that there's a different interpretation of the treaty. I think that there are some Russians who would like to use the process of ratification, on their side and in our discussion, to try to constrain what we do, not through the treaty, but through some other mechanism, to have us make statements that would suggest that would be the case. We have made very clear statements to the contrary, repeatedly.

Senator RISCH. I understand what we have said. My problem is what they're saying.

Thank you, Mr. Chairman.

The CHAIRMAN. Senator Casey.

Senator CASEY. Thank you, Mr. Chairman.

We want to thank our witnesses for being here. I know we have a vote coming up, so I might be less than my allotted time.

I wanted to first start with Dr. Miller. You know we've had a number of witnesses here, in addition to the three of you—many distinguished witnesses. One of them was Dr. Kissinger. When he testified, he talked about, among other things, three objectives. One was to reduce or eliminate the dangers of war by miscalculation, which requires transparency. Two, he said, bringing about the maximum stability in the balance of forces. Three, he said, to overcome the danger of accidents fostered by the automaticity of the new technology.

I'd ask, you, first, Dr. Miller, in your—based upon your experience and based upon your knowledge of the treaty and our current security posture as it will be impacted by the treaty, do you believe

this treaty in any way hinders the United States from responding to any and all threats against it?

Dr. MILLER. Senator Casey, no, I do not believe it hinders us in any way. And, in fact, the provisions of the treaty, including those for verification and transparency, significantly aid our ability to identify potential challenges and to be prepared to respond to them.

Senator CASEY. And I wanted to also follow up with General O'Reilly on some questions that we've all asked about—over time, about missile defense. I know that when you were in front of the House, the House Armed Services Committee, you said a number of things that spoke to this question of missile defense. You said "Relative to the recently expired START Treaty, the New START Treaty actually reduces constraints on the development of the missile defense program. And under the New START Treaty our targets will no longer be subject to START constraints."

In a similar vein, in the question I asked Dr. Miller, Does the START Treaty in any way hinder our ability to carry out these objectives that you set forth in the House—in your House testimony?

General O'REILLY. No, sir, it does not.

Senator CASEY. And, in addition to asserting that, why do you say that? What are your——

General O'REILLY. Well, sir, for——

Senator CASEY [continuing]. What do you point to as evidence?

General O'REILLY [continuing]. For one thing, the treaty actually, in Article III, excludes interceptor development, which is what is the mainstay of our missile defense. So, it explicitly addresses the fact that the development of our interceptors is not under this—covered under this treaty.

Second of all, I have talked about the use of targets, which are a challenge for us, to come up with longer range targets as we mature the missile defense system. But, there are other aspects, too, such as—the previous treaty limited our ability to encrypt our information from our targets in flight testing. And what we do not want to do is share, in broad, open forum, our data, as it's coming off our flight tests. And so, there are various other aspects, besides the discussion we have had before about limiting our launchers. The areas which they limited—converting silos or putting them on submarines—are not part of our plan, for operational, for technical, and for resource reasons.

Senator CASEY. Thank you. And I'll make this my last so we have time—a little extra time.

The verification measures in—that would be in place, upon ratification of the treaty, can any one of you—any one of you want to speak to that, the benefits of those verification provisions?

Dr. MILLER. Senator Casey, I'll just start with the three that General Chilton mentioned earlier.

The first is a database of deployed and nondeployed systems and facilities that is—will be put in place, I believe, 45 days after the entry into force of the treaty.

Linked to that is a requirement for notification of any change in the status of forces under the treaty.

Third is the unique identifiers. And under START, there were unique identifiers associated with mobile missiles only. This treaty

has them associated with all delivery systems. And so, it will improve our ability to track the—what—the status and—of their systems over time.

So, the database, the notifications, and the unique identifiers, together, really provide a very strong basis. Add on top of that the inspections under the treaty—18 inspections of—overall, of deployed and nondeployed systems, and of facilities.

Just note that 18 inspections for 35 sites under New START—compare that to 28 inspections under START for 70 facilities. In fact, the ratio is improved under the New START Treaty, relative to the START Treaty.

All of that backed up by national technical means that we can collect by ourselves and provide an independent means of validating the data that we collect across these multiple different pathways. Very, very solid verification regime.

Senator CASEY. Thank you very much.

The CHAIRMAN. Thank you, Senator Casey.

And, Senator Kaufman, have you voted?

Senator KAUFMAN. No.

The CHAIRMAN. OK. Well—how long do you think you're going to be, Senator Shaheen?

Senator SHAHEEN. Probably 5 minutes.

The CHAIRMAN. Why don't you stay, then, and try to wrap up? My suggestion would be that, Senator Shaheen, you proceed; Senator Kaufman, you wrap up; and I'll go over and—we're trying to hold the vote.

I'll thank you, ahead of time, very, very much for being here today.

We're going to leave the record open for—I guess, until the end of the week, in case there are any questions that want to be submitted.

Thank you very much.

Senator Shaheen.

Senator SHAHEEN. Thank you.

And thank you all for being here.

I missed the beginning of the interchange with Senator Risch, but I just wanted to follow up and make sure I understand what your bottom line is on that, General O'Reilly. Do you believe that the Russian unilateral statement is a reason for concern, from a military perspective?

General O'REILLY. No, ma'am.

Senator SHAHEEN. Thank you.

And, General Chilton, in your testimony you suggested that the verification regime would be very important so that we could continue to know what was going on in Russia, basically. Can you be more specific about what you think the impact of failure to ratify this treaty would have on our military planning and our knowledge of what's happening in Russia?

General CHILTON. Senator, we would have no verification regime, because there is none under the Moscow Treaty, and, of course, START I has expired. And so, I think that's a significant point, that we would lose any transparency or right to inspect the Russian force structure. And I think that's important, that we have that visibility into their forces.

Senator SHAHEEN. And what happens if we don't get that visibility?

General CHILTON. Well, if we don't get the treaty: a, they're not constrained in their development of force structure, and b, we have no insight into what they're doing. So, it's the worst of both possible worlds. And so, what that means to us is that we have to guess or, through other national technical means, estimate what their force structure and what the capability of their weapons are, which then leads us to do analysis on what we need. And the less precise that is, the more the probability that we either under- or overdevelop the force structure we require. And neither is a good result. "Under," it would be a security issue; "over" would be a cost issue. We could end up developing capabilities that we really didn't require.

Senator SHAHEEN. Thank you.

You also pointed out in your testimony that—you talked about the modernization plan for the administration. Can you talk about why you feel like what's being proposed is sufficient, or not, to address modernization?

General CHILTON. Senator, this is the first substantial increase in the funding toward addressing the stockpile issues that we have, to address the infrastructure issues that we have in the Department of Energy, in the NNSA. This is something I have personally been advocating for, for the last 2½ years, and so, I'm greatly encouraged by this Presidential budget that has come forward, and I strongly support—completely support the FY11 budget, as well as the request for FY10 reprogramming to address the issues with the B–61 bomb.

We're at a very, very important point in history, in the decision making progress to ensure we can sustain our nuclear stockpile for the future. The stockpile is safe, secure, and reliable today, but the decisions we make will impact the stockpile in 2020, in 2030, and it's important that we make those decisions, support these funds, so that we can move forward to assure future generations will have the security provided that we benefit from today.

Senator SHAHEEN. Thank you.

And thank you all very much for being here.

Senator KAUFMAN [presiding]. Thank you for your service. As usually happens, when you get to me, most of the questions have been asked and answered, and answered very well.

And I just—the point to make here is that we've had—I think this is our ninth hearing, and all the witnesses have said this is a treaty and it's good for us, and we should be ratifying.

And you talked about some of the problems if we do not ratify the treaty. What are some limitations on the Russians that are incorporated in this treaty? If you were in the Russian Defense Department, what are some of the things you will not be able to do, that you might like to do, once this treaty is ratified?

Dr. MILLER. Senator Kaufman, I would start with the overall limits of the treaty. And should there be a future Russian decision to try to deploy larger numbers of ICBMs, SLBMs, heavy bombers, and associated warheads, the treaty's limits will be in place. As was noted earlier, we expect them to be below the treaty's limit of 700 deployed ICBM and SLBM launchers—I'm sorry—deployed

ICBMs and SLBMs and heavy bombers. But, the treaty makes clear that that—in fact, that they will be, and therefore, will help us on the planning side, as well.

From a verification perspective—without the treaty, obviously the Russians would not be required to open up their facilities and to open up the—for inspection—the deployed forces, as well. And I would hope that they would see that as something that would be not a positive. In other words, I would hope that they would see the transparency in the same positive way that we do. But, in any event, it would be something that, without the treaty, Russia would not be obliged to provide.

Senator KAUFMAN. Great.

General O'Reilly, you said the New START Treaty reduces—this is a quote—"The New START Treaty reduces constraints on the development of the missile defense programs in several areas." Can you just expand on that a little bit?

General O'REILLY. Sir, as I've said, the area—the targets which we use—as the missile defense program is maturing, we are testing against longer and longer range targets. And the targets themselves become a challenge for us. Being able to use previously retired strategic systems greatly enhances our ability to conduct a target—or, a flight-test program. Plus, the way the data is processed. And previously, when we had accountable targets, where part of the targets were accountable under the previous treaty, we were limited from where we could launch. And that also is an issue. So, in those regards, sir, this is a—it gives us much greater flexibility into developing a cost-effective and very insightful flight-test program.

Senator KAUFMAN. And finally, we talked about—you talked about some of the problems if we do not ratify the treaty. Why is there a sense of urgency to get the treaty ratified?

Dr. MILLER. Senator Kaufman, today, as you know, we have no verification procedures in place for for Russian forces. We—without the treaty, we wouldn't have the database, we would not have notifications, we would not have the unique identifiers, nor the inspections to provide us a good understanding of the status of—and size of—Russian forces. So, the—in terms of the desire to get this—have the treaty ratified and enter into force relatively soon, the longer that we wait before those are in place, the greater the uncertainty associated with our understanding of their strategic systems.

Senator KAUFMAN. Great, thank you. So, we have a very—we have a very good treaty here. We've had a number of—9, 10 hearings. Everyone agrees the treaty should ratify, and there's a real sense to have—it's a real sense to have it done, and done as quickly as possible.

I want to thank you for your testimony, and I want to thank you especially for your service. The American people are well helped by the service that you've created over the years. And I—when I look and listen to what your testimony, it makes me more and more proud that we have the very best people working on these issues. And the American people should feel safe that we're going to have a new treaty, and it's been well worked out, and it's been checked out by people in all parts of the government.

So, I want to thank you for your service.

And I adjourn the hearing.
[Whereupon, at 10:55 a.m., the hearing was adjourned.]

ADDITIONAL MATERIAL SUBMITTED FOR THE RECORD

RESPONSES OF GEN KEVIN P. CHILTON TO QUESTIONS SUBMITTED BY SENATOR LUGAR

MODERNIZATION OF THE U.S. NUCLEAR WEAPONS ENTERPRISE

Question. General Chilton, how important is the modernization of the U.S. nuclear weapons enterprise, including the nuclear weapons stockpile, the delivery systems, and the supporting infrastructure?

Answer. Modernization of the U.S. nuclear weapons enterprise is critical to meeting the President's commitment to sustain credible, reliable, and effective nuclear deterrence capabilities as long as nuclear weapons exist. The Nuclear Posture Review reaffirmed the value of the triad and the need to recapitalize our nuclear forces. The DOD 1251 Report and the DOE 1331 Report provide summaries of plans and requirements needed for the sustainment and recapitalization of a safe, secure, and effective strategic deterrent.

B–61 WARHEAD LIFE EXTENSION

Question. General Chilton, how vital and urgent is the pending reprogramming request for the B–61 warhead Life Extension?

Answer. The National Nuclear Security Administration reprogramming request for the full scope (nuclear and nonnuclear) B–61 Life Extension Program (LEP) is extremely vital and urgent to sustaining our theater and strategic nuclear air-delivered capabilities. Delaying action on the pending B–61 reprogramming request will delay completion of the LEP study that determines the technical approach by the end of FY11 and jeopardizes availability of the first production unit required in FY17. In addition, timely approval of the reprogramming request is needed to mature technologies, including critical safety and security features, for incorporation in the LEP. In short, further delays will impact the operational availability and reliability of the B–61, limit the ability to incorporate vitally needed safety and security features, increase costs, and introduce risks to future stockpile management efforts.

ATOMIC ENERGY DEFENSE ACTIVITIES OF THE NNSA

Question. General Chilton, how is the uniformed military leadership supporting appropriation of the FY11 budget submission with regard for atomic energy defense activities of the National Nuclear Security Administration? How important is it to your mission that this request by fully funded?

Answer. The President's FY 2011 budget request for NNSA resulted from close coordination between DOD, DOE and the National Security Council on required funding for atomic energy defense activities of the National Nuclear Security Administration and represents a very important first step in recapitalizing our infrastructure to more effectively sustain our stockpile and manage risk.

It is imperative that we get a solid start on the critical recapitalization and sustainment efforts necessary to sustain our nuclear deterrence capabilities. Fully funding the President's FY 2011 budget request and the future program years is needed to begin to meet sustainment requirements in several already compressed program schedules. This recapitalization will take many years and require continued bipartisan support and funding.

EXECUTIVE-LEGISLATIVE COOPERATION IN FY11

Question. General Chilton, how can we work together to ensure that the Congress and administration continue to build on the increases provided in FY11 over the coming decade?

Answer. An administration and congressional commitment to a clear, long-term plan for managing delivery systems, the nuclear stockpile and supporting infrastructures will support sustained funding for U.S. strategic deterrence capabilities. We must build partnerships and continue our dialogue to refine a shared vision and understanding of the nuclear weapons policies and posture articulated in the Nuclear Posture Review (NPR). DoD's recent 1251 Report is a first step that builds on the NPR and describes plans for maintaining delivery platforms for nuclear weapons; sustaining a safe, secure, and reliable U.S. nuclear weapons stockpile; and modern-

izing the nuclear weapons complex while neither supporting new military missions nor providing new military capabilities.

1251 REPORT

Question. General Chilton, how useful was the 1251 report to planning for the future nuclear weapons enterprise? Should Congress and the administration regularly reasses the plan to ensure it provides for a safe, secure, and reliable nuclear deterrent for the United States?

Answer. The 1251 report was very useful in providing an outline of force structure and NNSA plans. We worked very closely with OSD, Joint staff, and the National Security Council staff. It allowed for increased visibility of important issues by both Congress and the administration. Sufficient and sustained funding will be critical to the sustainment and recapitalization of force structure, stockpile, and nuclear enterprise infrastructure. We will continue to work to ensure the required recapitalization of our delivery vehicles to provide for a safe, secure, and reliable nuclear deterrent.

INVOLVEMENT OF NATIONAL LABORATORIES IN NUCLEAR WEAPONS SAFETY

Question. General Chilton, do you believe it is important for the National Laboratories to explore the full range of options to ensure that U.S. nuclear weapons are safe, secure, and reliable into the future, including, when and where appropriate, replacement options?

Answer. Yes, I agree it is important that our scientists and engineers explore all options to ensure the safety, security, and reliability of our nuclear weapons and bring their recommendation to the Nuclear Weapons Council for assessment of the path forward. The Nuclear Posture Review (NPR) codified the full range of LEP approaches will be considered on a case-by-case basis to sustain current stockpile capabilities: refurbishment of existing warheads, reuse of nuclear components from different warheads, and replacement of nuclear components. This is consistent with the congressionally directed Stockpile Management Program objectives. I do not view the NPR language as a "restriction," but an important part of the administration's internal review before it submits a budget request for stockpile sustainment activities executed by the National Nuclear Security Administration.

TRIAD

Question. General Chilton, do current plans enable us to maintain a triad of air-, land-, and sea-based strategic offensive forces and how are you working to ensure that planning is brought forward to present a credible, stabilizing family of delivery vehicles well into the next decade, and beyond?

Answer. Yes, current plans support the triad as clearly articulated in the NPR, however, there are acquisition decisions that will be needed to support the sustainment and recapitalization of the triad over the long term. USSTRATCOM, with the assigned mission of strategic deterrence, participated in the process of identifying requirements and advocating for funding for the modernization and sustainment of triad forces and nuclear stockpile. We are working very hard in conjunction with our Service Components to carefully study the requirements and tradespace necessary to make the most cost-effective investments, while looking for leveraging opportunities and innovative ways to meet our national security commitments. We will need to work together to continue to address sustainment and recapitalization requirements to provide a safe, secure, and effective strategic deterrent.

RESPONSE OF HON. JAMES N. MILLER, JR., TO QUESTION SUBMITTED BY SENATOR FEINGOLD

PROMPT GLOBAL STRIKE

Question. Dr. Miller, You testified with regards to a prompt global strike capability that, DOD is also: . . . exploring the potential of conventionally armed, long-range systems not associated with an ICBM or SLBM that fly a nonballistic trajectory (e.g., boost-glide systems). Such systems would have the advantage that they could "steer around" other countries to avoid overflight and have flight trajectories distinguishable from an ICBM or SLBM. We would not consider such nonnuclear systems that do not otherwise meet the definitions of the New START Treaty to be accountable as "new kinds of strategic offense arms" for the purposes of the treaty. Is there a possibility that other countries would not be certain that such a "system"

was armed with a conventional warhead, notwithstanding the nonballistic trajectory, and that any launch of such a "system" would inadvertently provoke a nuclear confrontation?

Answer. The Department of Defense is currently evaluating the potential costs, risks, and benefits of nonnuclear prompt global strike capabilities, as well as alternative deployment options and scenarios for their possible employment. A range of measures could help to distinguish nonnuclear from nuclear systems and reduce the risks of misinterpretation, including deploying nonnuclear and nuclear systems at different locations, having different flight trajectories (e.g., hypersonic glide only for nonnuclear weapons), limiting the number of nonnuclear systems deployed and/or employed at any one time so that it was clear that a first-strike was not possible/underway, and providing launch notifications and implementing other transparency measures.

RESPONSE OF LTG PATRICK J. O'REILLY TO QUESTION SUBMITTED BY SENATOR FEINGOLD

MISSILE DEFENSE SYSTEM

Question. During the hearing you testified that the development of a missile defense system that might be able to overcome Russian nuclear forces, at least temporarily, would be significantly more expensive than the current, planned system. Dr. Miller indicated that even if we developed such a system, it would not alone be sufficient as the Russians would likely develop additional means to overcome any such system, effectively renewing the arms race. Putting aside the wisdom of such a course of action, can you give a rough estimate of the cost of developing such a system? Specifically, I would appreciate it if you would provide the following information:

- The per unit cost of developing, deploying and maintaining an interceptor missile, all related equipment and property.
- The cost of developing, deploying, and maintaining two interceptor missiles, all related equipment and property, per Russian missile permitted under the New START Treaty.
- The cost of developing, deploying, and maintaining two interceptor missiles, all related equipment and property, per 50,000 Russian missiles.

Answer. U.S. missile defense capabilities are intended to counter regional threats and provide a viable homeland defense against a limited ballistic missile attack. MDA has not been directed to attempt to develop a system to defend the high volume and complexity of Russia's ICBM arsenal and thus cannot estimate a cost for such an effort. The Ground Based Interceptors deployed today—not intended to cope with high-volume complex attacks—cost on average $70 million to produce (procurement costs only), and each new silo is estimated to cost approximately $36 million.

RESPONSES OF GEN KEVIN P. CHILTON TO QUESTIONS SUBMITTED BY SENATOR RISCH

FUNDING INCREASES

Question. In your testimony you stated "you are confident that the combination of NEW START ratification, implementation of the NPR's recommendations, and funding of associated investments will continue to provide global security." If the necessary increases in funding do not materialize, would you still maintain your same level of confidence?

Answer. No, sustained funding will be required to ensure our continued confidence in our strategic deterrent. If increases contained in the FY11 budget submission do not materialize, we will experience delays in addressing aging concerns with our systems. Reduced funding will also delay the incorporation of important safety and security improvements; reduce our ability to sustain weapons, platforms, and human capital; and impact necessary platform modernization efforts. Over time, these combined impacts will erode the effectiveness of the stockpile and the credibility of the deterrent. Funding requested is both prudent and necessary.

Question. During testimony in 2009, General Cartwright expressed the view that he "would be very concerned if we got below 800 deployed delivery vehicles." The New Start Treaty establishes a level of 700 deployed strategic delivery vehicles. Are you concerned that this number is 100 below General Cartwright's comfort level?

2009 SASC Testimony:

> Senator THUNE. Do you agree with the commitment to reduce our strategic delivery vehicles as somewhere in the range of 500 to 1,100 systems? And in your view, at what point in this range between that 500 and 1,100 would the delivery vehicle reductions necessitate making our nuclear triad into a dyad?
>
> General CARTWRIGHT. When we get into that range—and that's what drove the—the range, is that from—from about 1,100 down to about 500, 500 being principally where the Russians would like to be, 1,100 being principally where we would like to be, now the negotiation starts. I would be very concerned if we got down below those levels about midpoint.

Answer. No, I'm not concerned. Under the 700 limit on deployed ICBMs, SLBMs, and nuclear-capable heavy bombers, and 800 limit on deployed and nondeployed ICBM launchers, SLBM launchers, and nuclear-capable heavy bombers, the United States will maintain a sufficiently robust and flexible deterrent force.

The Nuclear Posture Review conducted detailed analysis of potential reductions in strategic weapons, including delivery vehicles, which would allow the United States to sustain stable deterrence at lower force levels. This analysis assumed negotiated limits with Russia. The conclusion from the NPR analyses that stable deterrence could be maintained at lower strategic delivery vehicle levels, which took advantage of New START counting and conversion rules, formed the basis for U.S. negotiations with Russia.

NUCLEAR FORCE STRUCTURE

Question. The administration's one-page fact sheet on the 1251 report shows that the U.S. nuclear force structure under this treaty could comprise up to 420 ICBMs, 240 SLBMs, and 60 bombers. Additionally, the use of the ambiguous "up to" means anything up to that level, meaning it could be much less than that number. This adds up to 720, which is 20 over the 700 limitation on strategic delivery systems, which suggests additional decisions need to be made with respect to U.S. force structure under New Start.

- Where will you find the additional 20 delivery systems to eliminate?
- With the added complexity of the counting rules for Prompt Global Strike systems, as we add PGS systems where would you cut delivery vehicles to make way for these systems?

Answer. Yes, additional decisions are required to meet the 700 deployed strategic delivery vehicle limit of New START. We must be within the treaty limit of 700 deployed strategic delivery systems before the end of the 7-year treaty implementation period. In anticipation of determining this force size, U.S. Strategic Command will continue to work with the Services as they develop post-Nuclear Posture Review modernization and sustainment plans for our nuclear forces. We will continue to assess the force size required for an effective deterrent and provide a recommendation to the Secretary of Defense well in advance of the treaty requirement.

Whether or not deployment of PGS requires additional adjustment in the strategic launchers will be a function of the type PGS system deployed. Given this uncertainty, it is premature to speculate on where possible reductions may or may not come from.

Question. What kind of input did you provide to the SecDef regarding the numbers of ICBMS, SLBMs, and bombers should be deployed under New Start? Will you share that input?

What is your estimate of how the Russians will configure their strategic forces under New Start? What new strategic systems will the Russians deploy within the timeframe of this treaty? Have the Russians deployed their new road-mobile ICBM with multiple warheads? Are we able to track this missile?

Have you conducted a net assessment to determine whether the United States can carry out its deterrence missions in the face of likely Russian strategic and tactical nuclear weapons force structure? Please provide details.

What if the United States decides to deploy 20 conventionally armed ballistic missiles for prompt global strike—which of the three legs of the nuclear triad will be further reduced to accommodate this deployment?

With the failure of the recent boost glide prompt global strike test, will the United States look more seriously at more traditional ballistic prompt global strike? What is the timeline for those decisions to be made?

Answer. [Deleted.]

NEED FOR A NUCLEAR FORCE NET ASSESSMENT

Question. Assume there are some 425 critical targets for the Russians to strike—420 ICBMs, 2 submarine bases, and 3 bomber bases—and the Russians have at least 1,550 nuclear warheads as allowed under New Start (they could have more since bombers count only as 1 despite the number of nuclear bombs they actually carry).

- Walk us through your understanding of how this contributes to strategic stability? Why aren't U.S. forces vulnerable to a Russian first strike?
- Please explain why Russian tactical nuclear weapons (which could number approximately 3,800 according to the Strategic Posture Commission) don't upset strategic stability?
- Did U.S. Strategic Command, perform a net assessment of the ability of U.S. nuclear forces to survive a Russian first strike and carry out their respective missions in support of U.S. deterrence objectives, including U.S. security guarantees to allies? Can you provide the Senate a classified briefing and the written analysis on this?

Answer. Our nuclear forces are postured today to deter other nuclear capable nations from attacking the United States and to also assure allies to whom the United States has extended an umbrella of strategic deterrence. The mix of ICBMs on alert, SSBNs at sea and unlocated by potential adversaries, and bombers that could be generated to alert in a timely fashion in addition to serving as an effective deterrent also provide a high degree of strategic stability. These forces, combined with our missile warning systems and redundant and highly survivable nuclear command and control systems provide the response options for the President to consider should the United States be attacked. Finally, the focused collection of intelligence supporting strategic deterrence is intended to allow sufficiently timely generation of additional forces above our day-to-day posture if required in a developing crisis. The combination of day-to-day force posture, ability to generation additional forces in a timely manner, and focused intelligence and warning provides a highly survivable deterrent force.

Under the assumptions of limited range and different roles, Russian tactical nuclear weapons do not directly influence the strategic balance between the United States and Russia. Though numerical asymmetry exists in the numbers of tactical nuclear weapons the United States has and we estimate Russia possesses, when considered within the context of our total capability and given force levels as structured in New START, this asymmetry is not assessed to substantially affect the strategic stability between the United States and Russia.

Furthermore, within the regional context, the United States relies on additional capabilities to support extended deterrence and power projection, including: conventional force capabilities, ballistic missile defenses, allied capabilities, advanced technologies, and modernization and maintenance of existing forces, to name a few. As President Obama stated in Prague last year, we are committed to maintaining a safe, secure, and effective nuclear arsenal to deter any adversary and guarantee that defense to our allies. During the Nuclear Posture Review (NPR) consultations, our NATO allies were engaged on the issue of extended deterrence and were assured of our continued commitment to their defense. Allies have welcomed the outcome of the NPR, as well as the signing of New START.

New START's lower strategic force levels are based on force analyses conducted during the Nuclear Posture Review. We concluded that the lower New START limits will allow for an effective nuclear deterrent, and that any plans envisioned for deploying limited numbers of conventional warheads on ICBMs or SLBMs could be accommodated within those limits. In reaching these conclusions, the analyses conducted during the Nuclear Posture Review took into account the nuclear arsenals of other declared nuclear weapon states, as well as the nuclear programs of proliferant states.

Please refer further details of the analysis and requests for briefings to OSD.

NUCLEAR TRIAD

Question. The administration has made a commitment to maintaining the nuclear triad.

- Does this commitment extend only through the life of the treaty or beyond?
- Do you believe it is important the United States maintain all three legs of the nuclear triad? Why, please explain?
- Given the advances in potential enemy air defenses, the ability of our strategic bombers to penetrate to their targets is becoming increasingly more difficult.

Can we maintain the viability of the bomber leg of the triad without developing a new nuclear air-launched cruise missile?

Answer. I believe it is important to retain the triad. Each leg provides distinct attributes contributing to the strategic deterrence mission. As you note, this position was validated during the Nuclear Posture Review.

Service plans reflected in the FY11 Presidential Budget Request take a long view toward sustainment and modernization. The U.S. Navy has embarked on developing an *Ohio*-class SSBN Replacement Program, beginning R&D to support construction of the first submarine in 2019. Delivery of the first new SSBN is tentatively scheduled for 2027, with an expected lifespan through 2080. Navy's Trident D5 missile system has ongoing life extension programs to ensure its viability through 2042. The Air Force has plans in place for the sustainment of ICBMs (through 2030), B2s and B52s (to 2040) and ALCM (to 2030).

The growth of adversary defensive capabilities is a concern for the bomber force. In order to support the range of potential missions of all Combatant Commands, the future air leg needs both standoff and penetrating capabilities. The Air Force plans on sustaining ALCM to 2030 and included funding in the FY11 budget for an Analysis of Alternatives for a future cruise missile that may satisfy both the nuclear and conventional missions.

AGING OF U.S. NUCLEAR WEAPONS

Question. Are you concerned about the aging of our nuclear weapons? You wrote a letter with Admiral Mullen in September 2008 stating "while today's nuclear stockpile is safe, secure, and reliable, the stockpile sustainment issues expressed by the directors of the nuclear weapons laboratories raise significant concerns." "[S]ignificant concerns," General Chilton? Please elaborate on those concerns.

There are those in the Senate who have stated that because the lab directors continue to certify the stockpile each year, all is well. Would you agree with those Senators?

Answer. I am concerned about the long-term confidence in the stockpile. Each year it is increasingly challenging to certify the legacy stockpile due to aging concerns. Through the success of the stockpile stewardship program the stockpile today remains as safe, secure, and effective as our cold-war-era designs allow. Our stockpile stewardship program has provided evidence that our warheads are aging and doing so in ways that can be difficult to predict. Today, we know that selected components on some warheads require refurbishment as part of ongoing, funded efforts. The administration has also requested funding for additional studies to identify necessary life extension requirements for other weapons. As weapons require life extension activities, we will also have opportunities to improve their safety and security features, as well as to maintain long-term confidence in effectiveness. Robust assessment and surveillance programs within the nuclear weapons enterprise are needed to continue to certify the stockpile without underground nuclear testing. Additionally, we must make the necessary investments to recapitalize the NNSA infrastructure outlined in the 3113 Report, FY 2011 Stockpile and Stewardship Management Plan.

1251 PLAN

Question. How important is it that the Congress take a fresh look at the 1251 plan each year? Would you be concerned if the FY11 budget turned out to be a 1-year blip and the nuclear weapons enterprise budget returned to the FY05–10 era of dangerous underfunding?

Answer. I believe the annual oversight of budgets for strategic weapons and platforms is important to sustain the Nation's focus on this key element of our security. I also believe that we need to have a broader, longer term view of the stockpile in view of the time needed to identify problems, study and determine corrective measures, and then implement appropriate program changes.

We carefully review Service budget activities related to strategic systems on an annual basis. The administration has requested a multiyear commitment in the FYDP to the nuclear enterprise budgets. I would be concerned if we do not sustain funding within these budgets beyond FY11.

MODERNIZATION OF NUCLEAR WEAPONS

Question. You wrote a letter in September 2008 with Admiral Mullen that "the United States is the only nuclear weapons state not currently modernizing its nuclear capabilities and supporting infrastructure." Is that a prudent course for the United States? Can that be fixed in only 1 year?

Answer. Your question reflects an accurate assessment of my previous and current position. We cannot address our aging capabilities and supporting infrastructures in 1 year. However, as articulated in the Nuclear Posture Review and the President's FY 2011 Budget Request, the administration has requested significant long-term investments essential for sustaining a safe, secure, and effective strategic deterrent capability. Continued commitment from the administration and Congress will be required over a number of years to sustain and modernize our strategic deterrence capabilities.

TACTICAL NUCLEAR WEAPONS

Question. The Perry-Schlesinger Strategic Posture Commission report estimates that Russia holds 3,800 tactical nuclear warheads and notes that, "The combination of new warhead designs, the estimated production capability for new nuclear warheads, and precision delivery systems and open up new possibilities for Russian efforts to threaten to use nuclear weapons to influence regional conflicts." Likewise, Under Secretary of Defense Flournoy has observed that the Russians are "actually increasing their reliance on nuclear weapons and the role of nuclear weapons in their strategy."

- Isn't it the case that as the numbers of strategic nuclear weapons go down in our respective arsenals, the disparity in tactical nuclear weapons becomes more significant?

Under this treaty, the United States will reduce strategic nuclear warheads to 1,550, while the Russians will continue to deploy at least 3,800 tactical nuclear warheads in addition to their strategic nuclear warheads. Not only will the Russians maintain a 10–1 superiority in tactical nuclear weapons, their tactical nuclear weapons will outnumber our strategic nuclear weapons by at least 2–1.

- How does this contribute to nuclear stability?
- What impact will this disparity have on allied views of the U.S. nuclear umbrella?
- What leverage do we have to address this disparity in the future?
- Why didn't we make this an objective for this agreement? Especially since we agreed to a more vague connection between strategic offensive and defensive arms.

Answer a & d. Certainly, Russia's total nuclear force size will remain a significant factor in determining how much and how fast we are prepared to reduce U.S. forces in the future. The size and pace of U.S. nuclear force reductions will be implemented in ways that maintain effective deterrence and sustain the credibility of our security assurances to our allies and partners.

The 2010 Nuclear Posture Review (NPR) and statements by senior U.S. officials have made clear that the United States intends to pursue broader reductions with Russia, including tactical nuclear weapons, following the entry into force of the New START Treaty. The number and role of tactical nuclear weapons in the Russian arsenal warrants addressing in future nuclear reduction discussions between the United States and Russia. Meanwhile, United States nuclear forces will continue to underwrite deterrence for the United States, its allies, and its partners.

Answer b & c. Tactical nuclear weapons do not substantively influence the strategic nuclear balance between the United States and Russia because of their limited range and different roles. Even so, under the New START limits the United States retains the capacity and capability to upload our strategic nuclear delivery systems in response to any attempt by Russia to leverage its tactical nuclear weapons to gain advantage. Furthermore, within the regional context, the United States relies on multiple capabilities, including its superior conventional force capabilities, tactical nuclear capabilities, U.S. strategic nuclear capabilities, ballistic missile defenses, and allied capabilities, to support extended deterrence and power projection.

Answer e. Refer to OSD.

FUTURE REDUCTIONS

Question. From your perspective, would additional reductions in U.S. ICBMs, SLBMs and heavy bombers, and their associated warheads/bombs, below those contained in the New START treaty be possible and would you advise we pursue them?

I understand DOD is currently conducting an analysis of future force reductions, but help us understand how you are thinking about these issues:

- What are the key considerations to take into account when contemplating lower U.S. nuclear forces?

- Are you concerned that at lower levels the military will not be able to carry out its deterrence missions?
- Are you concerned about the survivability of U.S. forces at lower levels?
  - Do you believe that at lower force levels the implications of cheating become more profound?
  - Does detecting cheating, become more important at the lower levels imposed by New START?
- To have greater confidence in detecting cheating, doesn't it require a larger dependence on National Technical Means?
- Are you concerned that other countries may view lower U.S. force levels as an opportunity to gain parity with the United States in nuclear capability?
- Are you concerned that at lower levels of U.S. forces, our allies may come to doubt the credibility of U.S. nuclear security guarantees—especially if the Russians maintain large numbers of tactical nuclear weapons?

Answer. As stated in the Nuclear Posture Review, the President has directed a review of post-New START arms control objectives to consider further reductions in nuclear weapons.

Specifically, the U.S. goals in post-New START bilateral negotiations with Russia could include reducing nonstrategic/tactical nuclear weapons and nondeployed nuclear weapons, as well as deployed strategic nuclear weapons—ICBMs, SLBMs, and nuclear-capable heavy bombers. Of course, any specific United States-Russian discussions on U.S. nonstrategic/tactical nuclear weapons will take place in the context of continued close consultation with allies and partners. The United States will maintain a nuclear arsenal to maintain strategic stability with other major nuclear powers, deter potential adversaries, and reassure our allies and partners of our security commitments to them.

A number of factors were considered in STRATCOM's analysis for New START and the NPR, including but not limited to: employment guidance, deterrence, extended deterrence, assurance of friends and allies, ability to hedge against technical and geopolitical developments based on the nuclear infrastructure, and the potential for further reductions. These factors will certainly play a critical, but not all inclusive role, in the analysis to support further reductions.

TECHNOLOGICAL PARITY WITH THE RUSSIAN FEDERATION

Question. According to the Congressional Commission on the Strategic Posture of the United States (page 12): "Russia is at work on a new intercontinental ballistic missile (initially deployed with a new single warhead but capable of carrying multiple warheads), a new ballistic missile submarine and the associated new missile and warhead, a new short-range ballistic missile, and low-yield tactical nuclear weapons including an earth penetrator. It is also engaged in continued research and development on a hypersonic intercontinental glide missile."

With the Russians currently developing these new systems. What new platforms is the United States planning to deploy during the life of this treaty in order to ensure technological parity with the Russians? Do you believe the United States should continue to deploy an ALCM?

Answer. The United States will likely not deploy new delivery platforms during the life of the treaty. The Department is committed to the ongoing life extension and sustainment programs to ensure our platforms and weapons provide a robust and assured strategic and extended deterrent capability.

The Department has also embarked on efforts for our "next-generation" platforms—Navy has started R&D activities to support the *Ohio*-class Replacement program while the Air Force is conducting recapitalization studies for ICBMs, penetrating and standoff bomber and future cruise missile.

Yes, the ALCM remains a critical component of the strategic deterrent force. ALCM provides flexible and responsive capabilities that ensure our bomber forces remain an essential element of our deterrent. It also serves an integral role in our hedge strategy by providing the most responsive capability to mitigate technical problems in other legs of the triad.

B61 LIFE EXTENSION

Question. Please describe why the B61 life extension is important.

Answer. The full scope B61 life extension is important because the B61 is a cornerstone of our air-delivered strategic and extended deterrent. The full scope life extension will refurbish an aging system; improve 30-year-old safety and security features; take advantage of a limited infrastructure window within the nuclear enterprise; and reduce future stockpile size by consolidating four B61 variants into

one. Finally, conducting this life extension as planned will eliminate the need for another life extension in the 2020s, thus saving taxpayer dollars by handling the weapon only once.

DELIVERY SYSTEM MODERNIZATION

Question. The administration will invest $100 billion over the next decade in nuclear delivery systems. About $30 billion of this total will go toward development and acquisition of a new strategic submarine, leaving about $70 billion. According to estimates by U.S. Strategic Command, the cost of maintaining our current dedicated nuclear forces is approximately $5.6 billion per year or $56 billion over the decade. This leaves roughly $14 billion of the $100 billion the administration intends to invest—even less if you factor in inflation.

- General Chilton, the 1251 plan reveals that the bulk of the funding planned is to sustain current systems. There is no funding in the plan to build a new bomber, ICBM, or Air Launched Cruise missile. How can this plan be sufficient if there is no money in it for any follow-on system other than the nuclear submarine?
- Is this $14 billion sufficient to develop and acquire:
  1. A next generation bomber;
  2. A follow-on ICBM;
  3. A follow-on nuclear air launched cruise missile; and
  4. Develop a conventional prompt global strike capability.
- In light of these figures, and the fact that you have yet to make additional modernization decisions, please explain why you believe $100 billion is sufficient investment in our delivery systems over the next decade.
  1. How confident are you that the administration will pursue these other programs? Please explain?
  2. Why didn't you make a decision to pursue these in the 1251 report?
  3. What is the likelihood you would decide against a new bomber, air-launched cruise missile, or follow-on ICBM?
  4. Do you believe the Senate should ratify this treaty before the administration has committed to modernization beyond a new ballistic missile submarine?

Answer. The estimated investment of over $100 billion for strategic delivery vehicles over the next decade, provided in the section 1251 report, represents a best-estimate of costs associated with deployed systems and programs underway and planned. This estimate does not include all of the costs associated with potential future modernization programs. The FY 2011–2020 costs provided in the sec. 1251 report include funds for sustaining and upgrading existing systems, including the B–2A and B–52H bombers, Minuteman III ICBMs, and the *Ohio*-class SSBN. In addition, the report includes estimated costs for the *Ohio*-class SSBN replacement, with the initial funding for this program having been provided in the FY 2010 DOD budget. These FY 2011–2020 cost estimates do not provide funds for other possible follow-on systems—the ALCM follow-on and the Minuteman III ICBM follow-on, and a possible follow-on heavy bomber—studies are now underway regarding options for these systems. As specific decisions are made regarding future systems, necessary funding will be requested in future DOD budget requests. Given this level of commitment the ability of the present force to be adequately sustained through the New START Treaty and the time available to consider the nature of future deterrent forces beyond the new SSBN, I believe the Senate should provide their consent for ratification of New START.

RESPONSES OF JAMES N. MILLER, JR., TO QUESTIONS SUBMITTED BY SENATOR RISCH

TACTICAL NUCLEAR WEAPONS

Question. . The Perry-Schlesinger Strategic Posture Commission report estimates that Russia holds 3,800 tactical nuclear warheads and notes that, "The combination of new warhead designs, the estimated production capability for new nuclear warheads, and precision delivery systems and open up new possibilities for Russian efforts to threaten to use nuclear weapons to influence regional conflicts." Likewise, Under Secretary of Defense Flournoy has observed that the Russians are "actually increasing their reliance on nuclear weapons and the role of nuclear weapons in their strategy."

- Isn't it the case that as the numbers of strategic nuclear weapons go down in our respective arsenals, the disparity in tactical nuclear weapons becomes more significant?

Under this treaty, the United States will reduce strategic nuclear warheads to 1,550, while the Russians will continue to deploy at least 3,800 tactical nuclear warheads in addition to their strategic nuclear warheads. Not only will the Russians maintain a 10–1 superiority in tactical nuclear weapons, their tactical nuclear weapons will outnumber our strategic nuclear weapons by at least 2–1.

- How does this contribute to nuclear stability?
- What impact will this disparity have on allied views of the U.S. nuclear umbrella?
- What leverage do we have to address this disparity in the future?
- Why didn't we make this an objective for this agreement? Especially since we agreed to a more vague connection between strategic offensive and defensive arms.

Answer. a. Russia's nuclear force remains a significant factor in determining how much and how fast the United States should reduce U.S. nuclear forces. While large disparities in overall levels of nuclear capabilities could raise concerns on both sides, it is important to note that the United States will retain many more than 1,550 nuclear weapons if the New START Treaty is ratified and enters into force. For example, as of September 30, 2009, the United States had 5,113 nuclear in the stockpile (several thousand more than the upper limit for deployed strategic systems under the SORT Treaty), with an additional several thousand awaiting dismantlement. Because the New START Treaty does not limit tactical and nondeployed nuclear weapons, the United States may retain whatever numbers of these systems desired.

b. Tactical nuclear weapons do not directly influence the stability of the strategic nuclear balance between the United States and Russia because of their limited range and the different roles these weapons play. More broadly, the United States will be able to retain approximate overall parity in nuclear weapons if the New START Treaty is ratified and enters into force.

c. In the course of consultations with allies during the development and following the release of the NPR and the signing of the New START Treaty, many allied governments have told us they are comfortable with our planned nuclear force posture, which is consistent with the NPR recommendations and the New START Treaty. Representatives of these governments have also noted that future United States-Russian nuclear arms reduction negotiations should seek to reduce Russian tactical nuclear weapons.

d. As the 2010 NPR makes clear, and as the President reiterated in Prague on April 8, 2010, at the signing of the New START Treaty, the United States intends to pursue additional and broader reductions with Russia that would include reductions in strategic and tactical nuclear weapons and also nondeployed weapons. We believe that such reductions will be in the interests of both sides in order to further enhance stability, reduce costs, and meet obligations under the Nuclear Non-Proliferation Treaty.

e. The United States did not make reductions in the Russian tactical nuclear forces an objective for this treaty, because from the outset, the New START Treaty was intended to replace the START Treaty expiring in December 2009, which was focused solely on strategic offensive forces. Deferring negotiations on tactical nuclear weapons until after a START successor agreement had been concluded was also the unanimous recommendation of the Perry-Schlesinger Congressional Strategic Posture Commission in the spring of 2009.

MISSILE DEFENSE PREAMBLE LANGUAGE

Question. The New START Preamble states: "Recognizing the existence of the interrelationship between strategic offensive arms and strategic defensive arms, that this interrelationship will become more important as strategic nuclear arms are reduced, and that current strategic defensive arms do not undermine the viability and effectiveness of the strategic offensive arms of the Parties."

- How does the U.S. side interpret the phrase "current strategic defensive arms"? Does it include the deployment of 5 SM–3 block IIB missiles in Europe by 2020? How about 10 IIB missiles? How about 100?
- How do the Russians interpret the "current" level of strategic defensive arms? At what point in our deployment plans will they suggest we've moved beyond "current" capabilities?
- In your testimony you said that you have briefed the Russians on President Obama's Phased Adaptive Approach. What was their reaction to each phase? What concerns did they raise? What objections did they raise? Please provide a copy of all the briefing slides used for that presentation.

Answer. I would like to address the policy issues which LTG O'Reilly deferred:

- "Strategic defensive arms" consist of missile defenses that are capable against intercontinental ballistic missiles as well as air defenses that provide protection against heavy bombers and cruise missiles. "Current" strategic defensive arms include those capabilities deployed at the time of the signing of the New START Treaty in April 2010.
- The United States has repeatedly made clear that we intend to move beyond "current" missile defense capabilities by improving our Ground-Based Mid-course Defenses (GMD), as well as moving forward with the Phased Adaptive Approach (PAA) in Europe and in other regions. There is therefore no doubt that the Russians understand that the United States plans to move beyond "current" missile defense capabilities both qualitatively and quantitatively. In our assessment, none of the capabilities planned for the PAA in Europe will undermine the viability and effectiveness of Russia's strategic offensive arms. This is a point we have made repeatedly to Russia in explaining the results of the 2010 Ballistic Missile Defense Review, and in policy and technical explanations about the European-based Phased Adaptive Approach and the GMD system.

RUSSIAN UNILATERAL STATEMENT

Question. "The Treaty between the Russian Federation and the United States of America on the Reduction and Limitation of Strategic Offensive Arms signed in Prague on April 8, 2010, can operate and be viable only if the United States of America refrains from developing its missile defense capabilities quantitatively or qualitatively. Consequently, the exceptional circumstances referred to in Article 14 of the treaty include increasing the capabilities of the United States of America's missile defence system in such a way that threatens the potential of the strategic nuclear forces of the Russian Federation."

- What would the Russians consider a quantitative or qualitative development in U.S. missile defense capabilities? Additional ground-based interceptors in Alaska? Additional SM–3 block IIA missiles on U.S. ships or deployed in Poland in 2018, as planned? The development and deployment of SM–3 block IIB missiles in Europe by 2020, as planned?
- How did you discuss this matter with the Russians? Can you provide the Senate documentation, briefings, memos of such discussions?
- Have the Russians explained what type and numbers of U.S. missile defenses could "threaten the potential of the strategic nuclear forces of the Russian Federation"?

Answer. a. The Russian Federation has not defined what it would consider a quantitative or qualitative development in U.S. missile defenses. Russia's main concern—as specifically stated in the last sentence of its unilateral statement cited in this question—appears to be that improved and expanded U.S. missile defense capabilities might be able to undermine the credibility of Russia's strategic deterrent. Various U.S. officials have informed their Russian counterparts that U.S. missile defense capabilities associated with deployment of the Phased Adaptive Approach (PAA) in Europe will not pose a threat to Russia's strategic deterrent because the capabilities to be deployed during each phase (including Phase 4, which is planned to include deployment of SM–3 Block IIB missiles in Europe) will not be able to engage Russian strategic missile forces, that is, ICBMs, based in Russia and SLBMs deployed on strategic submarines at sea or in port.

The various versions of the Stand Missile-3 (SM–3) missile defense interceptors we are planning to deploy in Europe as part of the European PAA (including the SM–3 Block IIBs to be deployed during Phase 4) will not have the speed necessary to intercept Russian ICBMs or SLBMs heading to the United States. Moreover, the 30 ground-based interceptors (GBIs) deployed at Fort Greely, AK, and Vandenberg Air Force Base, CA—which are designed to defeat very small attacks by first generation North Korean and Iranian ICBMs—will not have significant capability against a large-scale Russian strategic missile attack that would likely include hundreds of advanced reentry vehicles combined with various types of penetration aids; indeed the number of GBIs could increase substantially and the same would be true.

For these reasons, we do not believe that Russia will have a legitimate missile defense-related reason, as defined by their own unilateral statement, to withdraw from the New START Treaty during its 10-year duration, or for that matter if the treaty were extended for an additional 5 years, as allowed by mutual consent.

b. U.S. missile defense plans were set forth publicly during the President's September 17, 2009, announcement of the "Phased Adaptive Approach" to ballistic mis-

sile defense in Europe as well as in the Ballistic Missile Defense Review Report mandated by Congress, which was published on February 1, 2010.

Additionally, the Obama administration has provided briefings on U.S. regional and national ballistic missile defense (BMD) policy, plans, and programs to representatives of the Russian Government and the Russian military on several occasions over the past several years. The briefing and discussions conducted in Moscow in October 2009 within the Arms Control and International Security Working Group of the United States-Russia Bilateral Presidential Commission included a clear description of all four phases of the U.S Phased Adaptive Approach (PAA) to missile defense in Europe. A second briefing and discussion were held between representatives of the U.S. Joint Staff and the Russian General Staff in a meeting of the Military Cooperation Working Group. There have been numerous other high-level engagements between representatives of the United States and Russia in which we have repeatedly explained that we do not see Russia as a threat, nor do we or will we have the capabilities to negate the Russian strategic deterrent during the 10-year duration of the New START Treaty, or for that matter if it were extended for an additional 5 years by mutual consent.

We can provide the Senate briefings and related materials. In addition, we can assure the Senate that we have made no "secret deals" or agreements with the Russians that would constrain the U.S. ability to develop and deploy missile defenses to defend the homeland from limited missile attacks and to defend our deployed forces, allies, and partners from growing regional missile threats.

c. The Russians have not identified specific U.S. missile defense systems whose deployment would justify Russian withdrawal from the treaty.

U.S. UNILATERAL STATEMENT

Question. U.S. statement says; "The United States of America takes note of the Statement on Missile Defense by the Russian Federation. The United States missile defense systems are not intended to affect the strategic balance with Russia. The United States missile defense systems would be employed to defend the United States against limited missile launches, and to defend its deployed forces, allies, and partners against regional threats. The United States intends to continue improving and deploying its missile defense systems in order to defend itself against limited attack and as part of our collaborative approach to strengthening stability in key regions."

- Are the U.S. and Russian definitions of "limited" the same?
- What the United States considers to be limited could be construed by the Russians as having an impact on their strategic forces—did you discuss this with the Russians?
- The Russians claimed 10 ground-based interceptors to be deployed in Poland were a threat to them and President Obama unilaterally backed away from the missiles' emplacement. Why won't the Russians also claim that the SM–3 block IIB is a threat to Russian strategic forces? And if the Russians do claim it is a threat, will the administration back away and revise the Phased-Adaptive Approach to comply with Russian objections?

Answer. a. We have not made an attempt to arrive at an agreed definition of "limited" in terms of missile defense with the Russians. This language is used to describe the goal of our missile defense efforts. As the United States has stated in the past, our homeland missile defense capabilities are focused on regional actors such as Iran and North Korea. While the GMD system would be employed to defend the United States against limited missile launches from any source, it does not have the capacity to cope with large scale Russian missile attacks, and is not intended to affect the strategic balance with Russia.

b. We have discussed with Russia why we believe that our missile defense efforts, including the GMD system deployed in the United States for defense of the U.S. homeland and our planned regional missile defense capabilities, including the Phased Adaptive Approach in Europe, are not a threat to Russia's strategic deterrent.

c. As the U.S. unilateral statement regarding missile defense, the Ballistic Missile Defense Review, and our budgetary plans all make clear, the United States is committed to the Phased Adaptive Approach in Europe and will continue to improve our missile defenses, as needed, to defend the U.S. homeland, our deployed forces, and our allies and partners. The United States has made it clear to the Russian Federation that the U.S. missile defenses, including the GMD system deployed in the United States for defense of the U.S. homeland and our planned regional missile

defense capabilities, including the Phased Adaptive Approach in Europe, are not intended to affect the strategic balance with Russia.

DEPLOYMENT OF SM–3 BLOCK IIA AND IIB

Question. What is the current estimate for when the SM–3 block IIA and block IIB would be ready for deployment? Is the administration committed to fully fund the development and deployment of phase 3 and 4 of the Phased Adaptive Approach in Europe?

Answer. Deployment of the SM–3 Block IIA is planned for the 2018 timeframe and the SM–3 Block IIB is planned for the 2020 timeframe. The administration is fully committed to funding the development and deployment of the European Phased Adaptive Approach to counter the threat posed by regional actors such as Iran to our deployed forces, allies and partners in Europe.

RESPONSES OF LTG PATRICK J. O'REILLY TO QUESTIONS SUBMITTED BY SENATOR RISCH

MISSILE DEFENSE PREAMBLE LANGUAGE

Question. The New START Preamble states: "Recognizing the existence of the interrelationship between strategic offensive arms and strategic defensive arms, that this interrelationship will become more important as strategic nuclear arms are reduced, and that current strategic defensive arms do not undermine the viability and effectiveness of the strategic offensive arms of the Parties."

- How does the U.S. side interpret the phrase "current strategic defensive arms"? Does it include the deployment of 5 SM–3 block IIB missiles in Europe by 2020? How about 10 IIB missiles? How about 100?
- How do the Russians interpret the "current" level of strategic defensive arms? At what point in our deployment plans will they suggest we've moved beyond "current" capabilities?
- In your testimony you said that you have briefed the Russians on President Obama's Phased Adaptive Approach. What was their reaction to each phase? What concerns did they raise? What objections did they raise? Please provide a copy of all the briefing slides used for that presentation.

Answer. As head of the Missile Defense Agency, I am responsible for technical aspects of the new architecture including the development, testing, and fielding of the architecture's components. I defer to my colleagues in the Office of the Secretary of Defense (OSD) and the Department of State to respond to questions that have policy or diplomatic implications.

I briefed Russian officials on the capabilities and limitations of our missile defense plans throughout all four phases of the phased adaptive approach. Based on fundamental physics and first principle engineering, it is well understood where we have capability and where we don't have capability, especially in regards to their strategic arsenals. It was very clear to me through their questions and responses that they fully understood my presentation.

I went through the details of all four phases of the Phased Adaptive Approach, especially Phase IV. And while the missiles that we have selected as interceptors in Phase IV are expected to provide a very effective defense for a regional type threat, they are not of the size to have sufficient range to reach Russian strategic missile fields. Given Russian expertise in missiles and the size of these interceptors it is an easily verifiable property of these missiles. Even if Russia flew a missile within range of our Phase IV interceptors, we would not be able to intercept those missiles given the time we would see the missiles and the velocity of their much larger strategic missiles and our smaller interceptors. The Russians seemed to be very knowledgeable of this and acknowledged my points.

DOD will provide the briefing slides used for this presentation under separate cover.

RUSSIAN UNILATERAL STATEMENT

Question. "The Treaty between the Russian Federation and the United States of America on the Reduction and Limitation of Strategic Offensive Arms signed in Prague on April 8, 2010, can operate and be viable only if the United States of America refrains from developing its missile defense capabilities quantitatively or qualitatively. Consequently, the exceptional circumstances referred to in Article 14 of the treaty include increasing the capabilities of the United States of America's

missile defence system in such a way that threatens the potential of the strategic nuclear forces of the Russian Federation."

- What would the Russians consider a quantitative or qualitative development in U.S. missile defense capabilities? Additional ground-based interceptors in Alaska? Additional SM–3 block IIA missiles on U.S. ships or deployed in Poland in 2018, as planned? The development and deployment of SM–3 block IIB missiles in Europe by 2020, as planned?
- How did you discuss this matter with the Russians? Can you provide the Senate documentation, briefings, memos of such discussions?
- Have the Russians explained what type and numbers of U.S. missile defenses could "threaten the potential of the strategic nuclear forces of the Russian Federation"?

Answer. Our plans for the Phased Adaptive Approach to missile defense in Europe do not require the development of large interceptors capable of countering the Russian ICBM arsenal. The deployment of hundreds of Ground Based Interceptors (GBIs) would be required over a 5-year construction period before the quantity of GBIs would be sufficient to degrade Russia's strategic capabilities. We have no plans or budget requested for such qualitative or quantitative improvements that would effectively degrade Russian strategic forces.

U.S. UNILATERAL STATEMENT

Question. The U.S. statement says; "The United States of America takes note of the Statement on Missile Defense by the Russian Federation. The United States missile defense systems are not intended to affect the strategic balance with Russia. The United States missile defense systems would be employed to defend the United States against limited missile launches, and to defend its deployed forces, allies and partners against regional threats. The United States intends to continue improving and deploying its missile defense systems in order to defend itself against limited attack and as part of our collaborative approach to strengthening stability in key regions."

- Are the U.S. and Russian definitions of "limited" the same?
- What the United States considers to be limited could be construed by the Russians as having an impact on their strategic forces—did you discuss this with the Russians?
- The Russians claimed 10 ground-based interceptors to be deployed in Poland were a threat to them and President Obama unilaterally backed away from the missiles' emplacement. Why won't the Russians also claim that the SM–3 block IIB is a threat to Russian strategic forces? And if the Russians do claim it is a threat, will the administration back away and revise the Phased-Adaptive Approach to comply with Russian objections?

Answer. The size of the propulsion systems of the interceptors under development to support the Phased Adaptive Approach are too small to effectively reach Russian strategic missiles heading toward the U.S. from their missile fields. I have made the Russians aware of our smaller interceptors and they understand the interceptors' limited capability against the Russian ICBMs. The 10 Ground-Based Interceptors (GBIs) previously proposed for deployment in Poland are 12 times larger than our new interceptors and the Russians were concerned about the larger GBIs.

DEPLOYMENT OF STANDARD MISSILE-3 (SM–3) BLOCKS IIA AND IIB

Question. What are the current estimates for when the SM–3 Blocks IIA and IIB would be ready for deployment? Is the administration committed to fully fund the development and deployment of phase 3 and 4 of the Phased Adaptive Approach in Europe?

Answer. The current deployment estimate for the SM–3 Blocks IIA and Blocks IIB are:

- Flight testing for the SM–3 Block IIA missile is scheduled for 2014. Production would follow with the SM–3 Block IIA ready for deployment as part of Phased Adaptive Approach Phase III in FY18.
- The initial flight testing for the prototype SM–3 IIB missile is scheduled to begin in FY 2015. Production would follow with the SM–3 Block IIB ready for deployment as part of the Phased Adaptive Approach Phase IV in 2020.

As head of the Missile Defense Agency, I am responsible for technical aspects of the new architecture including the development, testing, and fielding of the architecture's components. MDA's budget requests fully support the development scope and deployment timeframes described above.

IMPLEMENTATION—INSPECTIONS AND ASSISTANCE

THURSDAY, JUNE 24, 2010

U.S. SENATE,
COMMITTEE ON FOREIGN RELATIONS,
Washington, DC.

The committee met, pursuant to notice, at 10:03 a.m., in room SD–419, Dirksen Senate Office Building, Hon. Robert P. Casey, Jr., presiding.

Present: Senators Casey, Cardin, Lugar, Isakson, and Risch.

OPENING STATEMENT OF HON. ROBERT P. CASEY, JR., U.S. SENATOR FROM PENNSYLVANIA

Senator CASEY. The hearing will come to order.

Thank you very much for taking the time to be with us this morning.

This hearing of the Senate Foreign Relations Committee meets today to review the role of inspections in the verification regime of the New START Treaty.

First, we need to ask a threshold question with regard to this treaty. How does this treaty contribute to the United States national security? First, the treaty itself provides for predictability, transparency, and stability in the United States-Russian nuclear relationship. Former National Security—or, I should say, former National Nuclear Security Administration—Administrator, Ambassador Linton Brooks, put it best when he said, "Transparency leads to predictability and predictability leads to stability." The opportunity to examine Russian nuclear forces will help limit the surprises, mistrust, and miscalculation that could result from a lack of information.

To underscore this point, I'd like to draw attention to an ad that was released today by the Partnership for a Secure America that appeared in today's—probably among other places—today's Politico. I think you've seen—it's on page 31. This ad is signed by a bipartisan list of distinguished Americans, including George Shultz, Lee Hamilton, Colin Powell, Madeleine Albright, just to name a few. This group clearly declares that the New START Treaty does not limit missile defense, nor does it inhibit our ability to maintain an effective and reliable arsenal. Moreover, the group states that the verification and inspection measures are essential to United States national security and nuclear threat reduction as it relates to Russian strategic nuclear weapons.

We thank them for their continued service, those who were listed in the ad, and their contribution to this important debate.

The existence of the START Treaty—and, in particular, the framework for an inspection regime—has proven remarkably durable, even during difficult times in the Russian-United States relationship. For example, despite tensions over policy in the Balkans and the NATO campaign in Kosovo, our respective commitments to START have never been in question. In an environment of instability today in Afghanistan and across the Middle East, stability in our relationship with Russia becomes even more important.

In addition to the benefits of decreasing the number of nuclear weapons, the signing of this treaty has resulted in concrete benefits. First, in deepening our relationship with the Russian Federation, we're able to secure support for sanctions on the Iranian regime at the United Nations. Russia has also decided not to provide S–300 missiles to Iran, even though the sale of this weapon is not banned by U.N. sanctions.

Moreover, our current relations with Russia are stable, but if that were to change, the New START Treaty would provide a ceiling of 1,550 deployed nuclear weapons in the Russian nuclear arsenal in case it were to decide to chart a new strategic course.

This treaty will also have strategic benefits apart from arms control. But, at a more fundamental level, we meet here today to concretely discuss how this treaty will provide a valuable window into Russian nuclear forces.

Today, we look forward to hearing from our witnesses on whether they believe that the verification regime crafted under the New START Treaty fulfills the two main purposes of arms-control verification regimes: First, to provide a mechanism to increase confidence that all parties are abiding by the treaty; and second, to provide early warning of any violation that can jeopardize our national security.

Over the past two decades, both the American and Russian inspection teams have implemented the original START Treaty. The New START Treaty was negotiated with this experience as a foundation, and builds on its best practices.

Some have asked whether we have lost any valuable elements of the original START agreement's inspection regime. Critics point out that, under the original START Treaty, the United States was permitted 25 data update, reentry vehicle, and facility inspections a year, while under the New START Treaty, the United States can only inspect 18 facilities annually. However, in a previous hearing on the START Treaty, Admiral Mullen noted that, when START entered into force, there were 55 Russian facilities subject to inspection, but now there will only be 35 Russian facilities subject to inspection. Because the Russian strategic nuclear forces have contracted so much over the past 15 years, we have certainly not lost anything in the number of inspections we carry out per facility. This does not take into account that some of the inspections under the New START Treaty allow us to do two inspections at once, unlike under the original START verification regime.

I would also assert that the inspections regime has also changed to reflect the current security environment and enhanced relationship with the Russian Federation, and because of more than a decade of experience in conducting inspections. The inspection regime is simpler and cheaper than it was—than what was conducted

under the first START Treaty. We conduct fewer inspections under this treaty, because there are fewer sites to inspect. We know what works and we know what doesn't work.

As I mentioned earlier, we have built upon a substantial track record of experience in conducting inspections and hosting Russian inspectors. The Defense Threat Reduction Agency, known by the acronym DTRA, trains, equips, organizes, deploys, and exercises operational control over inspection, monitoring, and escort teams. In addition to preparing for conducting onsite inspections of Russian facilities, the United States must be prepared to host onsite inspections under the New START Treaty without revealing—without revealing—sensitive military information.

I look forward to hearing from our witnesses today about how the New START Treaty will affect their hosting of Russian inspections at United States facilities.

We must ask ourselves what we would lose under the New START Treaty agreement, were it not verified—or, ratified, I should say. As General Chilton, Commander of the U.S. Strategic Command, testified last week, "The New START Treaty will reestablish a strategic nuclear arms control verification regime that provides intrusive access to Russian nuclear forces and a measure of predictability in Russian force deployments over the life of the treaty. Such access and predictability contribute to our ability to plan, confidently, our own force modernization efforts and our hedging strategy." So said General Chilton.

The General also noted that while—that without this verification regime in place, the ability to plan our own force structure would be far more difficult and costly, and would drive our strategists to always default to the worst-case scenario. He said, "Without such a regime, we would be, unfortunately, left to use worst-case analyses regarding our own force requirements."

While Chairman Kerry and Senator Lugar have led an effort to thoroughly review the treaty, there remains key questions with regard to the inspections regime. I hope that, through the course of this hearing, we'll gain better perspective on at least two particular issues: No. 1, an instructive understanding of the actual inspections process; and second, the mechanisms in place to address and resolve disputes or perceived inconsistencies with the agreement.

Thanks to the leadership of this committee's ranking member, Senator Lugar, the United States has worked with Russia for almost 20 years to eliminate weapons of mass destruction and their associated delivery systems through the Nunn-Lugar Cooperative Threat Reduction Program. This historic effort has bolstered U.S. nonproliferation efforts, and with the original START Treaty as a foundation, was successful in the elimination of ICBMs and SLBMs, heavy bombers, and air-to-surface missiles. I look forward to hearing how the Cooperative Threat Reduction Program would complement the New START Treaty agreement.

Today we welcome back the Honorable James N. Miller, Jr., Deputy Under Secretary of Defense for Policy, who was before this committee last week. And we give a warm welcome back to Kenneth A. Myers III, a former professional staff member on the committee, and now the director of the Defense Threat Reduction

Agency and U.S. Strategic Command Center for Combating Weapons of Mass Destruction.

In his role as Principal Deputy Under Secretary of Defense of Policy, Dr. Miller provides advice and assistance on matters concerning the formulation of national security and defense policy and the integration of the oversight of Department of Defense policy. Dr. Miller provided the committee with valuable insight last week, and we look forward to the same today.

Kenneth Myers is in charge of—or, is charged with integrating and synchronizing the Pentagon's defensewide efforts in support of combating the weapons of mass destruction threat. In this role, we look to Mr. Myers to provide us, today, with a thorough examination of the connection between the New START Treaty and DTRA's activities.

I'd ask our witnesses to speak for about 7 minutes each. We'll try to keep to that as best we can. Please note that if you'd like to summarize your statement, of course, your full statement will be made part of the official hearing record.

And at this time, I'd like to turn to our distinguished ranking member, Senator Lugar.

OPENING STATEMENT OF HON. RICHARD G. LUGAR, U.S. SENATOR FROM INDIANA

Senator LUGAR. Well, thank you very much, Mr. Chairman.

Today, the Foreign Relations Committee will meet twice as part of our ongoing examination of the New START Treaty. And this morning, we will hear, as you pointed out, testimony regarding treaty inspections and implementation. This afternoon, we will examine benefits and risks of the new treaty.

I join you in welcoming back Dr. James Miller, Deputy Under Secretary of Defense for Policy, who appeared before us last week and offers his valuable testimony. And we are especially pleased to welcome back to the committee, Kenneth A. Myers III, the Director of the Defense Threat Reduction Agency, which played such an important role in this committee's deliberations on previous arms control treaties, as well as his work in the field as a part of Cooperative Threat Reduction.

Having served for many years as a senior member of the Foreign Relations Committee professional staff, we are especially pleased that he is here today and can help recapitulate the history of some of our previous deliberations.

During discussion of the New START Treaty, many Senators and commentators have underscored the importance of verification and inspections. It is a widely accepted principle of strategic arms control that agreements must be verifiable. Yet, few Senators know how we carry out inspections or implement treaty provisions. Who performs the inspections for our government? How do inspectors enter Russia, and under what conditions? What are they allowed to see? How do we choose what to inspect? How do we accommodate Russian inspection teams that come to the United States?

Successful arms control sometimes depends on seemingly mundane matters, such as delineating the privileges and responsibilities of verification teams operating in each others' countries, as well as the procedures for conducting inspections. Today's hearing

is an opportunity to develop a detailed understanding of the verification process that will be applied to the New START Treaty.

The START I Treaty expired last December. The White House agreed with Moscow to continue to act in its spirit while negotiations continued on the treaty that is now before us. And yet, today we have no binding verifications regime in place with Russia as we have this meeting this morning. The only way forward to binding verification is through the New START Treaty.

The Defense Threat Reduction Agency, or DTRA, was the executive agency for onsite inspection under the START I Treaty. The painstaking inspection process in the New START Treaty will also fall under DTRA's purview. Beyond treaty inspections, DTRA has numerous missions, including implementation of the Nunn-Lugar Act, which is devoted to safely converting and destroying vast stockpiles of nuclear, chemical, and biological weapons in the former Soviet Union.

As of today, the Nunn-Lugar program has deactivated 7,545 strategic nuclear warheads, as well as corresponding strategic launchers and nuclear infrastructure. The number of nuclear warheads deactivated in the former Soviet Union under the Nunn-Lugar program is almost five times greater than the number of deployed strategic warheads that Russia would be allowed under the New START I—rather, under the New START Treaty we're discussing today.

Nunn-Lugar has also upgraded security at 24 weapons storage sites, built and equipped 20 biological monitoring stations, and neutralized 1,395 metric tons of Russian and Albanian chemical weapons agent.

Now, in addition to verification issues, we have the opportunity today to examine the New START Treaty's implications for the Nunn-Lugar program activities in Russia. What missiles or supporting infrastructure are likely to be eliminated under the treaty? How would the treaty's revised elimination regime change the locations at which Nunn-Lugar would work?

I've traveled to the former Soviet Union on numerous occasions to encourage and witness the safeguarding and destruction of weapons covered by START and other initiatives. The destruction of thousands of weapons is a monumental achievement for our countries. But, the process surrounding this joint effort is as important as the number of weapons eliminated.

The United States-Russian relationship has been through numerous highs and lows in the post-cold-war era. Throughout this period, START inspections and consultations and the corresponding threat reduction activities of the Nunn-Lugar program have been a constant that have served to reduce miscalculation and to build respect. This has not prevented highly contentious disagreements with Moscow, but it has meant we have not had to wonder about the makeup and the disposition of Russian nuclear forces during periods of tension. It's also reduced, though not eliminated, the proliferation threat posed by the nuclear arsenal of the former Soviet Union.

This process must continue if we are to answer the existential threat posed by the proliferation of weapons of mass destruction. Every missile destroyed, every warhead deactivated, and every

inspection implemented makes us safer. Russia and the United States have the choice whether or not to continue this effort, and that choice is embodied in the New START Treaty.

I thank the witnesses for joining us today. We look forward to their insights.

And I thank you, Mr. Chairman.

Senator CASEY. Thank you, Senator Lugar. And I'm—again, want to thank you for your leadership over so many years on these issues, and we're grateful that you're with us today again to provide that leadership.

Dr. Miller, do you want to start?

STATEMENT OF HON. JAMES N. MILLER, JR., DEPUTY UNDER SECRETARY OF DEFENSE FOR POLICY, DEPARTMENT OF DEFENSE, WASHINGTON, DC

Dr. MILLER. Thank you.

Senator CASEY. Thank you.

Dr. MILLER. Mr. Chairman, Senator Lugar, distinguished members of the committee, it is a pleasure to join Ken Myers, our very capable and accomplished director of the Defense Threat Reduction Agency, to testify here today on the New START Treaty.

The committee asked us to address four issues: the treaty's inspection regime, its elimination provisions, the Cooperative Threat Reduction Program and it's relation to the inspections, and our continuing efforts to address biological threats.

I would like to briefly summarize highlights of my written statement, and, as Senator Casey offered, ask that the full statement be entered into the record.

And I know that Mr. Myers will go into more detail on the—on how we conduct inspections in CTR. I will focus on policy-related issues.

So, first, on New START inspections. Onsite inspections are a lynchpin of the New START Treaty's verification framework. The treaty allows each party to conduct up to 18 short-notice onsite inspections each year, with up to 10 type one inspections at operating bases for ICBMs, strategic nuclear-powered ballistic missile submarines, and nuclear-capable heavy bombers, and up to 8 type two inspections conducted at places such as storage sites, test ranges, and conversion or elimination facilities.

Onsite inspections work synergistically with other elements of the treaty on its provisions on verifications, including extensive data exchanges on the characteristics and locations of ICBMs, SLBMs, and nuclear-capable heavy bombers, unique identifiers associated with each ballistic missile and heavy bomber, and a requirement to report any changes in the status of strategic systems through timely notifications.

By enabling the United States to directly observe Russia's strategic nuclear forces and related facilities, inspections will help the United States verify that Russia is complying with the provisions of the New START Treaty.

Inspections under New START will also provide a deterrent to cheating, because the treaty provides for up to 18 inspections per year at sites selected by the inspecting party. Each side knows that the other will have a significant capability to uncover any discrep-

ancies between what is reported and what is actually happening. If the United States has concerns or sees ambiguities in reported data, we will be able to raise those issues with the Russians in the Bilateral Consultative Commission established under the treaty, and pursue them at higher levels, if necessary.

The conversion and elimination provisions of the New START Treaty are designed to allow both the United States and Russia to convert or eliminate strategic offensive arms in a transparent, simplified, and less costly manner than was the case under START. Under these simplified procedures, the United States will be able to remove from accountability over 300 ICBM and SLBM launchers and heavy-bomber systems that would have been accountable under the old START.

And I want to particularly highlight that the treaty will allow us to take our four conventional SSGNs, which now carry cruise—conventional cruise missiles, as well as conventionally—conventional-only B–1B and B–52 bombers off the books. This feature of the treaty will allow us to meet the treaty's limits while preserving force structure for conventional missions and more headroom under the treaty's limits for nuclear systems.

Now, regarding the Cooperative Threat Reduction Program. For almost 20 years the Nunn-Lugar CTR program has worked with Russia, other states of the former Soviet Union, and, increasingly, new partners, to advance U.S. nonproliferation objectives by supporting the elimination of weapons of mass destruction and associated delivery vehicles. As was noted, the CTR program has played a critical role in the elimination of the strategic systems of the former Soviet Union. This includes 672 ICBM launchers and 783 ICBMs, 476 SLBM launchers, and 651 SLBMs, and 155 heavy bombers, and 906 air-to-surface missiles. This program has also supported the deactivation of 7,545 nuclear warheads. Those figures are accurate as of June 21, when we submitted the testimony.

CTR will complement New START while continuing to operate under its own authorities. Consistent with longstanding practice, the United States will continue to make payment for the work funded by Nunn-Lugar CTR only after it is confirmed as completed by a U.S. Government CTR official or U.S. Government-authorized CTR contractor personnel. Such practices will provide additional transparency into the elimination of Russian Strategic systems, building off the verification provisions of the New START Treaty.

The Nunn-Lugar CTR program has made a tremendous contribution to U.S. national security, in great part because of the single-minded commitment of its two founders. Senator Lugar, I understand, has visited a CTR project virtually every year since the program has existed, sometimes with Senator Nunn along, now in his role as a private-citizen advocate.

Senator Lugar has always been available, as well, to help administrations of both parties when quiet high-level intervention was required with a foreign government on a CTR issue. And his leadership has also been key to ensure that CTR has received strong congressional support over the years.

This program—his program—has succeeded because of his role. And, Senator, I want to say that we're all truly grateful.

Finally, the committee asked that we address the administration's efforts to prevent and, if necessary, respond to biological threats, a top priority for the administration. As you know, to guide the U.S. approach, last fall the President signed a national strategy for countering biological threats which seeks to reduce the risks presented by the deliberate or accidental release of a biological agent.

DOD is working with our interagency partners to implement the national strategy. For DOD, a large support of this plan comes from the CTR program. In fact, biological threat reduction activities now reflect almost 40 percent of the CTR budget. And the Biological Threat Reduction Program is currently assisting eight countries: Armenia, Azerbaijan, Georgia, Kazakhstan, Pakistan, Russia, Ukraine, and Uzbekistan. Building on these and other successes of the CTR program, we are working to expand the scope of our threat reduction efforts to new regions in a response to new challenges and opportunities.

In conclusion, the New START Treaty is strongly in the national security interest of the United States, and the Department of Defense fully supports it. The Cooperative Threat Reduction Program will complement New START and make additional key contributions to U.S. national security in its own right. CTR is also key to our broader efforts to prevent and counter biological threats.

Thank you, and I look forward to answering your questions.

[The prepared statement of Dr. Miller follows:]

PREPARED STATEMENT OF DR. JAMES N. MILLER, PRINCIPAL DEPUTY UNDER SECRETARY OF DEFENSE FOR POLICY, DEPARTMENT OF DEFENSE, WASHINGTON, DC

Mr. Chairman, Senator Lugar, distinguished members of the committee, thank you for the opportunity to testify today. It is a pleasure to join Kenneth Myers, Director of the Defense Threat Reduction Agency (DTRA), to discuss inspections associated with the New START Treaty, and the continuing work of the Nunn-Lugar Cooperative Threat Reduction (CTR) program. My remarks will provide a policy perspective, and Mr. Myers will address implementation, for which DTRA plays a leading role.

NEW START INSPECTIONS

Onsite inspections are a linchpin of the New START Treaty's verification framework. The treaty allows each Party to conduct up to 18 short-notice onsite inspections each year, with up to 10 type one inspections conducted at operating bases for ICBMs, strategic nuclear-powered ballistic missile submarines (SSBNs), and nuclear-capable heavy bombers, and up to 8 type two inspections conducted at places such as storage sites, test ranges, formerly declared facilities, and conversion or elimination facilities.

Onsite inspections work synergistically with other elements of the treaty, including extensive data exchanges on the technical characteristics, locations, and dispositions of ICBMs, SLBMs, and nuclear-capable heavy bombers, and unique identifiers associated with each ballistic missile and heavy bomber. Any changes in the status of strategic systems must be reported through timely notifications and, twice annually, the sides must provide a comprehensive snapshot of their strategic offensive forces. By enabling the United States to directly observe Russia's strategic nuclear forces and related facilities, inspections help confirm the accuracy of declared data on deployed and nondeployed strategic offensive arms, and the conversion or elimination of these systems. Inspections also can confirm that facilities which previously supported strategic offensive arms are not being used for purposes inconsistent with the treaty. In short, inspections will help the United States verify that Russia is reporting the status of its strategic forces accurately and complying with the provisions of the New START Treaty.

Inspections will not be shots in the dark. Using information provided by required data exchanges, notifications, past inspections, and national technical means (NTM),

we can choose to inspect those facilities of greatest interest to us. Then, through short-notice onsite inspections, our inspectors can verify that what the Russians are reporting accurately reflects reality.

Inspections under New START will provide a deterrent to cheating. Because the treaty provides for an annual quota of up to 18 inspections at sites selected by the inspecting party, each side knows that the other will have a significant capability to uncover any discrepancies between what is reported and what is actually happening. If the United States has concerns or sees ambiguities in reported data, we will be able to raise them with the Russians in the Bilateral Consultative Commission and pursue them further at higher levels, if necessary.

In addition to helping to monitor compliance and deter cheating, onsite inspections, coupled with compulsory exhibitions of any new types of strategic systems, will help the United States better understand the disposition, operating and support patterns, and characteristics of Russia's strategic offensive forces. This level of detailed information on Russian strategic forces could simply not be accumulated in the absence of a treaty verification regime. By allowing both sides to base assessments on the direct monitoring of each other's strategic offensive forces, New START will, if ratified, promote transparency and help avoid worst-case assumptions and planning.

CONVERSION AND ELIMINATION

The conversion and elimination provisions of the New START Treaty are designed to allow both the United States and Russia to convert or eliminate strategic offensive arms in a transparent, simplified, and less costly manner than was the case under START. These processes will ensure that the systems are rendered incapable of performing their original purposes. Under New START, the United States will be able to remove from accountability 96 former SLBM launchers on 4 *Ohio*-class SSBNs converted to SSGNs, and over 60 B–1B bombers converted to a conventional-only role. We will also be able to convert additional B–52H bombers to a conventional-only role and employ simplified procedures to eliminate 100 currently empty ICBM silos and more than 70 B–52 and B–1B heavy bombers.

NUNN-LUGAR COOPERATIVE THREAT REDUCTION (CTR) PROGRAM

For almost 20 years, the Nunn-Lugar CTR program has worked with Russia, other states of the former Soviet Union, and increasingly, new partners around the world to advance U.S. nonproliferation objectives by providing support for the elimination of weapons of mass destruction and associated delivery systems. As part of this mission, the program has played a critical role in the elimination of the strategic systems of the former Soviet Union. As of June 21, 2010, the CTR program has supported the elimination of 672 ICBM launchers and 783 ICBMs, 476 SLBM launchers and 651 SLBMs, and 155 heavy bombers and 906 air-to-surface missiles. It has also supported the deactivation of 7,545 nuclear warheads.

CTR assistance has incentivized Russia to drawdown its Soviet-legacy nuclear forces, and reduced opportunities for their proliferation or use. Past eliminations have been completed in accordance with applicable START provisions, including the START Conversion or Elimination Protocol. CTR will complement New START, while continuing to operate under its own authorities. Consistent with longstanding practice, the United States will continue to make payment for the work funded by Nunn-Lugar CTR only after it is confirmed as completed by a U.S. Government CTR official or U.S. Government-authorized CTR contractor personnel. Such practices will provide additional transparency into the elimination of Russian strategic systems that builds on the verification provisions of the New START Treaty.

I would also like to highlight that other Nunn-Lugar CTR projects in Russia complement New START Treaty objectives. DOD, in cooperation with the Department of Energy, has upgraded and modernized the security systems of sites in the Russian Federation where strategic and nonstrategic (tactical) nuclear weapons are stored. This has included instituting an enhanced personnel reliability system and provision of an automated inventory control system to allow the Russian Ministry of Defense to keep better track of the location and status of its nuclear warheads destined for dismantlement. We are sustaining enhanced security systems at 24 nuclear weapons storage sites in Russia previously upgraded by DOD. Further, CTR's nuclear weapons transportation security program is enhancing the security, safety, and control of nuclear weapons during shipment between operational sites, secure storage sites, and dismantlement facilities. Such nuclear weapons shipments average four per month and will continue through 2012. These programs play an important proliferation prevention role and support the President's initiative to lockdown all vulnerable nuclear sites around the world.

In sum, the CTR program has made a tremendous contribution to U.S. national security and will continue to do so under the New START Treaty.

CONTINUING BIOLOGICAL THREAT

The committee asked that Mr. Myers and I address the administration's efforts to prevent and respond to biological threats, which is a top priority for the Obama administration. To guide the U.S. Government approach to this problem, in November 2009, the President signed a National Strategy for Countering Biological Threats which seeks to reduce the risks presented by the deliberate or accidental release of a biological agent.

DOD, along with its interagency partners, is developing a comprehensive plan to implement the national strategy and ensure that all U.S. Government efforts in this critical area are aligned with the strategy. For the Department of Defense, a large portion of the overall support to this plan comes directly from the CTR program. In fact, biological threat reduction activities are an increasingly important aspect of the overall CTR program and now reflect almost 40 percent of the CTR budget. Today, the Biological Threat Reduction Program (BTRP) is assisting eight countries, including Armenia, Azerbaijan, Georgia, Kazakhstan, Pakistan, Russia, Ukraine, and Uzbekistan, with plans to expand further into Afghanistan and several other regions.

Building on these and other successes of the Nunn-Lugar CTR program, we are working to expand the scope of our threat reduction efforts to new regions and in response to new challenges and opportunities. Four key principles—integration, responsiveness, stewardship, and cooperation—will guide the Nunn-Lugar CTR program as we undertake these new missions around the world. We are grateful for the continued support of Congress, including this committee. This support has enabled the Nunn-Lugar CTR program to address emerging WMD threats and to achieve longstanding nonproliferation goals more effectively and comprehensively.

CONCLUSION

The New START Treaty's provisions for onsite inspections provide the cornerstone of the treaty's verification regime. Onsite inspections and exhibitions will provide us with the ability to put our trained inspectors in some of Russia's most sensitive facilities to confirm that the data they declare about their strategic offensive arms is valid. This, in turn, will establish a strong disincentive to Russian cheating. More broadly, these inspections and exhibitions will give us a detailed picture of Russia's strategic nuclear forces that we simply could not obtain otherwise. The Nunn-Lugar CTR program plays a critical role in encouraging further eliminations of Russia's strategic delivery systems and associated infrastructure. Together, these activities form a central part of our effort to reduce nuclear dangers in a verifiable and stabilizing manner. The expansion of the CTR program's biological threat reduction program will further reduce risks to the United States.

Senator CASEY. Mr. Myers.

STATEMENT OF KENNETH A. MYERS III, DIRECTOR, DEFENSE THREAT REDUCTION AGENCY AND DIRECTOR, U.S. STRATEGIC COMMAND CENTER FOR COMBATING WEAPONS OF MASS DESTRUCTION, FORT BELVOIR, VA

Mr. MYERS. Mr. Chairman, Ranking Member Lugar, committees—members of the committee, it is an honor to return to the committee to address the roles of the Defense Threat Reduction Agency in executing the inspection provisions of the New START Treaty.

I will summarize my remarks and ask that my complete statement be made part of the record.

The mission of the nearly 2,000 civilian and military personnel of DTRA is to safeguard the United States and its allies from weapons of mass destruction by providing capabilities to reduce, eliminate, and counter such threats, and mitigate their effects. The proliferation of weapons of mass destruction, their means of deliv-

ery, and related knowledge materiels pose a grave and current threat that is growing and evolving.

One of the most effective tools our Nation has for addressing WMD threats is the Nunn-Lugar Cooperative Threat Reduction Program. This highly innovative and effective program has assisted Russia in meeting its START obligations by dismantling 783 intercontinental ballistic missiles and 651 submarine-launched ballistic missiles and associated infrastructure.

DTRA implemented these Nunn-Lugar activities in accordance with the START Treaty and will continue these activities, consistent with new START provisions, should the Senate consent to ratification.

DTRA is also the DOD focal point for the implementation of inspection and escort provisions of arms control treaties. The Agency conducts onsite inspections and escorts foreign inspectors at U.S. facilities. In addition, DTRA provides technical expertise to arms control treaty delegations, the compliance forums of treaties, and the Office of the Secretary of Defense, and other DOD components.

DTRA supported the New START Treaty negotiations by providing arms control implementation expertise and negotiating experience, linguistic ability, and administrative support to the lead negotiators. Of the 56 members of the Geneva negotiating team, 18 were DTRA personnel.

DTRA played a critical role in the development of the inspections framework and the conversion and elimination portion of the new treaty.

DTRA will have the same responsibilities to support New START that we had in place for START. As it did in the 649 onsite inspections under START, DTRA will staff, train, equip, and lead United States onsite inspection teams in Russia, and escort Russian inspectors at United States facilities. DTRA inspectors and escorts are responsible for observing, documenting, and reporting the factual findings of their inspections activities to the interagency community responsible for making verification and compliance judgments. Onsite inspection serves as a tool designed to promote fulfillment of treaty obligations under New START. The short-notice nature of these inspections is designed to ensure treaty compliance.

In addition, New START imposes restrictions that prevent the removal of strategic systems from an inspection site before inspectors arrive. Once on the ground, DTRA inspectors are able to put eyes on these systems and confirm that what has been reported in the data exchange is actually what exists on that site.

DTRA will also oversee the conduct of all New START escort operations of Russian inspectors at United States facilities. We've successfully fulfilled this mission 470 times under START. Escort teams will consist of DTRA core members, augmented by local personnel from the facility being inspected. DTRA teams will serve as the onsite representatives during the escort activities, and ensure that short-note inspections comply with the treaty.

DTRA will train the Agency's cadre of inspectors and escort personnel on the specific provisions of the new treaty, and how to implement those provisions. We are crafting a specific training program, prepare our personnel for New START.

Earlier this month, DTRA conducted a START to New START Transition Workshop and will soon begin conducting our first New START training course. This course concentrates on the operating principles and inspection procedures for New START. The core audience is interagency personnel, service representatives, and treaty compliance officers from U.S. facilities, as well as our own inspectors and escorts. The curriculum is modeled after the highly successful semiannual treaty course DTRA conducted for the original START Treaty. DTRA continues to work closely with the DOD Office of Treaty Compliance and the military services to prepare U.S. facilities for the new treaty. We are actively coordinating with the Air Force and the Navy in preparing facilities subject to inspection under New START. This involves working through the inspection procedures for each site, conducting site-assistance visits, as needed, and conducting mock inspections.

Full mock inspections utilize base personnel, a DTRA escort team, and the DTRA team playing the role of Russian inspectors. These events provide opportunities for DTRA to simulate an actual inspection and refine training for inspection and base personnel.

I would like to take this opportunity to walk you through the inspection and escort process that would be used, should the Senate consent to ratification of the New START Treaty. In front of each of you is an overview detailing the inspection and escort procedures that would be conducted by DTRA teams.

The New START Treaty retains the START construct of two points of entry for each country through which teams will transit to conduct inspections. The points of entry for U.S. inspectors in Russia are Moscow in the west, and Ulan Ude for inspection sites in the east. The points of entry for Russian inspectors are Washington, DC, and San Francisco.

All United States missions to Russia will originate at the Defense Threat Reduction Agency at Fort Belvoir, VA, where inspection teams will assemble, draw necessary equipment, and conduct initial mission briefings.

As was the case under START, teams are limited to a total of 10 inspectors. Each DTRA-led team will consist of a team chief, deputy team chief, weapons specialist, linguists, and selected experts. The team chief is the official United States representative for the team.

Teams conducting missions in western Russia will proceed to the DTRA gateway in Darmstadt, Germany, near Frankfurt, an agency facility, where they will conduct detailed mission planning and preparation. Inspectors will conduct a thorough study of the inspection facility and its systems, previous inspection history for the site, and the data declared by Russia for that facility.

Nearly all of the facilities under the New START Treaty were also inspectible under START, and we have substantial START inspection history to draw upon as teams prepare for missions. They will review the treaty provisions applicable to the inspection site, assign individual roles and responsibilities for each team member, and plan the conduct of the inspection.

Teams conducting missions in eastern Russia will conduct similar preparations at the DTRA facility at Yokota Air Base in Japan.

A type one inspection consists of two major components: a warhead inspection of deployed ICBMs, SLBMs, or heavy bombers, and an inspection of any nondeployed strategic offensive arms that might be present at the facility—spare missiles in the ICBM maintenance facility, or within bunkers at a submarine base, for example.

The overall objective of the inspection is to confirm the exchange data for the facility being inspected. No later than 32 hours prior to the team's arrival in Russia, the Russian Government will be notified of our intent to conduct an inspection. The team will be met by a Russian escort team at Moscow or Ulan Ude, and conduct arrival procedures.

Within 4 hours of arrival at the point of entry, the U.S. team chief will designate the site to be inspected, after which the escort team has 24 hours to transport inspectors to the site.

Upon arrival at the base, the team will be told how many reentry vehicles are loaded on each deployed ICBM, SLBM, or how many nuclear armaments are loaded on heavy bombers, and the number of deployed and nondeployed items located at the base. Inspectors will also be provided a site diagram annotated to show the location of declared items on the base. The team will select a single ICBM or SLBM or three heavy bombers for inspection. The base will prepare the missile or heavy bombers for inspection by partially dismantling the front section and covering the reentry vehicles with other soft or hard covers, for ICBMs and SLBMs, or covering nuclear armaments, if they are loaded onto a bomber. The team will then observe the covered objects and confirm the declared number.

In the case where objects declared to be nonnuclear are present—for example, penetration aids on missiles or conventional weapons on bombers—those objects may be subject to radiation-detection measurements to confirm that they are nonnuclear.

Due to safety and handling considerations at ICBM and submarine bases, there is no time limit on the conduct of the warhead inspection. Afterward, the team has 24 hours to inspect the rest of the site, to include structures and vehicles, to confirm the number of nondeployed items declared for that facility.

For heavy bombers, the inspection is limited to 30 hours. Inspectors will then complete the official inspection report, which will be signed by both the United States and Russian Federation team chiefs. After completion of inspection activities, teams return to the respective gateway, via the point of entry, for post-mission activities and reporting.

Russian inspections in the United States will follow the same procedures and timelines described above. DTRA will oversee the conduct of all New START escort operations at United States facilities, and will maintain an escort team on standby at each point of entry.

After receiving the notification of Russia's intent to conduct an inspection, the DTRA Operations Center will notify all U.S. facilities subject to inspection associated with a particular point of entry, and DTRA will prepare to receive the inbound team. Russian——

Senator CASEY. Mr. Myers, I just want to make sure you can wrap up soon, because——

Mr. MYERS. Yes, I will. Yes, sir.

Russian inspectors arriving at the Washington point of entry will be escorted by personnel from DTRA headquarters. Our detachment at Travis Air Force Base will escort Russian inspectors arriving at the San Francisco point of entry.

After the Russian team designates the inspection site, the DTRA escort will notify the selected facility, gather necessary information, and coordinate with the Air Force's Air Mobility Command to transport the team to the facility. Escorts will work closely with site personnel to facilitate the inspection, with the DTRA team chief being the senior U.S. representative.

Upon completion of the inspection, the escort team will coordinate the return of the Russian inspection team to the point of entry and facilitate its departure from the United States. From the time of their entry into the United States until their departure, Russian inspectors will be escorted by DTRA personnel.

DTRA's preparations for executing its responsibilities under New START have been thorough and built upon our experiences with START and INF. Implementing the new inspection regime will not be unfamiliar to the agency, and we will be prepared to carry out all of its inspection and escort provisions with the utmost accuracy and efficiency. We are proud of our record of success in treaty implementation, and look forward to the challenges ahead.

I thank you for this opportunity, and welcome your questions.

[The prepared statement of Mr. Myers follows:]

PREPARED STATEMENT OF KENNETH A. MYERS III, DIRECTOR, DEFENSE THREAT REDUCTION AGENCY AND DIRECTOR, U.S. STRATEGIC COMMAND CENTER FOR COMBATING WMD, FORT BELVOIR, VA

INTRODUCTION

Mr. Chairman, Ranking Member Senator Lugar, and members of the Senate Committee on Foreign Relations, it is an honor and a pleasure to appear before you today to testify on the roles of the Defense Threat Reduction Agency (DTRA) in shaping the inspection and escort provisions of the New Strategic Arms Reduction Treaty (NST) and implementing those provisions, should the Senate consent to ratification of the treaty.

After an overview of the DTRA mission, I will focus my remarks on agency roles and responsibilities regarding the NST; inspection and escort provisions of NST; inspection and escort team organization; and preparations for implementing those responsibilities under NST including training, site assistance visits and mock inspections, and inspection notifications and data management.

AGENCY MISSION

The mission of the nearly 2,000 civilian and military personnel of DTRA is to safeguard the United States and its allies from Weapons of Mass Destruction (WMD)—Chemical, Biological, Radiological, and Nuclear Weapons, as well as high yield explosives capable of destroying buildings and critical infrastructure, by providing capabilities to reduce, eliminate and counter such threats, and mitigate their effects. The proliferation of WMD, their means of delivery, and related knowledge and materiels pose a grave and current threat that is growing and evolving. The need to develop and field improved Countering-WMD (C–WMD) capabilities is more important than ever and DTRA is in the forefront of the national effort to deliver such capabilities.

In addition to serving as the Director of DTRA, I am also the Director of the U.S. Strategic Command Center for Combating WMD (SCC–WMD). Colocated with DTRA and fully integrated within the daily activities of the agency, the SCC–WMD assists the Commander, U.S. Strategic Command with the synchronization of Countering-WMD planning and coordination of related DOD activities across the Combatant Commands and with our interagency partners; identification of C–WMD capability needs; and advocacy for C–WMD capabilities.

DTRA provides C–WMD expertise and support at strategic (global and national), operational (regional and theater), and tactical (battlefield) levels. The agency initiates, stimulates, and participates in interagency, bilateral, and multilateral partnerships, often providing the essential expertise and leadership to get programs established and projects moving. However, the primary role of DTRA in the global CWMD effort is that of an executing agency. Our programs span nonproliferation, counterproliferation, and consequence management, combining technology with operational considerations, and providing Combatant Commanders systems approaches to meeting their WMD challenges. In partnership with others across the U.S. Government (USG), the private sector, and our overseas allies and friends, DTRA integrates a wide range of C–WMD technical, operational, and intelligence subject matter expertise to provide integrated, readily applicable solutions to C–WMD challenges.

One of the most effective tools our Nation has for countering WMD threats is the Nunn-Lugar Cooperative Threat Reduction (CTR) Program. This highly innovative and effective program dismantles and eliminates strategic WMD delivery systems and associated infrastructure; consolidates and secures WMD related technology and materiels; increases transparency; and builds foreign partnerships and collaboration. Nunn-Lugar conducts these activities consistent with the Strategic Arms Reduction Treaty (START) and will continue these activities consistent with the applicable NST provisions. DTRA is the Department of Defense (DOD) organization responsible for implementing this program.

To date, the Nunn-Lugar program has dismantled strategic delivery systems—fixed and mobile Intercontinental Ballistic Missiles (ICBMs) and their launchers; Submarine-Launched Ballistic Missiles (SLBMs), their launch tubes, and strategic missile submarines (SSBNs); strategic bombers and associated air-to-surface missiles—once capable of carrying over 7,500 nuclear warheads. The Nunn-Lugar program also has sealed 194 nuclear test tunnels and holes; improved nuclear weapon transportation and storage security against potential terrorist threats in Russia; destroyed over 1,300 metric tons of Russian and Albanian chemical weapons agents; built and equipped 20 biological monitoring stations; and assisted our partners in improving their capabilities to interdict illicit movements of WMD and related materiels.

As these important efforts with our partners in the former Soviet Union continue, we also are taking the knowledge and capabilities acquired through Nunn-Lugar program implementation to new partners across the globe. For example, the Nunn-Lugar program will provide the DOD means for implementing the President's initiative to secure all vulnerable fissile materiels worldwide by the end of 2012 and will expand its Biological Threat Reduction (BTR) efforts through new partnerships around the globe to provide for more rapid, coordinated, and effective U.S. and international responses to future disease outbreaks or biological attacks.

These new nuclear and biological threat reduction efforts exemplify DTRA's new strategy of global engagement, called "Nunn-Lugar Global Cooperation" (NLGC). Under this strategy, DTRA is adapting and applying the lessons learned from the execution of the Nunn-Lugar Program to the new partnerships across the globe. We are shaping our programs and activities so that they are more agile and flexible, anticipatory of and responsive to emerging threats and fleeting opportunities, and tailored to the individual needs and potential contributions of new international partners. In addition, the NLGC strategy will harness the full range of DTRA and SCC–WMD CWMD expertise and capabilities, integrating Nunn-Lugar capabilities, arms control, bilateral and multilateral threat response activities, global situational awareness, partnership capacity building, and increased support to the Combatant Commanders' theater security engagement efforts.

THE DTRA ARMS CONTROL MISSION

DTRA's charter, DOD Directive 5105.62, designates the agency as the DOD focal point for implementation of inspection, escort, and monitoring provisions of arms control treaties. The agency provides, conducts, and manages training for onsite inspections, as well as performs activities associated with the conduct of onsite inspections by foreign inspectors at U.S. facilities. In addition, DTRA provides technical expertise to U.S. arms control treaty delegations, the compliance forums of the various treaties, the Office of the Secretary of Defense (OSD) and other DOD Components, and provides staff support to the OSD Treaty Managers.

Prior to the establishment of DTRA on 1 October 1998, these activities were performed by the onsite Inspection Agency (OSIA) in support of the Intermediate-Range Nuclear Forces (INF) Treaty, Threshold Test Ban Treaty, Conventional Forces in Europe Treaty, Vienna Document, Open Skies Treaty, and START. OSIA brought

its unique expertise to DTRA, which continues to perform the inspection mission for those treaties still in effect, as well as escort-only operations under the Chemical Weapons Convention.

NEGOTIATIONS

DTRA supported the NST negotiations by providing analytical, technical, and staff support to the lead negotiators and to DOD and USG interagency working groups. Of the 56 members of the Geneva negotiating team, 18 were DTRA personnel. The DTRA team provided years of arms control implementation expertise and negotiating experience, linguistic ability, and administrative support to the Delegation as a whole and to the chief negotiator, Assistant Secretary of State Rose Gottemoeller. DTRA personnel fulfilled key roles in the negotiating working groups on Inspection Activities, Conversion and Elimination, Treaty Articles and Definitions, and Notifications, and played a critical part in the development of those portions of the new treaty. DTRA military linguists augmented the language support staff at the U.S. Mission, providing much-needed help in translating the large number of negotiating documents. Our linguists were frequently called on to interpret for high profile or technically oriented meetings due to their exceptional language abilities and precise knowledge of arms control terms.

INSPECTIONS UNDER NEW START

Building on the success of the INF Treaty, START had a verification regime in which onsite inspections played a major role. These inspections ensured that declared systems were accurately accounted for and helped to verify compliance with treaty provisions. The NST inspection regime builds on the experience gained from 15 years of START implementation, in which over 1,100 onsite inspections were conducted.

START had nine different types of onsite inspections. Under the NST, that number has been reduced to two: type one inspections, which focus on sites with deployed and nondeployed strategic systems, for instance operational ICBM, submarine, and bomber bases; and type two inspections, which focus on sites with nondeployed strategic systems such as storage and training facilities and can also be used to confirm conversions or eliminations of items subject to the treaty. After entry into force, each side will have the right to conduct 10 type one inspections and 8 type two inspections per year. NST does not provide for a baseline inspection of every facility as had been conducted under START.

Building on the past 15 years of START experience, the sides agreed that it would not be necessary to conduct baseline inspections at facilities that had been subject to inspection under START. They also agreed that it was unnecessary to conduct technical exhibitions for arms that had been previously exhibited under START. Exhibitions will be required only for those current and future types of strategic offensive arms that had not been exhibited under START—such as the RS–24 mobile ICBM for Russia and the B–2 heavy bomber for the United States. In addition to exhibitions for these new types, New START provides for exhibitions related to conversion or elimination of items that are subject to the treaty, in order to demonstrate the procedures used to render such items incapable of employing nuclear weapons.

INSPECTION AND ESCORT OPERATIONS UNDER NEW START

DTRA will staff, train, equip, and lead where inspection teams in Russia and escort Russian inspectors at United States facilities, and will maintain the same basic organization to support NST that it had established for START, with detachments in Yokota Air Base (AB), Japan and Travis AFB, California, as well as the DTRA European Operations Division in Darmstadt, Germany. There are 35 facilities in Russia that will be subject to inspections and 17 facilities in the United States that will be subject to inspections.

As it had under START, DTRA will prepare for and conduct inspection activities at facilities in Russia, to collect data that will assist the USG in determining treaty compliance. However, the agency does not make verification or compliance judgments. DTRA inspectors and escorts are responsible for observing, documenting, and reporting the factual findings of their inspection activities to the interagency policy community responsible for making requisite judgments concerning verification and compliance.

The NST retains the START construct of two points of entry for each country, through which inspection teams will transit to conduct inspections. The points of entry for United States inspectors in Russia are Moscow in western Russia and Ulan-Ude for inspection sites in eastern Russia. The points of entry for Russian in-

spectors are Washington, DC, and San Francisco, CA. All United States inspection missions to Russia will originate at the Defense Threat Reduction Center at Fort Belvoir, Va, where inspection teams will assemble, draw necessary equipment, and conduct initial mission briefings.

Teams conducting missions in western Russia will proceed to the DTRA gateway in Darmstadt, Germany, where they will conduct detailed mission planning and preparation. Inspectors will conduct a thorough study of the inspection facility and its systems, previous inspection history for the site, and the data declared by Russia for that facility. Nearly all of the facilities under the NST were also inspectable under START, and we have substantial START inspection history to draw upon as teams prepare for missions. They will review the treaty provisions applicable to the inspection site, assign individual roles and responsibilities for each team member, and plan the conduct of the inspection. Teams conducting missions in eastern Russia will conduct similar preparation at the DTRA facility at Yokota AB, Japan.

A type one inspection consists of two major components, a warhead inspection of deployed ICBMs, SLBMs, or heavy bombers, and an inspection of any nondeployed strategic offensive arms that might be present at the facility (spare missiles in the ICBM maintenance facility or within bunkers at a submarine bases, for example). The overall objective of this inspection is to confirm the exchanged data for the facility being inspected.

No later than 32 hours prior to the inspection team's arrival in Russia and during normal working hours, the U.S. Nuclear Risk Reduction Center will notify the Russian Government of our intent to conduct an inspection. The team will be met by a Russian escort team at Moscow or Ulan Ude and conduct arrival procedures. Within 4 hours of arrival at the point of entry, the U.S. team chief will designate the site to be inspected in writing, after which the escort team has 24 hours to transport inspectors to the site.

Upon arrival at the base, the inspection team will be told how many reentry vehicles are loaded on each deployed ICBM or SLBM, or how many nuclear armaments are loaded on heavy bombers and, the number of deployed and nondeployed items located at the base. Inspectors will also be provided a site diagram annotated to show the location of declared items on the base. The inspection team will select a single ICBM or SLBM or three heavy bombers for inspection. The base will prepare the missile or heavy bombers for inspection by partially dismantling the front section and covering the RVs with either soft or hard covers for ICBMs and SLBMs or covering nuclear armaments if any are loaded onto a bomber. The inspection team will then observe the covered objects and confirm the declared number. In the case where objects declared to be nonnuclear are present (penetration aids on missiles or conventional weapons on bombers), those objects may be subject to Radiation Detection Equipment measurements to confirm that they are nonnuclear.

Upon completion of the reentry vehicle inspection, the inspection team will inspect the rest of the facility, to include structures and vehicles within the inspectable boundaries, to confirm the number of nondeployed items declared for that facility. For Heavy Bomber bases, the inspection is limited to 30 hours. Due to safety and handling considerations at ICBM and submarine bases, there is no time limit on the conduct of the warhead inspection. Upon completion of the warhead inspection, inspectors have 24 hours to inspect the rest of the ICBM or SLBM base for nondeployed items. Inspectors will then complete the official inspection report, which will be signed by both the inspection and escort team chiefs. After completion of inspection activities, teams return to the respective gateway via the point of entry for post-mission activities and reporting.

For onsite inspections of United States facilities, Russian inspectors arriving at the Washington point of entry will be escorted by personnel from DTRA headquarters. Our detachment at Travis AFB will escort Russian inspectors arriving at the San Francisco point of entry. DTRA will oversee the conduct of all NST escort operations at U.S. facilities. DTRA will maintain an escort team on standby at each POE upon the treaty's entry into force.

Under NST, the inspecting party must notify the inspected party of the arrival of an inspection team during normal working hours and no later than 32 hours before the team's scheduled arrival time. After receiving the notification of Russia's intent to conduct an inspection via the U.S. Nuclear Risk Reduction Center, the DTRA Operations Center will notify all U.S. facilities subject to inspection associated with a particular point of entry and DTRA will prepare to receive the inbound inspection team. No more than 4 hours after the team arrives at the point of entry, the Russian team chief will declare in writing the site to be inspected. After site designation, the DTRA escort team will immediately notify the selected facility and will coordinate with that facility to gather the necessary information, determine preferred arrival time and prepare for the inspection. DTRA escorts will coordinate

with the Air Force's Air Mobility Command to transport the team to the site within 24 hours of the time of site declaration. Site personnel will make the necessary preparations for the arrival of the inspectors and their escorts. Such preparations include complying with preinspection restrictions, readying the site for inspection, and making logistical arrangements to feed, billet, and transport the inspectors and escorts while they are at the facility.

Upon completion of the inspection, the escort team will coordinate the return of the Russian inspection team to the point of entry and facilitate its departure from the United States. From the time of their entry into the United States until their departure, the activities of Russian inspectors will be supervised by a DTRA escort team.

INSPECTION AND ESCORT TEAM ORGANIZATION

Inspection teams consist of technical experts in the areas of ICBM, SLBM, and heavy bomber inspections. As was the case under START, inspection teams are limited to a total of 10 inspectors. Each team is led by a DTRA core element consisting of team chief, deputy team chief, weapons specialist, and two linguists. The remainder of each 10-person team will consist of selected experts from DTRA and other USG agencies. The inspection team chief is the official USG representative.

The escort teams consist of the same core group, but are augmented by local personnel from the facility being inspected. Escort teams will support inspections throughout the United States and also serve as the onsite USG representatives during the escort activities. In addition to facilitating the inspection process, escorts are responsible for coordinating transportation, billeting, meals, interpreting, emergency support, and security.

Based on the projected workload and the number of inspections that can be conducted under the new treaty, the personnel requirements for NST are less than they were for START. Under START, DTRA was prepared to escort multiple visiting inspection teams simultaneously, as well as conduct both short notice and elimination inspection missions. It was possible to have four United States inspection teams in Russia (two short notice and two elimination inspections) while at the same time receiving a Russian inspection team at each United States point of entry. New START allows for only one inspection team in country at any given time. Coupled with the reduction in number of inspections, these changes will allow DTRA to reduce from 10 teams under START to 5 inspection teams under NST.

Although there will be fewer inspections under NST, the type one inspections will be more demanding on both DTRA and site personnel, as it combines the main parts of what were formerly two separate inspections under START into a single, more lengthy inspection.

NEW START TREATY PREPARATIONS

DTRA is preparing and planning to perform its inspection and escort responsibilities should the Senate consent to ratification.

Inspector and Escort Training

To prepare for implementation of the treaty, DTRA will train the agency's cadre of inspectors and escort personnel on the provisions of the new treaty and how to implement those provisions. The agency has rigorous team training programs to support inspections and escorting for all treaties, including a specific training program to prepare our personnel for NST. DTRA will ensure that the techniques and lessons learned under START are carried forward. Initial certification of DTRA inspectors and escorts will occur over the May-October 2010 timeframe and involve formal instruction on treaty provisions, self-study, mock inspections at U.S. facilities, and team certification standards and boards.

The agency recently conducted a START to New START Transition Workshop, and will be conducting our first NST training course this October. This course provides the core training for interagency personnel, service representatives, and Treaty Compliance Officers from U.S. facilities, as well as our own inspectors and escorts, on the operating principles and inspection procedures for NST. This course is modeled on the highly successful semiannual treaty course DTRA has conducted for START.

Site Assistance Visits and Mock Inspections

DTRA works closely with the Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics Office of Treaty Compliance and the services to prepare U.S. facilities for the new treaty by providing training, assisting in the development of inspection plans, conducting site assistance visits, and providing full "red-on-blue" mock inspections. Since NST was signed this April, DTRA has been

actively coordinating with the Air Force and the Navy to prepare facilities subject to inspection under New START. This has and will involve working through the inspection procedures for each site, and conducting site assistance visits and mock inspections as needed. Full mock inspections will utilize base personnel, a DTRA escort team, and a DTRA team playing the role of Russian inspectors. These events provide opportunities for DTRA to simulate an actual inspection and refine training for inspection and base personnel.

Arms Control Enterprise System

DTRA uses the web-based Arms Control Enterprise System (ACES) to support data reporting requirements and notifications for all treaty limited equipment and accountable items. This system includes data handling capabilities and reporting procedures for compliance tracking of weapons systems subject to treaty restrictions. The ACES module that previously supported START and INF requires upgrading for NST's provisions for the use of unique identifiers and counting of warheads, as well as the change in structure of the semiannual database report and updated notification formats. DTRA is in the process of upgrading ACES to meet NST requirements, and will ensure that the necessary interim data management and reporting measures are in place during the transition to the new module.

Nunn-Lugar Cooperative Threat Reduction (CTR) Program

DTRA implements the Nunn-Lugar program which promotes the elimination of systems to achieve force reductions required by treaty obligations and provides transparency. Nunn-Lugar is currently engaged in decommissioning, disassembly, dismantlement, and elimination activities for a variety of systems, including: SS–25 ICBMs, mobile launchers, and regimental base infrastructure; SS–N–20 SLBMs and components; SS–N–18 SLBMs and components; SS–18 ICBMs and silos; SS–19 ICBMs and silos; and SLBM launchers and reactor units from *Typhoon-* and *Delta III*-class submarines. All Strategic Offensive Arms Elimination activities have been conducted consistent with START and all future activities will be conducted consistent with NST. These activities have continued without disruption through the expiration of START and following the signature of the NST.

We have reviewed the elimination procedures for each of these systems and are working closely with the Executive Agent for the Russian Government, the Federal Space Agency (FSA), to consider adjustments to ongoing elimination activities to take advantage of efficiencies resulting from NST provisions while maintaining our mutual nonproliferation and threat reduction goals within the NST Treaty environment.

Further, in cooperation with the FSA and Rosatom, the Nunn-Lugar program will continue to identify potential cost-sharing opportunities for each system that will enable the Russian Government to assume increased responsibilities for strategic system eliminations.

We will continue to monitor the elimination work in accordance with Federal Acquisition Regulations governing payments for completed work. Technical site visits will continue as they have in the past under the same procedures agreed to under the CTR Umbrella Agreement which was signed by the United States and Russian Federation Presidents.

CONCLUSION

DTRA's preparations for executing its responsibilities under NST have been thorough and build upon our experience with START and INF. Implementing the new inspection regime will not be unfamiliar to the agency and we will be prepared to carry out all of its inspection and escort provisions with the utmost accuracy and efficiency. We are proud of our record of success in arms control implementation and look forward to the challenges ahead. I thank you for this opportunity, and welcome your questions.

Senator CASEY. Thank you, Mr. Myers. I appreciate both your testimony and that of Dr. Miller, as well.

I'm—because of the substantial contribution that the ranking member, Senator Lugar, has made to this issue and to our national security over many years, I'm tempted, at this moment, to yield my time, but I'm not allowed to, by the committee rules; I have to ask some questions first. But, we'll make sure he gets even more time than we would normally allot to anyone.

But, grateful for that testimony.

I wanted to step back and—Mr. Myers, much of what you walked through—I'm glad you did that, because we were going to get to the mechanics, and I think that's important, for people to get an understanding, both Senators' as well as the American people. I wanted to step back and take a broader—take on a broader question first, and that's the question, really, in a word, "experience," that, as the years marched on, under the original START Treaty, obviously both sides gained a lot of experience from that. And there's no question that that experience has informed our judgments, has informed the—and did inform—the negotiations leading up to the development of the New START Treaty.

I'm just wondering if either of you can highlight or specify some examples of experience developed and learned over those years that helped in the negotiations, but also will help effectuate the elements of these—this treaty, upon ratification—methods or strategies or procedures that might work better, just based upon that experience, but also from the vantage point of how our experience over those years actually helped in the negotiations themselves.

Dr. MILLER. If I could——

Senator CASEY. Dr. Miller.

Dr. MILLER [continuing]. Senator, take a first answer, then I know that Ken will want to—will add more on the question of experience on the ground, as well.

The START Treaty had an integrated approach to verification. Onsite inspections were a key part, but, in addition to that, we have a comprehensive updated database, notifications with respect to movements between facilities and changes in the status of strategic offensive arms, the use of unique identifiers. One lesson learned was that we should broaden that from just mobile missiles to all systems, which we did under New START, and also provisions against interference with national technical means and the establishment of the JCIC, the Joint Consultative—I've forgotten the—is it——

VOICE. Compliance and——

Dr. MILLER [continuing]. Compliance and Inspection Committee—Commission—and the new name for that in New START is the Bilateral Consultative Commission—as a forum to take these issues, so the—from a treaty perspective, a structural perspective, a lot of lessons from New START, in terms of how to structure a comprehensive and integrated verification regime, and the—as Mr. Myers noted, the deep involvement of the DTRA personnel and the negotiating team helped to bring those issues in—the more detailed procedures, as well—into the treaty and prepare us for inspections and other——

Senator CASEY. I'm just going to interject for one second. When—just for people listening, just some—a little more definition on terminology. "National technical means" and "unique identifiers," could you just walk—just briefly define them?

Dr. MILLER. Sure. National technical means include the use of, for example, satellites or aircraft to collect data that are—and these systems are under United States control, and we are able to use them to try to understand the status of Russian strategic forces; indeed, to try to understand the status of other systems worldwide. Both the START Treaty and New START have a provi-

sion calling for noninterference with national technical means, which allows us to use those most effectively. And in any instances when we felt that there was interference, we would then have the right to take that issue into the Bilateral Consultative Commission.

And, I'm sorry, the——

VOICE. Unique identifiers.

Dr. MILLER [continuing]. The unique identifiers—under the START Treaty, there was an identifier affixed to each mobile missile. And what's been done under the New START is to have a similar approach, not just for mobile missiles, but for all missiles. And the details of where that is located will be determined by a combination of—on each side—of what's feasible. So, for silo-based ICBMs, it may make sense to do it at a location that's viewable by the side when it does its inspections, and so forth. So, those unique identifiers will then allow us—as we establish a comprehensive database of Russian strategic systems, it will actually allow us to track their status, and, if they are moved, their movement over time throughout the treaty, with 6-month updates and with required notifications, anytime that there's a change.

Senator CASEY. Mr. Myers, I'll just—I have about 2 minutes left on my questions—but, just a slight reformulation of the question on the experience gained. With your expertise in this—in the area of—the process itself, how you go about the inspections—anything learned in those years that will help—that has helped in the negotiations, and will help in the implementation, of the treaty as it relates to the process, the experience gained by learning more—or going through that process?

Mr. MYERS. Yes, sir. DTRA and its predecessors started doing arms-control inspections in 1988. We—through the INF Treaty—we do inspections under a number of different treaties today, whether it be CFE, whether it be the Dayton Accords, Vienna document, Open Skies, a number of different treaty obligations that DTRA carries out.

WE also have the experience of the START Treaty. So, when we're talking about the New START Treaty, the inspections—the inspectors are not starting from scratch. We are starting with a wealth of knowledge that will allow us to pick up where we left off in December. And that's our plan.

With regard to a specific example, I think that the unique identifiers that Mr. Miller mentioned are critical, but I would point out, on the inspection regimes, with regard to the experience of our inspectors, we're learning lessons and applying to them daily. When a team goes to Russia, they encounter a situation, whether it be a new technique, whether it be a unique situation that has not been seen before, we take that lesson learned, go ahead and apply it, begin applying it to our training regime, our preparation regime, before the next team heads out on the next inspection. So, I think I would amplify on unique identifiers, and I would point in, in terms of lessons learned, it's happening on a daily/weekly basis. It's being applied the very next time a DTRA team goes out the door.

Senator CASEY. I don't want to simplify this, and I want to turn to Senator Lugar, but "unique identifiers," just for people listening, to put it into more common language, what's the best way to

express that? Serial numbers, plus—I just want to give a sense, for people listening.

Mr. MYERS. Here in the United States, we will probably go ahead and use the serial numbers of the missile, if you will; and that will allow the United States to track Russian components, and the Russians to track United States components, from their birth, if you will, all the way through their deployments, different bases, different locations, and will allow us to track it all the way through its elimination, all the way through its death. So, it really allows us to chart and track a system's life cycle and the transparency that that provides, and the "asurety" that that provides, ensures, as Senator Lugar said earlier on, no misunderstandings.

Senator CASEY. Thank you.

Senator Lugar.

Senator LUGAR. Thank you, Mr. Chairman.

Dr. Miller, some commentators have expressed the view that the New START Treaty may not limit Russian missiles launched from railcars. Now, under New START, the term "mobile launcher of ICBMs" is defined as the mechanism for launching the missile and the self-propelled device on which it is mounted. These commentators suggest that the term "self-propelled" excludes towed railcars. Now, regardless of the definition of a "mobile launcher," isn't it true that any Russian ICBM, and any Russian launcher of an ICBM, would count toward limits in the New START Treaty? And perhaps even more important, isn't it true, just as a matter of historical fact, that the Nunn-Lugar program participated in the dismantlement of the last SS–24 rail mobile Russian missile, and that Russia no longer has any rail mobile systems?

Mr. MYERS. Senator, that's exactly correct, that rail mobile ICBMs are not specifically mentioned in the New START Treaty because neither party currently deploys rail mobile ICBMs. They would be counted under the treaty's limits on—for ICBMs and for launchers. If, in the future, the—Russia were to go forward and develop and deploy rail mobile ICBMs, first they would be counted, and then we would need to take to the Bilateral Consultative Commission discussion of what should be the specific verification provisions associated with them. Negotiators made a decision not to negotiate for hypotheticals with respect to this or other systems.

And, in fact, with respect to CTR, 56 SS–24 ICBMs were eliminated in Russia. That was completed in 2008. And 39 SS–24 launchers were eliminated, with completion in 2007.

Senator LUGAR. Well, I thank you for that response. I mention it, not out of a source of irritation, but simply—critics of the New START Treaty preying upon something such as the fact that these railcars are no longer mentioned betray, perhaps, a thought that they really don't know what has been destroyed in Russia. And this is why it—I appreciate very much your going through, today, what already has been achieved. We are not beginning from scratch, we're coming in with a New START Treaty with, as we pointed out, every single one of the rail mobile Russian missiles and railcars destroyed, gone, under programs we have had. So, that's sort of important, to establish these facts so that we delimit, at least, the amount of our purview.

Now, both of you have done a great job of walking us through the inspection process. I appreciate especially the handout and the detail with which Mr. Myers proceeded with this. But, just the sake of underlining a couple of thoughts that you have done here, what role did the record of inspections under START I play in formulating the new inspections mandated under the New START? And please explain for us how these new inspections compare with the 12 different kinds of inspections permitted under START I.

Mr. MYERS. Thank you, Senator. The inspection provisions of the New START Treaty are grounded in the experience of the 15 years that we had under the START Treaty. Key elements of the inspection regime were retained, while those with minimal utility are no longer—with no utility—were streamlined or not brought forward.

There were nine types of onsite inspections and two types of exhibitions under the START Treaty. Those have been streamlined into three components under the New START Treaty. Type one inspections, type two inspections, and exhibitions.

Type one inspections combine elements of START reentry vehicle inspections and data update inspections, and are focused on both deployed and nondeployed systems.

Type two inspections are geared more toward nondeployed systems and include elements of START data update inspections and formally declared facilities inspections and elimination inspections.

The remaining types of START inspections were not carried forward.

START's technical characteristics exhibitions and distinguishability exhibitions have been condensed into a single exhibition under New START. And obviously the primary difference between START and New START is, under New START, we are confirming the actual number of reentry vehicles that each delivery vehicle is carrying, as opposed to, under START, where we were ensuring that "not more than" an assigned number was being carried by that delivery vehicle.

Senator LUGAR. Now, you've already indicated, Mr. Myers, that DTRA had 18 persons in the negotiating team.

Mr. MYERS. Yes, sir.

Senator LUGAR. And that is important to establish as we take a look at who was around the table. The expertise that you have demonstrated this morning, and this detail was obviously around the table with those who were negotiating the treaty in our behalf.

Mr. MYERS. Yes, sir.

Senator LUGAR. Let me just ask, now—Under Article VI of the New START Treaty, there is provision for conversion or elimination of weapons and launchers. Conversions or elimination may be carried out at any declared facility. Nunn-Lugar supported destruction of strategic weapons under START I at declared facilities for storage and elimination. And I recall visiting with you at the Surovatikha facility to witness the SS–18 being eliminated.

What results will implementation of the New START Treaty have on the Nunn-Lugar strategic offensive elimination activities in Russia? And do you anticipate that elimination could become cheaper, given the flexibility provided under the New START Treaty for such provisions? And where would all this work be car-

ried out, at existing Nunn-Lugar sites or at other places in Russia that—where we did not previously have work?

Dr. MILLER. Senator, let me take a first cut at the answer, and I think Mr. Myers will want to add something.

As noted before, we expect CTR to complement New START, just as it did START, but continue to operate under its own authorities as it seeks its—the nonproliferation benefits, as well.

CTR elimination procedures will be consistent with the New START Treaty. They are designed to be simplified and less costly than those under START, but also designed to be effective in rendering strategic systems inoperable.

So, at this point, as we look to go forward, we have a lot of experience with the New START—I'm sorry, with—we have a lot of experience with the procedures under START and applying them with the CTR program. And as the negotiations were underway, we began to look at what the implications would be for elimination and conversion under the New START Treaty, as well.

And I believe that those are still under review at DTRA, but I'll let Mr. Myers speak to that. There certainly is the possibility of cost savings. Because one of the key goals of CTR is to ensure our nonproliferation goals, as well, we'll look closely at any changes, to make sure that we meet the full range of objectives of New START and of CTR.

And if I could just add one last note, with respect to conversion or elimination. The conversion of our systems, from nuclear-capable to—or dual-capable bombers, for examples—to conventional-only is really a key provision of the treaty that, as I said, allows us to retain, indeed strengthen, our conventional capabilities while leaving more headroom for nuclear systems under the treaty.

Mr. MYERS. Senator, I'd add two points.

No. 1, as Mr. Miller pointed out, it—the elimination procedures under New START are much simpler. So, indeed, there could be savings in elimination processes, in terms of overall costs. And that's primarily because fewer components will need to be displayed for arms control inspectors, as opposed to, for example, 14 cuts that you might have observed in your visit to Surovatikha, or in another installation in Russia. Fewer requirements for elimination exist under the New START Treaty.

And the second point is, in our conversations with the Russians to date, we understand that the eliminations required to meet Russian obligations under the New START Treaty will take place at the same locations that we are operating and doing elimination work today. So, we do not envision new facilities. Now, obviously, things may change. They are fluid, at this moment. But, right now we are not planning on doing work at any new locations than we are, already, today.

Senator LUGAR. Thank you.

Thank you, Mr. Chairman.

Senator CASEY. Senator Cardin.

Senator CARDIN. Mr. Chairman, thank you very much.

And let me thank both of our witnesses for their service on this issue to our country. These are extremely important issues.

This is one of a series of hearings that the committee has held on the START—the confirmation process. And at each time, there

have been the advantages of this treaty for the United States. And today, we're talking about—as it relates to inspections, we've gone over several other aspects of it. And in each case, we go over how important it would be for the United States, that type of access—for example, inspection, to see what's going on in the Soviet—in Russia. We've also gone over how important this treaty is for the United States-Russian relations and for the United States leadership, on nuclear safety issues and on dealing with nonproliferation and reduction of nuclear warheads. And, of course, as has been pointed out many times, there is the ability to withdraw from the treaty. So, if it be—there's a national security interest for the United States, we always have that safety valve to deal with.

My question is—we're talking about inspection, and you went through what our obligations are in regards to the Russians' inspections here within the United States. Can you just outline for us where we should have at least knowledge of issues that our obligations are, in regards to inspection, that may be of concern for the security of our country?

Mr. MYERS. Senator, the way we go about training for the conduct of and the hosting of the inspections, the way we work closely with the military services, with the Air Force and the Navy, the way we, not only train our inspectors, but train the personnel at the bases, the way we do mock inspections, the way we practice, the—we believe that we have a system in place that ensures that U.S. national security is not jeopardized in any of those types of situations.

The personnel that carry out and who escort these inspections know the treaties, backward and forward, left and right, and have the relationship and the experience with their Russian partners to ensure that the treaties are lived up to the exact word of the document. So, in terms of overall concerns with regard to inspections and the like, that is minimal.

I don't know if Dr. Miller——

Dr. MILLER. Sir, I would just add that, just as there were a good number of DTRA personnel involved in the negotiations, the services and U.S. Strategy Command were also very much involved. And as the that alternative approaches to inspections were considered, any potential impact on operations was taken into account, and these—the result was a set of inspection activities planned under New START—or allowed for under New START—that we believe will be effective in verification, but will not have any notable impact on the United States ability to operate our strategic forces effectively.

Senator CARDIN. I appreciate that answer. We've been operating under these inspection requirements under the current START obligations. Is there anything new in this START Treaty that would raise any concern in regards to inspections here in the United States or U.S. facilities?

Mr. MYERS. Not in my opinion, Senator, and not in the way we're going about preparing this and training for these inspections, both conducting them and hosting them. And, in fact, I think your question outlined the critical point. This—we're not starting from scratch. We have 15 years of experience of hosting and conducting these inspections. And the inspections—and with regard type one

inspections, we have several inspections that have been combined, that were separate under the original START Treaty. But, this is not new territory. Our inspectors and our escorts and our hosts are confident that they can carry out the provisions of this treaty.

Senator CARDIN. Dr. Miller.

Dr. MILLER. I agree. We are confident we can carry out the provisions of the treaty with no impact on our ability to operate our forces.

Senator CARDIN. Thank you.

Again, I thank you both for your extraordinary service. I know these are not easy issues when you're trying to balance a lot of different agencies and their concerns with an overall objective. And congratulations for a job well done.

Thank you, Mr. Chairman.

Senator CASEY. Thank you, Senator Cardin.

Senator Isakson.

Senator ISAKSON. Dr. Miller, I want to associate myself with the kind words you said about Dick Lugar—Senator Lugar. Senator Lugar and Senator Nunn have done the country a great service. Sam Nunn was a great Senator from Georgia, and still a good friend of mine today.

And I think it's important to note that the Cooperative Threat Reduction of 7,545 warheads, since it started, that's five times the number of warheads this agreement would allow the Russians to have. So, it's a significant contribution. And, I think, in a time in which terrorism raised its ugly head in the world, in 2001, and continues to be a threat, the most important thing we can do is make sure those spent warheads that are laying around are captured, deactivated, and we don't have the danger of a possible dirty bomb somewhere in the world.

So, I want to add my congratulations to what Dr. Miller said about the work of Dick Lugar and Sam Nunn on that.

Mr. Myers, the staff briefing memo tells me—I want to qualify this, I'm telling you who told me this——

[Laughter.]

Senator ISAKSON [continuing]. That the Permanent Portal Monitoring Facility that each country was allowed under the first START Treaty is not included in this START Treaty, and that it's because—and the statement says we discontinued production of new ICBMs in Utah, so the Russians took away their permanent facility. But, we had one, up until December of last year, in Votkinsk—or I guess that's Votkinsk—Russia. Does it bother you that, with the new treaty, we wouldn't have that in Russia anymore?

Dr. MILLER. Senator, the provisions that have been included in the New START Treaty, including the 48-hour notice prior to the exit of a missile from the—not only the Votkinsk facility, but others, and the notification process of where those missiles would be moved to, where they might be deployed, and the like, provides us with tremendous amount of transparency and the ability to provide verification of where those missiles and where those items are in the absence of the Votkinsk Portable—Portal Monitoring Facility.

Senator ISAKSON. Good. Of the 18 inspections that the New START Treaty will allow, 10 tier one and 8 tier two, how long does

the normal tier one inspection take? And how long would a normal tier two inspection take?

Mr. MYERS. The norm—if you give me one moment, I will give you the exact numbers—the—from the time the inspection team arrives in-country they will be at the site within 24 hours. So, depending on how you define the start of the inspection—they will arrive. The inspection site is, in fact, frozen with one—within 1 hour of our inspectors identifying which site we want to inspect. The inspected country is obligated by the treaty to transport inspectors to the designated launcher within 12 hours for silos, 3 hours for SLBMs and bombers, and 5 hours for mobile ICBM launchers. For safety reasons, there is no limit on the time to prepare a missile for inspection. And then, prior—excuse me—after that process, each of the inspectors on the inspection team is provided 15 minutes to directly observe the article. There is a 30-hour time limit for bomber inspections.

So, in other words, with 10 inspectors, theoretically they could stretch that out to 150 minutes of viewing of whatever it is they want to take a look at. More often than not, they go up in groups or in small groups, or not everyone takes that time. But, following that, 24 hours on the site for a type one inspection, and then normally they would be leaving the base and returning back.

Senator ISAKSON. Now, under a tier one inspection we have to give 32 hours' notice, is that right?

Mr. MYERS. Under any inspection, Senator.

Senator ISAKSON. On any tier——

Mr. MYERS [continuing]. Thirty-——

Senator ISAKSON [continuing]. One or——

Mr. MYERS. Thirty-two——

Senator ISAKSON [continuing]. Two.

Mr. MYERS [continuing]. Hours.

Senator ISAKSON. Well, under tier one, there's a prohibition against moving anything at the facility once the notice has been given, is that correct?

Mr. MYERS. After 1 hour.

Senator ISAKSON. After 1 hour.

Mr. MYERS. One hour. So, when our—if our folks, for example, are—have arrived in Moscow, they have presented the Russian escorts with a designation of which site we want to go to, the clock starts.

Senator ISAKSON. OK.

Mr. MYERS. And with—after 1 hour, nothing can move. And obviously, we will be taking—we'll bring a number of different skill sets and tools to that table to ensure that the Russians are complying with that, in terms of national technical means and the like.

Senator ISAKSON. Well that's my followup question. I guess you're talking about, in terms of technical means, satellite observation and things like that?

Mr. MYERS. Yes, sir.

Senator ISAKSON. Is that the primary way you would do it?

Mr. MYERS. I would say so. Yes, sir.

Senator ISAKSON. OK. I remember—and we've had so many hearings, and I've attended so many of them, I've got a lot of things running around in my head that may not be correct—being that

Kings Bay is located on the coast of the State of Georgia and is our east coast Trident submarine base, wasn't there a provision, in terms of the number of launchers within the Tridents, we're going to reduce it from 24 to 20, is that correct?

Mr. MYERS. Senator, that is our plan, under the New START Treaty, so we'll have a plan to have no more than a—or, in fact, plan to have 240 SLBM launchers, at any point in time, that are deployed. Under the provisions of the treaty, we're allowed to have up to 100 additional nondeployed launchers.

Senator ISAKSON. That does—I don't know whether you're familiar with our converted Tridents, the *Georgia* and the *Florida*, I think. The—does—I'm trying to remember. Well, I can't talk about that, that's right. I better not ask that question.

That completes my questions. Thank you.

Thank you, Mr. Chairman.

Senator CASEY. Thank you, Senator Isakson.

I wanted to direct my first question, on this round, to Mr. Myers about the handout you gave, that Senator Lugar referred to. We're grateful for that kind of a handout, because it saves many of us on the committee, if not members who will be voting on ratification but are not members of the committee—saves them and us a lot of time. We'd probably have to ask our staffs to create this if it didn't exist, so it's very helpful. In 14 pages, you've given a very specific guidebook for us.

I wanted to focus on the—well, first, just by way of explanation for folks who are hearing, I know, lots of different terminologies. When you get to the part of the handout that is referred to as "Mission Execution"—and you did a wonderful job of outlining what takes place up until the point of execution—but, you divide execution into both inspection and escort. And I guess most people can really understand the—what "inspection" means, but can you differentiate between "inspection" and "escort," just so we have a sense of the difference?

Mr. MYERS. Yes, sir. When we're talking about "inspection," we're talking about the United States team that will be inspecting a Russian facility.

Senator CASEY. Right.

Mr. MYERS. A 10-man or -person team that would inspect a Russian facility.

When we—when we're referring to "escorts," we're referring to the Russian escorts who would meet our inspection team, either in Moscow or Ulan Ude. And we're also referring to the DTRA team of escorts that would meet a Russian inspection team, either in Washington or in San Francisco.

Senator CASEY. OK. And, in terms of the inspection process, in your handout you've got, I guess, two pages dedicated to that. And some of the detail, you've just highlighted. I guess I wanted to have you, to the extent that you can—and I know there are different roles that an—various inspectors would play, depending on what type of inspection and when. But, if you can just kind of give us a sense of what that individual does, once they're on the ground, so to speak. You've walked through some of the detail, but just kind of take us to that site, for a moment, and walk through what a typical inspector—an individual person would be doing once

they—once they're, kind of, in-country. Can you do that in a summary fashion? I think it just helps to be able to visualize that.

Mr. MYERS. Certainly, Senator. Let me start with the inspection team having arrived at the site to be inspected. There is a time limit for them to actually get out to see, let's say, for example, the silo. When they arrive at the silo, the door of the silo is to have been—remained closed. They will open the door of the silo. And there are a number of different ways that they will exhibit what is inside. Sometimes the inspectors will actually go over to it and look down the silo; sometimes the payload or the nosecone is removed, taken to another facility. But, from the moment that the silo door comes open, our inspectors never take their eyes off the missile, to ensure that what we inspect is actually what is inside that silo.

So, part of the team—and when they're at DTRA, to begin with, or what—they're at one of the gateways, either in Darmstadt, Germany, or in Yokota, in Japan—part of the responsibilities, part of the things that are going on, is the handing out of duties. Whose responsibility will be to take on this role and this role and this role? And, obviously, one of the responsibilities is to keep eyes on that, the entire time.

When the missile is prepared for viewing, each of the entity—each of the team members will have another specific role while they go up and they inspect. I mean, obviously they're taking in the general view, but they also have specific responsibilities.

Senator CASEY. Let me just stop you there for 1 second.

Mr. MYERS. Yes, sir.

Senator CASEY. The—when the inspector—an individual inspector, in that scenario that you just outlined, is keeping his or her eye on the missile, what—and they obviously have trained eyes, they've been through lots and lots of training—what are they looking for? I mean, is there a checklist that they're trying to walk through? Or are they just——

Mr. MYERS. They're just making sure it doesn't move.

Senator CASEY. Yes.

Mr. MYERS. They're making sure what's in there doesn't come out of there until the inspection team has an opportunity to verify that what's supposed to be in there is actually in there.

Senator CASEY. And I was told recently that if there are photographs taken, that's—how does that process work?

Mr. MYERS. If the inspectors and the escorts find what I would call an "ambiguous situation" in which something does not appear to be in full compliance, or there is a concern, or something is being utilized that is—that may not be appropriate, the inspecting team can request that the escort team take a picture of it, a digital photograph. That photograph is then appended to the inspection report, which is signed by both the U.S. lead inspector as well as the lead escort. And that becomes the official record, for the United States and Russia. And the United States inspection team, as they come out of Russia, through Frankfurt—excuse me—Darmstadt, Germany, and back to Washington, that is the official record. That is the record that they will give to the interagency compliance process, the group of U.S. Government agencies and departments whose job it is to make judgments on the compliance. Our—the

DTRA inspectors are supplying the facts—and, in this case, the photograph—and the judgment is being made, at the policy level.

Senator CASEY. Now, go back in time—and I just have another minute in this round, but—go back in time, to the preparation. I noted, on page 2 of your handout, in terms of the training—I'm just going to do a quick highlight, here. You say the core team inspectors undergo 4 to 6 months of intensive training, in three phases. You have a heading that outlines team certification boards and then recurring monthly training. What can you tell us about that process of training, in terms of the intensity of it? And then, I guess, the—intensity and duration, I guess.

Mr. MYERS. We have 500 people focused on this mission. And their No. 1 goal is to ensure that our teams, who are going out to do the inspections, and our teams that are taking on the escort responsibilities, are most up to date with any eventuality, any change, any development that occurs.

So, when we're talking about the recurring monthly training, we were talking about the lessons learned, the new situations that an inspection team might encounter, or unique situations that—at certain facilities, that were not known before or what have you. All of that information, all of that data, is brought forward and provided across the board, in terms of training, to ensure that all of our—the entire organization is on the same page with the lessons learned, with the new conditions, and ensure that we are all prepared to deal with it accurately and adequately.

Senator CASEY. Thank you. I'll come back to some others.

Senator Lugar.

Senator LUGAR. Mr. Chairman, earlier in the hearing you mentioned a page in Politico, today's edition, June 24, 2010, on page 31, which is entitled, "Russia Transparency Equals Security." And you cited, at that time, very distinguished Americans who have endorsed a series of statements on that page, that included Secretaries Albright and Shultz and Perry, and John Whitehead, and a great number of people. I would mention, just for the sake of the record, that those also affirming these statements were some distinguished former colleagues who have taken part in our debates, including Bill Cohen, who also served as Secretary of Defense, John Danforth, Chuck Hagel, Nancy Kassebaum-Baker, Warren Rudman, Alan Simpson, Tim Worth, and, of course, my partner, Sam Nunn, who Senator Isakson mentioned, quite correctly, a moment ago.

I would like to ask, Mr. Chairman, that unanimous consent be given for this to be a part of the record of the hearing.

Senator CASEY. Without objection.

[The page from *Politico* referred to above can be found in the "Additional Material Submitted for the Record" section of this hearing.]

Senator LUGAR. Now, let me just state what each of these distinguished Americans—and they're on a long list of equally distinguished persons joining them—have stated, which is, "Now, is the time for a thorough and balanced national discussion about nuclear arms control and nuclear nonproliferation. We must remember that a world without a binding United States-Russian nuclear weapons agreement is a much more dangerous world. We, the undersigned,

Republican and Democrats, support the New START Treaty because we believe that it, first, enhances stability, transparency, and predictability between the world's two largest nuclear powers, which together possess about 95 percent of the world's nuclear weapons; two, contains verification and inspection measures essential to United States national security and national threat reduction as it relates to Russia's strategic nuclear weapons; third, addresses our Nuclear Non-Proliferation Treaty, NPT, obligations, and therefore assists in gaining cooperation from other countries on key nonproliferation priorities; four, helps strengthen broader United States-Russia cooperation, which is important in responding to proliferation challenges from Iran and North Korea; five, does not inhibit our ability to maintain an effective and reliable nuclear arsenal; and, sixth, does not constrain our ability to develop and deploy missile defense systems."

Now, I cite these because these are all issues that have arisen in our hearing in various forms and the fact that this long list of distinguished American public servants, Republicans and Democrats over at least two decades, all come to the same conclusions. Does not mean that every Senator would come to the same conclusions, but I think it's a strong argument, which buttresses the testimony you're giving in detail today. And I appreciate the initiative taken by these Americans in speaking out, at this point.

And on a different subject, I would like to ask either one of you about the biological strategy you've touched upon. In November 2009, the Obama administration released the National Strategy for Countering Biological Threats. And the national strategy stated, "By assisting with efforts to redirect former weapons scientists, repurpose our—or decommission facilities and equipment, develop and implement practices that permit safe and secure work with high-risk pathogens and toxins, build scientific ties, and improve mutual understanding, our security engagement programs have developed a strong track record of effective risk management." This is from the Obama administration's National Strategy for Countering Biological Threats.

Now, last week, DTRA announced the opening of the Interim Central Reference Laboratory in Odessa, Ukraine. The level-three biosafety laboratory is the first built under the expanded authority of Nunn-Lugar Cooperative Threat Reduction Program. The White House has placed strong emphasis on its announced policy of securing all nuclear weapons in 4 years, but has made limited progress on implementation of a bipartisan biological strategy. Therefore, I would like to ask both of you, What efforts are being made or undertaken on the policy front to ensure effective implementation of our biological threat strategy? And how will DTRA implement key elements of that biological strategy?

Dr. MILLER. Senator Lugar, as you know, as I stated earlier, we have shifted, such that some 40 percent of the Cooperative Threat Reduction Program is now focused on biological threat reduction. We're currently working with eight countries, looking to expand that to additional countries. And so, very much understand the—both the opportunities and the dangers associates with the advancement of biotechnology, and that this needs to be a key focus for our national security strategy.

I would just highlight three themes that were in the National Strategy to Counter Biological Threats that provide a reference point for us and suggest areas where we're really focusing.

The first is to improve global access to the life sciences, to combat infectious disease, regardless of its cause. And that's, in part, because, while there are some viruses and bacteria that are known to have, historically, been possible agents for weapons, there are the potential for others to emerge in the future, and we also want to be concerned about naturally occurring diseases as well.

Second, is establishing and reinforcing norms against the misuse of the life sciences. As we see this expertise in technology advance, that's especially important.

And the third—it relates to the BTRP, the Biological Threat Reduction Program—is to institute a set of really coordinated activities that together will help influence, identify, inhibit, and/or interdict those who seek to misuse the life sciences.

That's the framework we've been operating under. We have a very active interagency process. DOD is contributing, through DTRA, through investments and in potential multivalent vaccines and in other areas, and it—let me just assure you that it's an area where we understand there is a significant threat, and where we have significant progress ahead of us that we need to make.

Senator LUGAR. Mr. Myers.

Mr. MYERS. Yes, sir. I would add a couple of points. One, I appreciate your recognizing the important work that was done in Odessa, Ukraine. Your visit to Odessa, several years ago with Senator Nunn, really allowed us to set the foundation for the laboratory we were able to open up. That'll be an interim laboratory, until we're able to identify the location of a permanent one.

Two months prior to that, we broke ground on setting up a permanent central reference laboratory in Kazakhstan. In both situations, we have good working relationship with the Kazakhs and the Ukrainians; and perhaps even more importantly, we have an outstanding relationship with our colleagues at the Department of State. Both of those laboratories, the groundbreaking and the opening of the laboratory in Ukraine, would not have been possible without the support of Ambassador Hoagland, in Kazakhstan, Ambassador Tefft, in Ukraine. They are outstanding supporters, and we work very, very well together.

I think Mr. Miller laid out for you the areas that we're looking to expand. We're looking to take the lessons learned from our work in the former Soviet Union, and apply them and take them outside, take them to new regions of the world. We basically have three pillars that we seek to arrange our cooperation or our work around.

No. 1 is, helping enhance the bio—excuse me—the disease biosurveillance capabilities of these countries. Identifying the outbreak of a disease sooner—as soon as possible—is critical in terms of stopping it before it could spread, before it could reach, potentially, U.S. shores or our men and women serving overseas.

No. 2, supporting collaborative research. Working with these countries where these diseases are—where they live, where they were born, is critical in terms of finding collective solutions to them.

And also, improving the overall biosafety and security, and that includes increase in the security surrounding these disease pathogens. Countries and laboratories and hospitals have good reasons to keep these dangerous pathogens, so they can work on solutions, work on antidotes, but that makes them very, very dangerous, as well. So, one of the things that we work on very carefully, in a daily basis, is increasing the security around them so that that research can go on, but can go on in a safe and secure location.

Senator LUGAR. Well, I thank you very much for that testimony.

I mention all of this, Mr. Chairman, because during one visit to Russia, I saw production lines where pathogens were being replicated. Ostensibly, this was to treat livestock. Others would have charged that it might have eliminated the livestock of a country that, in fact, was victim of this situation.

Now, in fairness to Russians who were involved in that production line, which had been shut down, in Saint Petersburg, we observed pathogens, now under control, being utilized for the benefit of the hospital system of the country, in the treatment of disease. Now, both are a part of the picture.

And even as we have centered, correctly I think, on nuclear weapons that might be fired at us or others, the fact is that weapons of mass destruction have included biological and chemical components, and no amount of missile defense is really going to be particularly effective in this area. And this is why I want to spread the discussion a little further, because this relationship with Russia is absolutely critical, in terms of the areas that we're talking about today and which we'll not be able to explore in more detail.

But, I thank you, Mr. Chairman.

Senator CASEY. Thank you, Senator Lugar. I know we might—I have a few more questions—we might be joined by another member; and I'll yield, if we are joined by another member.

I did want to ask a question that I meant to ask earlier, in terms of the inspection regime itself. And, of course, for those listening, whenever we say the word "regime," it's not a government, it's a process and a structure. But, in terms of the treaty's inspection regime that the Defense Threat Reduction Agency would have liked to have seen, but didn't get, is there any—can you point to any improvements to the process, the structure, the regime itself, that either of you or like-minded individuals were advocating for, that you didn't get in the end, in the course of the negotiations?

Mr. MYERS. No, sir. The DTRA representatives at the negotiations were part of the team from the beginning, from the formulation of the negotiating positions all the way through. They were onboard the entire time.

Senator CASEY. Dr. Miller.

Dr. MILLER. Senator Casey, I agree, we are absolutely confident that this inspection regime that—and the broader verification regime of the treaty—is adequate for the—for verifying the provisions of the treaty.

I'll just add briefly that, as an example where we achieved, in a sense, more than was absolutely necessary for verification, the provisions of this treaty are not dependent on telemetry for their verification, unlike some of the provisions of the START Treaty.

And yet, we have a provision to exchange in—telemetric information in up to five missile launches per year.

Senator CASEY. And I wanted to, again, get to—when we use the word "telemetry," the definition that—it's the transmission—it's transmission—just so we're clear about that.

Dr. MILLER. It—telemetry is the—in this instance, is the information associated with the launches of missiles. It's transmitted—well, either transmitted or sometimes captured in data storage devices.

Senator CASEY. Broadcasted, yes.

Dr. MILLER. Or both—broadcast, exactly right. And it was useful in the START Treaty for verification, because START Treaty limited throw weight, and so, the—as the missile was launched, it would help to assess the missile's throw-weight. And because there was a limitation—I'm sorry—the START Treaty had an attribution rule for warheads. And so, if, let's say, the SS–18 had an attribution rule of 10, if we saw a launch that had 11 warheads, that would have been a treaty violation. So, this information that is associated with the missile launches and either broadcast and/or captured by device is—was important for START, not important for New START, but in—notwithstanding that, we still have—will have some exchange of this data.

Senator CASEY. Just about two more questions.

There was one area, that I didn't pursue, about the—kind of, the undergirding, or the foundation, of any kind of verification structure. The goal—or one of the main goals is to increase confidence that both parties are complying with the treaty.

I guess the—one thing—but, one thing we didn't get to was the Bilateral Consultation Committee's process, how that works, in the context of the treaty. Either or both of you want to walk through that a little bit?

Mr. MYERS. I can give a basic broad overview.

The purpose of the Commission is to provide a forum for the sides to come together to discuss, and with the goal of, settling on a solution to some of the ambiguous situations that I described earlier. I think a number of issues have come up during the implementation of the treaty, and—in which the two sides saw a provision of the treaty, thinking that, you know, it had maybe been one way or another, and the two sides had a different interpretation. And the consultative commissions are very helpful, in terms of providing a forum for those discussions to take place, to find a solution. They—a number of solutions have been found, and there are other issues that continue to be discussed, and will be needed for the New START Treaty.

Senator CASEY. Is it too simplistic to analogize it to a dispute resolution body or is it—is it akin to that, or is it——

Mr. MYERS. Well, I guess my only hesitation would be—is that no answer is imposed. It has to be agreed to by both parties. I think that's the key difference I would put there, is—this is a forum to find solutions. And very often solutions are found, and—but, if they are not, that commission remains for continuing to seek them.

Senator CASEY. Doctor.

Dr. MILLER. Senator, I would just add that it—that the BCC, the Bilateral Consultative Commission, builds directly from the experience and lessons learned from the START Treaty's Joint Compliance and Inspection Commission, the JCIC. And there were, throughout the course of the treaty, a number of issues raised, by both sides, about a range of issues, often with respect to detailed questions of how inspections would be conducted in—for example, whether—what kind of covers could be placed over reentry vehicles as those were inspected. And the experience was that, following the discussion and implementation of new procedures coming out of the Joint Compliance and Inspection Commission, or, looking forward, the BCC, that the majority of these issues were resolved and allowed moving forward with the inspections.

Senator CASEY. I wanted to conclude with just one question. It relates to a Congressional Research Service report entitled "Monitoring and Verification in Arms Control," April 21 of this year, written by Amy E. Woolf. Senator Lugar is in some of the footnotes—he's referred to in several of the footnotes. I won't read the whole report, obviously, but I did want to ask for your reaction to a statement made at the end of this report which is consistent with much of what we discussed today and what Senator Lugar was referring to earlier, about the importance of this treaty, beyond just the mechanics of arms control, but also in terms of the relationship. She writes, in pertinent part—this is on page 23, the last full paragraph, and I'm reading—it's, in pertinent part—it's not the whole paragraph—she says, the—and I quote, "The United States would have far less access to and knowledge about Russian forces without any treaty mandated monitoring provisions in place. The New START Treaty will contain an extensive database, listing the number and location of every deployed and nondeployed delivery vehicle, and every deployed and nondeployed missile in the Russian arsenal. The database will also list the precise number of warheads deployed on each missile." And it goes on from there.

I just wanted to have you react to that, if—and I know it's not a comprehensive statement of the reasons why I believe we should ratify—but, talk for a moment about—as we conclude—about that statement, which is very much consistent with, I think, your own statements here today.

Dr. MILLER. Senator Casey, I agree 100 percent with the portion of the statement that you—of the report—that you read out loud. The New START Treaty will provide the ability for United States inspectors to be onsite at a range of Russian deployment locations and other locations where they—with—for nondeployed items—that we would otherwise not have access to, and will provide us, through its—the database, the unique identifiers that we discussed earlier, the requirements for notification when anything moves, a very strong baseline of understanding that will then inform those onsite inspections when they take place. Cooperative Threat Reduction will build off of that and provide us tremendous insights that, as I think you had noted, General Chilton had—in testimony, earlier—testified last week that this will help us avoid worst-case planning and help us build confidence and help us move forward, we hope, with further arms reductions, beyond New START, and,

more broadly, with continuing to strengthen the United States-Russian relationship.

Senator CASEY. Mr. Myers, anything to add to that?

Mr. MYERS. Without the New START Treaty, we won't have inspectors on the ground in Russia. Without the New START Treaty, we will not have the data declarations, we will not have the notifications of where things are located, we will not have the unique identifiers to be able to track missiles and components through their life.

The quote that was given earlier, that was attributed to Linton Brooks, we won't have transparency, we won't have predictability, and that won't provide as much stability as we will have under the New START Treaty.

Senator CASEY. Thank you very much.

Senator Lugar, anything?

Senator LUGAR. No, thank you, Mr. Chairman.

Senator CASEY. Thank you very much.

Our hearing is adjourned.

[Whereupon, at 11:40 a.m., the hearing was adjourned.]

Additional Material Submitted for the Record

Extract From Politico Submitted by Senator Richard Lugar

TRANSPARENCY = SECURITY

Nuclear arms control is a critical pillar of America's national security. Negotiated agreements to reduce the threat posed by the Cold War nuclear arms race have always enjoyed strong bipartisan support in the U.S.

In 1982, President Reagan proposed that the U.S. and the Soviet Union reduce their nuclear arsenals by thousands of warheads each. This proposal became the basis for the 1991 START I treaty. Since that time, every U.S. President, in concert with Russia, has advanced President Reagan's legacy through steady and prudent reductions of the world's two largest nuclear arsenals, including the 2002 Treaty of Moscow, signed by Presidents Bush and Putin.

On April 8, 2010, Presidents Obama and Medvedev signed the new START treaty, agreeing to further reduce both sides' arsenals and bring into force a new regime for inspections and verification. This was a necessary and appropriate step toward safeguarding our national security. Without the new START, the U.S. has no legally binding ability to conduct inspections of Russia's nuclear arsenal, and would be in a far weaker position to lead the world in stopping nuclear proliferation.

Now is the time for a thorough and balanced national discussion about nuclear arms control and nonproliferation. But we must remember that a world without a binding U.S.-Russian nuclear weapons agreement is a much more dangerous world. We, the undersigned Republicans and Democrats, support the new START treaty because we believe that it:

- Enhances stability, transparency and predictability between the world's two largest nuclear powers, which together possess about 95 percent of the world's nuclear weapons
- Contains verification and inspection measures essential to U.S. national security and nuclear threat reduction as it relates to Russia's strategic nuclear weapons
- Addresses our Nuclear Nonproliferation Treaty (NPT) obligations and therefore assists in gaining cooperation from other countries on key nonproliferation priorities
- Helps strengthen broader U.S.–Russia cooperation, which is important in responding to proliferation challenges from Iran and North Korea
- Does not inhibit our ability to maintain an effective and reliable nuclear arsenal
- Does not constrain our ability to develop and deploy missile defense systems

MADELEINE ALBRIGHT Secretary of State 1997-2001
HOWARD BAKER US Senator (R-TN) 1967-85
SAMUEL BERGER National Security Advisor 1997-2001
LINTON BROOKS Administrator, National Nuclear Security Administration 2002-07
HAROLD BROWN Secretary of Defense 1977-81
FRANK CARLUCCI Secretary of Defense 1987-89
WARREN CHRISTOPHER Secretary of State 1993-97
WILLIAM COHEN Secretary of Defense 1997-2001
JOHN C. DANFORTH US Senator (R-MO) 1977-95
KENNETH M. DUBERSTEIN White House Chief of Staff 1988-89
CHUCK HAGEL US Senator (R-NE) 1997-2009
LEE HAMILTON US Congressman (D-IN) 1965-99; Co-Chair, PSA Advisory Board
GARY HART US Senator (D-CO) 1975-87
RITA E. HAUSER Chair, International Peace Institute
CARLA HILLS US Trade Representative 1989-93

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NANCY KASSEBAUM-BAKER US Senator (R-KS) 1978-97
THOMAS KEAN Governor (R-NJ) 1982-90; 9/11 Commission Chair
RICHARD LEONE President, The Century Foundation
DONALD MCHENRY US Ambassador to the UN 1979-81
SAM NUNN US Senator (D-GA) 1972-96
WILLIAM PERRY Secretary of Defense 1994-97
THOMAS PICKERING Under Secretary of State 1997-2000
COLIN L. POWELL Secretary of State 2001- 05
WARREN RUDMAN US Senator (R-NH) 1980-92; Co-Chair, PSA Advisory Board
ALAN SIMPSON US Senator (R-WY) 1979-97
GEORGE SHULTZ Secretary of State 1982-89
THEODORE SORENSEN White House Special Counsel 1961-63
JOHN WHITEHEAD Deputy Secretary of State 1985-88
TIMOTHY E. WIRTH US Senator (D-CO) 1987-93
FRANK WISNER Under Secretary of State 1992-93

BENEFITS AND RISKS

THURSDAY, JUNE 24, 2010

U.S. SENATE,
COMMITTEE ON FOREIGN RELATIONS,
Washington, DC.

The committee met, pursuant to notice, at 2:34 p.m., in Room SD–419, Dirksen Senate Office Building, Hon. Jeanne Shaheen presiding.

Present: Senators Shaheen, Lugar, Risch, DeMint, Barrasso, and Inhofe.

OPENING STATEMENT OF HON. JEANNE SHAHEEN, U.S. SENATOR FROM NEW HAMPSHIRE

Senator SHAHEEN. Good afternoon, thank you all for coming. The Senate Foreign Relations Committee meets today in our tenth hearing—so if the room is not full for our panelists, please know that it's not because of you, it's because of—we have been on this topic for awhile.

We are here to discuss what the treaty will mean for American national security, for our deterrent capabilities, the global nonproliferation regime, and our relationship with Russia.

We have three excellent witnesses today, and we look forward to your testimony.

Over the past 2 months, we have heard from more than a dozen witnesses, including the treaty's chief negotiators, the Secretaries of both State and Defense, the Chairman of the Joint Chiefs of Staff, the head of the U.S. Strategic Command, and the Director of the Missile Defense Agency. We've heard from many former officials, both Democrat and Republican, some of our country's most esteemed voices on national security.

And their testimony has made one thing abundantly clear. They have all agreed that the United States will be more secure if we ratify this treaty.

The New START Treaty reduces the number of nuclear weapons that Russia and the United States can deploy. As former Secretary of State Henry Kissinger said last month, we must recognize, "the importance of a continuing dialogue with a country that together with us possesses 95 percent of the world's nuclear weapons. Without such a dialogue, the world would be rudderless in front of its greatest dangers." We have heard from former Secretary of Defense and Energy James Schlesinger, who said ratification of this treaty is "obligatory" and who noted that failure to ratify New START would be, "detrimental to U.S. influence over other countries' nonproliferation policies."

We have also heard from administration officials who have tried to allay some of the concerns raised by skeptics. Critics have expressed concern that the reductions under the treaty will prevent the United States from fielding an effective nuclear deterrent. However, last week, General Kevin Chilton, the Commander of U.S. Strategic Command, told us that the treaty allows us to keep "exactly what is needed" to maintain an effective nuclear deterrent. In fact, he said the treaty gives us flexibility to hedge against any potential technical failure in our weapons or change in the geopolitical situation.

Other critics have been concerned that the treaty will somehow impede our missile defense efforts. But on this point all of our witnesses from the Department of Defense—both civilian and uniformed military—have been unanimous. In the words of General Chilton, "This treaty does not constrain any current missile defense plans." In addition, LTG Patrick O'Reilly, Director of the U.S. Missile Defense Agency, noted that New START actually reduces the previous START Treaty's constraints on developing missile defense programs.

We must remember that currently, the United States and Russia are working without a much-needed verification regime. New START establishes verification and monitoring mechanisms so that the United States can better understand how Russia is developing and deploying its strategic nuclear forces. As our expert witnesses have testified, every day that we are without an effective verification regime represents another day that we do not have knowledge of the Russian arsenal.

The New START Treaty also opens the door to further cooperation with Russia on other issues of mutual concern, most importantly nuclear proliferation.

As Stephen Hadley testified last week, the New START Treaty is "an indication of one more thing where Russia and the United States have found it in their common interest to work together cooperatively." Two weeks ago, Russia voted in favor of U.N. Security Council Resolution 1929, which imposes new sanctions on Iran. In addition, Moscow has cancelled its sale of S–300 antiaircraft missiles to Tehran.

Finally, New START Treaty is a critical part of our commitment to fight nuclear proliferation and nuclear terrorism. By demonstrating that the United States is serious about adhering to its commitments under the Nonproliferation Treaty, the New START Treaty will help us convince other nations to fight the spread of nuclear weapons.

Today, we are here to discuss both the benefits of the New START Treaty and the concerns that critics have expressed. We will hear three different viewpoints from three people with long careers in public service.

Ambassador Robert Joseph is a senior scholar at the National Institute for Public Policy, and he served as Under Secretary of State for Arms Control and International Security during the George W. Bush administration.

Ambassador Eric Edelman is a distinguished fellow at the Center for Strategic and Budgetary Assessments, and he served as Under Secretary of Defense for Policy during the Bush administration.

Dr. Morton Halperin is a senior adviser to the Open Society Institute. He has also held many positions in government, including director of the State Department's policy planning staff during the Clinton administration.

Gentlemen, thank you all for coming here today. We look forward to your testimony.

And I will ask both Senators Lugar and Inhofe if they would make opening statements next.

Senator Lugar.

OPENING STATEMENT OF HON. RICHARD G. LUGAR, U.S. SENATOR FROM INDIANA

Senator LUGAR. Well, thank you, Chairman Shaheen.

This morning, as you know, our committee met with Dr. James Miller, Deputy Under Secretary of Defense for Policy, and Kenneth A. Myers, III, Director of the Defense Threat Reduction Agency, to better understand how the New START Treaty would be implemented. We examined, in particular, how inspections will be carried out and how the Nunn-Lugar Program will intersect with the New START Treaty.

This afternoon, we continue our discussion with an examination of the potential risks and benefits of the treaty. And we welcome a very distinguished panel. As you pointed out, Dr. Bob Joseph, who was Under Secretary of State for Arms Control and International Security during the second Bush administration; Eric Edelman, who has served several administrations in different capacities, including the Bush administration as Under Secretary of Defense for Policy; and Morton Halperin, currently of the Open Society Institute, also was a member of the 2009 Congressional Commission on the Strategic Posture of the United States.

Most of the basic strategic concerns that motivated Republican and Democratic administrations to pursue nuclear arms control with Moscow during the last several decades still exist today. We are seeking mutual reductions in nuclear warheads and delivery vehicles that contribute to stability and reduce the costs of maintaining the weapons. We are pursuing transparency of our nuclear arsenals, backed up by strong verification measures and formal consultation methods. We are attempting to maximize the safety of our nuclear arsenals and encourage global cooperation toward nonproliferation goals. And we are hoping to solidify United States-Russian cooperation on nuclear security matters, while sustaining our knowledge of Russian nuclear capabilities and intentions.

We know, however, that bilateral treaties are not neat instruments, because they involve merging the will of two nations with distinct, and often conflicting, interests. Treaties come with inherent imperfections and questions. As Secretary Gates testified in May, even successful agreements routinely are accompanied by differences of opinion of the parties. And the ratification process, therefore, is intended to consider whether limits on strategic forces and verification procedures are fully consistent with United States national security.

This process also is intended to prepare the committee to draft a resolution of ratification for consideration by the whole Senate. The resolution should clarify the meaning and effect of treaty

provisions for the United States and resolve areas of concern or ambiguity.

We appreciate very much the presence and the assistance of our witnesses today in this continuing process and look forward to their testimony.

I thank you.

Senator SHAHEEN. Thank you, Senator Lugar.

Senator Inhofe.

STATEMENT OF HON. JAMES M. INHOFE, U.S. SENATOR FROM OKLAHOMA

Senator INHOFE. Thank you, Madam Chairman.

I, first of all, I agree with you, this is the 10th hearing that you've had. I would suggest that you haven't had any hearings where the witnesses are opposed to the treaty. That's kind of interesting, because I'm on the Armed Services Committee, I'm the second-ranking member on the Armed Services Committee, and we had a hearing. The first hearing that we had, Madam Chairman, we had four witnesses—we had Secretary Chu, Secretary Clinton, Mullen and Gates—all of whom were for the treaty.

Now, we've gone through this before, I can remember, back when—and I was not on the Foreign Relations Committee several years ago, Senator Lugar, when the Law of the Sea Treaty was passed out by a vote of 16–0 and it was going to just run—rush right through the Senate until, at that time, Republicans were a majority and I was on the—our Environment and Public Works Committee, as well as the Armed Services Committee. And I insisted that we have hearings and have people who are both for and against that treaty at that time, which is the Law of the Sea Treaty. Well, we ended up defeating it. But I can assure you, if we had not had any hearings, Madam Chairman, where there is someone who is opposed to it, that it wouldn't have been defeated. I mean, you—that's what hearings are supposed to be all about.

Now, we've had these hearings, some nine—17 witnesses, so far, no witnesses in opposition to it. I don't know who thinks that can be reasonable, because it's not. Now, I don't mind being criticized—normally, as Senator Lugar knows, historically I've been the skunk at the picnic many times. But, in this case, as I study this treaty and I go through on the floor—I won't go through this now because I've given three speeches on the floor where I do get down to some of the—into the weeds on this thing, such as the modernization, force structure, missile defense and the verification. And, obviously, I'm not going to go through that now, but since you brought up a couple of these things, let me just mention.

If you look at force structure, this force structure reduces—and we're talking about here, delivery systems, the ICBMs for 420, the nuclear-capable—we only two vehicles that can handle this from there, that's the B–52 and the B–2—we would have 60 of them, and then as far as the SLBMs, the submarine-launched ballistic missiles, we would be reducing down to 240.

Well, right now we have 720. If you add that up, that's 700. And I asked Secretary Gates, I've asked everyone, can you tell me where the other 20 are going to come from? And people don't have the answer.

I've been very much much concerned on—as I hope others are—on the technical disparity—the technical weapon disparity between the United States and Russia. And, anyway, they have 10 to 1, their ratio over ours.

And as far as, Madam Chairman, you made the statement that this does not affect the missile defense system. I would only suggest that, as Sergei Lavrov stated—he's a Russian Foreign Minister, "We have not yet agreed on this missile defense issue, and we are trying to clarify how the agreements reached by the two Presidents correlate with the actions taken unilaterally by Washington," and added that, "Obama administration had not coordinated its missile defense plans."

Now, listen to this, Madam Chairman, in a unilateral statement by the Russian side—and this is back on the day of—shortly after this was signed, this was in Prague, April 8th, "The treaty can operate and be viable only if the United States of America refrains from developing its missile defense capabilities quantitatively and qualitatively."

Now, I could go on, but I'm sure that you've heard this before. You've heard that there is objection to this, and you've also seen something that was an advertisement in today's—what was this? In Political Today, Madam Chairman, where it's an advertisement for a Partnership for a Secure America, a group that is criticizing me because I have not attended these. And I made the statement that, until we have a hearing where there is at least one witness in opposition to it, I'm not going to. I made this statement after I attended the first one with those four witnesses.

So, what I'm going to do is, hopefully some of the witnesses, and I think that, perhaps Mr. Joseph might be the one who would be most knowledgeable in these areas—might want to address some of the things that I have said, both on the floor and now.

So, I would only say on this nasty blog that came out on me, it doesn't matter, it doesn't bother me because it happens every day, that was from the people who paid for and ran this ad, talking about the fact that I was absent from these hearings, I want to make sure that everybody knows that I have been absent for that reason. Because I will continue to be absent until I see, Madam Chairman, that there is a committee with some witness on the committee, who is opposed to it.

I think that we're going to see—you'll see me insisting on some hearings, some more hearings in the Armed Services Committee, but hopefully this committee could do the same thing.

Now, I'm going to be here for awhile, I have to excuse myself between 3:00 and 3:15 for a media call, but I'd like to hear some of the witnesses, perhaps, address some of the things that I've been saying.

And I thank you very much.

Senator SHAHEEN. Thank you, Senator Inhofe.

I would just like to point out for the record that in my statement, I wasn't the one talking about the impact of the treaty on our missile defense efforts, but I was quoting from witnesses who appeared before this committee.

Senator INHOFE. Sure.

Senator SHAHEEN. Who testified to that. So, I think you—I just wanted to make sure that nobody was confused about that point.

So, Ambassador Joseph, would you like to begin?

STATEMENT OF HON. ROBERT G. JOSEPH, SENIOR SCHOLAR, NATIONAL INSTITUTE FOR PUBLIC POLICY, FAIRFAX, VA

Ambassador JOSEPH. Madam Chairman, Senator Lugar, Senator Inhofe, thank you for the invitation to appear before the committee. It's a real pleasure and honor to return and testify on New START.

I do have a prepared statement that I would—with your approval—submit for the record.

Senator SHAHEEN. We will include the statement as you have submitted it, thank you.

Ambassador JOSEPH. Thank you, Senator.

Let me preface my opening remarks by noting that my experience with arms control is grounded within the executive branch, but I am keenly aware of the vital role that the Senate plays in the treaty ratification process. Our Nation's security has benefited from the close scrutiny given to past treaties, especially by this committee, but also others by asking hard questions and fixing flaws that have been uncovered in the process.

In summarizing my statement, I would like to raise three questions. The first is whether New START meets the long-held standards we have thought necessary to protect U.S. security? Does it limit what we assume to be limited or are there gaps? Equally important, can it be verified?

A number of experts have concluded that rail-mobile ICBMs would not be counted under the treaty. Others disagree. The position of the administration is clear: rail-mobile launchers, missiles, and warheads are accountable.

I don't know what the Russian position is. But I do know that New START is silent on rail-mobiles. All previous START provisions that captured rail-mobile ICBMs were either deleted or were changed to exclude them. To me, it is inconceivable that, should Russia again deploy rail-mobile ICBMs, they would not be counted. That said, based solely on the treaty text, its protocols and annexes, one can come to a different conclusion than that of the administration—one that excludes rail-mobiles from accountability.

On this point, I believe the Senate can play a very constructive role by ensuring that there is no ambiguity, that the obligation is clear and precise and agreed by both parties, as it is with silo-based and road-mobile missiles.

When faced with an analogous situation in the INF ratification debate, the Senate directed the Reagan administration to seek clarification on several aspects of the verification regime. As it was then, leaving any potential loophole would not be in our security interest or in the interest of improved United States-Russian relations.

Another longstanding theme in Senate oversight has been the requirement for effective verification. We know that New START includes data exchanges and inspections that could provide valuable information that we may not have absent the treaty being ratified.

But the question is not whether or not we're better off with the monitoring provisions of New START than without them. The question is whether the treaty is verifiable. Whether New START meets this standard is an open question, the intelligence community has yet to provide its assessment. We do know that New START leaves significant gaps in our ability to monitor new developments in Russia's strategic posture. The end of U.S. on-the-ground presence at Votkinsk, and the provisions governing telemetry mean we will have less confidence than under START I in our ability to determine what Russia may be doing in its ongoing modernization. While New START is being advertised as strengthening predictability, these changes could well have the opposite effect.

A final point on the terms of New START relates to the size of the reductions and whether the treaty will provide for equal force reductions. While technically accurate, saying that there will be a one-third reduction of deployed strategic warheads ignores two factors.

First, both sides are already below the 2,200 level of the Moscow Treaty. Second, actual reductions of warheads may be substantially less than expected given the bomber counting rule. Because bombers, no matter what they are loaded with, are counted as "one," both parties could increase deployed warheads beyond 2,200.

While the United States will almost certainly seek to go below the 1,550-warhead level for actual deployed warheads, the same may not be true for Russia. And Moscow will not be legally obligated to do so.

As for who reduces more, here again the answer is clear. As stated by Secretary Gates, Russia is currently below the top levels of delivery vehicles permitted under New START. For the United States, the reductions are real and deep and, in the case of launchers, well below what U.S. military officials had earlier said was the minimum U.S. requirement.

My second question relates to the treaty's impact on two vital capabilities for the future: missile defenses and prompt global strike capabilities—the very capabilities that, according to the Nuclear Posture Review, make possible reductions in nuclear weapons. I know my colleague, Ambassador Edelman, will talk about conventional prompt global strike, so I will limit my remarks to missile defenses.

Initially, the administration gave numerous assurances that there would be no limitations on missile defenses. After the text of the treaty became public, the line changed to "no constraints on current and planned" programs.

We know there are restrictions in the treaty, both direct and possibly—and I would underline possibly—indirect. Article V prohibits the conversion and use of ICBM and SLBM launchers for placement of missile defense interceptors. While the Obama administration has stated it has no intention to undertake any further conversions, future administrations, as Dr. Kissinger pointed out, might find the option attractive.

Last week Under Secretaries Flournoy and Carter, two widely respected professionals, wrote that New START "does not constrain the U.S. from testing, developing and deploying missile defenses." I believe the Senate can, and should, make this assurance formal.

Perhaps the best means would be an explicit statement that no further limitations on defenses will be acceptable.

My third question is how does the United States benefit from New START? The administration has stressed the importance of New START to "re-set" the United States-Russian relationship. For some in Russia, including some in high government positions, "re-set" may mean something entirely different from our understanding. For them, the United States is described, openly, as the adversary. For them, New START serves a number of purposes. It constrains United States forces while not encumbering Russian forces; it enhances the status of Russia and restores in part the lost prestige from superpower days; and it once again treats nuclear weapons—the one category of arms in which Russia can compete with the United States—as the principal currency in our relationship.

I believe that if we want a normal relationship with Russia, we need to move beyond cold war approaches. We need to build on common interests and joint efforts to deal with today's challenges, such as combating nuclear terrorism and managing the expansion of nuclear energy in a manner that reduces the risks of nuclear proliferation.

The administration has also made the case that New START is important because it demonstrates a commitment to disarmament, and thereby will lead to greater support for U.S. nonproliferation goals. The first half of that is sound—through New START and other means, the administration has established impeccable disarmament credentials. However, this has not led, in my view, to greater pressure on Iran, or to greater cooperation in strengthening the NPT regime. The most recent U.N. Security Council resolution on Iran, Resolution No. 4, falls far short of what the administration sought, as did the outcome of the NPT review conference.

In closing, I would join with others, including in the Senate and in the administration, to stress the need for ensuring an effective, reliable, and safe nuclear deterrent for the future. New START must be assessed in the context of a robust commitment to maintain the necessary nuclear offensive capabilities required to meet today's threats and those that may emerge. This is a long-term commitment, not a 1-year budget bump-up. It includes the maintenance of the triad and of a modern nuclear weapons infrastructure. These are the capabilities that will provide strategic stability, deterrence, and credible assurances to our friends and allies.

[The prepared statement of Ambassador Joseph follows:]

PREPARED STATEMENT OF ROBERT G. JOSEPH, SENIOR SCHOLAR, NATIONAL INSTITUTE FOR PUBLIC POLICY, FAIRFAX, VA

Chairman Shaheen, Senator Lugar, distinguished members, thank you for the invitation to appear before this committee to discuss the New START Treaty. Having retired from the career civil service in 2007 after serving at the Department of Defense, on the National Security Council staff, and at the Department of State, I am here today in a personal capacity.

While my direct experience with arms control is grounded within the executive branch, I am well aware of the vital role the Senate has played in all of the treaties that I have been associated with—including the INF Treaty and the START I Treaty to reduce nuclear arms and provide strategic stability. In particular, this committee has consistently provided close scrutiny of all arms control agreements submitted for consent to ratification. Our Nation's security has benefited from this due

diligence—from asking hard questions and from fixing flaws that have been uncovered in the process.

I would like to raise three questions for your consideration based on concerns that I have in my reading of the New START Treaty.

The first is whether New START—especially the provisions on limitations and monitoring—meet the long-held standards we have thought necessary to protect U.S. security? Do the terms of the treaty limit what we assume to be limited or are there gaps that must be addressed? And, equally important, do the terms provide for effective verification?

A number of arms control experts have concluded that, based on their examination of the treaty, rail-mobile ICBMs would not be counted under the treaty limits. Other experts disagree. The position of the Obama administration is clear and now part of the treaty record. In testimony to this committee, Dr. Jim Miller, Principal Deputy Under Secretary of Defense for Policy, has stated unequivocally that rail-mobile ICBM launchers, missiles and warheads are accountable.

I do not know the Russian position. But I do know that the New START Treaty is totally silent on rail-mobiles and that all previous START provisions that captured rail-mobile ICBMs were either deleted or changed to exclude them. To me, it is inconceivable that, should Russia again deploy rail-mobile ICBMs, they would not be counted under the treaty's launcher and warhead limits. That said, based solely on the treaty text, its protocols and annexes, one can come to a different conclusion than that of the administration—one that excludes rail-mobiles from accountability.

On this point, I believe Senate can play a very constructive role by ensuring that there is no room for ambiguity, through amendment or other means, such as a formal exchange of notes. The language should not allow for competing interpretations. It should be clear and precise—as it is with silo-based and road-mobile missiles.

When faced with an analogous situation in the INF ratification debate, on important points on which the terms of the INF Treaty were not clear, the Senate directed the Reagan administration to seek clarification with the then Soviet Union on several aspects of the verification regime and on the meaning of a "weapons delivery vehicle." As it was then, leaving any potential loophole would not be in our security interest or in the interest of improved United States-Russian relations. Ambiguities involving treaty obligations do not lead to greater confidence. Rather, they undermine mutual trust.

Another principal, longstanding theme in Senate oversight has been the requirement for effective verification. "Trust but verify "has been the standard for more than 20 years. Whether the New START Treaty meets this standard is a major issue.

The Intelligence Community (IC) has yet to provide its assessment. How that assessment will be stated and conditioned will be a key factor in evaluating the treaty. Experience suggests that there will substantial conditionality in the IC's judgments. The level of confidence in the assessments will differ depending on the assumptions. As just one example, if Russia does what the IC expects in terms of road-mobile ICBM deployments, the confidence level will be higher than the level if Russia practices denial and deception techniques that are not prohibited by the treaty. As with previous assessments from the IC and State, the devil will be in the details.

We do know that the verification regime for New START includes data exchanges and onsite inspections that could provide valuable information that we may not have absent the treaty being ratified. But we also know that the treaty leaves potentially significant gaps in our ability to monitor developments in Russia's strategic posture. For example, the end of the United States on-the-ground presence at Votkinsk means we will have less confidence than under START I in our ability to determine what is exiting this Russian missile manufacturing facility.

Moreover, given the telemetry exchange provisions, whereby each side determines the information to be shared, we may have additional gaps in understanding ongoing and future Russian strategic force improvements. The Obama administration argues that this change in monitoring posture will not affect the ability to verify New START limits because these limits are different than under START I. While perhaps technically true, New START is being advertized as a means of strengthening predictability. Yet, because of changes in the telemetry regime, we will have less transparency into Russia's modernization. This is likely to undermine confidence and predictability.

The question before the Senate is not whether we are better off with the monitoring provisions of New START Treaty than without them. The question is whether the treaty is verifiable. The answer is unclear at this time. Before rendering judgment on the treaty, we must await assurances of the ability to verify its provisions.

A final point on the terms of New START relates to the size of the reductions and whether the treaty will provide for equal force reductions. While technically ac-

curate, saying that the treaty will result in a one-third reduction of deployed strategic warheads (from 2,200 to 1,550) ignores two factors.

First, both sides are already well below the 2,200 level of the Moscow Treaty. Russian military journalist Alexander Golts has written that Russia is now about 100–150 warheads above the 1,550 level and that, with the expected near term retirement of legacy systems, Russia will soon be under the limit—with or without New START. For our part, under guidance set by President Bush, the United States has been in the process of going significantly lower than the 2,200 warhead limit. In fact, I understand we are now below 2,000 deployed warheads.

Second, actual reductions of warheads may be substantially less than advertised given the change in the bomber counting rule. Technically, because strategic bombers, no matter what their actual load out, are counted as carrying one warhead, it is possible that any actual reductions in deployed warheads would be much less than anticipated. In fact, it is possible under the treaty for either or both parties to increase the level of deployed warheads beyond the 2,200 level set by the Treaty of Moscow.

While the bomber counting rule may be a positive for the United States if we modernize this leg of the triad, it is essential to understand how the treaty works and the implications. In doing so, we must recognize that, while the United States will almost certainly seek to go below the 1,550 level of actual deployed warheads, the same may not be true for Russia. And Moscow is not legally obligated to do so.

As for who reduces more, the answer is clear. As stated by Secretary Gates, Russia is currently below the top levels permitted under New START with regard to delivery vehicles. Consequently, Moscow is not likely to have to eliminate a single launcher from where it was headed without New START. The expectation is that Russia will cut some deployed warheads but significantly less than suggested by the administration. For the United States, the reductions are much deeper and, in the case of launchers, well below what U.S. military officials had earlier stated to be the U.S. requirement.

My second question relates to the treaty's impact on two vital capabilities for the future: missile defenses and conventional prompt global strike capabilities—the very capabilities that, according to the recently released Nuclear Posture Review, make possible the reductions in nuclear forces envisioned in New START. What will be the impact of New START on our ability and willingness to develop and deploy future capabilities in both of these areas to meet future threats?

I know my esteemed colleague, Ambassador Edelman, will go into some detail on conventional prompt global strike, so I will limit my remarks to missile defenses. Initially, the Obama administration gave numerous assurances that there would be no limitations on missile defenses in the treaty—"no way, no how." Later, once the treaty text was made public, the line changed to "no meaningful" limitations and "no constraints on current and planned" programs.

We know there are restrictions on missile defenses in the treaty, both direct and possibly indirect. Article V prohibits the future conversion and use of ICBM and SLBM launchers for placement of missile defense interceptors. While the Obama administration has stated it has no intention to convert such launchers for missile defense, the previous administration did undertake such conversions. And future administrations might also find the conversion option attractive. As Dr. Kissinger testified before this committee: "I would also have preferred to avoid prohibiting the use of missile launching sites for strategic defense as unnecessarily limiting strategic options of a future President."

As for implicit constraints on missile defenses, Russian officials have stressed what they call the "legally binding "protocol language which notes the "interrelationship between strategic offensive arms and strategic defensive arms. "Foreign Minister Lavrov has repeatedly stated that Russia will be entitled to withdraw from the treaty if there is a change from existing levels in the "quantitative and qualitative "capacities of U.S. strategic defenses. By doing so, Moscow may desire to gain leverage over the future direction of U.S. missile defense programs—development and deployments of future systems that are necessary to defend the United States and our friends and allies.

Last week Under Secretaries of Defense Michele Flournoy and Ashton Carter, two widely respected professionals, wrote in the Wall Street Journal that New START "does not constrain the U.S. from testing, developing and deploying missile defenses." They emphasized that these "capabilities are critical to protecting U.S. citizens, our forces abroad, and our allies from real and growing threats." In the ratification process, the Senate can build on, and make formal, this assurance. It can also make evident that the United States will not accept limits on current and future missile defense programs and capabilities. Perhaps the best means of doing so would be an explicit statement that no further limitations or prohibitions on missile

defenses, such as those that could potentially be agreed in the treaty's consultative body, will be acceptable.

My third question is how does the United States benefit from New START?

The Obama administration has stressed the importance of New START to "re-set" the United States-Russian relationship. To the extent that the treaty improves mutual confidence in our bilateral relations, it may make a modest, near term contribution. To the extent the treaty contributes to the reestablishment of the cold-war relationship we had with the Soviet Union, it will carry a long-term cost.

For some in Russia, including in high government positions, the United States is seen and described openly as the adversary. For them, New START serves a number of purposes: it constrains U.S. forces while not encumbering Russian forces; it perpetuates deterrence through the balance of terror and mutual assured destruction; it enhances the status of Russia and restores in part the lost prestige from superpower days; and it once again treats nuclear weapons—the one category of arms on which Russia can compete with the United States—as the principal currency of the relationship.

If we do believe the cold war is over, and if we want a normal relationship with Russia, we need to move beyond cold-war approaches. We need to base our relations on common interests and joint efforts to deal with today's security challenges, such as countering nuclear terrorism and managing the expansion of nuclear energy in a manner that reduces the risks of nuclear weapon proliferation.

Predictability and stability are important elements of our relationship with Russia. Reductions of nuclear weapons to the lowest level possible consistent with our security requirements, including for extended deterrence for our friends and allies, are important to our nonproliferation goals. But these objectives are not well-served by traditional arms control of the type practiced in the cold war when we and the Soviet Union were enemies in a divided world with thousands of nuclear weapons pointed at each other.

The Obama administration has also made the case that New START is important because it demonstrates the U.S. commitment to disarmament, and thereby will lead to greater support for U.S. nonproliferation goals. The first half of the administration's case is sound—through New START and other means, it has established impeccable credentials on disarmament. However, it is far from clear that this has or will lead to greater international pressure on states like Iran or to greater cooperation in strengthening the NPT regime. The most recent U.N. Security Council resolution on Iran falls far short of what the administration sought, as did the outcome of the NPT review conference.

In closing, I would join with many others, including in the Senate and in the administration, to stress the need for ensuring an effective, reliable, and safe nuclear deterrent force for the future. New START must be assessed in the context of a robust commitment to maintain the necessary nuclear offensive capabilities required to meet today's threats and those that may emerge. This is a long-term commitment, not a 1-year budget bump-up. It includes the maintenance of the TRIAD and of a modern nuclear weapons infrastructure. These are the capabilities that will provide strategic stability, deterrence, and credible assurances to our friends and allies.

Senator SHAHEEN. Thank you.

Ambassador Edelman.

Senator LUGAR. Madam Chairman, could I just ask that we recess, and I ask this because I want to make certain all of us hear each of the three witnesses.

Senator SHAHEEN. Sure. What——

Senator LUGAR. And if we leave and relieve each other, we are going to miss some of the testimony.

Senator INHOFE. Yes, Madam Chair, they may not be aware that a vote started 6 minutes ago.

I meant to mention, Ambassador Edelman, I have fond memories of our relationship in Turkey when you had that job there, and I thank you for your public service, and I've enjoyed that relationship.

Senator SHAHEEN. I think recessing while we all go vote is a good idea, so we'll recess for 5 minutes, and we will return.

[Recess.]

Senator SHAHEEN. This hearing will come to order again, we didn't quite make it back in 5 minutes, but pretty close.

So, because I know a number of the members have a scheduling issue and we promised to let our panelists out, we will go ahead and begin and hope that the other Senators join us shortly.

Ambassador Edelman.

STATEMENT OF HON. ERIC S. EDELMAN, DISTINGUISHED FELLOW, CENTER FOR STRATEGIC AND BUDGETARY ASSESSMENTS, VISITING SCHOLAR, PHILIP MERRILL CENTER FOR STRATEGIC STUDIES, JOHNS HOPKINS UNIVERSITY SCHOOL OF ADVANCED INTERNATIONAL STUDIES, WASHINGTON, DC

Ambassador EDLEMAN. Thank you Senator Shaheen, and Senator Lugar and to the other members of the committee who hopefully will arrive. I very much appreciate the opportunity to be here today and speak to the committee.

I think the committee's hearings, as many of them as there have been, and as many more as there will be, provide a very good opportunity to increase our understanding of how this treaty fits into the broader set of national security issues that are facing the Nation in a period when, as the Nuclear Posture Review notes, "the threat of global nuclear war has become remote, but the threat of nuclear attack has increased."

And I think it's particularly the case that the Senate can be deliberate about this, because earlier arms reduction and limitation agreements were reached in a context of what was widely perceived as an out-of-control arms race. But today, both sides are clearly lowering their number of deployed warheads, and I think the Senate therefore can and ought to take the time necessary to make sure that all of this is done right, rather than done fast.

I, as Senator Lugar noted, have served several administrations as a career diplomat, working on United States-Russia relations. And I served three consecutive Presidential administrations, all of which operated from the assumption that the collapse of the Soviet Union marked the end of an ideologically driven strategic antagonism between the United States and Russia. All three administrations based their policies on the hope and expectation that a democratizing Russia would become a normal country, an active proponent of a new and stable world order, a partner with the United States in NATO in seeking peace and stability, and a Europe whole and free, and also in resolving conflicts and dangers in Southwest Asia, Northeast Asia, and elsewhere.

And in that sense, I do see that the recurrence of a form of arms control that posits an adversarial relationship between the United States and Russia as an unfortunate retreat from those earlier aspirations. We don't, for example, have arms control treaties with "normal" countries with nuclear weapons like France and the United Kingdom. And I suppose that Russia's increasing turn toward authoritarianism and the tensions and conflicts along Russia's periphery that have developed over the past half-decade may have made the return to a START-like treaty structure an inevitable. But, I think we also need to bear in mind that in the current environment, a START-like treaty that ignores North Korea and Iran could represent more of a step backward than a step forward.

In my view, the treaty needs to be evaluated both against the standards of predictability, strategic stability, and verifiability that we employed for the earlier START treaties if we are going to use that traditional treaty structure.

In addition, however, I think it needs to be evaluated in another way, because we are entering a second nuclear era with emergent nuclear powers in North Korea, most likely Iran, and now perhaps Burma. And I think the Senate must review this measure against a standard that incorporates the kinds of capabilities, particularly robust missile defenses and conventional prompt global strike that I think are likely be necessary for the United States to deal with these emerging challenges.

My colleague, Ambassador Joseph has talked about some of the ambiguities in the treaty language, some of the issues of verifiability, and the limits on missile defense so I will focus my remarks on the launcher limits set in the New START Treaty which is a concern, I think, of Senator Inhofe's, and their impact on the Prompt Global Strike capabilities.

Beginning in the 1990s a number of scholars began to write about the emergence of a second Nuclear Age. It's an era characterized by a continuing need to maintain deterrence among great powers but also to manage a more complicated multinational nuclear competition resulting from the progressive nuclearization of Asia with Iran and Burma, as I said, possibly soon joining India, Pakistan, China, and North Korea as nuclear weapons states.

Others may follow in a cascade of proliferation which was a concern highlighted by the report of the Perry-Schlesinger Nuclear Posture Commission on which Mort Halperin served, as well as the Graham-Talent Commission on Prevention of Weapons of Mass Destruction Proliferation and Terrorism.

So, how well does the New START Treaty position the United States for the task of both maintaining deterrence and dealing with emergent regional powers?

I do hope that the Senate will look carefully at the launcher limit of 700 and I noted your comments, Madam Chairman, about the testimony you've heard from General Chilton, Secretary Gates, and others. All I can tell you is that in September 2008, Secretary Gates and then-Energy Secretary Bodman produced a joint DOE–DOD White Paper on "National Security and Nuclear Weapons in the 21st Century" which suggested a larger force was necessary. And as recently as a year ago—less than a year ago, actually, General Cartwright, in an exchange with Senator Thune on the Senate Armed Services Committee said he "would be very concerned" if the launcher limit dropped below 800. So, you know, what has changed? It's easy to understand why this lower limit was appealing to Russian officials since their launcher numbers appear to be dropping below 700 as a consequence of the aging of their systems and problems with their foundering modernization plans. But a treaty that requires no elimination of nuclear force structure by Russia while forcing the United States to reduce launchers is perhaps not in the United States national interest, given the global United States responsibilities for providing extended deterrence to allies—a set of responsibilities that Russia does not face.

Secretary Clinton, among others, has suggested that the United States may have to take on even new extended deterrence requirements in the Middle East if Iran emerges as a nuclear power. And one has to ask the question, can the United States credibly take on increased commitments to provide assured deterrence to our allies and extended deterrence with a shrinking arsenal of launchers?

In both the 2001 and 2010 Nuclear Posture Reviews, the point was made that advancing U.S. conventional capabilities, and in particular long-range precision strike weapons, make it possible to decrease the role of nuclear weapons in our Nation's military force posture. But while long-range conventional strike weapons can achieve some of the discrete target effects that were previously reserved for nuclear weapons, they cannot produce the mass effects or credibility that are uniquely resident in the nuclear weapons inventory as General Chilton testified before the Armed Services committee on April 22.

The use of prompt conventional strike for the purposes of destroying a fleeting, emergent target, such as terrorist leader or a suspected transfer of WMD would require small numbers of PGS vehicles, which might easily be accommodated under the 700 launcher limit which is what, I think, Secretary Miller has testified to. However, I think we increasingly need to think about prompt global strike as the leading edge of combat operations in environments where anti-access/area-denial capabilities will preclude the traditional use of U.S. airpower or where the President, current or future, will want nonnuclear options for dealing with a spreading number of nations with small nuclear inventories.

One recent study has suggested the need for at least 50 such systems, but the number could easily be larger. Fifty would already pinch the nuclear forces needed to maintain the nuclear triad under the New START negotiated launcher limit, and I think that goes to one of the points that Mr. Inhofe made at the beginning, but the problem could become even more acute if lower limits are negotiated in subsequent agreements. And I think the problem here is that the treaty's preamble establishes a link—suggests a link—between deployment of prompt global strike and "strategic stability," thereby establishing a precedent for counting these weapons as part of nuclear arms control agreements.

The truth is, for the 10-year life of this agreement the cheapest and quickest route to prompt global strike capability would be a conventionally armed Trident or Minuteman missile, whose numbers are limited by the treaty.

Let me conclude by agreeing with Secretary and Ambassador Joseph that in the current context, the requirement for nuclear deterrence is going to remain a concern for all policymakers and a modernized nuclear force is going to be essential to that. As Secretary Gates suggested in October 2008, it's a sine qua non for maintaining nuclear deterrence. He pointed out then that, "at a certain point, it will become impossible to keep extending the life of our arsenal, especially in light of our testing moratorium. It also makes it harder to reduce existing stockpiles, because eventually we won't have as much confidence in the efficacy of the weapons we do have. Currently, the United States is the only declared

nuclear power that is neither modernizing its nuclear arsenal nor has the capability to produce a new nuclear warhead. The United Kingdom and France have programs to maintain their deterrent capabilities. China and Russia have embarked on ambitious paths to design and field new weapons. To be blunt, there is absolutely no way we can maintain a credible deterrent and reduce the number of weapons in our stockpile without either resorting to testing or pursuing a modernization program."

Much of the danger and the difficulty the Nation will face in the future presents itself in the form of regional, nuclear armed powers. The Nuclear Posture Review rightly points out the Nation can reduce the role of nuclear weapons, even in the face of these difficulties, because we have improved missile defense and prompt global strike capabilities, among others, but this is true only if we continue to field these capabilities in sufficient numbers, and with plausible operational concepts that enable us to preserve our security interest.

New START, unfortunately, introduces limits and obstacles to further development of precisely these means of defending the country. I think as part of the ratification I would hope the Senate will express its sense that no further limitations on either missile defense or prompt global strike should be considered as a part of future nuclear arms reduction agreements. Any such constraints could potentially prove to be a major error in long-term strategy because they would trade away areas of United States comparative advantage for reductions in Russian strategic forces that would be likely to happen even in the absence of a treaty.

Thank you very much.

[The prepared statement of Ambassador Edelman follows:]

PREPARED STATEMENT OF ERIC S. EDELMAN, DISTINGUISHED FELLOW, CENTER FOR STRATEGIC AND BUDGETARY ASSESSMENTS, VISITING SCHOLAR, PHILIP MERRILL CENTER FOR STRATEGIC STUDIES, JOHNS HOPKINS UNIVERSITY SCHOOL OF ADVANCED INTERNATIONAL STUDIES, WASHINGTON, DC

Chairman Shaheen, Senator Lugar, members of the committee, thank you for providing me with the opportunity to share some thoughts with you today on the New START Treaty. A year ago I retired from the United States Foreign Service after almost 30 years and I bring to the subject at hand some perspectives from my years of work at the State Department, White House, and Department of Defense, but today, however, I am not representing any institution, organization, or party. I am speaking solely for myself.

I would like to begin by saluting you Mr. Chairman, and your colleagues on the committee, as well as the Armed Services and Intelligence Committees, for approaching the subject with the thoroughness and careful deliberation it deserves. As the constitutional scholar George Anastaplo has observed, "the arrangements in Section 2 with respect to treaties and appointments take it for granted that the Senate can be depended upon to be as well equipped as the President to know, or at least to be told, what is needed by the country from time to time. The Senate shares the Executive power here, however convenient it may be to vest in a single man the negotiation of treaties. The President is not assumed to know things the Senate does not know or that the Senate cannot be told in appropriate circumstances." [1]

The Senate's scrutiny and skepticism has played a valuable role in the history of arms limitation and reduction agreements and, in at least one case, SALT II, this body did not ratify an agreement reached by the executive branch.

I believe the systematic airing currently being provided by the committee can contribute to increased understanding of how this treaty fits into the broader set of national security issues facing the Nation when, as the Nuclear Posture Review notes,

[1] George Anastaplo, "The Consitution of 1787: A Commentary" (Baltimore, MD: Johns Hopkins University Press, 1989), p. 112.

"the threat of global nuclear war has become remote, but the risk of nuclear attack has increased."[2] This is particularly the case because the earlier arms limitation and reduction agreements were reached in a context of what was widely perceived as an out of control arms race. Today both sides are already lowering their number of deployed nuclear warheads, and contrary to some assertions, despite the expiration of the START Treaty in December 2009, the number of deployed warheads remains governed by the Moscow Treaty until 2012. The Senate therefore can and should take the time to make sure that we get things done right rather than done fast.

I spent a good deal of my career as a diplomat working on U.S.-Soviet and, after 1992, U.S.-Russian relations. I served three consecutive Presidential administrations, all of which operated from the assumption that the collapse of the Soviet Union marked the end of an ideologically driven, strategic antagonism between the United States and Russia. All three administrations based their policies on the hope and expectation that a democratizing Russia would become a "normal" country, an active proponent of a new and stable world order, a partner with the U.S. and NATO in seeking peace and stability in a Europe whole and free and also in resolving conflicts and dangers in Southwest Asia, Northeast Asia, and elsewhere. In that sense the recurrence to a format that posits an adversarial relationship between the United States and Russia, defined by a need to control their respective nuclear arsenals, seems to mark an unfortunate retreat from those earlier aspirations. We don't, for example, have arms control treaties with "normal" countries that have nuclear weapons like the U.K. and France. Russia's increasing turn toward authoritarianism and the tensions and conflicts along the country's periphery that have developed over the past half-decade may have made the return to a START-like treaty structure an inevitable, if lamentable, development. But a START-like treaty that ignores North Korea and Iran may be a step backward rather than forward.

Given these circumstances the New START Treaty, in my view, needs to be evaluated both against the standards used for predictability, strategic stability, and verifiability that were employed for earlier treaties of this type. If we are going to use the traditional arms control treaty structure we need to approach treaty questions with the same care and attention to detail that we did in earlier Senate reviews. In addition, however, because we are entering a Second Nuclear Era with emergent nuclear powers in North Korea, most likely Iran, and perhaps in Burma as well, the Senate's review must also be measured against a standard that incorporates the kinds of capabilities, particularly robust missile defenses and conventional prompt global strike, that will likely be required to cope successfully with new challenges.

In his statement, my colleague Robert Joseph deals with issues regarding ambiguities in the treaty language, verifiability, and limits on missile defenses. I will not belabor those issues, although I very much share his concerns. Rather I will focus my attention on some characteristics of the Second Nuclear Era and pose some questions, in that regard, about the launcher limits set in the New START Treaty and their impact on the development of Prompt Global Strike (PGS) capabilities.

Since the middle of the 1990s a number of scholars, including Fred Ikle, Keith Payne, Paul Bracken, Colin Gray, and Andrew Krepinevich have written about the emergence of a Second Nuclear Age.[3] This era is characterized by the continuing need to maintain deterrence among the great powers and to manage a more complicated multinational nuclear competition resulting from the progressive nuclearization of Asia with Iran and Burma possibly soon joining India, Pakistan, China, and North Korea as nuclear weapons states. Others may perhaps follow in a cascade of proliferation that has been highlighted in the reports of both the Perry-Schlesinger Nuclear Posture Commission and the Graham-Talent Commission on Prevention of Weapons of Mass Destruction Proliferation and Terrorism. The growing number of nuclear weapons states with relatively small nuclear inventories imposes on the United States a requirement to put more emphasis on both missile defenses and long-range precision conventional strike weapons. This requirement has been recognized by the Nuclear Posture Review.

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[2] Department of Defense, "Nuclear Posture Review Report," April 2010, p. iv.

[3] See for example, Fred Charles Iklé, "The Second Coming of the Nuclear Age," Foreign Affairs, January/February 1996; Keith Payne, "Deterrence in the Second Nuclear Age" (Lexington, KY: University Press of Kentucky, 1996); Colin Gray, "The Second Nuclear Age" (Boulder, CO: Lynne Rienner Publishers, 1999); Paul Bracken, "The Second Nuclear Age," Foreign Affairs, January/February 2000; and Andrew F. Krepinevich, "U.S. Nuclear Forces: Meeting the Challenge of a Proliferated World" (Washington, DC: Center for Strategic and Budgetary Assessments, 2009).

How well does the New START Treaty position the United States for the task of both maintaining deterrence among the existing nuclear powers and dealing with emergent regional nuclear powers?

With regard to the overall question of deterrence I hope the Senate will carefully examine the launcher limit of 700 deployed (with an additional 100 nondeployed launchers) to determine for itself if this limit meets the requirements of deterrence. In September 2008, Secretary Gates and then Energy Secretary Samuel Bodman produced a joint DOE–DOD White Paper "National Security and Nuclear Weapons in the 21st Century" that suggested a force of roughly 900 launchers was needed for purposes of deterrence. As recently as last fall the Vice Chairman of the Joint Chiefs of Staff, General James Cartwright, during an exchange with Senator Thune in the SASC, said he "would be very concerned" if the launcher limit dropped below 800. What has changed? Why are 700 deployed launchers now sufficient? How will the U.S. maintain a resilient triad of ICBMs, SLBMs, and manned bombers in the medium term? It is easy to understand why this lower limit was appealing to Russian officials since their launcher numbers appear to be dropping below 700 as a consequence of the aging of their systems and problems with their foundering modernization plans. But is a treaty that requires no elimination of nuclear force structure by Russia while forcing the U.S. to reduce launchers in the U.S. national interest, particularly given U.S. global responsibilities for providing extended deterrence to its allies a requirement which Russia does not face. Secretary Clinton and others have suggested that the possible emergence of a nuclear Iran may lead the U.S. to take on even more commitments to provide extended deterrence in the Middle East. Can the U.S. credibly take on such commitments with a shrinking arsenal of launchers?

The launcher limit has implications for our Prompt Global Strike capabilities. Both the 2001 and 2010 Nuclear Posture Reviews make the point that advancing U.S. conventional capabilities, and in particular long-range precision conventional strike weapons, make it possible to decrease the role of nuclear weapons in the Nation's military force posture. It is important to note, however, that while long-range conventional strike weapons can achieve some of the discrete target effects that were previously reserved for nuclear weapons they cannot produce the mass effects or credibility that are uniquely resident in our nuclear weapons inventory. As General Chilton told the Senate Armed Services committee on April 22, "I consider prompt global strike capability as a niche capability, another quiver, if you will, of the United States to address warfighting concerns. I do not see it as a replacement for the nuclear deterrent in that role, specifically.you don't replace the nuclear deterrent with that, one-for-one, not even ten-for-one." Today, as we move into the Second Nuclear Era the question of a Prompt Global Strike capability is taking on greater urgency. But the use of either ICBMs or SLBMs for the PGS mission will henceforth be constrained by the Treaty which counts them as Strategic Delivery Vehicles accountable under the 700 launcher limit. The difficulty here is that we do not yet know what the requirement for PGS will be, and thus run a substantial risk of putting the arms control cart ahead of the capability requirements horse.

The use of prompt conventional strikes for the purpose of destroying a fleeting, emergent target, such as a terrorist leader or a suspected transfer of WMD, would require small numbers of PGS vehicles which might be easily accommodated under the 700 launcher limit. However, PGS increasingly needs to be seen as necessary for the leading edge of combat operations in an environment where anti-access/area denial capabilities will preclude traditional uses of U.S. airpower or where the President (current or future) will want nonnuclear options for dealing with a spreading number of nations with small nuclear inventories. One recent study has suggested the need for 50 such systems, but the number could easily be larger.[4] This number could already pinch the nuclear forces needed to maintain the nuclear triad under the New START negotiated launcher limit. The problem could become even more acute if lower limits are negotiated in subsequent agreements. A major problem here is that the treaty's preamble suggests a link between the deployment of PGS and "strategic stability," thereby establishing a precedent for counting these weapons as part of nuclear arms control agreements. Although the article-by-article analysis of the treaty submitted to the Senate suggests that the United States has registered with Russia its view that "not all new kinds of systems of strategic range would be 'new kinds of strategic offensive arms' subject to the New START Treaty" (a statement that would seem to protect a hypersonic glide vehicle from being sub-

[4] Bruce Sugden, "Speed Kills: Analyzing the Deployment of Conventional Ballistic Missiles," International Security, 34:1, Summer 2009, 113–146, estimate of a minimum force of 50 for counternuclear missions is on page 119. See also Thomas Scheber, "Conventionally-Armed ICBMs: Time for Another Look," Comparative Strategy, 27:4, 336–344.

ject to the treaty), the fact remains that for the 10-year life of this agreement the cheapest and quickest route to a PGS capability would be a conventionally armed Trident or Minuteman missile, whose numbers are limited by the treaty.

Let me conclude by noting that the United States has probably never faced a more complex or daunting set of challenges to the Nation's security as we will in the years ahead. In that context, the requirement for nuclear deterrence will remain a concern for policymakers. As Secretary Gates suggested in October 2008 a sine qua non for maintaining our nuclear deterrent is a modernized nuclear force. He rightly pointed out that "at a certain point, it will become impossible to keep extending the life of our arsenal—especially in light of our testing moratorium. It also makes it harder to reduce existing stockpiles, because eventually we won't have as much confidence in the efficacy of the weapons we do have. Currently, the United States is the only declared nuclear power that is neither modernizing its nuclear arsenal nor has the capability to produce a new nuclear warhead. The United Kingdom and France have programs to maintain their deterrent capabilities. China and Russia have embarked on ambitious paths to design and field new weapons. To be blunt, there is absolutely no way we can maintain a credible deterrent and reduce the number of weapons in our stockpile without either resorting to testing our stockpile or pursuing a modernization program."

That said much of the danger and difficulty the Nation faces will present itself in the form of regional, nuclear armed powers. The Nuclear Posture Review rightly points out that the Nation can reduce the role of nuclear weapons, even in the face of these difficulties, because we have improved Missile Defense and PGS capabilities, but this is true only if we continue to field these capabilities in sufficient numbers, and with plausible operational concepts that enable us to preserve our security interest. New START, unfortunately introduces limits and obstacles to further development of precisely these means of defending the country. As part of the ratification process I would hope that, at a minimum, the Senate will express its sense that no further limitations on either Missile Defense or Prompt Global Strike should be considered as a part of future nuclear arms reduction agreements. Allowing any further such constraints could well prove a major error in long-term strategy because they would trade away areas of U.S. comparative advantage for reductions in Russian strategic forces that would be likely to happen even in the absence of a treaty.

Senator SHAHEEN. Thank you, Ambassador Edelman.

Dr. Halperin.

STATEMENT OF DR. MORTON H. HALPERIN, SENIOR ADVISOR, OPEN SOCIETY INSTITUTE, WASHINGTON, DC

Dr. HALPERIN. Thank you very much, Madam Chairman, Senator Lugar. It's a great pleasure to testify again before this distinguished committee and to make clear I appear in support of the Senate consenting to ratification of the New START Treaty. I have no doubt the ratification of the treaty is in the national interest of the United States, that it will strengthen strategic stability between the United States and Russia and help the United States to secure the international cooperation it needs to deal with the dangers of nuclear proliferation and the danger of terrorists gaining control of a nuclear weapon.

As Senator Lugar noted, I was a member of the Perry-Schlesinger Commission, and I will rely on the conclusions of that Commission in my testimony.

The Commission, as the committee knows, was composed of individuals with, to say the least, very diverging views on a wide range of nuclear issues, but with one exception, we managed to reach a consensus on every issue that we considered. And that consensus included very clear and precise recommendations on what we thought—all of us thought—the next strategic arms control treaty should look like. The Obama administration took these recommendations very seriously and the treaty that's now before you conforms, in every material way, with the recommendations of the

Commission. I thus support ratification for the same reasons that led me to join the consensus on the Commission.

In short, I believe that the limitations placed on Russian and American forces will contribute to strategic stability and reduce the risk of unintended and/or accidental use of nuclear weapons by either nation. At the same time, it will clearly permit the United States to maintain sufficient forces to deter deliberate attack on the United States or its allies or partners, by Russia or any other state possessing nuclear weapons.

It will also enable the United States to provide credible and effective nuclear guarantees to our allies and partners and will provide a framework in which we can get the greater cooperation that we need from other states to advance our nonproliferation objectives.

The Commission report makes clear that another purpose of a new START treaty is to improve the overall political relation between the United States and Russia. I think the treaty will, in fact, accomplish that purpose when it is ratified by both countries.

The Commission was mindful, as the administration was, of how difficult it will be to reach agreement with the Russians on very large reductions in the arsenals of both sides and it, therefore, expressed its support for the framework that had been agreed, as we were finishing our work, between the two governments and suggested that the treaty focus, as its first step, on modest and straightforward reductions which would reinvigorate the strategic arms control process rather than striving for bold new initiatives. It suggested that a mutual reduction of strategic forces would be achievable and would be a first, but important, modest step forward. As I say, the administration followed this advice and the treaty before you achieves modest but important objectives.

The treaty, reflecting, as it does, the recommendation of a bipartisan Commission, should provide momentum to reestablish the badly needed bipartisanship that we've had in the past on arms control policy and on arms control treaties.

In that connection, I am pleased to see that today the Partnership for A Secure America, Senator Inhofe mentioned, released a statement which was a bipartisan statement in support of ratification of the treaty which was signed by 30 former high-ranking officials equally divided between Republicans and Democrats. I should note that I am on the board of the Partnership for a Secure America, but I would ask that that statement be made part of the record, and I'd like to submit it to the committee for that purpose.

Senator SHAHEEN. Without objection, the statement will be included in the record.

Dr. HALPERIN. Now, the numerical limitations in the treaty will permit the United States to gradually reduce the number of deployed warheads and number of launchers in its strategic arsenal over a 7-year period, and in a manner that will allow the United States to maintain the triad of delivery systems with each leg contributing to stability and deterrence. The administration has ample time to make careful choices about which systems to reduce, and how to reach the posture that, in my view, will clearly be more than sufficient for both deterrence and assurance.

Moreover, the administration is committed to the modernization of its arsenal. We've been told that the modernization of the arsenal is a necessary component of moving ahead with this treaty. I believe that it is in our interest to do so whether or not we have a treaty, that the administration is committed to do so, and I hope that the Congress will follow the budget proposals of the administration and move forward with the modernization of both the delivery systems, when that is required, and also with the steps necessary to maintain a modern, safe and effective nuclear weapons arsenal.

Now, you've also asked me to evaluate the concerns that have been raised about the treaty. As I understand those concerns, in addition to the question of whether Congress will actually approve the proposed improvements in our nuclear infrastructure, they relate to verification, to ballistic missile defense, and to one or two other issues. I will leave it to other witnesses to discuss the technical aspects of verification. Let me simply say that I have no doubt that Russian efforts at evasion of this treaty have no chance of success at any level which would provide a meaningful advantage to them in the nuclear competition between the United States and Russia, and I think that is the standard that the Senate has used to evaluate every other treaty, and I think it is the only appropriate standard for assessing the adequacy of verification.

Now, the ballistic missile defense issue seems to have generated the greatest level of concern. I find this surprising, and frankly, disappointing. The New START Treaty simply does not limit the number of launches the United States can deploy or otherwise constrain the ability of the United States to deploy effective ballistic missile defense, period, full stop. That should be the end of the debate. But it has not been.

The concerns expressed are that the preamble acknowledges a link between offense and defense, that the treaty bans placing ballistic missile defense launchers in strategic missile silos and that the Russians have asserted a right to withdraw from the treaty if they determine that American missile defenses threaten their deterrent. The statement in the preamble, in my view, is nothing more than a statement of the obvious and indeed, a truth which the United States long urged on the Soviet Union before they came to accept it.

The Russian unilateral assertion is nothing more than a restatement of what is in the treaty and what is obvious. No one could doubt, for example, that a Russian decision to deploy a very large ballistic missile defense force aimed at shooting down all American missiles that survived a Russian first strike on the United States would lead the United States to carefully evaluate the adequacy of our offensive forces and to withdraw from the treaty if we determined that our supreme national interests required such action. We should not be surprised if the Russians have the same view.

The only thing that I would add to the very clear statement to this committee by General O'Reilly on the silo issue is that I think it is in the interest of the United States to draw a bright line between those systems which are under the treaty and those systems which are not. So that I think the limit on both placing offensive

missiles in defensive silos and the reverse is, in fact, in the interest of the United States.

I noted that the continuing controversy over ballistic missile defense was disappointing. This is so because the Commission, which included many long time opponents of ballistic missile defense as well as many passionate advocates, reached a full consensus on that issue, one that is fully consistent with the treaty as well as the actions of the Obama administration and the recommendations it has made to the Congress. And I would ask that my written statement and attachment quoting from the committee—the Commission statement also be included in the record.

Senator SHAHEEN. Without objection.

Dr. HALPERIN. The committee not only strongly supported limited defenses, it clearly opposed defenses aimed at the Russian or Chinese missile force. And not only that, it warned against deployments that did lead Russia or China to believe that we were trying to affect their offensive military capability because it said that such actions would lead Russia or China to take actions, increase the size of their own strategic forces, that would increase the threat to the United States and its allies.

So this statement, this policy proposal from the Commission, says deploy active defenses against Iran, against North Korea, but make sure you do it in a way that doesn't trigger Russian increases in their own offensive missile forces because that will reduce our security, whether it's in the treaty or not. And all the Russians have done is to say what the Commission said, which is if we deploy forces that, in fact, threaten their deterrent, they will respond by building larger offensive forces. That is not in our interest that they do that. And therefore, as the Commission recommended, we should very carefully design our ballistic missile defenses so that they don't seem to pose, or actually pose, that threat to Moscow. And I think the Russian unilateral statement and, therefore, what our own policy should be are very much the same.

Now, let me say a final word, if I can, about two other issues that have been raised in the other testimony. First is the question of rail mobile missiles. As I read the treaty, it is not at all silent on that subject. It has a definition of both strategic offensive missiles and strategic offensive launchers, which clearly includes rail mobile systems. So they are covered by the treaty. They are prohibited by the treaty. I think no Russian could possibly believe that this treaty was written to put limits on offensive missiles but then say but if you put them on rails, they don't count. I don't believe there is anything in the legislative history to suggest that that is the case. And I think that the Senate can ratify the treaty in full confidence that rail mobile missiles are covered.

Now, on the question of conventional prompt global strike, I think, as Secretary Edelman has conceded, that if we stay with numbers like 10 or 12 of these, which is what most people think is sufficient for the purposes that have been discussed, we can easily accommodate it within these numbers. If we go to much larger numbers of them, then we will need to design and build a new system. And my own view is that it is imperative that we build a system that isn't covered by the terms of this treaty, that isn't a strategic missile.

And the administration is working on such a system because you do not want to fire, in my view, 50 missiles from the ICBM field in the direction that will—the Russians will not be able to tell is not an attack on them. That seems to me extraordinarily dangerous. There would be a very strong argument against doing that in a crisis. And we do not want to build a prompt conventional system that we then find that we can't use because it seems too risky. And the operational use of them on submarines, which are often out of communication range, also seems to me not the most effective system. So if the United States decided that it did need 50 or more of these systems, I believe it would build a new system which would not be covered by the strategic treaty.

I am pleased to have this opportunity to testify. And, of course, I would be delighted to answer questions. Thank you very much.

[The prepared statement of Dr. Halperin follows:]

PREPARED STATEMENT OF MORTON H. HALPERIN, SENIOR ADVISOR, OPEN SOCIETY INSTITUTE, WASHINGTON, DC

Mr. Chairman, It is a great honor and privilege to be invited to testify again before this distinguished committee. I appear in support of the Senate consenting to ratification of the New START Treaty. I have no doubt that ratification is in the national interest and that the treaty will strengthen strategic stability between the United States and Russia and help the United States to secure the international cooperation it needs to deal with nuclear proliferation and the threat of terrorists gaining control of a nuclear weapon.

My official involvement with these issues began in 1967 when, as a Deputy Assistant Secretary of Defense, I helped to develop the initial American positions for what became known as the SALT process. I also worked on strategic arms control matters in the Nixon and Clinton administrations. I am now the cochair of the advisory board of the New America Foundation Nuclear Strategy and Non-Proliferation Initiative. Perhaps most directly relevant to the evaluation of the New START Treaty, I served on the Congressional Commission on the Strategic Posture of the United States.

As the committee knows, the Commission, composed of individuals with, to say the least, very divergent views on nuclear issues reached consensus on every issue but the CTBT. That consensus included very clear and precise recommendations on what we thought the next strategic arms control treaty should look like. The Obama administration clearly took those recommendations very seriously. The treaty now before the Senate conforms in every material way with the recommendations of the Commission. I thus support ratification for the same reasons that led me to join the consensus on the Commission.

In short, I believe that the limitations placed on Russian and American forces will contribute to strategic stability and reduce the risk of unintended or accidental use of nuclear weapons by either nation. At the same time it will permit the United States to maintain a strategic arsenal which is more than sufficient to deter a deliberate attack on the United States or its allies and partners by Russia or any other state possessing nuclear weapons. It will also enable the United States to provide credible and effective nuclear guarantees to our allies and partners and will provide a framework in which we are much more likely to get the cooperation we need from other states to advance our nonproliferation objectives. As I will explain in a minute, I am confident that the provisions of the treaty can be verified.

The Commission's final report placed the value of a new START treaty in the context of the importance of the overall political relation between the United States and Russia and explained the potential value of an arms control regime as follows:

> It may provide assurances to each side about the intentions driving modernization programs. It may lend predictability to the future of the bilateral relationship, a benefit of value to the United States but also its allies and friends. U.S.-Russian arms control can also reinforce the NPT.
>
> Moreover, at a time when the United States is considering how to reduce nuclear dangers globally, it is essential that it pursue cooperative, binding measures with others.

The Commission was mindful, as was the administration, of how difficult it would be to reach agreement with the Russians on very large reductions in the nuclear arsenal of both sides. It, therefore, expressed its support for the framework agreed in early April 2009 between Presidents Obama and Medvedev and offered this specific advice:

> In the effort to renew the U.S.-Russian arms control process, the first step should be modest and straightforward. It is more important to reinvigorate the strategic arms control process than to strive for bold new initiatives. A mutual reduction of operationally deployed strategic nuclear weapons in some increment should be achievable. This first reduction could be a modest one, but the objective should be to do what can be done in the short term to rejuvenate the process and ensure that strategic arms control survives the end of START I at the end of 2009.
>
> Recalling that reductions in nuclear forces should proceed only through bilateral agreements, the United States and Russia should address limits on both launchers and warheads and discuss how to adopt the comprehensive START verification measures to any new commitments. Success in taking this first step will help create the political will to proceed to follow-on steps on the basis of effective verification.

The Obama administration followed this advice and the treaty achieves the modest but important objectives that the Commission envisioned. I urge the committee to report the treaty favorably. This treaty, reflecting as it does the recommendations of a bipartisan commission, should provide momentum to reestablish bipartisanship on strategic arms control treaties and policy.

Although the treaty is limited in its scope, the administration has achieved the modest but important objectives identified by the Commission.

The numerical limitations contained in the treaty will permit the United States to gradually reduce the number of deployed warheads and the number of launchers in its strategic arsenal over 7 years and in a manner that will allow the United States to maintain the triad of delivery systems with each leg contributing to stability and deterrence. The administration has ample time to make careful choices about which systems to reduce and to reach a posture that is more than sufficient for deterrence and assurance.

Moreover, the administration's proposals to the Congress to modernize the nuclear infrastructure and to substantially increase spending to assure that the nuclear arsenal remains safe, secure, and reliable, also follows the recommendations of the Commission. If approved by the Congress, which I would also strongly urge you to do, the administration's proposed effort would assure that the nuclear forces of the United States remain equal to the tasks of deterrence and assurance.

The committee has asked me evaluate the concerns that have been raised about the treaty. As I understand them, these concerns, in addition to doubts about whether Congress will fund the proposed improvements in the nuclear infrastructure, relate to verification and to ballistic missile defense.

I will leave it to other witnesses to discuss the technical aspects of verification. Let me simply say that I have no doubt that Russian efforts at evasion have no chance of success at the level which could provide any advantage. With thousands of warheads and hundreds of delivery vehicles permitted under the treaty, the scale of any possible undetected cheating would have no impact on our security nor that of our allies and partners. The question of whether any arms control treaty is in the American security interest does not turn on whether there is a 100 percent assurance that the first violation can be detected on the first day. There can never be such an assurance. Rather one must ask, in light of the value to the United States of the limitations and monitoring in the treaty and the range of uncertainty about possible violations, whether the treaty is in the overall interest of the United States. That is the standard which informed the evaluation of the INF Treaty, START I, and START II, and the Moscow Treaty—all of which were overwhelmingly approved by the Senate—and it should be the standard for this very modest step.

The BMD issue seems to have generated the greatest level of concern. I find this surprising and frankly somewhat disappointing. The New START Treaty simply does not limit the number of launchers the United States can deploy or otherwise constrain the ability of the United States to deploy ballistic missile defenses. Period. That should be the end of the discussion. The concerns expressed are that the preamble acknowledges the link between offense and defense, that the treaty bans placing BMD launchers in strategic missile silos, and that the Russians have asserted a right to withdraw from the treaty if they determine that American missile defense deployments threaten their deterrent.

The statement in the preamble is nothing more than a statement of the obvious and a truth which the United States long urged on the Russians before they accepted it. The Russian unilateral assertion is nothing more than a restatement of what is in the treaty and what is obvious. No one could doubt that a Russian decision to deploy a very large ballistic missile defense force aimed at shooting down all of the American missiles that survived a Russian surprise first strike would lead the United States to carefully evaluate the adequacy of our offensive forces and to withdraw from the treaty if we determine that our supreme national interest requires such action. We should not be surprised if the Russians have the same view.

As the committee well knows, the military and civilian leadership of the Department of Defense have assured the Senate that the Pentagon has concluded that placing defensive missiles in existing offensive silos is not cost-effective. The existing silos that were converted at Vandenberg, despite some early claims to the contrary by treaty opponents, have been grandfathered in under the treaty. In any event, there is nothing in the treaty to prevent the United States from building new missile defense launchers. So this constraint is of no significance.

Moreover, it is in the interest of the United States to draw a bright line between those systems that are limited under the treaty, strategic nuclear warheads and delivery vehicles, and those that are not, i.e., missile defenses. Rather than seeing this demarcation as a constraint, a clear line between offenses and defenses ensures an unconstrained space outside the treaty for a robust missile defense effort.

I noted that the continuing controversy over BMD was disappointing. That is so because the Commission, which included many long time opponents of ballistic missile defense as well as many passionate advocates, reached a full consensus on this issue, one that is fully consistent with the treaty as well as with the actions that the Obama administration has taken and recommended to the Congress. I have attached the short chapter on this subject from the Commission report to my statement and ask that it be made part of the record along with my prepared statement.

The Commission strongly supported technically capable missile defenses against limited threats such as those that might come from Iran or North Korea, but it argued against any effort to deploy defenses directed at Russia or China, warning that "the United States should ensure that its actions do not lead Russia or China to take actions that increase the threat to the United States and its allies and friends." It also urged renewed efforts to insure cooperation with Russia. It noted that:

> For more than a decade the development of U.S. ballistic missile defenses has been guided by the principles of (1) protecting against limited strikes while (2) taking into account the legitimate concerns of Russia and China about strategic stability. These remain sound guiding principles. Defenses sufficient to sow doubts in Moscow or Beijing about the viability of their deterrents could lead them to take actions that increase the threat to the United States and its allies and friends.

The START Treaty and the policies of the Obama administration are, down to the last detail, fully consistent with that advice. The assertion that the treaty should be rejected because of a concern about BMD amounts to an unfounded assertion that this administration or a future one would fail to request funding for a ballistic missile program against a real threat from a third power because of a fear that Russia would use it as an excuse to withdraw from the treaty. This administration made clear where it stands when it resisted efforts to write additional limits on defense into the treaty and was prepared to walk away from the negotiations if necessary. I have no doubt that future administrations will act with similar regard to the nation's security.

Attachment.

3

On Missile Defense

Missile defenses are an integral part of the strategic posture of the United States after the Cold War. Such defenses were essentially impractical before, given the massive arsenal of multi-range Soviet missiles. In the past, they have also been counterproductive in that they drove the expansion of offensive capabilities. Today, the missile threats of most immediate concern originate from countries such as North Korea and Iran which have deployed short- to medium-range ballistic missiles, and are developing long-range missiles. For example, Iran has several hundred mobile short and medium-range missiles that could threaten U.S. allies and bases, and the recent launch of its Safir-2 Space Launch Vehicle demonstrated some technologies necessary for the development of a crude long-range missile. North Korea has hundreds of mobile short- and medium-range ballistic missiles, and has under development liquid-fueled rockets that could serve as a space launch vehicle for a satellite or as a first-generation long-range missile.

Ballistic missile defense capabilities can play a useful role in support of the basic objectives of deterrence, broadly defined, and damage limitation against limited threats, as set out in the previous chapter. These capabilities may contribute to deterrence by raising doubts in a potential aggressor's mind about the prospects of success in attempts to coerce or attack others. They may contribute to assurance of allies, by increasing their protection and also reducing the risks that the United States would face in protecting them against a regional aggressor. Defenses against short- and medium-range ballistic missiles are seen by some U.S. allies as increasingly important to their security. Israel and Japan have demonstrated the value they ascribe to missile defense by joining in cooperative programs with the United States. The Commission strongly supports continued missile defense cooperation with allies. It lowers costs for all and strengthens the potential for collective defense.

The United States has fielded a ballistic missile defense system capable of defending against these short- to medium-range missiles. U.S. missile defense systems in development and deployment, including the Terminal

High Altitude Area Defense (THAAD) system, Patriot Advanced Capability (PAC) 3, and the Aegis Combat System, have had numerous successful flight tests. The United States currently plans to complete deployment of 96 THAAD and 133 Standard Missile 3 interceptors. These numbers should be reviewed if the threat from North Korean or Iranian missiles increases.

The United States has also fielded a ground-based system intended to defend against small numbers of long-range missiles. This system has demonstrated some capability against unsophisticated threats and should undergo additional system testing to determine its effectiveness against more complex threats that include technologies intended to help in-coming missiles penetrate the defense (so-called penetration aids). Further development and deployment of these long-range defense interceptors should depend on results of these tests and on developments in the ICBM threats facing the United States and its allies. Research and development should continue on responses to counter limited but more complex threats.

For more than a decade the development of U.S. ballistic missile defenses has been guided by the principles of (1) protecting against limited strikes while (2) taking into account the legitimate concerns of Russia and China about strategic stability. These remain sound guiding principles. Defenses sufficient to sow doubts in Moscow or Beijing about the viability of their deterrents could lead them to take actions that increase the threat to the United States and its allies and friends. Both Russia and China have expressed concerns. Current U.S. plans for missile defense should not call into question the viability of Russia's nuclear deterrent. China sees its concerns as more immediate, given the much smaller size of its nuclear force. U.S. assessments indicate that a significant operational impact on the Chinese deterrent would require a larger and more capable defense than the United States has plans to construct, but China may already be increasing the size of its ICBM force in response to its assessment of the U.S. missile defense program.

For more than a decade the development of U.S. ballistic missile defenses has been guided by the principles of (1) protecting against limited strikes while (2) taking into account the legitimate concerns of Russia and China about strategic stability. These remain sound guiding principles.

The Commission supports a substantial role for defenses against short- to medium-range missiles. Defenses against longer range missiles should be based on their demonstrated effectiveness and the projected threat from North Korea and Iran. Defenses against these limited threats should be designed to avoid giving Russia or China a reason to increase their strategic threat to the United States or its allies. But these defenses should become ca-

pable against more complex limited threats as they mature. As noted above, this long-range missile defense system is now incapable of defending against complex threats.

The Commission recommends that the United States strengthen cooperation with Russia and China to restrict transfers to others of advanced missile technology, including the countermeasures to such defenses. Cooperative missile defense efforts with allies should be strengthened and opportunities for missile defense cooperation with Russia should be further explored.

Finding

1. Missile defenses effective against regional nuclear aggressors, including against limited long-range threats, are a valuable component of the U.S. strategic posture.

Recommendations

1. The United States should develop and, where appropriate, deploy missile defenses against regional nuclear aggressors, including against limited long-range threats. It should also develop effective capabilities to defend against increasingly complex missile threats.
2. While the missile threats posed by potential regional aggressors are countered, the United States should ensure that its actions do not lead Russia or China to take actions that increase the threat to the United States and its allies and friends.
3. The United States should strengthen international cooperation for missile defense, including with allies, but also with Russia.
4. The United States should also work with Russia and China to control advanced missile technology transfer.

Ambassador EDLEMAN. Madam Chairman, I think I neglected to ask for your permission to have the text of the formal statement I——

Senator SHAHEEN. They will all be included in the record. Thank you very much.

Ambassador Joseph, you made the point in your testimony that the United States and Russia should move beyond a cold war framework for arms control and that during the Bush administration there was a suggestion that we have less stringent counting rules and no need for clear verification as in the Moscow Treaty. But did I misunderstand that you—it sounded to me like you also

were criticizing New START for having counting rules that are not stringent enough. So I wondered if you could just—did I misunderstand you, or can you clarify the difference in the two points that you were making?

Ambassador JOSEPH. My comments on the counting rules weren't meant to be a criticism. They were just meant to draw out the implications of what is in the treaty and what is not in the treaty.

Senator SHAHEEN. But I—I guess I am trying to—so are the—are you comfortable that the counting rules that are in New START will be an improvement over not having any in the Moscow Treaty? Or do you think that—that we should go back to not having any?

Ambassador JOSEPH. Well, no, I think that the Moscow Treaty has basically the same counting rules as the New START Treaty. We are counting operationally deployed warheads. Now, there is one change. And that is in the bomber counting rule. And I did not mean to criticize that. It may be something that is positive for the United States, to have that flexibility because it is important, I believe, to have the bombers as a leg of the triad.

But it is only going to provide the flexibility and the advantage to us if we modernize our bomber force. And right now that is very much in question. I don't know that we will modernize and we will go forward with a follow-on to ALCM. If we don't, we lose the B–52Hs as delivery platforms. I don't know that in the longer term we are going to modernize by having a new strategic bomber. These are questions, I think, that need to be dealt with because the answers affect how, I believe, the New START agreement needs to be assessed.

Senator SHAHEEN. OK. Thank you. That is helpful. You also highlighted what you called gaps in the verification regime in the treaty. And do you believe that the verification procedures in the treaty, including resuming onsite inspections and providing unique identifiers for each weapon—are they more useful than the complete absence of these that we now have? Or do you think—not see them as comparable?

Ambassador JOSEPH. Senator? I am sorry for interrupting.

Senator SHAHEEN. No, that is OK.

Ambassador JOSEPH. I think that the data exchanges and the onsite inspections are likely to provide useful information. And so, if the question is are we better off with those provisions than without those provisions, I think the answer is yes. But that has never been the standard for determining whether a treaty is verifiable. That is only one factor. We don't have the intelligence community's assessment yet as to whether the treaty is verifiable or not.

And in terms of the gaps, I was pointing out gaps in the ability to monitor future developments in Russian strategic forces. Without an on-the-ground presence at Votkinsk and without the type of telemetry that we received under START I, we are less able to understand what the Russians are doing and will be doing in the future in terms of modernization. Now, that may or may not be a factor in the verifiability of the specific limits of the treaty. But it does undermine this notion of predictability and mutual confidence-building because we will know less about their modernization program.

Senator SHAHEEN. Ambassador Edelman, you pointed out that there is no way to maintain a credible deterrent and reduce our stockpile without either testing our stockpile or modernizing it. Do you believe that the treaty has specific constraints on doing either of these?

Ambassador EDLEMAN. No, ma'am, I was saying that the treaty needs to be considered in the broader context of the circumstance of our nuclear enterprise and our nuclear force. And I was—most of my remarks, actually, were a long quotation from Secretary Gates' speech to the Carnegie Endowment in October 2008. So I was really reflecting Secretary Gates' view.

Senator SHAHEEN. And do you—are you concerned that the—the modernization—the dollars that this administration is putting toward modernization are going to be inadequate? Is that what you are suggesting?

Ambassador EDLEMAN. I do have a concern about that, which I hope this committee and the Armed Services Committee would be looking into carefully. I have seen the one-page White House press statement about the 1251 report which is a classified document. I think you all have it. I have not seen that, so I can't comment really in any granularity about the—the longer term program. But it—it does strike me that it seems to be a minimal add-on to the amount of money that Secretary Gates has offered from the Defense Department budget. And that, I don't think, is going to be sufficient for the real modernization of the complex.

Senator SHAHEEN. And how does it compare to the dollars that were allotted under the previous administration? Can you tell us that?

Ambassador EDLEMAN. Well, I mean, the—the previous administration had a different approach, which was not to pursue life extensions, but to pursue the RRW. And we were not successful in getting the funding from the Congress.

Senator SHAHEEN. Thank you.

Dr. Halperin, you pointed out in your testimony that the treaty could help with the future of the United States-Russian relationship. I wonder if you could talk a little bit about what you think the benefits of that would be.

Dr. HALPERIN. Well, I think that the treaty—sorry. The treaty reestablishes a legally binding relationship between the two countries in terms of their nuclear arsenals and in terms of a set of verification procedures and commitments, for example, not to interfere with unilateral verification procedures that I think is important to have. It is, as has been said, something the Russians wanted. And I think it sets the framework which enables us to move ahead with other issues. We can have a debate about whether the Iranian resolution would have been even worse if we hadn't reached that agreement. It is clearly not everything we wanted. But I think it provides an important platform under which we can then engage the Russians on other issues that are important to our security and to theirs.

Senator SHAHEEN. Thank you.

Senator Lugar.

Senator LUGAR. Well, thank you, Chairman.

Now, let me just note that many of us on this committee have cosigned a number of letters with regard to the adequacy of our deterrent. Secretary Gates has welcomed—back in September and October of last year subsequently, and I appreciate that that $5 billion more is being added, apparently. And Senator Inhofe will be able to help out on that on defense side, maybe add more. But there is a desire to make sure we have an adequate arsenal. And those reports are taken seriously.

Now, I would just indicate that the treaty, as I think you have suggested, Dr. Joseph, does not get into the railway situation with regard to the SS–24. I would—would indicate, as I mentioned this morning, there are no more SS–24 rail mobile Russian missiles. And one reason is in the Nunn-Lugar program we got rid of all of them. They are gone. I think the statement is adequate, it covers historically where we stand. But nevertheless, I would just indicate that as we try to talk about this morning with verification and the particulars of that that one of the reasons why we have made considerable headway is that under the Cooperative Threat Reduction Program, which went on for several administrations, we were talking about maybe 1,500 warheads being left in the Russian situation. It was mentioned widely this morning that about 5,500 have been destroyed. And that is a good many more than most of us would have contemplated at the beginning of the Nunn-Lugar business.

I would just say that one reason so many were destroyed is that when we had boots on the ground, we had DTRA people there, the Russians, as a matter of fact, did want to get rid of more and more materiel because it is expensive. And the problems of maintaining it or the risks of having it around were very considerable. My impression is they still do. One reason they have so little is because it costs a lot, and their budget has never been quite adequate for all of this.

So I appreciate the need for trying to determine who is winning or losing in this proposition, but I would be very skeptical of suggesting that somehow whether this treaty may lead to a more adversarial relationship. I would—I would just say anecdotally that after I complete my question at about 10 minutes to 4, I am committed to go to a meeting that Senator Reid has called and a few folks to talk to President Medvedev of Russia, who happens to be here in the building. My guess is that it will not be an adversarial meeting. He will probably ask when are you going to ratify the treaty. And we will raise the same with him. As a matter of fact, this is as basic for getting on with our relationships and getting to serious arms control talks with regard to the tactical missiles or various other aspects of this, which in my judgment are not going to occur without there being at least some structure for this to happen.

I would just—I would just mention finally that this morning in our briefing in detail about the verification procedures there is no absolute way of knowing everything we need to know about Russia. But much of what we know about Russia, as you as veterans of the treaty all know, has come about sometimes inadvertently like some folks wandering around out there every year visiting with Russians as they opened up more and more situations.

I can recall vividly, for example, being invited to Sermash, the submarine base. No American to my knowledge had been there before. And the only reason I was going is because I was in Russia and at the time they wanted somebody to talk seriously about how they were going to get rid of the Typhoon submarines, which had become very expensive for them and which they were six. And Tom Clancy's Red October stories of those submarines going up and down our coasts, the 200 nuclear armed missiles ship-shot from Philadelphia and New York all this time—whether we knew about it or not makes no difference. I went up there, and they would not allow me to take a picture standing in front of the Typhoon. But they took one and inadvertently sent it over to us. And it was the first time our intelligence people had seen something of that size. Right there.

I would just say simply this was not covered by arms control. There was no arm twisting. And that has been the nature of the picture in a pragmatic way. So, you know, I appreciate the testimony of all three of you. And I am—I am sorry to get into philosophizing and anecdotes and the past. But it just seems to me that the bulk of what we were hearing from many persons is as a practical matter we had better get on with the job of serious negotiations with the Russians and see whether we can enlist them for the serious problems you have illustrated with North Korea, with Iran, with some other situations which really are very important and for the moment are not begging us for arms control talks.

This is going to require considerable pressure by the two countries that have still 95 percent of the stuff left and therefore, whatever may be the intimidating factors to that. And so, I am hopeful that as we proceed through this, we retain really as practical a point of view. And I appreciate the calmness with which you have approached this and your—and I appreciate working with you over the years in terms of so many ways in which we have all tried jointly on behalf of the country.

And finally, I would just say that I believe that eventually we will come to some conclusion on this treaty. I am not certain what the alternative is. Some have suggested, even in one of our hearings, that what we really ought to develop is a comprehensive missile defense system in which we shoot down everything that comes. That is an interesting Star Wars view and I think just as wild as it can be and not really a part, as I can see it, of any serious talk about arms control. But I take seriously anybody in these hearings who comes forward with any idea. I would hope, however, we would come to find our agreement—that there is no constraint, no constraint against our developing missile defense, despite the preamble statement and ramblings by Russians from time to time. The fact is if the Russians decide they don't want the treaty, they can walk away from it. And so can we. My view is that we both want the treaty. And the problem is sort of getting on with it so we have a better basis.

Having exhausted all of my time, I will rest and not ask to get into an argument with any of you. But I appreciate your coming. Thank you.

Senator SHAHEEN. Thank you, Senator Lugar.

Senator Inhofe.

Senator INHOFE. So you are leaving the argument to me. Is that it?

Senator LUGAR. Yes.

Senator INHOFE. Let me first of all say that I understand—I am sorry, Ambassador Edelman, I wasn't here during your testimony. I had to do a radio call before coming back from the vote.

But I understand that, Dr. Halperin, you made a comment about this. I hope you don't think from any comments I made in my opening statement that I object to this. I have no objection to this. The fact, though, is that all of the—the—the blogs that were so critical of me came from John Isaacs, who contributed to this and is not—this is not—this is not his organization. I have no problem with this at all.

And also, I am not saying that I owe either Ambassador Joseph or Ambassador Edelman an apology for my opening statements. But the fact is that the 17 witnesses prior to this meeting were all very pro-New START. And all four of the witnesses that we had in the Senate Armed Services Committee were also. My point is a hearing is not a hearing in something as significant as this until you have people that are very much opposed to it. And I believe that is healthy. I reference the Law of the Sea Treaty that was—we ended up with very healthy debating, confrontational hearings because it is—was a very significant one. And we, as you know, did not end up ratifying that.

So—so I—I from some of the comments that you made, Ambassador Joseph, I agree with you some of the things. I think in terms of our—our delivery systems or, as I referred to it in my statements on the Senate floor, are force structures. We do have a problem. And we—we do—you commented about the B–52 and the B–2. The fact that we did have and authorized in our committee the next generation bomber, which was taken out 18 months ago in President Obama's first budget is something I think that one of the things that I had a problem with. I had other problems. The main problem I had was what they did with the ground-based site in Poland.

Well, let me ask the two of you, if I could, the—you heard me in my opening statement refer to the numbers in the nuclear force structure, section 1251, retains—and we talked about the 3 delivery ICBM, SLBM and then, of course, the aircraft. Four hundred and twenty of the ICBMs, sixty of the bombers. Now, we actually have more than that, but those that have—can be used for this purpose and then retaining the 240 SLBMs. Now, that adds up to 720. We are to get—bring that down to 700. Would either one of you have a specific answer as to how we get there? You probably don't. This is getting into the weeds, I know.

Ambassador EDLEMAN. I think the most likely answer would be from the bomber wing of the triad. But I'd—I'd go back to what Ambassador Joseph said. One of the concerns I have is I think the 1251 statement says up to 60 bombers. I think there are 18 operational B–2s, which means about 42, by my count, B–52Hs. But—but that 42 B–52H number of delivery platforms is, as—as Ambassador Joseph said, totally dependent on a follow-on to ALCM. And we could very easily find ourselves some time in the next couple of years with a bomber leg of the TRIAD that is only 18 B–2s. That

would be a matter of some concern to me because, as the Schlesinger Commission reported—not the one that Ambassador Mort Halperin was on, but the one that Secretary Schlesinger did for Secretary Gates about the Minot episode—very strongly suggested that the bomber wing of the triad remains extremely important. It is—it is the one tool the President in the crisis has to signal. And it is the one set of nuclear weapons he has which are recallable. And so, I would be very worried that some of this comes out—to get down to the 700—out of the bomber leg.

Senator INHOFE. OK. And I appreciate that. Ambassador Edelman, you also—in my absence my staff tells me that you said you did agree with Senator Inhofe on one point. But you didn't say what that point was.

Ambassador EDLEMAN. I am not—I think it might have been on the—first of all, I don't mean to suggest that it is the only point on which I agree with you. But I think it was on the question of whether the launcher limits worked a hardship on—on U.S. ability to provide the deterrent. I think that is what it was.

Senator INHOFE. OK. That is—that is fine. One of the problems I have had, of course, is in the tactical area where we are outmanned about 10 to 1. And I have found a statement that was made—if I can find it here. Here it is—by Senator Biden at that time, 2003. That was Senator Biden. He said, "After entry into force of the Moscow Treaty, getting a handle on the Russian tactical nuclear weapons must be a top arms control and nonproliferation objective of the United States Government." Do the two of you agree with his statement at that time?

Ambassador JOSEPH. Senator, I have for a long time thought it was necessary to get a handle on the great disparity in so-called nonstrategic nuclear weapons. Every time I hear the term nonstrategic nuclear weapons, I recall that no nuclear weapon is nonstrategic.

Senator INHOFE. OK.

Ambassador JOSEPH. This notion of a nonstrategic nuclear weapon is one that is derived from the old arms control dialogue. It is a total artificiality. It relates to the inability to count these weapons in the past and to verify them. And when we had thousands and thousands of strategic weapons, it was kind of OK to put them off to one side as a convenience. But I have never thought of them as nonstrategic. I imagine a short-range nuclear weapon going off anywhere, and the consequences would be fundamentally strategic.

Senator INHOFE. Yes, sir.

Ambassador JOSEPH. We have not been able to get a handle on those. In 2002, the Bush administration was criticized for the Treaty of Moscow by a number of Members of the Senate for not getting a handle on those. This treaty does not get a handle on these so-called tactical nonstrategic theater—call them what you will—just don't call them strategic. I think we very much need to because the importance of this category of weapons has gone up as the number of strategic weapons has gone down. In 2002, we were talking about 6,000 weapons under START I. Now we are below 2,200. The great disparity in this category of weapons, which gives the Russians an 8 to 1 or 10 to 1 advantage—I am not entirely sure

what the numbers are—is clearly important. And to me it raises the possibility for the first time—for the first time since the Kennedy administration—we are at risk of sacrificing or changing a fundamental policy which was a set—a nuclear posture second to none. I think we are approaching a nuclear posture second to one.

Senator INHOFE. To none. All right, that is very good. I know my time is expired. But if it is—if it is——

Senator SHAHEEN. Actually, I would prefer if we could go on. I also have to leave, and we have two more people to ask questions. So thank you.

Senator Risch.

Senator RISCH. Thank you, Madam Chairman.

First of all, let me say that I have the highest regard for our ranking member's view of all of these things. And he mentioned the fact that there has been discussion about the—there has been a lot of discussion about our ability and our fortitude to defend ourselves from incoming missiles. And certainly, I think the consensus is that—that it would be really impossible to develop a full umbrella where you could stop everything coming in everywhere. But on the other hand, I think if we ignored our own peril, having some type of a missile defense system, not as much as from Russia as from the other rogue nations who threaten us, we do so really at our own peril. And while we are about it, it seems to me that even though you could not put a full umbrella up, as technology develops, we could strategically protect military installations, the seat of government, the largest populations in our country. And we have a real disagreement with the Russians on that. And I—one of the things I am troubled with—with all this is that we do not have an agreement. We have a disagreement. And so, I mean, how do you vote for an agreement when it is, in fact, a disagreement?

So I have—I have maintained reservations about the treaty in that regard. And I continue to—to do so. But—but we have moved on, it seems like, to some other subjects. And so, I would like to get—this is only my second year on the committee. And I find it stunning, absolutely stunning that we have not had a compliance report since 2005. I mean, I do not get it. Now, the law of the United States, as I understand it, is this committee is supposed to be provided with a compliance report annually. And we have not had one since 2005. Yet I am being asked to exercise the constitutional requirement that I have to say "yea" or "nay" to this treaty. And I do not know how much cheating has gone on for the last 5 years. So I would kind of like to get each of your views briefly because I think we are going to have a vote here pretty quick. But I would like to get each of your views briefly as to why or what you make of the fact that we have not had a compliance report and we are operating here in the dark.

Ambassador EDLEMAN. Senator, I was in the Department of Defense from 2005 to 2008, so—and those reports are normally prepared in the Department of State. So I—to be quite honest with you, I do not have an answer for you on why they have not been done.

Senator RISCH. Well, do you share my concern about this?

Ambassador EDLEMAN. Yes.

Ambassador JOSEPH. Senator, I was in the Department of State. And—from 2005 to 2007. And I did periodically ask why the compliance reports—because I think they are—we are obligated to provide those on an annual basis—why we were having so much difficulty getting those reports to the Senate. And the answer kept coming back each time—it was—it was the interagency. Not a very good answer, but I think it probably is the correct answer. The process just could not deliver what was required under the report.

Senator RISCH. Well, it is only the law.

Ambassador JOSEPH. I agree, Senator.

Senator RISCH. Ambassador Halperin.

Dr. HALPERIN. I have no insight on that, Senator.

Senator RISCH. Madam Chairman, that is all I have. Thank you.

Senator SHAHEEN. Senator DeMint.

Senator DEMINT. Thank you, Madam Chairman. I want to thank the witnesses today. But, frankly, I am—I am almost stunned that anyone in this Senate would accept as an impossibility that America with our technology and what we have seen change in technology over the last several decades—would accept that we could never develop a missile defense system that could shoot down multiple missiles. With what is happening in laser technology, with electromagnetic fields, with—it is just hard for me to believe that we would accept indefinitely this idea that we have to be vulnerable to missile attacks. So that part of the whole equation of this is—is still unacceptable to me.

But I would like to ask Ambassadors—Mr. Joseph and Edelman about negotiating records. And I think you have been—you have received negotiating records for—for antiballistic missiles, the ABM Treaty, Intermediate Range Treaty. I would just like to get a little bit of details on that because, as my colleagues says here, this is more of a disagreement than an agreement as far as what is being said about the treaty right now. And if it is just something where if they do not like it, they get out and we do not like it, we get out, that does not sound like a whole lot to me. That does not sound really worth our time.

But since there have been conflicting reports about what has been promised, it would appear to be helpful in our decisionmaking to see what was said at the negotiating table. Is this unprecedented for us to ask for the negotiating records?

I will start with you, Mr. Edelman.

Ambassador EDLEMAN. No, it is certainly not unprecedented to my knowledge. I was not involved in some of the earlier negotiations. Ambassador Joseph may be more expert on this. But I would think in particular on some of these disputed issues it would be helpful for the Senate to have the negotiating record in—in understanding what actually occurred.

For instance, on the issue of—of rail-mobile, which Senator Lugar addressed and my colleague addressed in some detail in his statement and Mort Halperin addressed, I think the view that Mort expressed in his testimony is undoubtedly the administration view, as Secretary Miller testified to and the view that the United States would put forward. We do know from statements that have been made by senior Russians, including General Gagarin, the deputy of the strategic rocket forces, the commander, that the Rus-

sians have an interest, again, in rail-mobile. They have taken down all the SS–24s that Senator Lugar said. But they are interested in pursuing this in the future.

There is at least an interpretation of—of the treaty that it—that they do not ever enter into accountability because at Russian request the definitions for rail-mobile were deleted from the treaty. So I think it would be illuminating in the first instance for the members to get the negotiating record, find out what exactly happened, what were the discussions, why was it not included, why weren't the definitions carried over from—from START I, as just one example.

I would give another example—the limits on missile defense in article 5, section 3. Mr. Halperin said that, as administration witnesses have said, that those are not important limits or not very significant limits. But they are still limits. And it accedes to the principle that in these negotiations, missile defense can be limited, where we can put them, how we do it. I would like to see, if I were in your shoes, the negotiating record on that, in part because Alexi Arbatov, a very senior Russian expert on arms control, has said that this limit was specifically put into the treaty at Russian request. Well, if the United States in the course of these negotiations made that concession to Russia, I think the members of the Senate ought to know what we got for it.

Senator DEMINT. Ambassador Joseph, do you agree with that assessment?

Ambassador JOSEPH. Senator, I do. I think it is appropriate. And I think it is necessary in some cases for the Senate to have access to the record in order to have a full understanding of what the provisions are and what the implications are. And as my colleague said, you know, what did we get for the types of concessions that we made, other than the treaty? I mean, maybe that is the answer. We got a treaty. But I think exploring the negotiating record is something that would be very useful.

Senator INHOFE. Could I mention something? We made that request already. But the Armed Services——

Senator SHAHEEN. Senator, would you like to yield some of your time to Senator Inhofe?

I am sorry. We are on a tight schedule. And I apologize for that.

Senator DEMINT. I appreciate the Senator's comments there. He can add any he would like. So—but let me, since I am running out of time, just one other issue. I think implicitly the treaty accepts the idea that these are two—the United States and Russia are two superpowers agreeing to parity as far as nuclear missiles. As I look at the size of our economies, our role in the world, again, it is another assumption that is very difficult for me to accept. The United States is a protector of many and a threat to none. Russia is a protector of none and a threat to many. Over 30 countries count on us.

Yet we are bringing our—offensive capabilities down to the Russian level and in the process agreeing not to develop a missile defense system that is capable of threatening that offensive capability. The only flexibility we have with missile defense is to develop a system that does not threaten Russia. I mean, that is clear from the hearings with Secretary Clinton and Gates. It is

clear from the treaty. But this concept of—of parity with a third world economy that is—is using its energy to extort power from other countries—again, something that seems absurd to me at this time for the United States to accept a parity role with Russia.

Am I way off base? Does it make sense for us to agree to this? To me that seems like a destabilizing concept. It seems like it is going to send a number of our allies that depend on our umbrella of protection into the mode of developing their own nuclear weapons. And again, Ambassador, one of you?

Ambassador JOSEPH. Senator, my skepticism is that we continue to apply cold-war approaches in our relationship with Russia. And to me that plays to the worst instincts of Russia because they see parity as sort of restoring their superpower status. But they see it in the context of the United States being the adversary. I think that a better way to improve our relations with Russia—and I am an advocate of that—is to focus on those areas where we have common interests, such as stopping a terrorist acquiring a nuclear weapon, such as working together as nuclear energy expands, but to do that together in a way that limits access to reprocessing technology or enrichment technology.

I think working together in other areas will build confidence and will build trust in our relationship. There are always going to be difficulties in the United States-Russian relationship, at least in the near and mid-term. I mean, Georgia is—is a clear indication of that. But we can establish a non-cold-war-type relationship. But when we continue the practice of cold-war arms control, I think we move in the wrong direction.

And—and when we talk about the terms of the treaty—the rail-mobile issue has been raised a couple of times. I raised it in my prepared statement. The problem with the treaty is that it is ambiguous. And these ambiguities will play out in different forms in the bilateral consultative commission in this case, and will continue to undermine confidence. It will continue to create problems.

I think this is a—a terrific opportunity for the Senate to clarify this issue, to take away the ambiguity—because the ambiguity exists. And we can have our interpretation, and they can have a different interpretation. That is not the sort of treaty that you want to sign, it seems to me. We need to have precise and clear obligations. And both parties need to agree to that.

Senator DEMINT. Thank you for your indulgence, Madam Chair.

Senator SHAHEEN. Thank you, Senator. Again, I apologize because I have to leave. So we are going to have to close this hearing. But we will——

Senator INHOFE. May I ask a question of the Chair?

Senator SHAHEEN. Let me just finish my point. We will leave the record open for questions until Monday. And hopefully that will allow any further questions to be done. Did you have a final point, Senator Inhofe?

Senator INHOFE. No, that would be—that was my request.

Senator SHAHEEN. Thank you.

Senator INHOFE. Thank you.

Thank you to the witnesses.

Senator SHAHEEN. Again, thank you very much to all of our witnesses.

[Whereupon, at 4:05 p.m. the hearing was adjourned.]

ADDITIONAL MATERIAL SUBMITTED FOR THE RECORD

PREPARED STATEMENT FROM THE PARTNERSHIP FOR A SECURE AMERICA

Nuclear arms control is a critical pillar of America's national security. Negotiated agreements to reduce the threat posed by the Cold War nuclear arms race have always enjoyed strong bipartisan support in the U.S.

In 1982, President Reagan proposed that the U.S. and the Soviet Union reduce their nuclear arsenals by thousands of warheads each. This proposal became the basis for the 1991 START I treaty. Since that time, every U.S. President, in concert with Russia, has advanced President Reagan's legacy through steady and prudent reductions of the world's two largest nuclear arsenals, including the 2002 Treaty of Moscow, signed by Presidents Bush and Putin.

On April 8, 2010, Presidents Obama and Medvedev signed the new START treaty, agreeing to further reduce both sides' arsenals and bring into force a new regime for inspections and verification. This was a necessary and appropriate step toward safeguarding our national security. Without the new START, the U.S. has no legally binding ability to conduct inspections of Russia's nuclear arsenal, and would be a in a far weaker position to lead the world in stopping nuclear proliferation.

Now is the time for a thorough and balanced national discussion about nuclear arms control and proliferation. But we must remember that a world without a binding U.S.-Russian nuclear weapons agreement is a much more dangerous world.

We, the undersigned Republicans and Democrats, support the new START treaty because we believe that it:

- Enhances stability, transparency, and predictability between the world's two largest nuclear powers, which together possess about 95 percent of the world's nuclear weapons;
- Contains verification and inspection measures essential to U.S. national security and nuclear threat reduction as it relates to Russia's strategic nuclear weapons;
- Addresses our Nuclear Nonproliferation Treaty (NPT) obligations and therefore assists in gaining cooperation from other countries on key nonproliferation priorities;
- Helps strengthen broader U.S.-Russia cooperation, which is important in responding to proliferation challenges from Iran and North Korea;
- Does not inhibit our ability to maintain an effective and reliable nuclear arsenal; and
- Does not constrain our ability to develop and deploy missile defense systems.

Madeline Albright, Secretary of State 1997–2001
Howard Baker, U.S. Senator (R–TN) 1967–85
Samuel Berger, National Security Advisor 1997–2001
Linton Brooks, Administrator, National Nuclear Security Administration 2002–2007
Harold Brown, Secretary of Defense 1977–81
Frank Carlucci, Secretary of Defense 1987–89
Warren Christopher, Secretary of State 1993–97
William Cohen, Secretary of Defense 1997–2001
John C. Danforth, U.S. Senator (R–MO) 1977–95
Kenneth M. Duberstein, White House Chief of Staff 1988–89
Chuck Hagel, U.S. Senator (R–NE) 1997–2009
Lee Hamilton, U.S. Congressman (D–IN) 1965–99, Co-Chair, PSA Advisory Board
Gary Hart, U.S. Senator (D–CO) 1975–87
Rita E. Hauser, Chair, International Peace Institute
Carla Hills, U.S. Trade Representative 1989–93
Nancy Kassebaum–Baker, U.S. Senator (R–KS) 1978–97
Thomas Kean, Governor (R–NJ) 1982–90, 9/11 Commission Chair
Richard Leone, President, The Century Foundation
Donald McHenry, U.S. Ambassador to the UN 1979–81
Sam Nunn, U.S. Senator (D–GA) 1972–96
William Perry, Secretary of Defense 1994–97
Thomas Pickering, Under Secretary of State 1997–2000
Colin L. Powell, Secretary of State 2001–05
Warren Rudman, U.S. Senator (R–NH) 1080–92, Co-Chair, PSA Advisory Board
Alan Simpson, U.S. Senator (R–WY) 1979–97

George Shultz, Secretary of State 1982–89
Theodore Sorensen, White House Special Counsel, 1961–63
John Whitehead, Deputy Secretary of State 1985–88
Timothy E. Wirth, U.S. Senator (D–CO) 1987–93
Frank Wisner, Under Secretary of State 1992–93

MAINTAINING A SAFE, SECURE, AND EFFECTIVE NUCLEAR ARSENAL

THURSDAY, JULY 15, 2010

U.S. SENATE,
COMMITTEE ON FOREIGN RELATIONS,
Washington, DC.

The committee met, pursuant to notice, at 2:55 p.m., in room SD–419, Dirksen Senate Office Building, Hon. John F. Kerry (chairman of the committee) presiding.

Present: Senators Kerry, Casey, Kaufman, Lugar, Corker, Isakson, and Risch.

OPENING STATEMENT OF HON. JOHN F. KERRY, U.S. SENATOR FROM MASSACHUSETTS

The CHAIRMAN. The hearing will come to order. Thank you all for being so orderly already. And we welcome you to this, which will be the last public hearing on the subject of the New START Treaty.

I'm very pleased to welcome the directors of our Nation's three nuclear weapons laboratories. Together, our three witnesses today are responsible for maintaining the safety and reliability of our deterrent forces. That's a task that requires not only a significant commitment to our Nation's defense, but also the highest degree of scientific knowledge and technical skill.

We're very fortunate that this responsibility has fallen to the three dedicated professionals who are here this afternoon, and we thank you for your commitment and careers.

I said this is the last. I might just comment this is the 12th hearing that we've held on the New START Treaty. We've scrutinized the text of the treaty. We've scrutinized the protocol, the three technical annexes. We've reviewed the National Intelligence Estimate on the agreement, a State Department report on verifiability, and an analysis of Russian compliance with past arms control agreements. We've heard from 20 witnesses from across the ideological spectrum, some more than once. As Henry Kissinger said, "The hearing process has been not just bipartisan, it has been nonpartisan."

Throughout the process, one thing has become clear: The New START Treaty will make a vital contribution to American security. It will limit the number of nuclear weapons deployed by the United States and Russia. It will give us flexibility about how we meet those limits. Its verification provisions will deepen our understanding of Russia's nuclear forces, and perhaps most important, it will strengthen our efforts to prevent the spread of nuclear weapons to rogue states and terrorists.

Support for the New START Treaty has, frankly, been overwhelming, from both Republicans and Democrats. In our first hearing, James Schlesinger called ratification, "obligatory." James Baker said that New START is an important part of our efforts to strengthen the nonproliferation regime. And Stephen Hadley, George W. Bush's national security advisor, said that we need to see this treaty in the context of a 20-year effort spanning administrations of both parties.

Those same points were made again, 2 weeks ago, when 30 high-ranking former officials released a letter calling for ratification. That prestigious group included four former Secretaries of State, four former Secretaries of Defense, and the chair and vice chair of the 9/11 Commission. Many of the signatories, like George Shultz, served in the Reagan administration. Their participation reminded us that the process of strategic reductions supported by intrusive verification is one of President Reagan's greatest legacies. That legacy has always garnered strong bipartisan support in the U.S. Senate. The INF Treaty, the original START Treaty, the Moscow Treaty were all approved by overwhelming majorities.

But, this committee, I'm pleased to say, and appropriately, has not offered its support automatically. We've asked tough questions. We've perused the record and demanded accountability from the negotiators, and I think we've gotten answers to the questions that we've asked.

Now, at first, some members, and some others, expressed concern that the treaty's verification provisions were not as stringent as those in the original START Treaty. But, we have, in fact, learned that this treaty includes new tools, like unique identifying numbers for all delivery vehicles. Its inspections will allow for new information, such as the number of warheads on each missile, which will be subject to inspection. And, of course, the treaty's verification provisions are, in fact, far more than what we have now, today, as we sit here, which is nothing, because the original START Treaty has expired.

There's also been concern that the treaty limits our missile defense options. This has been a frequently raised issue. I think we've pressed our Nation's top military officials on this issue, and I know that their response has been unanimous. This treaty does not, and will not, constrain missile defense in any meaningful way. The United States will continue to develop and deploy defenses, as we choose to, against possible attack from states like North Korea and Iran, and, were we to choose to, even against the potential of an attack from Russia or some other country.

Anyone who opposes this treaty because of alleged restrictions on missile defense needs to explain why their particular military judgment is better than that of the general in charge of the Strategic Command, better than the general directing the Missile Defense Agency, better than the Chairman of the Joint Chiefs of Staff, better than the Secretary of Defense—who was, after all, appointed to that position by George W. Bush originally.

Today, we're going to discuss a final issue that has been raised. How do you ensure that the weapons that we retain under the treaty are adequately maintained so as to maintain America's deterrence? As our colleague Senator Kyl wrote in the Wall Street

Journal last week, the New START Treaty should be considered within the context of our overall nuclear weapons policy, including funding for the nuclear infrastructure. I agree with that. But, as these issues are interrelated, you have to move forward on both of them together.

The President has requested $80 billion over the next 10 years to maintain our nuclear weapons and modernize the nuclear complex so that we preserve our nuclear deterrent for as long as we need it. Eighty billion dollars is a significant investment, folks, representing a 15-percent increase over baseline spending even after accounting for inflation. That's an additional $1 billion per year to guarantee the modernization program.

Linton Brooks, who served President George W. Bush as head of the National Nuclear Security Administration, has said that he would have killed for a budget like this.

I'd like to assure our witnesses that killing will not be necessary. [Laughter.]

But, now we need to move ahead on the New START. If we don't, we will set back the cause of American nuclear security and, frankly, harm our own efforts, with respect to proliferation, that are very real now, in terms of Iran, Iran sanctions, and where we will be, come September, at the United Nations meetings at that time.

This treaty, in my judgment, marks an important step forward toward safety in a world that is threatened by rogue states and terrorists with nuclear ambitions. As Dr. Kissinger said, "This committee's decision will affect the prospects for peace for a decade or more."

Our witnesses today are responsible for maintaining the health of our nuclear arsenal. Dr. Michael Anastasio is the director of Los Alamos National Laboratory. Dr. George Miller is the director of Lawrence Livermore National Laboratory. And Dr. Paul Hommert is the director of Sandia National Laboratories.

Gentlemen, it's an honor to have all of you here today, and we look forward to your testimony.

I might add that we will enter into the record the testimony of Linton Brooks, whose appearance before the committee was canceled at the time that the Senate marked the death of Senator Robert Byrd earlier this month.

[The statement referred to follows:]

PREPARED STATEMENT OF AMBASSADOR LINTON F. BROOKS ON THE NEW START TREATY

Thank you for the opportunity to provide this committee with my views on the New START Treaty. Although those views are informed by my government service, especially as negotiator of the START I treaty, I am appearing as a private citizen and my views do not necessarily represent the views of any organization with which I am affiliated.

I first testified before this committee in support of an arms control agreement almost 20 years ago. Then as now, the country benefited greatly from the committee's careful scrutiny of both the benefits and drawbacks of each agreement. As you carry out your consideration of New START, I want to encourage you not to evaluate it by cold-war standards. During the cold war, we wanted to constrain the arms race—thereby saving money—and to improve stability in a crisis by encouraging a shift away from ICBMs with multiple warheads.

Neither of these objectives is appropriate today. There is no arms race to cap and thus no savings to be had. Improving stability in a crisis is still an important goal

and I would prefer that this treaty encourage such stability. Conditions in Russia, however, preclude massive restructuring of their strategic forces no matter what arms control says. Thus, the two sides agreed at the onset of the New START negotiations that each would be free to structure its forces as it sees fit. This is consistent with the views of the last administration as well.

Instead of using a traditional cold-war standard, I believe the Senate should evaluate the degree to which New START fulfills the following four objectives:

- *First, reduce suspicion and avoid misunderstanding through increased transparency and predictability.* Transparency leads to predictability and predictability leads to stability. Here I believe New START breaks new ground. In cold-war treaties, we limited verification provisions to those necessary to verify formal treaty limits. New START provides some exchanges purely for transparency. For example, it assigns a unique identifier to each nondeployed system and provides for an exchange of data on the movements and locations of those systems, even though there are no numerical limits on nondeployed missiles. The most important example, however, is the agreement to exchange telemetry data on up to five ballistic missile launches a year, even though such data is not needed to verify any treaty limits. The treaty states that this exchange "is designed to help forge a new strategic relationship of the Parties."
- *Second, improve the overall political relationship with the Russian Federation.* The ability to work together on a complex issue helps advance the administration's aim to "reset" relations with Russia. It will be some time before we know the degree to which relations have improved and we may never know how much credit for any improvement goes to New START. I suspect that the record of cooperation will be mixed. For example, some will see the recent Russian support for a United Nations Security Council resolution imposing additional sanctions on Iran as an example of improved cooperation, while others perceive the sanctions as of limited effect and a sign that true Russian cooperation has not yet arrived. But it seems clear, as former Secretary of Defense Schlesinger told this committee, that failure of the United States to ratify New START would deal a serious blow to United States—Russian relations and thus to our ability to work together on important international security issues.
- *Third, increase international support for nuclear nonproliferation and for measures to counter nuclear terrorism by demonstrating a renewed emphasis on arms control and disarmament.* No one believes that states like Iran or North Korea will change their behavior because of New START ratification, but the administration hopes other nonnuclear states will be willing to take stronger actions to counter proliferation and to thwart nuclear terrorism now that the United States has reburnished its disarmament credentials. While I hope that the administration is right, and while their arguments are plausible, evidence that this will actually happen is lacking. It is certainly true that some states tell us they are unwilling to adopt the IAEA Additional Protocol or to convert research reactors from use of highly enriched uranium because we are not meeting our disarmament obligations under Article VI of the Nuclear Nonproliferation Treaty. It is unclear if these are reasons or excuses. Ratification of New START will let us call their bluff and take away excuses for inaction.
- *Finally, take tangible steps toward the elimination of nuclear weapons.* While I am a skeptic about both the feasibility and the desirability of nuclear abolition, it is a stated U.S. policy. The first step is obviously reductions in the arsenals of the two largest nuclear powers. Because abolition cannot happen for decades (if ever), I do not believe that it is necessary to support abolition in order to favor New START.

The only treaties in which the United States gets absolutely everything it wants are the kind signed on the deck of the Missouri to end a war. The committee and the Senate will need to consider possible shortcomings as well as possible advantages of New START. In doing so, it will wish to consider several concerns raised by thoughtful observers. I believe the following are the most significant:

- *A concern that the verification procedures and the transparency they provide are less than those available under the now expired START I Treaty.* It is important to distinguish between provisions needed to verify adherence to the limits of the treaty and those designed to enhance transparency. Because the Soviet Union appeared bent on a major buildup, START I had a number of subsidiary limits designed to prevent circumvention. Verifying those limits provided a good deal of useful transparency. But in an era of reductions, these limits are no longer required. Thus, New START has only three numerical limits, on launchers, missiles and warheads. While the Senate will need to study the recently submitted monitoring NIE and, once it has been submitted, the verification assessment,

I believe it is virtually certain it will find the treaty effectively verifiable. With respect to transparency, some of what was possible under the original START Treaty (monitoring production of mobile missiles, for example) is not provided for in New START. But I believe the correct comparison is not with what was available under START I but with what is available today with no treaty regime, no data exchange and no inspections.

- *Another concern, that New START may limit U.S. ballistic missile defenses.* The only explicit provision in this area is a ban on converting ICBM or SLBM launchers to launchers for ballistic missile defense. It is unfortunate that the administration allowed the perception that there would be no provisions outside the preamble, but such conversions would be a bad idea and banning them has no impact on our ability to field effective ballistic missile defenses. When New START was signed, the Russians made a unilateral statement that significant improvements in U.S. defenses would justify their withdrawal under the supreme national interest clause. This has no legal effect and is an obvious effort to pressure the United States. The Soviets made a similar statement to me about START I in June 1991. We ignored it in 1991 and should ignore it now. The Senate might consider language in the resolution of ratification making it clear it rejects such an attempt to pressure the United States.
- *A third concern, that the treaty doesn't cover so-called Russian tactical nuclear weapons.* Such weapons are of particular concern to some of our NATO allies. The Administration plans to include all nuclear weapons, including Russian tactical weapons, in future negotiations, although that may be difficult. While I think it is unwise and inappropriate to dictate details of U.S. negotiating strategy in advance, the Senate may wish to use the resolution of ratification to make explicit its expectation that such weapons will be dealt with in any future treaty.
- *Finally, many in the Senate are concerned about funding for the nuclear weapons enterprise.* I share that concern. The FY 2011 President's budget, if enacted, will provide a dramatic improvement, provided the increased funding is sustained in the future. I understand the administration has been forceful in supporting the weapons budget. The Senate should be equally forceful in working with House appropriators to ensure adequate funding for the nuclear weapons enterprise. Further, the Congress should be prepared to accept additional increases in the future if required. An important component of the President's budget is funding for two major new nuclear faculties: a Uranium Processing Facility in Tennessee and a plutonium laboratory in New Mexico. Large, complex, one-of-a-kind nuclear facilities often experience cost growth. While the Congress should insist on sound construction management, if cost growth occurs, Congress should work with the administration to provide additional funds so that necessary weapons science and stockpile stewardship are not threatened.

Each Senator must decide whether the benefits of New START overcome any concerns. In my view, the benefits—especially transparency and the improved political relationship with Russia—are significant, while the concerns are of limited importance. Thus, my professional judgment is that U.S. security would be best served by the Senate providing its advice and consent to ratification.

The CHAIRMAN. And I'd also like, if there is no objection, to enter into the record a letter I received yesterday from Secretary Shultz and from our former colleague Senator Sam Nunn in which they both strongly endorsed the New START Treaty and called for its swift ratification.

[The letter referred to follows:]

NUCLEAR SECURITY PROJECT,
Washington, DC, July 14, 2010.

Hon. JOHN F. KERRY,
Chairman, U.S. Senate Committee on Foreign Relations,
Washington, DC.

DEAR SENATOR KERRY: The potential use of nuclear weapons is one of the gravest dangers the world faces. Working with former Secretary of State Henry Kissinger and former Secretary of Defense Bill Perry, we have called for U.S. leadership to help build a solid consensus for reversing reliance on nuclear weapons globally as a vital contribution to preventing their proliferation into potentially dangerous hands, and ultimately ending them as a threat to the world. One important step

involves the renewal of nuclear arms talks between the United States and Russia and the conclusion of the New START Treaty, signed by President Barack Obama and President Dmitry Medvedev on April 8, 2010, in Prague.

We commend you for your leadership in scheduling hearings over the past two months in the Senate Foreign Relations Committee with a distinguished group of administration officials, former officials, and experts, and for your thorough and expeditious review of the New START agreement. Secretary Kissinger and Secretary Perry have both testified before the Senate in support of the New START agreement. In his testimony, Secretary Perry concluded that the New START Treaty "is a clear signal that the United States is serious about carrying out our responsibilities under the Nuclear Non-Proliferation Treaty" and "improves strategic stability between the United States and Russia." Secretary Kissinger stated, "The treaty, with its inspection and verification regime, is a significant confidence-building measure that may help lay the foundation for more constructive U.S.-Russia relations." In other expert testimony, former Director of Central Intelligence, Secretary of Defense and Secretary of Energy James Schlesinger stated, "It is obligatory for the United States to ratify" New START.

The two of us also want to make clear our support for New START and express our hope that the Committee can now move expeditiously with their report and a vote recommending New START for consideration by the full Senate. We recognize the importance of the Senate giving full consideration to the related hearings held by the Senate Armed Services Committee and the Senate Select Committee on Intelligence.

We strongly endorse the goals of this Treaty—to achieve a near-term reduction of nuclear weapons with mutually agreed verification procedures. We believe the threat of nuclear terrorism remains urgent, fueled by the spread of nuclear weapons, materials and technology around the world. While this is a global issue, there are two countries—the United States and Russia—whose cooperation is absolutely essential in order to successfully deal with current nuclear threats. With New START, our odds of establishing a more cooperative relationship with Russia improverecognizing this will be a process of engagement broader than anyone treaty.

Noting the full support of the Secretary of State, Secretary of Defense, and Chairman of the Joint Chiefs of Staff, and following our own review of the Treaty, we urge the Senate to give its advice and consent to ratification of New START as early as is feasible. We also urge the two governments to begin planning now for even more substantial reductions in the future involving all nuclear weapons, strategic and tactical, deployed and non-deployed. An identical letter has been provided to Senator Lugar.

Sincerely,

Hon. GEORGE P. SHULTZ,
Hoover Institution, Stanford, CA.
Hon. SAM NUNN,
Nuclear Threat Initiative, Washington, DC.

The CHAIRMAN. Senator Lugar.

STATEMENT OF HON. RICHARD G. LUGAR, U.S. SENATOR FROM INDIANA

Senator LUGAR. Well, thank you very much, Mr. Chairman.

As you pointed out today, the committee holds another very important hearing on the New START Treaty, and I join you in welcoming this distinguished panel of weapons experts.

As I mentioned last January in a speech to the Conference on Strategic Weapons in the 21st century, the work of our National Laboratories in science and stockpile stewardship is indispensable for our national security. In addition to ensuring that our nuclear weapons are safe, secure, and reliable, our laboratories also serve as engines of innovation that we hope will provide new technologies to tackle the vast array of energy, environmental, and medical challenges facing our Nation and the world.

This hearing is unique because, as our witnesses will make clear, the New START Treaty will not affect the mission of our labora-

tories. The treaty explicitly states that, "modernization and replacement of strategic offensive arms may be carried out." The management of both deployed and nondeployed warheads will not be fundamentally altered by entry into force of the New START Treaty. Yet, our consideration of New START has intensified a debate on modernization and stockpile stewardship programs in which our National Laboratories play a central role.

The three National Laboratories represented here today form the core of the United States nuclear weapons complex. Collectively, they must certify annually, to the President and to the Congress, that our nuclear weapons are safe, secure, and reliable.

Near the end of the last administration, a consensus developed that more needed to be done to ensure the vitality of our nuclear weapons complex, even as a framework for a successor to START I was sought. As Secretary Gates stated in his 2008 speech at the Carnegie Endowment, and I quote from the Secretary, "We will lead the way in reducing our arsenal, but we must always hedge against the dangerous and unpredictable world."

The Obama administration's Nuclear Posture Review appears to set a high bar for replacement of our nuclear weapons. The NPR states that, in considering any decision on engineering development for our weapons, the administration will give, "strong preference," to options for refurbishment or reuse, and that replacement would occur only if, "critical stockpile management program goals could not otherwise be met and if specifically authorized by the President and Congress."

Now, reinvestment in our nuclear stockpile will require substantial planning and funding. The administration's fiscal year 2011 budget—that request includes $624 million, an increase, for atomic energy defense activities. This is a welcome start to a longer process of budgeting and reinvestment. These plans were laid out in broad terms in the report submitted to Congress under section 1251 of last year's Defense Authorization Act.

This is a good plan, that should be executed. I look forward to engaging with our three laboratory directors today, and I hope to hear from them how the plans and budgets reported to the Senate are sufficient to maintain confidence in our nuclear weapons stockpile and the infrastructure that supports them.

I thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Lugar.

Dr. Anastasio, I think you're going to start, and we're just going to run right down the table. Thank you very much.

Dr. ANASTASIO. Well, thank you very much——

The CHAIRMAN. I might add, if you want to summarize, that would be certainly advantageous to the committee, in terms of time for questions, and your full texts will be placed in the record in full as if read. But——

Dr. ANASTASIO. Thank you, sir.

The CHAIRMAN. But, do what you need to do.

STATEMENT OF DR. MICHAEL R. ANASTASIO, DIRECTOR, LOS ALAMOS NATIONAL LABORATORY, LOS ALAMOS, NM

Dr. ANASTASIO. Well, Chairman Kerry, Ranking Member Lugar, and members of the committee, thanks for the opportunity to appear before you today.

I'm Dr. Michael Anastasio, the director of the Los Alamos National Laboratory, and it's a real honor for me to be here with you.

I've devoted the bulk of my career to the nuclear weapons enterprise; since 2006 as the director of Los Alamos, but originally as a weapons designer at the Lawrence Livermore National Laboratory before becoming director there in 2002.

In the President's April 2009 Prague speech, and in the recently released Nuclear Posture Review, this administration has directly linked reductions in nuclear weapons to the maintenance of the nuclear arsenal, both in support of the overall goal to reduce nuclear danger.

Secretary of Energy Steven Chu testified recently that as the stockpile size decreases in size, the role of science, technology, and engineering in deterrence will increase in importance.

The reductions proposed in New START highlight the importance of the laboratories' mission and the need for a healthy and vibrant science, technology, and engineering base. And so, I would like to bring forward three main points today to emphasize with you.

The first point is that the Stockpile Stewardship Program that was created by Congress in the mid-1990s has had many successes that were—by the way—no means assured at the outset of the program. We've maintained a safe, secure, and effective stockpile for the Nation without having to resort to nuclear testing. And, so far, we have retained the knowledge and skilled workforce of outstanding scientists and engineers. We've built many of the tools required for the task, in the form of the world's fastest computers and new experimental capabilities, such as the DARHT, the NIF, and MESA.

But, we're not finished. Because of the science we've developed, we now know more about nuclear weapons than we ever have. In particular, we've learned that our systems are aging, and that almost every one of them will require some form of life-extension activity in the next 25 years. The available mitigation actions are reaching their limits, and we have not challenged the full skill set of our workforce. Therefore, we must go beyond the refurbishments that have been considered to date as we look to the future.

My second point is that the Obama administration has put in place a new nuclear policy in its Nuclear Posture Review and in the FY11 budget submission. It calls for a significant increase in Weapons Activities. The NPR calls for a case-by-case analysis of the full range of life-extension approaches: refurbishment, reuse, and replacement. It also expresses, as we've heard, a strong preference for refurbishment or reuse in a decision to proceed to engineering development.

I understand the sensitivity of this issue, but personally I do not feel overly constrained by the language in the NPR. Rather, I believe it provides the necessary flexibility to manage the stockpile with acceptable levels of risk. It's always my obligation to ensure

that the best technical recommendations to meet requirements are brought forward for consideration.

The FY 2011 budget request, which calls for a $624 million increase, is essential. This is a positive step, and I urge Congress to approve that budget. And it's a real show of commitment on the part of the administration that helps stabilize the weapons program for the future. It also puts necessary new funds toward starting some of the needed hands-on stockpile work and repairing of the decaying infrastructure throughout the complex.

So, my third and final point is that, even with these positive actions, I do have concerns. This effort will require sustained focus for multiple administrations and multiple Congresses over several decades. I fear that program expectations may already be out of line with the fiscal realities faced by the country. The nuclear infrastructure needs and the stockpile needs have the potential to unbalance the rest of the program, squeezing out the science that is really the fundamental basis of Stockpile Stewardship.

In addition, we must balance the need to hire the future national security workforce with the looming pension shortfalls of nearly $200 million in FY12 at Los Alamos.

So, in conclusion, I'm cautiously optimistic about the future of the nuclear weapons program, that we can carry out our responsibilities under New START with adequate levels of risk. But, we need help. So, I urge Congress to work with the administration to form a national consensus on nuclear policy and to support the FY11 budget request as a necessary first step forward, and I would welcome a dialogue on how best to sustain focus on these issues over the extended period into the future.

So, thank you, and I'll be happy to take questions.

[The prepared statement of Dr. Anastasio follows:]

PREPARED STATEMENT OF DR. MICHAEL R. ANASTASIO, DIRECTOR, LOS ALAMOS NATIONAL LABORATORY, LOS ALAMOS, NM

Chairman Kerry, Ranking Member Lugar and members of the committee, thank you for the opportunity to appear before you today to respond to the committee's questions on the New START Treaty and the ability of the National Laboratories to maintain the safety, security, and effectiveness of the stockpile into the future. I am Dr. Michael R. Anastasio, the Director of the Los Alamos National Laboratory (LANL), and it is an honor to appear before you today to present my views.

In President Obama's April 2009 Prague speech and in the recently released Nuclear Posture Review (NPR), this administration has articulated its goal to reduce the global nuclear danger. In both the speech and the policy document, the administration has directly linked reductions in nuclear weapons to the maintenance of the nuclear arsenal. This then is a propitious time to discuss what is necessary to maintain the stockpile into the future as the Senate considers ratification of the New START Treaty.

From a Laboratory standpoint, it is important to understand that New START will reduce the number of delivery vehicles and warheads, but it will not alter the Nuclear Triad. Secretary of Energy Steven Chu testified before the Senate Armed Services Committee on June 17, 2010, that "As the stockpile decreases in size, the role of science, technology and engineering in deterrence will increase in importance." This means that the United States will have to devote appropriate attention and resources to protecting the physical and intellectual science, technology and engineering (ST&E) infrastructure that underpins the stockpile.

Los Alamos and the other National Security Laboratories also have historically played an important role in arms control, providing technical support to negotiators, to those who implement treaties, and to those who monitor the treaties and assess compliance. While I will not discuss this further, we continue to bring the innovative technical capabilities of the Laboratory to these challenges.

I do not see New START fundamentally changing the role of the Laboratory. What New START does do, however, is emphasize the importance of the Laboratories' mission and the need for a healthy and vibrant ST&E base to be able to continue to assure the stockpile into the future. These issues will be the focus of my remarks.

STOCKPILE STEWARDSHIP

Stockpile Stewardship Successes

The United States and its allies continue to depend on a nuclear deterrent as part of the overall security posture. The manner in which the Nation executes this mission has changed dramatically over the last several decades. In 1989 the United States ended the production of new nuclear weapons; 3 years later the United States adopted a moratorium on nuclear weapons testing that remains in effect to this day. In response to these new circumstances, the FY 1994 National Defense Authorization Act charged the Secretary of Energy to establish a Stockpile Stewardship Program (SSP) "to ensure the preservation of the core intellectual and technical competencies of the United States in nuclear weapons." To meet this challenge the nation has invested significant resources in the advanced scientific, experimental, engineering and computational capabilities of the National Laboratories. These capabilities are the basis for the Laboratories to assess the overall safety, security, and effectiveness of the stockpile as well as to execute the Stockpile Life Extension (LEP) Program, which I will describe in more detail below.

It is primarily through the SSP that the Laboratory provides technical support for U.S. nuclear forces, posture and policy. Our approach involves the continual assessment of the stockpile through surveillance enabled by a more fundamental scientific understanding. This has required us to build upon past nuclear test experience with the development of more advanced experimental and simulation tools and the expertise of the scientists, engineers, and technicians at our laboratories and production plants.

Our surveillance results show ever-increasing effects from aging. These results are assessed with an extensive range of nonnuclear testing and vastly improved simulation capability. Ultimately, expert judgment and rigorous interlaboratory peer review assure that critical conclusions are drawn from the best available data, appropriate high-resolution simulations and a suite of evolving experimental capabilities. Sound science is the core of our confidence.

The SSP at the Laboratories has had many successes to date; these successes were by no means assured when the Program began in 1995 as an ambitious effort to sustain the nuclear weapons stockpile while minimizing the need for nuclear testing. Examples of these successes include:

Annual Assessment: I am responsible for an assessment, based on a rigorous technical process, of all weapons in the stockpile for which the Laboratory is responsible. This "annual assessment" letter is provided to the Secretaries of Defense and Energy, as well as the Chair of the Nuclear Weapons Council, and then is forwarded to the President. I have personally signed eight assessment letters during my tenure at both Lawrence Livermore and now at Los Alamos and have had direct involvement in all 15 cycles since the inception of the program in 1996. In many regards, this letter and its detailed set of backup documents is the annual summation of all that we do in Stockpile Stewardship.

Pit Manufacturing: In 1989, the United States halted plutonium pit manufacturing at the Rocky Flats plant in Colorado, leaving the United States as the only nuclear weapons state without the ability to manufacture the core component of nuclear weapons. Using our science and technology to qualify the new build processes, Los Alamos restored this essential capability in 2007 and has nearly completed the build of pits required for the W–88, a central component of the sea-based deterrent.

DARHT: The Dual Axis Radiographic Hydrodynamic Test (DARHT) facility is now fully functional and allows our experimental teams to obtain three-dimensional, high-resolution, time-sequenced images taken within billionths of a second at specifically selected times within an implosion of a mock nuclear weapons assembly. Last December, the first dual-axis experiment was successfully carried out at DARHT. Data from the experiment will allow Los Alamos to close a Significant Finding Investigation (SFI) on a stockpile system. DARHT data is also critical to the W76 LEP effort.

Supercomputing: In partnership with IBM, Los Alamos built and deployed the world's first petascale (million-billion calculations per second) supercomputer—Road Runner. After an initial series of unclassified science runs to assure machine performance, Road Runner is now dedicated to classified weapons work. Later this summer, Los Alamos in partnership with Sandia, will take delivery of out next

supercomputer—Cielo—another petascale machine. The breadth and quality of experimental data being obtained has allowed Los Alamos to validate the significant progress on integrated three dimensional software tools within the Advanced Simulation and Computing campaign.

LANSCE: The Los Alamos Neutron Science Center (LANSCE) facility, an 800 MeV proton accelerator, makes a number of important contributions to our understanding of weapons performance. Proton radiography (pRad) at LANSCE allows us to make time-resolved measurements of dynamic events of weapon components, such as high-explosive detonation and burn. Data from pRad informs the W–76 LEP and B61 work. The LANSCE protons are also used to create spallation neutrons that allow the imaging of weapons components and are used to understand the basic nuclear physics. The Weapons Neutron Research station at LANSCE provides invaluable new radiochemical data used to refine the nuclear yield determinations, thereby allowing LANL staff to glean additional information from archived nuclear test data. LANSCE is the only facility in the country where these types of classified experiments that involve special nuclear material can currently be conducted.

Plutonium Aging Physics: LANL conducted years of detailed experiments that examined the physics of how plutonium ages. This assessment, paired with work conducted at Lawrence Livermore, enabled the NNSA to better understand the lifetime of plutonium components and its impacts upon nuclear weapons performance. This work allowed for better estimates of the sizing of production capabilities and of needed resources.

Maintaining the Stockpile Through Life-Extension Programs

As we learn about our strategic systems through Stockpile Stewardship, we then work with DOD and DOE/NNSA to determine appropriate steps for extending the lives of these systems for an additional 20 to 30 years beyond their original lifetimes through LEPs. To date, the LEP focus has been to effectively refurbish them so they are "just like" they were originally designed, to meet the requirements of the cold war (high yield to weight ratios). LEP activities include: research, development, and production work required to ensure that weapon systems continue to meet national security requirements.

The nation has successfully completed LEPs for the W87 ICBM warhead and the B61–7/11 gravity bomb. The W76 LEP is well underway and is contributing significantly to the long-term viability of the nation's sea-based deterrent force. Major components refurbished as part of the LEP include: the nuclear explosive package; the arming, firing and fuzing system; and the gas transfer system. This LEP is expected to extend the life of the W76 for an additional 30 years without reliance on underground nuclear testing. LANL played a major role in this effort, which required reconstitution of specialized material production after several decades. The First Production Unit (FPU) for the W76 LEP was completed in FY 2008.

With the bulk of the Laboratory's efforts on the W76 LEP complete, Los Alamos will shift its focus to the the B61 LEP, consistent with the NPR. Major components that will be refurbished as part of the LEP include: new detonator cable assembly, main charge, foams and polymers, and a new gas transfer system. This LEP also provides the opportunity to install enhanced, intrinsic safety and security features by modifying components in existing designs to meet today's dynamic security environment. Los Alamos expects to support an FPU in 2017 assuming timely Congressional approval of the funding needed to carry out the program.

LEP requirements derive from the joint DOD–DOE Nuclear Weapons Council (NWC). Each nuclear weapon system they identify and Congress funds is studied to develop options that meet the requirements established by the NWC. Per the guidance in the NPR and in the administration's Stockpile Stewardship and Management Report, it is my obligation to ensure that the teams at Los Alamos examine all the relevant technical options for an LEP, including refurbishment, reuse and replacement, and bring them forward to the NWC for a decision.

These efforts will include modifying cold-war-era weapons for enhanced margin against failure, increased safety, and improved security and use control. For example, introducing insensitive high explosives into systems that currently use conventional high explosives can improve safety. Future LEP studies will consider the possibility of adapting the resulting warhead to multiple platforms in order to reduce the number of warhead types. In all LEP studies, the Laboratories will rely on fundamental and applied ST&E to improve its understanding of nuclear weapon behavior and to assure the safety, security, and effectiveness of our nuclear deterrent supported by a reduced and more sustainable, efficient and appropriately sized nuclear security infrastructure.

Leveraging our Science for National Security

The issues that have arisen in the last 18 years of assuring the reliability of nuclear weapons without conducting a nuclear test are complex science and engineering problems. Some of these problems were anticipated—like the aging of certain components in a warhead—and others were totally unexpected. The success of the Stewardship program has been the ability to draw on a deep and rich science base at the Laboratories. This science base is enriched by engaging on a broad range of scientific problems, many of which have a direct relevance to broader national security interests. A vibrant science, technology and engineering enterprise is essential to supporting the stewardship program, and at the same time it provides a powerful resource for issues such as nonproliferation, counterproliferation, counterterrorism and intelligence assessment.

There is a tendency when people hear about the role the NNSA Laboratories play in solving other national problems that these are simply nice "spinoffs." These provide more than just positive benefits for the nation; rather, this work outside of the weapons program is essential to the conduct of the core nuclear weapons mission. We have a vibrant scientific workforce at Los Alamos, including around 2,500 Ph.D.s that are the core of our science base. The weapons program benefits directly when these scientists have the opportunity to extend their skills by working on challenging technical problems, like climate modeling, which then can validate and improve the methods in our 3–D weapons codes and solve challenges in the stockpile.

The following are a handful of recent Laboratory scientific successes that leverage our weapons science capabilities for broader national security interests, and also feed directly back into the nuclear weapons program:

Intelligence: Our weapons program capabilities give us the ability to assess foreign weapons programs and to assist the intelligence community. There is much truth to the statement that "it takes a nuclear weapons lab to find a nuclear weapons lab."

Nuclear Forensics and Attribution: Los Alamos delivered a suite of models and databases for National Technical Nuclear Forensics applications, such as modeling debris signatures and other nuclear security applications. LANL's capabilities in this area are a direct outgrowth of the former nuclear weapons testing program where scientists had to study the detailed chemistry of soil samples to determine various characteristics of a detonation. Our experts in this area can not only help with current nuclear forensics, but they also support the weapons program by helping to reinterpret data from previous underground tests. This information is then used to validate our weapons codes.

Plutonium Center of Excellence: LANL's efforts in nonweapons plutonium work help ensure the country maintains a core human capital ability to work with this material. The same researchers and technicians who work on plutonium 238 for use in deep-space missions for NASA also support the manufacture of plutonium pits for the stockpile.

Detection Technology: Much of the work at Los Alamos in the basic sciences arena has had a significant impact on detecting threats from emerging phenomena. For example, building x-ray and gamma ray detectors on satellites has promoted the discovery of fundamental cosmological phenomena like the collapse of black holes. In turn, these detectors have been refined and are part of our front line defense in monitoring other nations' weapons programs.

Advanced Simulation and Energy/Climate Research: The ability to simulate complex systems—like a nuclear explosion with thousands of parts exploding in a fraction of a second—is something that has also driven national security science forward. LANL has developed two of the four modules (sea ice and oceans) used in international climate models. Many of the lessons learned from observing a complex climate system can be applied to our weapons models. In particular, we have discovered heretofore unknown phenomena—in terms of regional climate impacts and within weapons systems—as we have gone to finer and finer levels of resolution in our simulations. On the energy front, LANL is also a partner in the recently announced DOE Office of Nuclear Energy Hub focused on nuclear power. LANL will play a key role in helping to build a "virtual reactor."

Gulf Oil Spill: Scientists from Los Alamos and other laboratories have played a significant role in the federal government's efforts to assess and stem the oil leaking in the Gulf of Mexico. Several efforts are continuing as the crisis continues. One particular area of emphasis is in diagnostics of the well system. LANL designed and developed the first ever two-dimensional radiography system deployed in deep water (below a few hundred feet). The radiography leveraged numerous capabilities including machining, advanced image analysis, and modeling techniques.

Next Chapter of Stockpile Stewardship

For the future, we need to build on the core scientific successes achieved through Stockpile Stewardship that have maintained the safety security and effectiveness of the stockpile for 18 years without nuclear testing. However, we are now at a crossroads as a nation. The next few years will determine our approach to the stockpile for decades to come. There is an opportunity right now for a national consensus to develop around nuclear policy that has been needed since the end of the cold war. As I will discuss further below, I am encouraged by the significant strides this administration has made in issuing a new policy, in the form of the NPR, as well as by its FY11 budget request for the Department of Energy, which I believe is an important first step. With this as a basis, I hope that Congress and the administration can reach a bipartisan national consensus.

Even with such a consensus, my concern is that with all there is to be done, the level of interest and budget support that we have seen this year will need to be sustained by future administrations and future Congresses. As I have seen over my nearly 30-year career at the Laboratories, solutions and fixes in this arena cannot be accomplished quickly. This will require a sustained effort on the part of the Nation for decades to come.

NEW POLICY FOR NUCLEAR WEAPONS

The administration's NPR, issued in April of this year, "provides the roadmap for implementing President Obama's agenda for reducing nuclear risks ." It focuses on five key objectives of nuclear weapons policies and posture, one of which is "Sustaining a safe, secure, and effective nuclear arsenal."

The Directors of Livermore and Sandia joined me in issuing a tri-lab statement about the NPR in April. We felt it was important to first outline the roles and responsibilities of the national laboratories in terms of providing the technical underpinnings to ensure the safety, security and effectiveness of the nuclear deterrent. With regard to the NPR's overall framework, I repeat here what we said:

> We believe 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.
>
> We are reassured that a key component of the NPR is the recognition of the importance of supporting a modern physical infrastructure—comprised of the national security laboratories and a complex of supporting facilities—and a highly capable workforce with the specialized skills needed to sustain the nuclear deterrent.

While the joint statement reflects the Laboratory Directors' collective views, I will elaborate on my own thinking on the NPR. It clearly emphasizes the three key elements of Stockpile Stewardship—hands-on work on the stockpile; the science, technology and engineering base; and the infrastructure at the laboratories and plants. I agree with the NPR's view that these are the three critical elements of the nuclear weapons enterprise. It is essential that all of these elements be in balance and adequately funded to maintain a safe, secure and effective stockpile. I will focus my remarks on each of these elements in turn.

Stockpile Work

The NPR is explicit about the weapons that need life-extension over the next 10 years: completion of the W76, proceeding on the full scope life extension of the B61, and study of the W78. I strongly agree with the NPR assertion of the need to increase the safety and security of our systems. The LEP process provides opportunities to do so, for example by switching all conventional high explosive (CHE) primaries with insensitive high explosive (IHE) primaries to increase safety margins and deploying certain intrinsic surety systems in the stockpile to better meet today's security challenges.

The NPR's statements on needed LEPs align well with the assessments that the Laboratories have made in recent years. We have seen that in many cases, the uncertainties associated with the current issues identified through surveillance threaten to overwhelm the small performance margins that characterize many of the weapons in the current stockpile. Essentially, this uncertainty dictates that almost every weapon system in the current stockpile will require completion of some type of life extension activity in the next 25 years.

The available mitigation actions for the results observed in surveillance, such as changes external to the nuclear package or relaxation of certain military requirements are reaching their limits. Consequently, as the Perry Commission observed, "The Stockpile Stewardship Program and the Life Extension Program have been remarkably successful in refurbishing and modernizing the stockpile . . . but cannot be counted on for the indefinite future." We will need to take advantage of the flexibility articulated in the NPR to go beyond just refurbishment that has been considered to date and evaluate the full range of options (refurbishment, reuse, and replacement) to increase nuclear performance margins to mitigate the need for nuclear testing.

The NPR states that in "any decision to proceed to engineering development for warhead LEPs, the United States will give strong preference to options for refurbishment or reuse." The NPR also strongly endorses, and the NNSA Stockpile Stewardship and Management Plan reinforces, the importance that on a case-by-case basis, the full range of LEP approaches will be considered: refurbishment, reuse, and replacement. I recognize the sensitivity of this topic but am convinced that allowing the laboratories the flexibility to present policymakers with our best technical recommendations to meet requirements is critical to our role in the stockpile management process. This approach greatly reduces the possibility of having to conduct nuclear testing, while at the same time exercising our nuclear designers and engineers. I do not feel overly constrained by the language in the NPR; rather, I believe it provides the necessary flexibility to manage the stockpile with acceptable levels of risk.

The starting point for all of this hands-on work, of course, is the stockpile surveillance program that pulls actual units from service and puts them through rigorous destructive and nondestructive testing. Through these efforts we are able to anticipate issues as well as learn when issues may require action, but I have been concerned for some time that we are not doing as much surveillance as we should be doing. The NPR states that investments are required in "Strengthening the science, technology, and engineering (ST&E) base needed for conducting weapon system LEPs, maturing advanced technologies to increase weapons surety, qualification of weapon components and certifying weapons without nuclear testing, and providing annual stockpile assessments *through weapons surveillance* [emphasis added]." I agree with this assessment. Since our knowledge base begins with surveillance, it is essential that we sustain support in this area.

Science, Technology, and Engineering

I strongly endorse the view of the NPR on strengthening the ST&E base; it is this base that provides the underpinning of confidence in the stockpile in the absence of nuclear testing. This expertise can only be maintained by continued scientific advances; it cannot be static. However, it has been allowed to erode in recent years, putting at risk our ability to make the necessary future advances in our capabilities. It is important to note that often years of technical work, for example in actinide sciences, are required ahead of time to enable the successful completion of today's requirements. Without investment today future confidence is at risk.

In addition, it is essential that we acquire experimental data from nonnuclear experiments to provide the "ground truth" about stockpile issues. Today, we are beginning to see many of the investments of Stockpile Stewardship come to fruition—notably the DARHT at Los Alamos, the NIF at Livermore, and the MESA facility at Sandia—yet, we have inadequate resources to carry out the all key experiments at these facilities. Just as the Nation is positioned to reap the benefits of these investments, funding declines make it extremely difficult to maintain, use or enhance these facility capabilities that are necessary to preserve our deterrent and to further other national security goals.

Similar to the world of experiments, today we are faced with an equal computational challenge and opportunity. To maintain the scientific vitality, international competitiveness, and leadership needed to support the administration's nuclear posture, continued advancement to exascale class computation is necessary. Such a capability will position us to provide better support for the stockpile, particularly in the form of surety options, and to provide reliable support for intelligence analysis including emerging foreign threats in the broad area of nuclear security.

Compounding that challenge of a healthy, vibrant ST&E base is the aging workforce at Los Alamos and elsewhere in the complex. At Los Alamos, the average age of career employees is now over 48, and 32 percent of all career employees are expected to retire within the next 5 years. Without an infusion of younger talent who can become recipients and beneficiaries in the transfer of knowledge from those with decades of experience, we will be at risk for loss of that knowledge.

Aging Infrastructure

Much of the nuclear infrastructure needed by the United States resides in facilities that date back to the 1950s. While we take great efforts to ensure our employees are safe in these aging facilities and that the public is not put at risk, the challenges and costs to maintain their active status is mounting rapidly.

The NPR and administration's FY11 budget support the Uranium Processing Facility (UPF) in Tennessee and the Chemistry and Metallurgy Research Replacement (CMRR) Nuclear Facility in New Mexico. They represent the critical next step in shrinking the Nation's nuclear infrastructure footprint while allowing these vital operations to continue in the most safe and secure environments possible. I strongly endorse investments in these two facilities and believe without them the costs associated with maintaining the existing facilities will eventually overwhelm the weapons program budgets.

The CMRR project at Los Alamos will replace the existing Chemistry and Metallurgy Research (CMR) facility, completed in 1952, that is at the end of its useful life. This facility houses the analytical chemistry, materials characterization, and actinide research and development activities that are required to support a wide spectrum of work at Los Alamos. The work in CMRR is critical to sustaining the Nation's nuclear deterrent, but it also is critical to nonproliferation efforts, development of power sources for U.S. space missions, training of IAEA inspectors and the work of nuclear forensics. We have been working closely with our industry partners to bring strong project management to this effort and to deliver this important project on cost and schedule. I am proud to report that on the first phase of this project, construction of the Radiological Laboratory Utility Office Building (RLUOB), we did just that: it was completed on time and budget last year. We are in the process of outfitting that facility and expect to occupy RLUOB in 2012. We continue to work closely with NNSA on the design of the next and final stage of the project, the Nuclear Facility. To successfully deliver this project, it will be important to have certainty in funding and consistency of requirements throughout the project.

At the same time, there are many other essential facilities across the complex and at Los Alamos that cannot be neglected because of our necessary focus on the major nuclear facilities. Infrastructure considerations must include operation of current facilities and the consolidation of old, inefficient ones. For example, we are working to identify adequate funding to maintain and operate the LANSCE facility for material properties, carry out planned actinide research and renew an aging infrastructure where over fifty percent of the buildings are more than 40 years old.

To reduce costs we have already eliminated a million square feet of antiquated laboratory and office space. Using funds from the American Recovery and Reinvestment Act we are in the process of decontaminating and demolishing the earliest plutonium and uranium facilities at the Laboratory.

FY11 BUDGET PROPOSAL

In addition to the NPR, the administration has developed an FY11 budget that moves us in the right direction. I view the NNSA's FY11 budget request as a positive first step and I urge its approval by Congress. The $624 million increase to Weapons activities is primarily focused on addressing the crumbling infrastructure of the Complex—most notably the plutonium infrastructure at LANL and the uranium infrastructure at Y–12, as well as beginning to attend to the needs of an aging stockpile with increased funds for Life Extension Programs. These are welcome increases and will begin to address some of the concerns that the Strategic Posture Commission and the Laboratory Directors have raised in recent years.

Restoring the scientific and physical infrastructure—all while managing pension and other challenges—will take time and sustained support by the Congress. Sustaining strong science funding in the form of Science Campaigns and advanced computing, as well as the infrastructure account, known as Readiness in Technical Base and Facilities (RTBF) that underlies all of the work we do, is essential. This funding enables us to carry out the fullest of scientific research and development efforts necessary to meet our nuclear weapon mission and broader national security needs and to attract and retain the best and brightest scientists.

CHALLENGES

The NPR provides the necessary policy framework, which I hope leads to a national consensus, and the FY11 budget request provides the first step in the fiscal implementation of the roadmap to sustain the long-term safety, security, and effectiveness of the stockpile. It is important to recognize that to fully implement this roadmap requires investments that carry across multiple administrations and multiple Congresses. Today, I fear that there is already a gap emerging between expec-

tations and fiscal realities. I fear that some may perceive that the FY11 budget request meets all of the necessary budget commitments for the program; however, there are still significant financial uncertainties, for example, the design of the UPF and CMRR are not complete and the final costs remain uncertain.

As I look to the future, I remain concerned that science will be squeezed when trying to compete with capital infrastructure investments and life extension program funding priorities. Having experienced three decades of federal budgets and their impacts on the weapons program, it will be challenging to sustain the increases the administration has called for. Just as I am encouraged by the significant increase we see in FY11, I am concerned that in the administration's section 1251 report, much of the planned funding increase for Weapons Activities do not come to fruition until the second half of the 10-year period.

Another example of the fiscal challenges that I see on the horizon is related to pensions. Like many other organizations across the country, we at Los Alamos are facing a pension shortfall during the current fiscal year and it is expected to grow over the next 2 years.

In FY10, the Laboratory has worked closely with the NNSA to resolve a pension shortfall of $76 million. Part of the solution has been to require employees to make contributions; the Laboratory is increasing its fringe rates to cover costs and NNSA has provided assistance on the order of $46 million. Next year, the pension shortfall is expected to be $77 million, and in FY12, the shortfall is expected to grow to about $200 million. NNSA is aware of this issue and we are working closely on possible options to address it. My chief concern is that if the Laboratory must shoulder the bulk of this increase, this will dramatically reduce the funds available for programmatic deliverables and cause significant disruption of the Laboratory workforce.

As I noted earlier, it will be important that as a nation we can align expectations with the fiscal realities that we see. At the same time, it is essential that we balance investment across all three major elements of the program—hands-on stockpile activities, ST&E, and infrastructure. For example, without investment in ST&E today we put at risk timely execution of the program beyond the very near term. On the other hand, focus on near term stockpile LEPs without infrastructure investment limits the near term program scope and efficiency and puts at risk longer term timely execution. Stability of funding plans is also important so that the balance that is struck can actually be executed. One approach to maintain focus on these issues across multiple administrations and Congresses could be a set of "safeguards," that have been used in past arms control treaties.

CONCLUSION

Thank you again for the opportunity to appear before you to testify on this important subject. As I stated, I am very encouraged by the progress this administration has made both on the policy and the budget fronts. The NPR provides the policy framework with the technical flexibility to manage the stockpile with an acceptable level of risk and the FY11 budget request is a positive step forward.

I am cautiously optimistic that with Congress' support we—as a nation—can recapture the bipartisan consensus that once existed about the Nation's strategic deterrent and the overall nuclear weapons complex. At the same time, I have concerns about sustaining the focus and an appropriate budget over the several decades for which it will be required. As a Laboratory, we are dedicated to ensuring the innovative science and engineering necessary to sustain our strategic deterrent and that can be applied to the many challenges the Nation now faces. Maintaining the necessary focus and resources of the administration and Congress is critical in order to achieve these national goals.

I look forward to engaging further with the committee on this important topic and I welcome your questions.

The CHAIRMAN. Thank you very much, Doctor.

Dr. Miller.

STATEMENT DR. GEORGE H. MILLER, DIRECTOR, LAWRENCE LIVERMORE NATIONAL LABORATORY, LIVERMORE, CA

Dr. MILLER. Thank you very much, Chairman Kerry, Ranking Member Lugar, and thank you very much for your continued interest in the Stockpile Stewardship Program.

As director of Lawrence Livermore National Laboratory, we are one of the laboratories responsible for sustaining stockpile safety, security, and effectiveness. I've devoted, essentially, my whole career to providing science and technology for the Nation's national security interests, including having personally designed several of the warheads that are in the stockpile today.

There are three points that I'd like to emphasize. Technically, we have an approach that can maintain safety, security, and effectiveness of the stockpile without nuclear testing and without introducing new military capabilities. Successfully meeting these mission requirements and carrying out the program of work will require sustaining the nuclear security enterprise for decades, with balanced investments across the full spectrum of activities that are required to support this activity.

Finally, and importantly, we all have a responsibility to nurture and sustain the outstanding stewards at our laboratories and our production plants.

From a scientific and technical point of view, I'm confident that we can maintain the safety, security, and effectiveness of the stockpile, because of the successes of the program to date. We've greatly improved our simulation and experimental capabilities, and used these unique national assets to understand and learn details about weapons' performance that went undiscovered in the era of nuclear testing. We've found and corrected issues in the stockpile, and we are continually improving our ability to assess weapon performance. We've successfully extended the life of some of the systems in the stockpile without resorting to nuclear testing. And we're providing the hands-on experience that's necessary to train the next generation of stockpile stewards.

The President's 2011 budget request seeks increased funding to reverse the recent declining budget trends and create a sustainable U.S. nuclear security enterprise. Our Nation's deterrent requires a Stockpile Stewardship Program that is adequately supported by successive administrations and Congresses to provide sufficient funding.

Today, additional investments are needed in all three of the areas of the Stockpile Stewardship Program, in science and technology and engineering that provides the basic underpinning of all of the decisions and all the confidence that we have, in extending the life of the systems that are currently in the stockpile, and in modernizing the facilities and infrastructure. I strongly urge Congress to support this vital first step toward increased investment in this national security mission.

Science, technology, and engineering underpin our confidence in the stockpile, and it's of vital importance that we enhance the level of surveillance that goes on in the stockpile. This is a program by which we look each year at what's going on in the stockpile, and we learn what issues we must address. We need to take full advantage of the two-laboratory system to provide independent advice and counsel to the administration and to Congress about what steps to take. In my view, this is much like something that's very familiar to all of us: When we have a serious medical problem, we frequently consult more than one doctor. We need to pursue and continue to advance the remarkable improvements that we have

seen in high-performance computing. And finally, we need to utilize these unique tools in order to improve our understanding.

The stockpile itself needs attention. We need to undertake extensive programs over the next two decades to extend the life of our stockpile.

We will examine a series of options that are based on previously tested nuclear designs that will range from refurbishment to reuse to replacement, carefully considering the desirability of improving the safety, security, the manufacturability, the maintainability of a much smaller stockpile. Preferred alternatives will consider the cost and the risks associated with each of the different options.

We also have an opportunity in these life-extension programs to provide more resiliency to the stockpile as it is reduced in size by providing warheads that are adaptable from one system to another.

And finally, we need to modernize cold-war era facilities, particularly those for processing uranium and plutonium. This will require funding increases.

Above all, we need to nurture and sustain our outstanding stewards at the laboratories and production facilities, and mentor them, and create our future. Long-term success depends upon these people.

While the President's 2011 budget for NNSA is a very good start, the 10-year plan calls for significant budget increases in the out years. This is the program of work that is required to sustain this effort over the long period of time.

Our success depends upon your support, and the support of successive administrations, in creating and sustaining a program that is balanced across all of these efforts, and a program that is adequately funded.

Thank you very much, again, for your continued interest in, and support of, this important national effort.

[The prepared statement of Dr. Miller follows:]

PREPARED STATEMENT OF DR. GEORGE H. MILLER, DIRECTOR, LAWRENCE LIVERMORE NATIONAL LABORATORY, LIVERMORE, CA

OPENING REMARKS

Mr. Chairman and members of the committee, thank you for the opportunity to provide a statement on the status and future prospects of the Department of Energy/National Nuclear Security Administration's (NNSA) Stockpile Stewardship Program to sustain the safety, security, and effectiveness of the Nation's nuclear stockpile. My name is George Miller and I am the Director of the Lawrence Livermore National Laboratory (LLNL).

LLNL is one of NNSA's two nuclear design laboratories and a principal participant in the Stockpile Stewardship Program. National security depends greatly on the success of our stockpile stewardship efforts. I want to thank the committee for your interest in and continued support for these activities.

In addition to stockpile stewardship, our Laboratory's nuclear security responsibilities include engaging in vital national programs to reduce the threats posed by nuclear proliferation and terrorism. The Laboratory also applies its multidisciplinary science and technology to provide solutions to a broader range of pressing national and global security challenges.

INTRODUCTION

From a scientific and technical viewpoint, I am confident that we can maintain a safe, secure, and effective nuclear deterrent through a science-based Stockpile Stewardship Program that is balanced, integrated, and sustained over time; this will require the support of successive administrations and Congress and sufficient

funding to meet mission requirements. Stockpile stewardship is a cornerstone of the Nation's strategic deterrent for the future. As demonstrated by the program's achievements to date, I believe that the highly capable scientists and engineers at the NNSA national laboratories and production facilities will be able to address issues that arise in an aging, smaller nuclear stockpile by utilizing and further advancing our exceptional computational and experimental tools and employing the full range of life-extension program (LEP) options.

My optimism is tempered by recent funding trends in—what to date—has been a very successful Stockpile Stewardship Program. Continuing success in the program's scientific and technically challenging activities will require additional new investments in major facilities and particular attention to sustaining the skills of our workforce. Budget constraints to date have resulted in deferral of life-extension programs (LEPs) and slower warhead surveillance rates than is technically desired. These constraints have also delayed production schedules; postponed important deliverables in science, technology, and engineering; delayed resolution of identified stockpile issues; and hindered efforts to develop modern and efficient manufacturing processes. In addition, there are fewer highly skilled stockpile stewards supporting the program than were present as recently as 5 years ago. Our Laboratory now has 2,608 scientists and engineers—609 fewer than in May 2005. Concurrently, stewardship is becoming technically more challenging as weapons continue to age beyond their intended lifetimes. In my 2009 Annual Stockpile Assessment letter to the Secretaries of Defense and Energy and the Chairman of the Nuclear Weapons Council, I expressed concerns about the impact that these trends will have on sustaining confidence in the stockpile.

The FY 2011 budget request seeks to reverse recent funding trends and reflects the need for increased investment to maintain sufficient capability to ensure the viability of the U.S. stockpile. The Nation's nuclear strategy—with or without the planned stockpile reductions—requires a Stockpile Stewardship Program that is balanced, integrated, and sustained over time. NNSA has provided to Congress its Stockpile Stewardship and Management Plan, which is funded in the FY 2011 Budget Request with a 9.8-percent increase ($624 million) compared to FY 2010. This is a good start, but only a start. The increased level of investment must not only be sustained but grow over time to provide for construction of new facilities and support increased LEP activities.

My testimony emphasizes several key points about a balanced, integrated, and sustained Stockpile Stewardship Program:

- *Accomplishments.*—Stockpile stewards have achieved many outstanding successes since the program began. These accomplishments give me confidence that the "science based" approach being pursued is a workable path forward for sustaining the safety, security, and effectiveness of the nation's nuclear deterrent.
- *A Sustainable Program.*—Stockpile stewardship is scientifically and technically very demanding. It is a very active, integrated program and to sustain it, its interdependent facets must be adequately funded to progress in a balanced manner.
- *The Budget.*—With the President's FY 2011 budget, we can begin to reinvigorate the Stockpile Stewardship Program. The requested additional funds will enable greater progress on many fronts—from stockpile life-extension activities, to recapitalizing the infrastructure, improving assessment capabilities, and building the knowledge base required to answer increasingly difficult questions about weapon performance over its full life cycle.
- *Life-Extension Programs.*—Options for life-extension programs (LEPs) will be based on previously tested nuclear designs. We will consider, on a case-by-case basis, the full range of LEP options (refurbishment, reuse, and replacement) to provide findings and technical recommendations for engineering development decisions.
- *The Workforce.*—The Stockpile Stewardship Program's most valuable and irreplaceable assets are the unique individuals who sustain it. Confidence in the stockpile ultimately depends on confidence in the stockpile stewards at the NNSA laboratories and production facilities. We must attract top talent to the program and sustain over time specialized technical skills and expertise, which provide the basis for judgments about the stockpile and stewardship actions taken, through mentoring and hands-on experience.

SCIENCE-BASED STOCKPILE STEWARDSHIP ACCOMPLISHMENTS

The science-based Stockpile Stewardship Program was launched on the premise that by developing a much more thorough understanding of the underlying science and technology that governs nuclear weapons performance, the country could main-

tain confidence in the stockpile without requiring nuclear testing. The knowledge gained must be sufficiently detailed to assess with confidence the safety, security, and effectiveness of the stockpile. We must have the ability to deal with whatever issues arise using existing nuclear test data together with advanced computational and experimental tools. Very ambitious goals were set to expeditiously develop increasingly sophisticated tools and apply them to arising issues in an aging stockpile.

We have made significant progress since the Stockpile Stewardship Program began. Use of the many tools and capabilities developed since the end of nuclear testing has greatly increased our understanding and knowledge of the stockpile. These tools and capabilities, together with the existing nuclear test database, have enabled the NNSA laboratories to annually assess and, as required, extend the life of the warheads in the U.S. stockpile. Some highlights—featuring work at LLNL—include:

- *High-Performance Computing.*—At its onset, the Stockpile Stewardship Program set the extremely challenging goal—many thought unachievable—of improving scientific computing performance by a factor of a million over a decade. That goal was achieved with the delivery of the 100-trillion-operations-per-second ASC Purple supercomputer to LLNL in 2005. The machine has served as a workhorse for all three NNSA laboratories, performing very demanding 3–D weapons simulations. This highly successful partnership between NNSA and the high-performance computing industry continues with the 20,000-trillion-operations-per-second Sequoia machine, which is on track to become operational at LLNL in 2012.
- *High-Fidelity Weapons Physics Simulations.*—Laboratory physicists and computer scientists stepped up to the challenge of developing weapons simulation codes that model the physics with far greater fidelity and run efficiently on computers with thousands of processors working in parallel. In 2002, LLNL scientists performed the first-ever complete 3–D simulation of a nuclear weapon explosion—with a level of spatial resolution and degree of physics realism previously unobtainable. Supercomputers have also been used to gain valuable insights into the properties of materials at extreme conditions and details about the formation and growth of hydrodynamic instabilities. These improved capabilities have made possible expeditious development of LEP design options and their certification.
- *Vastly Improved Experimental Capabilities.*—Thoroughly diagnosed nonnuclear tests are used to gather input data for weapons physics simulation models and validate their performance. Experiments at LLNL's Contained Firing Facility and the Dual-Axis Radiographic Hydrodyanamic Test (DARHT) Facility at Los Alamos National Laboratory (LANL) have provided key hydrodynamic performance information for applications ranging from LEPs to weapon safety studies. Data from the Joint Actinide Shock Physics Experimental Research (JASPER) gas-gun experiments were instrumental in the very successful plutonium aging study, and tests conducted at LLNL's High Explosives Applications Facility (HEAF) enable improved modeling of aging high explosives. With commissioning of the National Ignition Facility (NIF) in 2009, stockpile stewards now have an experimental facility capable of creating the temperatures and pressures necessary to study the physics of the nuclear phase of weapons performance.
- *Improved Understanding of Materials Aging and Weapons Performance.*—A long-term study by LLNL and LANL concluded that the performance of plutonium pits in stockpiled weapons will not sharply decline due to aging effects—a result with important implications in planning the future of the production complex. Through simulations and experiments, we have a much deeper understanding of the behavior and aging properties of weapons materials ranging from plutonium and high explosives to crystalline metals and polymers. Recently an LLNL scientist received an E.O. Lawrence Award for breakthrough work to resolve a previously unexplained 40-year-old anomaly that was one of the factors that drove the need for continued nuclear testing. Now, in simulation codes, a physics-based model can replace the use of an ad hoc calibration factor that had to be adjusted depending on weapon design specifics and nuclear test data. The effort involved combining high-fidelity nonnuclear experiments, the latest simulation tools, and reexamination of archival nuclear test data. Experiments at NIF are serving to confirm the model.
- *Successful Life-Extension Program.*—In 2004, NNSA successfully completed its first program to extend the lifetime of a stockpiled weapon without resorting to nuclear testing. Refurbishment of the W87 ICBM warhead—the design in the stockpile with the most modern safety features—extends the weapon's life by 30 years. LLNL (with Sandia National Laboratories) developed and certified the

engineering design and worked closely with the production facilities to ensure the product quality. The program has served as a model of the processes to be followed by subsequent and future LEPs. Today, the NNSA, its laboratories, and production facilities have continued this success with a major program to extend the life of the very important W76 Trident II SLBM warhead.

The successes to date have also given us insight into the better tools that are needed and science and technology areas that require continued work. These improvements will put our annual assessment of the stockpile on the firmest footing and provide us the insight and tools to make wise decisions and ensure the safety, security, and effectiveness of the stockpile as we move forward. For instance, from simulations performed to date, we have learned that we will need at least exascale—1,000,0000 trillion operations per second—to fully resolve the phenomena we have discovered.

A BALANCED, INTEGRATED, AND SUSTAINED STOCKPILE STEWARDSHIP PROGRAM

Stockpile Stewardship Program accomplishments to date give us confidence that the "science based" approach being pursued is a workable path forward to sustaining the safety, security, and effectiveness of the Nation's nuclear deterrent. Stockpile stewardship is scientifically and technically very demanding, yet the high-caliber experts at the national laboratories have proven themselves worthy of this major challenge time and time again.

Since 2005, the buying power of NNSA's Defense Programs has declined approximately $1B. Yet, the program will grow even more demanding as nuclear weapons continue to age far beyond their intended lifetime. As the stockpile continues to be downsized, even more pressure will arise to understand the state of each individual weapon. More difficult manufacturing issues are arising in life-extension programs (LEPs) and we have largely exhausted available options to improve performance margins through changes external to the warhead package.

There is growing widespread recognition that the Stockpile Stewardship Program—its workforce and facilities—must be reinvigorated to sustain a safe, secure, and effective nuclear arsenal over the long run. Reports commissioned by Congress (e.g., America's Strategic Posture and the Stockpile Stewardship and Management Plan prepared by NNSA) and reviews pursued by the executive branch (e.g., the 2010 Nuclear Posture Review (NPR)) have concluded that significantly increased investments are needed to support (in the words of the NPR) "a modern physical infrastructure—comprised of the national security laboratories and a complex of supporting facilities—and a highly capable workforce with the specialized skills needed to sustain the nuclear deterrent."

A balanced and sustainable Stockpile Stewardship Program integrates stockpile support activities—which include weapons surveillance, assessments, and as necessary, life-extension programs—with investments to modernize facilities and efforts to greatly improve scientific understanding of the details of nuclear weapons components and their performance. The many facets of the program are tightly interconnected. Even with stable overall funding at an adequate level of support, long-term success requires judicious balancing of evolving priorities and appropriate levels of effort.

Weapons Surveillance (to predict and detect the effects of aging and other stockpile issues).—We need to step up the rate of stockpile surveillance and continue to become more proficient at detecting and predicting potential problems early. The use of embedded sensors, which we are developing, would enable persistent surveillance and improve our knowledge of the specific state of each stockpiled weapon. Data would be indicative, for example, of aging and degradation, mechanical integrity, and exposure to harsh environments. In addition, we are developing ever more sophisticated tools to study how aging alters the physical characteristics of weapon materials and how these changes affect weapon effectiveness and safety.

Assessments (to analyze and evaluate effects of changes on weapon safety and performance). The Stockpile Stewardship Program includes a comprehensive set of activities to annually assess each weapons system and to address issues that arise. It is particularly important, in my view, for processes to actively engage both centers of nuclear design expertise—LLNL and LANL—to provide independent assessments. This is much like having a serious illness: advice from more than one independent source is crucial to the decisionmaking process. As we move further and further from a workforce that has actually tested a nuclear device, the independence of the two design centers is increasingly important. Our assessments are also benefiting from the development of Quantification of Margins and Uncertainties, a methodology that is increasing the rigor of weapon certification and the quality of annual assessments. To the extent possible, our assessments require rigorous scientific and

engineering demonstration and evaluation. As described below, we have been acquiring increasingly powerful tools to do so.

Life-Extension Programs (to sustain the stockpile through refurbishment, reuse, and/or replacement).—The laboratories must work closely with production facilities to integrate the production of parts with the development of new materials and manufacturing processes. Manufacturing is a particularly demanding challenge because the plants have to overcome extensive infrastructure and operational challenges and production technologies need modernization. Options for LEPs must be thoroughly analyzed to present decision makers with low risk, cost efficient alternatives to consider.

Science and Technology Foundations (to provide stockpile support through a thorough understanding of nuclear weapon performance and sustain the necessary base of specialized skills).—In "keystone question" areas such as boost physics and energy balance, Predictive Capability Framework campaigns utilize our advanced stockpile stewardship tools to fill gaps in knowledge about nuclear weapon performance relevant to existing or expected issues about stockpiled weapons. These activities integrate the use of state-of-the-art high-performance computers, high-fidelity simulation models, and data gathered from exceptional experimental facilities. This cutting-edge research both provides data for stockpile stewardship and enables the retention of nuclear weapons expertise in a staff that increasingly will have no nuclear test experience. We must nurture and exercise the scientific judgment of stockpile stewards.

Modernized Facilities and Infrastructure (to replace major facilities for processing plutonium and uranium and upgrade the physical infrastructure of the weapons complex).—NNSA's plans are to pursue the Chemistry and Metallurgy Research Replacement-Nuclear Facility (CMRR–NF) project at LANL and build a new Uranium Processing Facility (UPF) at the Y–12 Plant in Oak Ridge, Tennessee. Currently, these more-than-50-year-old facilities for processing plutonium and uranium are oversized, increasingly obsolete, and costly to maintain. They are also safety, security, and environmental concerns. These two are high priority and the most costly of numerous infrastructure modernization projects throughout the complex. Because of these projects, substantial increases above the FY 2011 budget will be required to sustain a balanced, integrated overall program. As the cost baselines are better defined, the changes that occur must be accommodated without upsetting overall program balance—the balance among science, technology, and engineering; life extensions of the stockpile; and recapitalization of the infrastructure.

IMPLICATIONS OF THE PRESIDENT'S FY 2011 BUDGET PROPOSAL

NNSA has provided to Congress its 10-year Stockpile Stewardship and Management Plan, developed as a complement to the NPR and New START. The plan is funded in the FY 2011 Budget Request with a 9.8-percent increase ($624 million) compared to FY 2010. This is a good start and will address a number of immediate needs for FY 2011. It is noteworthy that the plan calls for significant increases in the out years, as increasing levels of funding will be required for the LEPs and construction of major facilities. The FY 2011 budget request will serve to meet most needs in the three overarching areas:

Science, Technology, and Engineering (for technical assessments and certification of the stockpile).—Assessments of the condition of weapons and certification of the engineering design of implemented LEPs depend on the critical judgments of stockpile stewards and their nuclear weapons expertise. Both are developed by hands-on experience working challenging nuclear weapons science, technology, and engineering issues. In addition to supporting stockpile needs and building expertise, this work also advances ourfundamental understanding of nuclear weapons performance so that future stockpile stewards will be able to tackle even more difficult issues as they arise. The increased funding from FY 2010 levels will provide a critically needed boost to activities:

- *Stockpile Assessments.*—The funding increase in FY 2011 will support implementation at the NNSA laboratories of a new dual validation process that was established in the FY 2010 National Defense Authorization Act. The Independent Nuclear Weapon Assessment Process (INWAP) will strengthen annual assessments. Two sets of challenge teams (one from LLNL and SNL and the other from LANL and SNL) are being formed. Both the challenge team and the "home team" will have access to all relevant data and analysis about a weapon system-to be applied to annual assessments and peer reviews of significant finding closures and LEP certifications.
- *Keystone Science Issues.*—Science campaigns in the Stockpile Stewardship Program aim at filling major gaps in our knowledge about nuclear weapon perform-

ance—for example, in the areas of energy balance and boost physics. The goal is to remove "adjustable parameters" in our simulations and replace them with first-principles physics models. Such improvements are critically important to providing high confidence in the difficult decisions that might arise in sustaining an aging stockpile.

This extremely challenging research calls for a concerted effort that combines continuing advances in high-performance computing with well-diagnosed experiments at the laboratories' unique experimental facilities. We have a golden opportunity to dramatically advance our knowledge base. Progress, in particular, depends on effective use of NIF (allowing stockpile stewards to experimentally explore the physics of nuclear phases of nuclear weapons performance), DARHT, JASPER, and our other smaller scale experimental facilities. Importantly, efforts to support these keystone science issues are increased in the FY 2011 budget request.

- *Research and Development on Technology Advances for Stockpile Support.*—An important responsibility of the NNSA laboratories is to explore what is technically possible in nuclear design. Exploratory studies hone the skills of stockpile stewards and help us to avoid technical surprise from other nations' nuclear weapons activities. In addition, we develop advanced technologies that could be applied to the U.S. stockpile, consistent with the goal of no new weapons or improvements in militarycapabilities. These include means for substantially improving weapon safety and security that could be implemented as part of an LEP. The proposed budget increases will help accelerate progress in this area to ensure availability of these technologies as LEPs are proposed and carried out over the coming decade.
- *Advances in High-Performance Computing.*—We have made remarkable advances in high-performance computing and simulations, yet it is imperative that we continue to make rapid progress. Early success in the Stockpile Stewardship Program brought us "terascale" computing (trillions of operations per second); we now reached "petascale" (thousands of trillions); and we need "exascale" (millions of trillions) for two reasons. Petascale makes 3–D high-fidelity simulations of weapons performance practical. However, better models of boost physics and thermonuclear burn processes still need to be developed (in concert with experiments). That will require much greater computing horsepower. Secondly, as mentioned above, the underpinning of our assessment and certification is uncertainty quantification. Rigorous implementation of the methodology for each weapon system requires the running of many thousands of high fidelity 3–D simulations to map out the impact of uncertainties on weapon performance; hence, the need for much greater computing power.

  The proposed FY 2011 budget adequately supports computer center operations at LLNL and acquisition of the 20-petaflop Sequoia machine, which will become operational in 2012. More than a factor of ten faster than the current best, it is the next major advance in high-performance computing. Now is the time to start planning and preparing for the next step toward exascale, which is a grand challenge requiring additional resources.

An Active LEP Effort Together With Aggressive Surveillance.—As mentioned below, a number of stockpile systems require LEPs in the next one-to-two decades. Over the past two decades, two LEPs have been completed. Over the next 10 years, plans call for the the completion of one in progress, start of two full-scope LEPs, and preparation activities for additional LEPs the following decade. In addition to LEP support, funding needs to be increased from FY 2010 levels to address current surveillance shortfalls and mature safety and security technologies for production readiness for future LEPs. We look forward to participating in a study to identify and evaluate LEP options for the W78 Minuteman III ICBM warhead, which is planned to begin in FY 2011. NNSA has announced its intention to assign the W78 LEP to LLNL. The FY 2011 budget request provides adequate support for our B61 LEP peer review responsibilities as well as our responsibilities to support existing LLNL-designed stockpile systems.

Recapitalization of Plant and Laboratory Infrastructure.—Recapitalization is necessary to build a responsive infrastructure able to meet program and production needs. This includes fulfilling science, technology, and engineering program objectives and production requirements. Such an infrastructure is essential to the complex's ability to respond in a timely manner to technical issues and/or emerging threats. In addition to planning for and construction of new facilities (including the very major investments in CMRR–NF and UPF), adequate investments are needed for Readiness in Technical Base and Facilities (RTBF) for operations in and maintenance of existing facilities. My direct concern at LLNL is obtaining sufficient fund-

ing in FY 2011 to support operations at HEAF, which is a one-of-a-kind facility for research and development in high explosives and energetic materials, and to support Site 300, the Laboratory's remote experimental site which is home to the Contained Firing Facility.

LIFE-EXTENSION PROGRAMS

Warhead life-extension programs are undertaken to address issues discovered through surveillance and review processes supporting annual assessments. The role of the LEP is to fix issues that impact overall system effectiveness and extend stockpile life.

Effectiveness is influenced by many factors. Nuclear weapons are not static devices; their chemical and physical properties or characteristics change over time. While plutonium pits have been determined to have a very long service life, aging affects the performance of a number of important components including metals other than plutonium, polymers, neutron generators, and gas transfer systems. In addition, there are many other potential causes of decreased confidence in effectiveness—ranging from design flaws to material compatibility issues. Experience has shown that at least one major new and unanticipated issue is discovered approximately every 5 years.

Thus far, we have been able to retain confidence in warhead safety and effectiveness by offsetting identified increased uncertainties with corresponding increases in performance margins. They have been obtained by changes external to the nuclear explosives package or by relaxing or eliminating military requirements (in coordination with the Department of Defense). Options to further improve these margins have largely been exhausted.

Several LEPs activities are in progress and/or recommended by the NPR, and they are supportable with the proposed FY 2011 budget. The W76 Trident II SLBM warhead LEP is well underway. The initial design activities began in FY 2000 and the final refurbished weapon is expected to be delivered in FY 2017. In FY 2011, concept development is scheduled for completion in preparation for a full-scope LEP for the family of B61 nuclear bombs. The first production unit is planned for FY 2017. In addition, a study to identify and evaluate LEP options for the W78 Minuteman III ICBM warhead will begin in FY 2011. The NPR proposes that this study consider the possibility of having the resulting warhead be adaptable to multiple platforms in order to provide a cost effective hedge against future problems in the deployed stockpile. The first production unit is projected in FY 2021.

These plans for future LEPs are based on consideration of weapon system age and early indicators of impending issues that will need to be addressed. LEP activities formally start with a Phase 6.1 (or Phase 6.2) study conducted jointly with the DOD, which follows processes and procedures that were established for developing weapons during the cold war and have been adapted for LEPs. These joint concept development efforts consider military requirements and explore LEP options to meet the requirements. They involve extensive supercomputer simulation efforts and supportive experimental activities, thorough interactions with the NNSA production facilities and DOD contractors, and extensive peer review.

Within the Laboratory, we consider the full range of technical options to address military requirements that need to be balanced—for example, form fitting and functioning with an existing delivery system while providing enhanced safety (e.g., insensitive high explosive). In doing so, we consider tradeoffs that emphasize one requirement over another. The output of these evaluations is a set of recommended options for the U.S. Government to consider in deciding on the specific LEP option to proceed to engineering development (Phase 6.3). After a decision to proceed to full-scale development is made, we follow a very disciplined engineering process that involves the design agencies, production agencies, and the responsible military service.

LEPs provide the opportunity to consider adding new safety and security features without degrading overall effectiveness or introducing new military capabilities. Some of these safety and security improvements are ready for deployment now and would make a significant improvement; other even more effective approaches require further research. Considered features would be based on previous nuclear tests. Intrinsic surety, which incorporates the safety and security features inside the nuclear explosives package, provides the highest level of safety and protection against terrorist threats. Examples range from enhanced fire safety to technologies that make acquisition of special nuclear materials from U.S. nuclear weapons of little to no value to a terrorist.

The decision to add surety features is up to the U.S. Government, and the technical feasibility of specific safety and security features depends on the weapon and

approach taken to extend its life. The current LEP approach (refurbishment only) limits the range of safety and security features that can be incorporated into certain weapons systems.

The options studied for LEPs will be based on previously tested nuclear designs. To best manage risk, we will consider, on a case-by-case basis, the full range of LEP approaches characterized by the three discrete options along the spectrum of possibilities:

- *Warhead Refurbishment.*—Nuclear explosive package (NEP) composed of existing or newly manufactured components originally designed for that warhead.
- *Warhead Component Reuse.*—NEP composed of components previously manufactured for the stockpile (includes new production of previously manufactured components).
- *Warhead Replacement.*—NEP component not previously produced for the stockpile (based on tested designs).

All potential approaches—or, more likely, combinations of approaches—need to be examined because the areas of most significant risks vary, and often times, have to do with costs, manufacturing issues, the importance of improvements in margins, safety and security, and long-term maintenance and surveillance. These factors differ from system to system, and the various LEP approaches differ in the degree to which they provide flexibility to manage identified risks. They also differ in the degree to which they exercise the skills and capabilities of our people, which is an important consideration in sustaining an experienced workforce. Assessment and certification challenges depend primarily on design details and associated margins and uncertainties rather than the type of LEP approach considered.

Consideration of the full range of LEP options provides the necessary technical flexibility to manage the stockpile with an acceptable level of risk. Our findings and recommendations in studies of options will be based solely on our best technical assessments of cost, risk, and ability to meet stockpile management goals. In decisions to proceed to engineering development, the U.S. Government can consider a number of factors for particular LEP approaches.

THE IMPORTANCE OF PEOPLE

Long-term success in stockpile stewardship fundamentally depends on the quality of people in the program. If the nation is not confident in the expertise and technical judgments of the stewards, the nation will not have confidence in the safety, security, and effectiveness of our nuclear deterrent. Over the years, exceptional scientists and engineers have been attracted to LLNL by the opportunity to have access to the world-class facilities, to pursue technically challenging careers, and to work on projects of national importance. A Stockpile Stewardship Program that is stable, technically challenging, and of recognized importance to the nation is critical to the future success of the program—and to the Laboratory in carrying out its national security responsibilities.

The specialized technical skills and expertise required for stockpile stewardship, which come through mentoring and hands-on experience, take a long time to develop. Program stability is critically important, and it requires a balanced, integrated Stockpile Stewardship Program that has sustained bipartisan support and is sufficiently funded over the long term. We welcome a strong affirmation by the administration and Congress of the importance of the NNSA laboratories' work in maintaining the U.S. nuclear deterrent through stockpile stewardship.

An important benefit of a strong Stockpile Stewardship Program is that this foundational program helps the NNSA laboratories in meeting broader national security objectives. Clearly, nuclear weapons expertise is directly applicable to the nuclear security challenges of proliferation and terrorism. Other areas of national defense, domestic and international security, and energy and environment security also benefit from LLNL's broad scientific and technical base and international leadership in areas such as high-performance computing.

These activities further strengthen our science and technology workforce, add vitality to the Laboratory, spin new ideas and additional capabilities into the weapons program, and serve as a pipeline to bring top talent to LLNL so that we continue to provide the nation outstanding stockpile stewards. A broader base of national security programs at the NNSA laboratories is not a substitute for a strong Stockpile Stewardship Program; neither is it a distraction from our defining mission and responsibilities to sustain the nation's nuclear deterrent.

CLOSING REMARKS

My testimony describing the successes and future challenges in stockpile stewardship supports and amplifies a joint statement my fellow NNSA laboratory directors

and I issued when the Nuclear Posture Review was released. We made two key points.

First, that a Stockpile Stewardship Program which "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."

Second, that "We are reassured that a key component of the NPR is the recognition of the importance of supporting a modern physical infrastructure—comprised of the national security laboratories and a complex of supporting facilities—and a highly capable workforce with the specialized skills needed to sustain the nuclear deterrent."

Finally, I would like to again thank the committee for your interest in and continued support for stockpile stewardship.

The CHAIRMAN. Thank you, Dr. Miller.

Dr. Hommert.

STATEMENT OF DR. PAUL J. HOMMERT, DIRECTOR, SANDIA NATIONAL LABORATORIES, ALBUQUERQUE, NM

Dr. HOMMERT. Chairman Kerry, Ranking Member Lugar, and distinguished members of the Senate Foreign Relations Committee, thank you for the opportunity to testify.

I'm Paul Hommert, director of Sandia National Laboratories, a multiprogram national security laboratory. I'm honored to be here today with my colleagues from Los Alamos and Livermore to testify on sustaining nuclear weapons under New START.

Within the policy outlined in the NPR, the collective DOD and NNSA guidance documents, the FY11 budget request, and the force-structure terms of New START, I am confident that Sandia can provide the required support for the Nation's nuclear deterrent. This confidence comes from our assessment of stockpile management requirements against our mission, product space, and capabilities.

Within the nuclear weapons complex, Sandia is responsible for the design and qualification of nonnuclear components that ensure the weapons perform as intended when authorized, and remain safe and secure otherwise. We are responsible for hundreds of highly specialized components with extremely high reliability specifications and unique, often very harsh environmental requirements.

Today, we are facing new challenges. The weapons in the stockpile are aging and were designed when long life was not a high priority. The radar for the first B61 bomb, for example, was designed for a 5-year lifetime. There are B61s in the stockpile today with components that date back to the 1960s. It is a credit to the Stewardship Program that we have the economical knowledge to support continued confidence in these weapons system as they age.

What are the keys to managing the stockpile into the future?

First, a strong and modernized surveillance program tailored to the needs of an aging smaller stockpile to underpin our annual assessment findings and recommendations. While this is essential for the future, it is not sufficient. Through surveillance activities to date, we have already established a number of stockpile concerns that we must address.

Thus, the second element is the life-extension programs, foremost for us being the B61. This is an immediate challenge for Sandia, with a demanding schedule and a technical scope more than twice

that of the W76 life-extension program. I support the full-scope approach called for by the NPR, and would be very concerned if we only replaced nonnuclear components with the most immediate aging issues with those—and chose to reuse other nonnuclear components, some of which are, even now, over 40 years old.

In addition to the surveillance program and the life-extension programs, we must give strong attention to sustaining capabilities for the future. This—the highest priority is the vitality of our design competencies. In recent years, uncertainties surrounding requirements for the stockpile resulted in programmatic instability noted by the JASON panel as a threat to the stewardship program. Today, nearly half of the Sandia staff with experience in major weapons system efforts are over the age of 55. Their remaining careers will not span the upcoming life-extension program. This puts a premium, going forward, on stable, multiyear program direction and resources to provide opportunities for new technical staff to work with experienced designers.

Also key to sustainment is keeping pace with modern-day technologies. As an example, consider microelectronics, where, since we began our most recent full-system-development effort, the W88 in 1983, there has been a quantum leap in miniaturization and microelectronics functionality that offer real potential for enhancement to stockpile safety and security, which we will realize in the B61.

Infrastructure sustainment is also critical. We have world-class facilities, where we perform a range of scientific research and product qualification, but we also have outdated facilities that were commissioned in the 1950s and 1960s. We are working with NNSA to complete revitalization of our environmental test capabilities required to support the design of the B61 and subsequent LEPs, and to recapitalize the tooling in our trusted microelectronics foundry.

At Sandia, our broad national security work is critical to sustainment. We are well poised to support the New START regime and to continue our contributions to the nuclear security, nonproliferation, and counterterrorism objectives of the Nation. This work exercises and strengthens many of our nuclear weapons capabilities.

New START would not constrain the upcoming life-extension imperatives. However, it does reinforce the importance of a modern stockpile and a responsive infrastructure as we move forward toward a smaller arsenal.

Let me close by summarizing the keys to success, going forward: a robust surveillance program, stable life-extension programs, and unyielding attention to sustaining the key aspects of our capabilities for the future—people, technologies, infrastructure, and our broader national security programs.

Thank you, and I welcome your questions.

[The prepared statement of Dr. Hommert follows:]

PREPARED STATEMENT OF DR. PAUL J. HOMMERT, DIRECTOR, SANDIA NATIONAL LABORATORIES, ALBUQUERQUE, NM

INTRODUCTION

Chairman Kerry, Ranking Member Lugar, and distinguished members of the Senate Foreign Relations Committee, thank you for the opportunity to testify. I am Paul Hommert, President and Director of Sandia National Laboratories. Sandia is

a multiprogram national security laboratory owned by the United States Government and operated by Sandia Corporation[1] 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 complex, Sandia is responsible for the design, development, and qualification of nonnuclear components of nuclear weapons. It is also responsible for the systems engineering and integration of the nuclear weapons in the stockpile. While nuclear weapons remain Sandia's core mission, the science, technology, and engineering capabilities required to support this mission position us to support other aspects of national security as well. As a multiprogram national security laboratory, Sandia also conducts research and development in nuclear nonproliferation, nuclear counterterrorism, energy security, defense, and homeland security.

The policy framework outlined in the 2010 Nuclear Posture Review (NPR) Report, the high-level implementation plan established by the FY 2011 Stockpile Stewardship and Management Plan and the Report in Response to NDAA FY 2010 Section 1251, New START Treaty and Nuclear Force Restructure Plans (to be referred to as Section 1251 Report), and the funding profile described in the Department of Energy FY 2011 Congressional Budget Request weave the fabric of a compelling strategic future for U.S. nuclear weapons policy. In this context and in view of the New START Treaty, my statement today will address five closely related issues: (1) the U.S. nuclear stockpile today and in the future; (2) stockpile surveillance; (3) the life extension programs; (4) a retrospective of stockpile stewardship; and (5) verification technologies.

THE U.S. NUCLEAR STOCKPILE TODAY AND IN THE FUTURE

As noted in the Nuclear Posture Review Report, "The fundamental role of U.S. nuclear weapons, which will continue as long as nuclear weapons exist, is to deter nuclear attack on the United States, our allies, and our partners" (p. vii). Since the end of the cold war, the stockpile has become smaller in total numbers and comprises fewer weapon types, and its size will continue to decrease. It is natural that nuclear weapons policy in the post-cold-war era should be reevaluated in light of 21st century threats. The administration's joint objectives of maintaining a safe, secure, and effective nuclear arsenal and, at the same time, strengthening the global nonproliferation regime and preventing nuclear terrorism provide a challenging, significant role for Sandia and, indeed, for all those involved in the nuclear weapons program.

Within the context of the nuclear weapons policy outlined in the Nuclear Posture Review Report and the collective guidance for implementation provided in the FY 2011 Stockpile Stewardship and Management Plan, the Section 1251 Report, and the Department of Energy FY 2011 Congressional Budget Request, and under the New START Treaty terms, I am confident that Sandia can fulfill its responsibilities in support of the Nation's nuclear deterrent. That confidence comes from our assessment of the stockpile management requirements against our mission and product space and our capabilities. In their totality, the documents describing the future of the U.S. nuclear deterrent represent a well-founded, achievable path forward, which I understand and support. However, as we stand on the threshold of the next era of stockpile stewardship and management, we must recognize the challenges inherent in this framework. A significant body of work is required to sustain the deterrent into the next two decades, and we must ensure that the resources are commensurate with the requirements and expectations. Specifically, I can be confident that the totality of the stockpile management and deterrent policy can be supported only if the FY 2011 budget is authorized and appropriated at the level of the administration's request and the national significance of our mission is sustained.

Mission and Product Space

Sandia is responsible for the systems engineering and integration of the nuclear weapons in the U.S. stockpile. As systems integrator, we are responsible for numerous unique and challenging assignments, including the engineered interfaces from the warheads to the delivery platforms and surveillance management at the weapon system level for the nuclear weapons complex-both flight testing and system-level ground testing.

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

Sandia is the nonnuclear component design agency for NNSA. The components that we design ensure that the weapons will perform as intended when authorized through the U.S. command and control structure, and that they remain safe and secure otherwise. These critical functions are provided through our core products of arming, fuzing, and firing systems (AF&Fs), neutron generators, gas transfer systems, and surety systems. We are responsible for literally hundreds of major components in the stockpile. Our products are highly specialized electrical, microelectronic, electromechanical, chemical, and explosive components with extremely high reliability specifications and unique, very harsh environmental requirements. For example, an "intent stronglink" is a component that prevents a nuclear weapon from being armed until a unique string of code is entered indicating human intent. Even in the most recent designs, there are more than 200 parts in a component the size of a cell phone. We are also responsible for "weaklink" components, which are designed to fail in a manner that precludes inadvertent nuclear detonation in accident scenarios such as those involving fire or lightning. These safety components must meet stringent requirements.

Sandia designs, engineers, and integrates these specialized products into the Nation's nuclear arsenal through the efforts of a world-class workforce and highly specialized tools, facilities, and equipment. However, to fulfill our responsibilities for the deterrent into the future, we are facing new challenges.

Consider first that most of the weapons in the current stockpile were designed at a time when long design life was not typically a high-priority design requirement. The radar for the first B61 bomb, for example, was originally designed for a 5-year lifetime; today there are B61s in the stockpile with components manufactured in the late 1960s. It is a credit to our Stockpile Stewardship Program that we have the technical knowledge base to support continued confidence in these weapon systems as they age. Indeed, it is also a credit to those who designed the current stockpile that it has lasted well beyond original design lifetimes. Now we are working to provide solutions that will extend the lifetime of our nuclear arsenal for another 30 years.

The state of the stockpile is reported to the President through the annual assessment process. Through this process, we have been, and remain, able to assess the Nation's stockpile as safe, secure, and reliable. That said, as we move forward with the challenging business of extending the lifetimes of U.S. nuclear weapon systems, we must address stockpile aging and degradation, as well as technology obsolescence. In addition, long weapon lifetimes will become a specific design objective.

While the options to refurbish, reuse, and replace are applicable to the nuclear explosive package, almost all of Sandia's life extension work will involve replacements with modern technologies. Nonnuclear components, by their very nature, are subject to a whole range of potential aging and failure modes. Although we may be able to reuse some of the original components, doing so uniformly would be a fundamentally unwise option when their service life must be extended by another 30 years. In addition, only modern technology will enable introduction into the stockpile of the safety and security required by the Nuclear Posture Review Report.

Stockpile Surveillance

Stockpile surveillance and assessment play a crucial role in assuring the nuclear deterrent. Through these activities, we develop knowledge about the safety, security, and reliability of the stockpile. This knowledge provides the technical basis for our annual assessment findings and recommendations regarding the state of the stockpile. It also informs decisions made about the stockpile: from deployment and targeting to safe handling operations (routine or otherwise) and from there to development of new component and system design options. In their 2009 annual assessment letters, all three NNSA laboratory directors highlighted concerns about inadequate progress toward surveillance transformation. Former Sandia Laboratories Director Tom Hunter said, "I believe that the level of commitment to a tailored and balanced stockpile evaluation program for our aging, smaller stockpile is inadequate." Indeed, the JASON panel reached the same conclusion in their 2009 life extension study.

The Department of Energy FY 2011 Congressional Budget Request places high priority on stockpile surveillance, and we understand and agree to strengthen our knowledge and confidence in the current stockpile. The Surveillance Transformation Plan was established to better align our surveillance program with the challenges of an aging and smaller stockpile. The plan aims to shift the surveillance program's focus from finding defects to acquiring deeper scientific understanding of stockpile performance margins, distributions, and trends by creating higher fidelity diagnostics and physical and computational simulation capabilities. In this new framework, we will be better able to anticipate stockpile performance degradation and to schedule required actions. Yet, although essential, a strong surveillance pro-

gram is only one component of stockpile management into the future. The life extension programs are another component.

THE LIFE-EXTENSION PROGRAMS

The B61 Life-Extension Program

The Nuclear Posture Review Report concluded that the United States will "proceed with full scope life extension for the B61 bomb including enhancing safety, security, and use control" (p. xiii). This is the most immediate stockpile challenge for Sandia. For this life extension, we are deliberately building multidisciplinary teams of both highly experienced staff and new talent, sustaining the necessary knowledge in the management team, providing an optimal teaming environment, ensuring that facilities are ready for the work, and piloting new processes that will benefit our life-extension work.

Nevertheless, we find ourselves in a state of urgency, with a demanding schedule and expansive product requirements. The primary driver for the schedule of the B61 LEP is the fact that critical nonnuclear components are exhibiting age-related performance degradation. For example, the radar in the B61, which includes the now infamous vacuum tubes, must be replaced. In addition, both the neutron generator and a battery component are fast approaching obsolescence and must be replaced. A secondary driver for the schedule is the deployment of the F35 Joint Strike Fighter, which requires a new digital interface for the B61. Replacing the three aging components and adding the new digital interface represent the absolute minimum approach to this LEP. However, it is my judgment that we need to approach this LEP with a resolute commitment to replace old nonnuclear components and field a nuclear weapon system that employs modern technologies to improve safety and security and to extend service life.

The weapon systems addressed through the LEPs of the coming two decades will be in our stockpile well into the second half of this century. The "full" scope for the B61 LEP called for in the Nuclear Posture Review Report is a prudent approach to this life extension that addresses aging concerns, obsolete technologies, and enhancements in safety, security, and use control. Notably, the scale of this LEP will be much larger than that of the W76 Trident II SLBM warhead LEP, which is now in production. Whereas the W76 LEP involved redesign and replacement of 18 major Sandia components, the B61 LEP involves 46 such components.

To extend the lifetime of the B61, the requested FY 2011 funding is critical. We must complete the design definition in FY 2011 to create a firm understanding of system requirements and thus fully establish future-year budget needs. Total cost estimates for the B61 LEP are subject to change until the design definition and requirements are finalized.

We also have considerable technology maturation work to perform in FY 2011. Technology maturation is a rigorous approach we apply to developing new technologies, from the earliest conceptual designs through full-scale product realization and ultimately insertion into the stockpile. We use a construct of technology readiness levels, first implemented at the Department of Defense and then NASA, and implement a series of technical and programmatic reviews to ensure that new technologies reach the appropriate maturity level before they are used in a life extension baseline design. For the B61 LEP, we have 13 major categories of technology maturation work underway. Our cost estimates for FY 2011 in this area depend heavily on the progress we are trying to make in FY 2010. I am therefore concerned that, if the requested FY 2010 reprogramming is not implemented, significant additional risk will be introduced into our FY 2011 efforts on the B61 LEP. For example, we began FY 2010 by staffing up our B61 LEP team to position ourselves for strong performance in FY 2011. Specifically, we started FY 2010 with 139 full-time equivalent employees for the B61 LEP, and that number peaked in April at 192. Now the numbers are declining in the absence of FY 2010 reprogrammed dollars and concern over FY 2011 continuing resolution. Unless this situation changes, we will enter FY 2011 with roughly 50 percent of the staffing level that was originally intended for this critical program.

The possibility of a prolonged continuing resolution for FY 2011 is a real concern. The funding growth required for the B61 LEP from FY 2010 to FY 2011 is so essential that a continuing resolution funding level referenced back to FY 2010 will almost surely require removing staff from the program, a slip in the FY 2017 target for first production unit, or even a down-scoping of the program. The LEP schedule and scope are also, of course, heavily dependent on the appropriated funding in FY 2012 and beyond. FY 2011 funding is needed to get this program off to a good start, but enduring multiyear sustained funding is required to bring this program to successful completion. The success of the B61 LEP also requires a fully supported pro-

duction complex with particular importance placed on the Kansas City and Pantex Plants.

Other Life-Extension Programs

The B61 bomb is our current focus, but certain reentry systems in our stockpile also require near-term life extension activities. The Nuclear Posture Review Report recommended "initiating a study of LEP options for the W78 ICBM warhead, including the possibility of using the resulting warhead also on SLBMs to reduce the number of warhead types" (p. xiv). The Department of Energy FY 2011 Congressional Budget Request includes funding for a W78 LEP. Based on the guidance in the Nuclear Posture Review Report, the planning for this LEP will also examine the opportunities and risks associated with the resulting warhead referenced above.

At the request of the Office of the Secretary of Defense, we completed a feasibility study for a common integrated arming, fuzing, and firing (AF&F) system. Using an envelope of the requirements for the W78 and the W88, and even the W87 and the U.K. system, our study concluded that this approach was technically feasible, including improvements in safety and security enabled by miniaturization of electronics. Savings in weight and volume, at a premium in reentry systems, can be used for those additional safety and security features. The study results have been briefed to the Nuclear Weapons Council and are being used to inform decisions regarding the scope, schedule, and interplay between the W78 and W88 life extensions.

A RETROSPECTIVE OF STOCKPILE STEWARDSHIP

My confidence in our ability to successfully execute the life-extension programs is based on the suite of tools and capabilities that have resulted from the investments made in stockpile stewardship. For the first 15 years of the Science-Based Stockpile Stewardship Program, creating the scientific tools and knowledge required in the absence of underground nuclear testing was a compelling grand challenge for the U.S. nuclear weapons program. While the moratorium on underground nuclear testing had a more direct impact on Los Alamos and Lawrence Livermore National Laboratories than on Sandia National Laboratories, hundreds of experiments have been run on Sandia's Z accelerator, providing critical experimental data that are tied directly to the milestones of NNSA's Predictive Capability Framework roadmap. Advances in our pulsed power capabilities are supporting the Advanced Certification, Dynamic Materials Properties, and Primary and Secondary Assessment Technologies programs.

At Sandia, the primary impact of the moratorium on underground nuclear testing was the need to create tools and acquire the knowledge necessary to sustain confidence in the radiation hardness of our designs. We created advanced stockpile stewardship tools and effectively applied them to our annual assessment of the stockpile and to the qualification of the W76–1 life-extension program. Those tools gave us the understanding and knowledge to assess with confidence the state of the stockpile. Advances in our computational tools and improved experimental capabilities, coupled with high-fidelity diagnostics for model validation and improved characterization of test results, provided this new understanding.

Looking back at the Science-Based Stockpile Stewardship Program, it is clear that we collectively understood the magnitude of the change that needed to occur in the nuclear weapons program to address the moratorium on underground nuclear testing. What we, at Sandia, perhaps did not fully appreciate at the time was the impact that the end of the cold war would bring to the vitality of our system and component design community. During the cold war, we were pursuing simultaneously as many as 14 full-scale weapon development programs. Since 1992, we have had a total of only two programs of similar scale: the W76–1 and the W80–3 LEPs. The latter was cancelled in 2005. Thus, as we began to implement stockpile stewardship in the early 1990s, our weapon systems development workload dropped dramatically, and that meant less work for systems engineers and component designers. At the same time, technological advances were happening that would bear directly on the products within Sandia's responsibility.

As stated earlier, the products Sandia designs and engineers are highly specialized for the unique demands of nuclear weapons; however, they are related to commercial products because of similarities in underlying technologies. To express this idea differently, our components have a point of reference in commercial technology. This reality bears directly and significantly on Sandia's responsibilities as we embark on the next era of stewardship.

The pace of technological advances in recent decades has been staggering. Let me give just one example. In 1983, we were embarking on the full-scale design and development for the W88 Trident II submarine-launched ballistic missile (SLBM) war-

head, which is the last newly designed warhead to have entered the stockpile, and it took advantage of the microelectronics available at the time. That year, the cell phone industry, also relying on microelectronics, was proud of the first network in the United States: 7,000 phones, each weighing about 2 pounds. In the time that has passed since, miniaturization and functional density of microelectronics have taken a quantum leap. Today there are about 285 million cell phones, each weighing about 3 ounces. Such technological advances mean simply that some of the technologies on which Sandia products are based have become radically more advanced than they were the last time we built a large number of nonnuclear components for weapons.

The strong tie between the products developed by Sandia and those developed by the private sector is both a challenge and an opportunity—a challenge, because we must have the right set of people, skills, production equipment, and an up-to-date technology base at a time when budgets are not predictable; yet an opportunity, because it keeps us agile, adaptable, in tune with the needs of the Nation and because modern technologies provide opportunities for improvements in stockpile safety and security. This strong tie manifests itself in several ways. To reduce cost and whenever the required functionality is available from a trusted supplier in the commercial sector, we incorporate commercial off-the-shelf (COTS) parts into our products. Furthermore, for the parts we must manufacture (for example, specialized microelectronics), only modern production tooling and equipment can be readily maintained. Perhaps most important is the fact that we can attract the best and brightest new graduates when we can offer them challenging innovative projects that use the latest technologies, which they understand and on which they have been trained.

Cyber risk is another aspect of technological advances that we must consider. Since the 1980s Sandia has pioneered the use of vulnerability assessments to determine systematic cyber weaknesses in command and control and surety systems. We believe it is vital to the next generation of life extension programs that cyber risk be assessed and capabilities developed to mitigate the dangers.

Workforce

The demographics within Sandia's nuclear weapons program clearly reflect both the strengths of the Stockpile Stewardship Program and the challenges of a period with few full-scale weapon design programs. We have attracted the very best scientists, engineers, and technologists to the laboratories with large-scale science-based engineering programs that bring together computational with experimental test capabilities. However, retaining talent in our weapon and component design community has been challenging. The uncertainty surrounding the requirements for the future stockpile resulted in programmatic instability and lack of full-scale engineering development programs. In their recent life extension study, the JASON panel noted that a "lack of program stability" threatened the continued strength of the stewardship program.

While we must rise to meet near-term challenges of the Stockpile Stewardship Program, we also must establish the basis for long-term stability. For Sandia, stability should be viewed in the context of three pillars: people, infrastructure, and broad national security work. The Nuclear Posture Review Report highlighted the importance of the first two of these: "In order to remain safe, secure, and effective, the U.S. nuclear stockpile must be supported by a modern physical infrastructure, and a highly capable workforce" (p. xiv).

Today, 37 percent of the experienced technical staff in Sandia's weapon system and component design organizations are over the age of 55. Their remaining careers will not span the upcoming life extension programs. This reality puts a huge premium going forward on stable, multiyear, large-scale LEPs that provide opportunities for our new technical staff to work closely with our experienced designers on a full range of activities-from advanced concept development to component design and qualification, and ultimately to the production and fielding of nuclear weapon systems. The team we are assembling for the B61 LEP is representative of the new multidisciplinary approach we will take to ensure that (1) the powerful stewardship tools developed through our Nation's investment and applied effectively to stockpile assessment are adapted going forward to meet the needs of the design of weapon system architectures and components and (2) the latest technologies and innovative designs are coupled with rigor that comes from experience. To give only one example, recently validated thermal models developed by the Stockpile Stewardship Program were applied to the design of thermal batteries for the B61 LEP. These models allowed us to identify a nearly twofold increase in battery run time that could be achieved with a simple material substitution.

New tools and modern technologies, coupled with our management vision for the engineeringenvironment required for success, will foster innovation; lead to safety and security for the upcoming LEPs; and provide foundational technical and scientific strength to support the stockpile over the long term.

Essential Capabilities and Infrastructure

Sandia's capabilities are essential to its full life cycle responsibilities for the stockpile: from exploratory concept definition to design and qualification, and ultimately through ongoing stockpile surveillance and assessment. Let me point out a few examples.

The NNSA complex transformation plan designated Sandia as the Major Environmental Test Center of Excellence for the entire nuclear weapons program. The facilities and equipment we have in this area are extensive: (1) twenty test facilities at Sandia-New Mexico; (2) the Tonopah flight test range in Nevada; (3) the Weapon Evaluation Test Laboratory in Amarillo, Texas; and (4) the Kauai test facility. We use environmental test capabilities to simulate the full range of mechanical, thermal, electrical, explosive, and radiation environments that nuclear weapons must withstand, including those associated with postulated accident scenarios.

Significantly, capabilities originally developed in Sandia's nuclear weapons program also support other national needs. For example, the Thermal Test Complex, one of our major environmental test capabilities, is a $38M world-class suite of facilities supporting a full spectrum of technical research: from the basic studies of fire chemistry and model validation, to full-scale highly instrumented simulations of weapon system safety performance in fuel fire accident scenarios. The Thermal Test Complex was funded by Test Capabilities Revitalization (TCR) Phase 1, came online in 2006, and immediately provided necessary capabilities for the W76–1 LEP. Interestingly, expertise in flow visualization, plume evaluation, thermal sciences, and fire sciences developed at the Thermal Test Complex was recently also used in an area unrelated to nuclear weapons: the BP oil disaster.

Today, TCR Phase 2 funding is needed to renovate our suite of mechanical environment test facilities, many of which were commissioned in the 1950s and 1960s. These facilities will support the design and qualification of the B61 life extension and subsequent LEPs.

Another unique capability that Sandia stewards for the nuclear weapons program and also for DOE's nonproliferation payloads is the microelectronics research and fabrication facility, where we design and fabricate an array of unique microelectronics, as well as specialty optical components and microelectromechanical system, or MEMS, devices. This capability includes a national "trusted foundry" for radiation-hardened microelectronics. We have been providing microelectronic components to the nuclear stockpile at the highest level of trust since 1978 and to DOE's nonproliferation payloads since 1982. In 2009, Sandia received Class 1A Trusted Accreditation (the highest level of accreditation) from the Department of Defense for Trusted Design and Foundry Services and is the only government entity with this accreditation for both design and foundry operations. We must recapitalize the tooling and equipment in our silicon fabrication facility, much of which dates back about 15 years in an industry where technology changes almost every 2 years. Recapitalization will ensure production of the radiation-hardened components required by the upcoming reentry system life-extension work.

Expertise in materials science is required to engineer new materials for future stockpile applications, create the physics-based understanding of material aging in the current stockpile, and project potential performance impacts. Our materials science capabilities are essential to our national security mission. And yet, past funding constraints in Sandia's nuclear weapons program led to significant erosion in materials science. That erosion might have been even more serious had Sandia not successfully leveraged materials science research in support of its broader national security role. We are currently working with NNSA on centralizing our nonnuclear materials science funding and thereby enabling a more integrated capability.

We also have a critical but eroding capability in radiation effects sciences. It is my belief that the U.S. strategic arsenal should continue to maintain its requirements for radiation hardness. By its very nature, U.S. nuclear deterrence requires a nuclear arsenal that cannot be held at risk or denied by any adversary. Relaxation in the strategic hardness of our designs could be interpreted as a weakening of our deterrent posture.

Nuclear survivability is best addressed through intrinsic design properties and cannot be added through modifications to the stockpile once a threat changes. During the era of underground nuclear testing, we exposed Sandia components to nuclear environments as part of the qualification process. Today, in order to create a

fundamental understanding of the phenomena and failure mechanisms of concern, we simulate nuclear environments in aboveground test facilities, create computational models of the experiments, and then validate the computational models with experimental results. However, experimental and modeling and simulation capabilities that allow us to assess with confidence must be sustained. In the recent past, funding in this area has been erratic, resulting in difficulties managing the program and sustaining the critical skills of our staff in the important area of nuclear effects simulation.

Broad National Security Work

Today, national security challenges are more diverse than they were during the cold war. The NNSA laboratories are uniquely positioned to contribute solutions to these complex national security challenges. In the new environment, synergistic work supporting other national security missions is crucial. Indeed, as mentioned in the FY 2011 Stockpile Stewardship Management Plan Summary, "while NNSA nuclear weapons activities are clearly focused on the strategic deterrence aspects of the NNSA mission, they also inform and support with critical capabilities other aspects of national security."

I will refer to only one of many success stories at Sandia (others come from materials science, microelectronics, and computer science), showing how capabilities for the nuclear weapons program benefit from synergy with other national security programs. It is the story of our work in radars.

Competency in specialized radar applications is a required capability for the nuclear weapons program. As a result of initial investments in radar fuze capability for nuclear weapons, in 1983 we began working on miniature radars based on synthetic aperture concepts for nuclear weapons and broader national security activities. In 1985 we became involved in a program for the Department of Defense to develop a high-resolution, real-time synthetic aperture radar (SAR) suitable for use in unmanned aircraft. Sandia flew the first such SAR prototype in 1990. Follow-on work sponsored by the Department of Defense reduced the size and cost of SAR systems, improved resolution, and significantly expanded the applications and military benefits of radar. Partnerships with industry have transitioned each generation of the technology into field-deployable systems. Sandia-designed airborne SAR systems are now widely used for real-time surveillance by the U.S. military.

In this example, the original radar competency of the nuclear weapons program was improved by this work for the Department of Defense. The resulting advanced radar competency made it possible to apply new technology to the updated fuzing system for the W76-1 life extension. This updated fuzing system would not have been possible without the competency that was maintained and advanced by work for the Department of Defense.

VERIFICATION AND MONITORING

Sandia has had a long tradition of ingenuity and engineering excellence in developing technologies for verification and monitoring to support efforts in nonproliferation and nuclear security as demonstrated, for example, by our successful record of involvement with international treaties: from the VELA Satellite Programs (1960s) to the Intermediate-Range Forces Treaty (INF, 1987) and from there to the Strategic Arms Reduction Treaty (START, 1994). The New START Treaty signed in Prague in April 2010 aims to enhance predictability and stability and thus security, and verification activities will monitor compliance with limits and other obligations set forth in the treaty.

While details of Sandia's activities in verification can best be presented in a classified environment, I will state here that we have carefully reviewed the New START Treaty and understand the limits and obligations as well as the changes to the inspection protocols. Sandia will continue to support the government by providing the best technical solutions and expertise required. The current language of the New START Treaty mentions the radiation detection equipment, which was developed and manufactured at Sandia and used in the previous START, as a key piece of equipment for verification purposes under the terms of the new treaty. In addition, between September 2009 and April 2010, two Sandia experts served as technical advisors on the delegation that negotiated the New START Treaty.

CONCLUSIONS

As stated in the Nuclear Posture Review, "as long as nuclear weapons exist, the United States will maintain a safe, secure, and effective nuclear arsenal" (p. iii). The upcoming decade will be demanding as we conduct a number of life extension pro-

grams under compressed schedules, modernize our aging facilities, and invest in human capital.

Within the context of the nuclear weapons policy presented in the Nuclear Posture Review Report and the collective guidance for implementation provided in the FY 2011 Stockpile Stewardship and Management Plan, Section 1251 Report, and the Department of Energy FY 2011 Congressional Budget Request, and under the New START Treaty terms, I am confident that Sandia can provide the required support for the nation's nuclear deterrent. That confidence is based on our assessment of the stockpile management requirements against our mission and product space and our capabilities.

The New START Treaty, if ratified and entered into force, would not constrain or interfere with the upcoming stockpile life-extension imperatives. It would not change our planned approach or the tools we will apply. It would not limit the required introduction of modern technologies into existing warhead designs and the realization of the attendant benefits. However, it would reinforce the imperative to ensure a modern stockpile and a strong, responsive infrastructure as we move toward a smaller nuclear arsenal.

As a whole package, the documents describing the future of U.S. nuclear policy represent a well-founded, achievable path forward, which I understand and support. However, as we stand on the threshold of the new era of stockpile stewardship and management, we must recognize the challenges inherent in this framework. A significant body of work will be required to sustain the deterrent into the next two decades, and we must ensure that resources are commensurate with the requirements and expectations. The administration's FY 2011 budget request reflects a strong alignment among the White House, the Department of Defense, and the NNSA, and it recognizes the magnitude of our future work scope. And the fact that the three national security laboratory directors were invited to speak before you today is a clear indication of the leadership role of Congress in authorizing a path forward for U.S. nuclear deterrence. Our success in sustaining the stockpile rests on program stability, multiyear sustained funding, a clear national commitment to the U.S. nuclear deterrent, and the opportunity to perform innovative technical work in the service of the Nation.

The CHAIRMAN. Thank you very much, all three of you. And, again, may I say, for all of us, how much we appreciate your leadership in this critical area.

Let me begin. Each of you has raised the issue of resources, obviously, and appropriately. This week, Senator Lugar and I were invited to the White House and met with the President and Vice President on this subject, and I'm pleased—we're pleased—to be able to report that the President made it crystal clear that he is completely committed to the full funding of this modernization program for as long as his administration is in power, and he is going to make that clear to the leadership of the Senate, and particularly to Senator Kyl and others who have raised that concern, appropriately.

I want to make it clear, all of us are concerned about the viability of our deterrent. It would be absurd not to be. We rely on it. It's been a critical component of our country's defense and security for as long as it's existed, and we've always taken the measures necessary to maintain the technological confidence, and even edge, superiority, to know that we're in the position that we want to be. We are all committed to staying there.

There was a healthy debate at one period of time, based on the Perry-Schlesinger report and other things, that raised the question of building a new warhead design, other things, and it was rejected by the House. But, I think the current language is such that proceeding on an item-by-item basis and keeping our minds open to what is the best way to maintain the viability of those warheads, that we can proceed.

Am I correct, gentlemen, in reading your testimony and taking away from each of you the conclusion that—as former Secretary of Defense Bill Perry told this committee with respect to the Nuclear Posture Review, "The Nuclear Posture Review explicitly authorizes reuse, which the laboratories have felt reluctant to use before, and it gives the condition under which redesign can be achieved." He says, "I think this is a major step forward from where we are before."

Judging by your written statements, it seems to me you would endorse Secretary Perry's comments, but I would like to emphasize this for the record. Is that accurate? Do you feel confident that the NPR allows you the flexibility needed to be able to guarantee the viability of the structure?

Dr. Anastasio.

Dr. ANASTASIO. Sir, I believe, with the flexibility offered to explore the full range of options, that we do have the ability to sustain the stockpile with acceptable levels of risk. It's not the perfect approach, but we believe—or, I believe—that this is an approach that we can make work—again, if we have a program that's well planned and adequately funded.

The CHAIRMAN. Dr. Miller.

Dr. MILLER. Yes. Senator Kerry, I would say that the outline that is included in the NPR not only gives us the flexibility, it gives us the responsibility; it specifically says we are to examine the full range of options. It's certainly something that I feel, personally, is my responsibility to the country, to bring forth the full spectrum of options and which ones work the best.

In addition, we have certainly been encouraged by members of this administration, that that is their intent; they want us to examine the full range of options and to be sure that the full range of technical options are available to the decisionmakers.

The CHAIRMAN. Dr. Hommert.

Dr. HOMMERT. Yes. Mr. Chairman, in the Sandia mission space, which is nonnuclear components, largely as we go forward we will engage in replacement to adapt to modern technologies. But, overall, I would say I agree with my colleagues here, that what faces us in managing this stockpile forward, that this is not a limitation directly, and one that we can address in recommendations, we come forward, in the best way to manage the stockpile.

The CHAIRMAN. And the $624 million that, I think, is in the budget for next year, while it's not the $900 million that I think some requested, still amounts to a significant increase. Does that give you the capacity to be able to do what you need to do?

Dr. ANASTASIO. Well, sir, I think, first, that budget request—we sure hope that Congress will act on it, as well, but if that——

The CHAIRMAN. Assuming we act on it——

Dr. ANASTASIO. Yes. If that comes to pass——

The CHAIRMAN [continuing]. You get to 624——

Dr. ANASTASIO [continuing]. To me, it's a very strong commitment, on the part of the administration, to this program, and to what we need to do. Of course, that's the near term. As a good program manager, you need to worry about funding across the full life of the program, and that's an issue, as well. But——

The CHAIRMAN. But, no administration and no Congress can commit that to you. We can commit now and next year.

Dr. ANASTASIO. I understand. And I—and, as I say, that's an excellent start and a very strong, positive message.

The CHAIRMAN. And you don't have to kill for it.

Dr. ANASTASIO. Pardon?

The CHAIRMAN. You don't have to kill for it.

Dr. ANASTASIO. No, no. [Laughter.]

No, sir.

The CHAIRMAN. Dr. Miller.

Dr. MILLER. Yes, it is. The FY 2011 budget is a very positive step. Given the recent trends, you know, I can't say strongly enough how positive a step it is. It sets the direction correctly, sets the stage for the continued investment in this area, as Dr. Anastasio has said. You know, my concern is whether or not the country will be able to sustain that, because that is what is required in order to move this program and accomplish what has been set forward as a set of program goals for us.

The CHAIRMAN. Dr. Hommert.

Dr. HOMMERT. Yes. The FY11 budget, for us, is dominated by initiating the B61 life-extension program. And it's imperative that we begin that in 2011. And also in 2011 it allows us to accomplish establishing the baseline and requirements and cost for the full life-extension—full engineering development on the 61. So, it's a critical year, and it is supported in the budget.

The CHAIRMAN. Well, I appreciate that, from all of you.

I'm going to recognize Senator Lugar.

I, incidentally, noticed, Dr. Miller, that you pronounced his name "Loogarr." And yesterday Senator Corker made a major issue out of clarifying for the world how it is correctly pronounced. It's like the gun, "Looger." So——

[Laughter.]

Senator CORKER. We did do that in a secret meeting. I didn't want anybody to know that his name is actually "Looger." But——

The CHAIRMAN. It was a secret——

Senator CORKER [continuing]. It's good——

The CHAIRMAN. It was a secret meeting in front of cameras, press, all kinds of people. [Laughter.]

Dr. MILLER. I do apologize for my Southern heritage. [Laughter.]

The CHAIRMAN. That's something you should never apologize for, sir. [Laughter.]

Senator Lugar is going to also chair, because I have to go introduce a new U.S. attorney to the Judiciary Committee, so I hope you'll forgive me for that. But, I'll stay until I do have to run for that.

Thank you.

Senator Lugar.

Senator LUGAR [presiding]. Well, thank you very much, Mr. Chairman. I appreciate your introduction on the basis of my name identification, appropriate that it be equated to a gun during an arms control hearing, but——

[Laughter.]

Senator LUGAR [continuing]. Not to worry.

Let me just suggest, Dr. Anastasio, you note that one approach in—to maintaining a focus on our nuclear stockpile across multiple administrations and Congresses could be a set of safeguards that have been used in approving past arms control treaties. Now, I ask, Do you mean that certain measures could be required in a resolution approving the New START Treaty that would speak to these issues? And I raise this and would note that the Senate spoke to the safety, reliability, and performance of our nuclear forces when it approved the START II Treaty. I would mention, just for the sake of clarity, that the START II Treaty did not come into force, due, ultimately, to Russian objections, but it did pass this committee, it did pass the Senate, and it had at least these elements that have been suggested.

Now, would you agree with me, sir, that a good way to maintain the focus that you desire, and that we desire, would be to approve the New START Treaty with similar provisions?

Dr. ANASTASIO. Senator, my concern is the sustainability over the long term. Certainly, using safeguards could be one approach that the Congress could use to keep attention and focus. There are other approaches that potentially could serve, with annual written reports like the annual assessment letters that we write every year, which happen to be classified; we could do something unclassified. There could be regular hearings, annually, or some such thing, but something in that spectrum of ideas. Perhaps there's something that will work for the Congress and the administration that will allow us to keep this focus and to assure ourselves that we're still on track and on path to take care of these important issues.

Senator LUGAR. Well, I appreciate your comment, and maybe you could be of further counsel. I raise it because I suspect that, given what I mentioned, the potential multiple administrations, a stretch here, that perhaps our resolution of ratification ought to include language or other steps that might be useful in simply tightening our own focus on this issue of this hearing today and of the debate.

Let me ask for comments of all three of you. And, if you can, try to jot down in your memories these four items so that you might respond to them effectively together.

First of all, are U.S. nuclear weapons safe, secure, and effective?

Second, is Russia modernizing its stockpile of nuclear weapons?

And third, without the data provided by the New START Treaty, will there be more uncertainties with respect to the nuclear weapons Russia deploys as a part of its modernization?

And finally, would more uncertainty with regard to Russian weapons complicate current stockpile challenges—in particular, if our military decided that we would need to respond to those uncertainties through stockpile adjustments?

As you can tell, essentially I want to know your evaluation of how safe, secure, and reliable our stockpile is; what the Russians are doing; if we don't ratify START; and the uncertainties then increase, or maybe you will testify they wouldn't increase, but if they would; and then, under those circumstances, how we then begin to adjust what we're going to do, given a world of uncertainty in this area.

Would you commence with that, Dr. Anastasio?

Dr. ANASTASIO. Sure. So, the U.S. weapons in the stockpile today are safe, secure, and reliable. And I'm confident of that. I do worry about the long-term viability. And that's, of course, the basis for all the discussion——

Senator LUGAR. Yes.

Dr. ANASTASIO [continuing]. We're having today.

As far as "Is Russia modernizing their stockpile?"—to the best of the information I've seen from our intelligence community and our contact directly with the Russians over the years, I certainly believe that that's what they're doing.

Without data from New START, would that create more uncertainty for us about Russia? Well, certainly the country would not get as much information that the monitoring program would provide through New START.

Would that impact and complicate our job? I think, perhaps, that's best to ask the commander at STRATCOM or someone in the military, but my personal sense is that, based on what we know about the Russians, I think the path forward for our program is that it incorporates that knowledge that we have about where the Russians are going. So, I'm not sure that it would complicate, but, if we do get new requirements from the Department of Defense, then that certainly would have to be folded into the plans on how we could go forward, and we'd have to adjust the program to respond.

Senator LUGAR. Dr. Miller, do you have a comment on these questions?

Dr. MILLER. Yes, sir. Again, today I think the U.S. stockpile is safe and secure and effective. The principal issue is that in order to keep it that way requires us to do work on the stockpile, and, in many cases, there are opportunities to improve the safety and security of our stockpile in ways that are potentially very beneficial.

The Russians, I believe, are modernizing. We have an intelligence division at Livermore that spends a lot of time understanding what's going on in foreign countries. Again, it is my understanding that they are actively modernizing their stockpile.

I think that it is certainly true that the START Treaty that is under your consideration does offer the ability to understand, provide more data on what's going on in Russia with their systems. As a technical person, data is always valuable. And so, it will certainly reduce our uncertainties.

With respect to how the United States responds to those uncertainties, I would first say that the treaty itself does not impact, in a direct way, our job on the warhead side. It, of course, does impact the Department of Defense, in terms of the delivery systems. But, in terms of the treaty, the warhead proceeds, independent of any particular limitations in the treaty itself.

Senator LUGAR. Thank you.

Dr. Hommert.

Dr. HOMMERT. Yes, sir. I'm not going to—I think I agree with the comments of my colleagues.

Just on the first point, certainly the U.S. stockpile remains safe, secure, and effective. But, I would say that perhaps, as we look to an unprecedented age of our overall stockpile, the imperative for us

to take some action on that stockpile is increasing. And, in this forum, we'll just leave it at that.

And then, as to the other topics, I would echo the comments of my colleagues.

Senator LUGAR. I thank all three of you.

I thank you, Mr. Chairman.

The CHAIRMAN [presiding]. Thank you very much.

Senator Corker.

Senator CORKER. Thank you, Mr. Chairman. And thank you and the ranking member for having this hearing.

To me, the issue that we're focused on today is the most crucial issue that we need to be focusing on. And I thank each of you for your leadership. I know I plan to visit your facilities—two of the three facilities—at the end of the month, and get some firsthand input.

We have had others, who know each of you well and are former directors and have other relationships with you, who've talked a great deal about the fact that, if you look at this 10-year plan, that, in essence, we're still, even with the first-year input that we have, which I think we all welcome, that there's still about a $10 billion shortfall to do the things that need to be done over this next 10 years to really modernize and do the things that we need to do.

Over the course of time, I know we're going to talk more fully about that, but I wondered if you all might want to talk today about that, and give any editorial comments.

Also, I might add, in the 1251 report, it seems that we've pushed a great deal of the funding into the out years. And it seems to me it's pretty difficult—obviously, we do that a lot around here. And what I mean by that is, we leave the tough decisions to other people, and sometimes they never get made. I wondered if you two—if all three of you might comment on what I just said.

Dr. ANASTASIO. Well, certainly, Senator, the former lab directors are all colleagues of ours, and we do hear from them rather regularly.

As far as the funding issue, as I said, I think the 2011 budget submission shows strong commitment on the part of the administration. However, I do have concerns, as I've tried to express, that, in the out years, we need to find ways to sustain our focus and commitment to that.

A program that's back-end funded is always a difficult one to manage, when you're never sure, when you're funded on a year-by-year basis, exactly what's going to happen then. So, I think that is an important issue.

The other important part of that is that, for many of the major activities, like the life-extension programs or the nuclear facilities at Y–12 or at Los Alamos that need to be refurbished, we still don't have full estimates of what those costs are. What are the baseline costs for the LEPs and those facilities? Those are not fully established yet. So, there's still uncertainty in what the costs are going to be for this program over its 10-year life or 20-year life.

And so, I think, with all those reasons, we need to continue to have our focus and pay attention and adjust the program as we learn more. And hence, my suggestion and the dialogue with Senator Lugar about potential mechanisms to keep that focus.

Dr. MILLER. Yes, Senator, I also believe that the major risks associated with this program are in the out years. The 2011 budget is a very good first step that we strongly welcome. And, you know, as an individual familiar with managing very large programs in the budget environment that this country chooses to live in, it is very important to readjust the expectations every year, because we learn something every year. As Dr. Anastasio said, most of the major programs, such as the B61 life-extention program and the required facility upgrades do not yet have firm baselines. They will be established over the next year. Once we get that information, we will have to adjust the out-year budgets.

We also learn things every year about the nature of the stockpile itself. Is it aging as rapidly as we currently expect? Is it aging more rapidly or less rapidly? So, all of these things have to be taken into account. And it's really the flexibility to manage the out-year budgets while keeping our eye on the fact that, ultimately, we have to maintain the core intellectual capability that provides the overriding confidence, because there's a huge tendency, when facility costs go up, to rob the scientific capability in order to fund those very large facilities.

Dr. HOMMERT. Yes, sir, I would say, echoing that—and I have a very strong sense of the immediacy of the B61 situation, in that—very important, in 2011, that we establish that baseline—that when we establish that baseline, we then place the resources consistent with the requirements to execute the right scope required for that life-extension program, because it's immediate. It is right here in front of us.

And then, I think, once we establish these and other baselines for the program, inevitably there'll be reshaping and reprioritization that will have to occur in the budget as we go forward.

But, again, I'm very encouraged by at least now seeing, in 2011, that we can establish that very first and most immediate program baseline, and then gives us the momentum to carry that forward through the decade.

Senator CORKER. When you mentioned, Dr. Anastasio, the fact—and I know this is not a current statement—but, the fundamental premise of stockpile stewardship was at risk in 2008, what, in essence, were your referring to at that time?

Dr. ANASTASIO. Thank you, Senator. The thought I had in my mind is the same one I have today, which is, the path that we were on in 2008. I was very concerned about the decline in budget. And, as George Miller said, I like to think of it as the imperatives of the near term challenge us, sometimes we put the longer term at risk. And that's generated a squeeze on science, the fact that the other imperatives in the program have just reduced our focus on the science. And when you think about the premise of stockpile stewardship—my point—the whole notion, in a world without nuclear testing, which is one that we understand we're in, getting a more deep understanding of the science and the engineering is the basis for our confidence. By having that knowledge, and then continuing to extend that knowledge, that's the basis for our understanding and, hence, our confidence. And when you're squeezing that activity, you're starting to sacrifice it for the other elements of the pro-

gram, and that will lead to a situation where we could easily lose our confidence.

Dr. MILLER. Senator, if I could just add a point. You know, in 2008, both Dr. Anastasio and I, as directors of these two laboratories, had to reduce our workforce by 2,000 people. For us, that's more than 25 percent, a substantial number of scientists and engineers. I mean, it wasn't just administrative people, it was a substantial number of scientists and engineers—left the program. That is a huge concern, because, again, as one of the architects of the Stockpile Stewardship Program, when it was formed, in the early 1990s—you know, the fundamental premise which we based the recommendation that we could, in fact, maintain the stockpile without nuclear testing, was keeping the strong science and technology base with people engaged in understanding what was going on, and responding appropriately. So, that's really the concern. That is the long-term concern.

Senator CORKER. Mr. Chairman, I know you're getting ready to leave. And I really appreciate your having his hearing and certainly these distinguished and really important people to our country being here—I look—again, I know we're going to spend a lot of time, at the end of the month, at your facilities. What I would say—I know that you all are looking for 67 votes. I mean, around here, it's a counting game—that's kind of what we do. I just want to say to you that this, to me, is the important issue—the most important. And I know that we have some issues of verification and missile defense. And my guess is, we can address some of those questions actually in the resolution that we'll draft in this committee. And I know that we cannot bind future Congresses. Thankfully, those before us didn't do that. But, you know, the fact is that—I think—I very much appreciate the comment you made about the President's commitment. I know a letter's coming. I think a very strong 10-year plan—and really, the—even though this is good start—and this is kind of an opportunity, let's face it, for those of us who care about modernization, this moment in time is an opportunity. And I appreciate that very much.

I do think there are some discrepancies that we can work out in the scope of things, as it relates to our national security. They're not that big a dollars, in the scope of what we do with defense and other kinds of things.

But, just the buildings, alone, the—just the facilities that it takes to do the things we need to do are probably a $10 billion expenditure. So, there's obviously a gap. And I hope that there's some way that intelligent people, that really want to see something good happen, will figure out a way to work together to really solve this problem.

So, I'm heartened by the comments of both of you. I look forward to learning more from each of you later this month. But, I do think—and I've shared that with Secretary Clinton—that the real key issue is figuring out some way of giving assurance to those of us who care about our stockpile, that we're going to do those things over a period of time with a real concrete plan to achieve modernization.

And I thank you for this hearing.

The CHAIRMAN. Well, thank you, Senator Corker. And, look, we appreciate your concern. I've had a number of meetings with Senator Kyl, who, I think, is an acknowledged leader with respect to these issues. And he shares that concern, as do other Members. We all do.

And, as I said at the outset, the President—and all of us legitimately share this. None of us can afford to allow our deterrent shield to deteriorate, and to have a lack of confidence about it. That changes the bets. You know, the balance of power is maintained by the threat perception and the capacity to counter it. And whenever anybody makes a move—that's why I always argue so forcefully on this committee that if you unilaterally deploy defense to such a degree that you've altered somebody else's perception of their offense, you've done the same thing as you might do by changing your own offensive force; you've altered the perceptions. And people make their choices based on those perceptions. So, we are 100 percent committed to that.

What I can guarantee you is that, for the next 2 years, through the 2012 election, this President is going to make it absolutely clear this will be full-funded to the degree that he's promised. And that is a very significant plus-up. The most significant thing that the laboratories can do is take that money and execute all of these components as effectively as possible, so the Congress, and everybody else, has confidence in the dollar well spent and in a program well implemented. And if we do that, it's going to make it a lot easier to come back and do the other parts of this.

But, I am confident that the 10-year plan is going to be well laid out, well defined, on the table. And it's going to be up to us to guarantee—those of us who are here, you know, over the course of these next years, to guarantee that we fill our part of the bargain. And we'll do it.

Senator Isakson.

I need to leave, at this point, to go introduce this nominee. So, Senator Lugar, I appreciate your chairing. Thanks.

Thank you, gentlemen, for coming, very, very much. We appreciate it.

Dr. ANASTASIO. Thank you, Mr. Chairman.

Dr. MILLER. Thank you, Mr. Chairman.

Dr. HOMMERT. Thank you, Mr. Chairman.

Senator ISAKSON. Thank you, Mr. Chairman.

Dr. Anastasio, following up on the comments of the chairman, and particularly the questions of Senator Corker, on page 10 of your printed testimony, you made a rather substantial paragraph talking about, "As I look to the future, I remain concerned that science will be squeezed when trying to compete with capital infrastructure investments and life-extension program funding priorities." And then, I'll skip a couple sentences down to the bottom, where it says, "Just as I'm encouraged by a significant increase in FY11, I am concerned the administration's section 1251 report, much of the planned funding increases for weapons activities do not come to fruition until the second half of the 10-year period." Now, that's already been mentioned by Senator Corker.

And I read, in Dr. Hommert's testimony, regarding the B61 and the radar system and the famous vacuum tubes, that you have an absolute necessity to modernize that now. Am I—is that correct?

Dr. HOMMERT. Yes, sir, that's correct.

Senator ISAKSON. All right. So, I have this—I'm going to get to you in a minute, Dr. Miller, so just hang on, but I——

[Laughter.]

Senator ISAKSON [continuing]. I have this question. And I don't want to put you on the spot, but it would be helpful if we have—and I'm sure there are many more pressing depreciation or age-related deterioration issues in a weapons system—there have to be—are the funds in the 1251, understanding they're only gross numbers—I don't think they're broken down; at least, I don't have them—are they going to be enough to do what you know we have to do with what you know now?

I'll start with you, Dr. Hommert.

Dr. HOMMERT. Yes, Senator. Let me start first with 2011, because there's two phases here that are very important. First, in 2011, we establish what—using our vernacular, 62(a) phase, which is the—is—firms the requirement base and the funding base to then do the second phase, which is full-scale engineering development. The first—the 2011 budget is adequate for us to complete that first phase. The out-year budgets, 2012 through 2017, are, at this point, to the best of our knowledge, commensurate with that full-scale engineering development. But, we can't be certain of that until we finalize the requirements in costing base. So, that's a very important step.

The other thing I will mention, relative to the science issue, is that, in our mission space there is a very strong linkage with delivering technologies to—like an updated radar, et cetera—to our science and technology base. They are very strongly linked in executing, going forward. So, a piece of this budget is our technology maturation, our pull on our science and engineering into the stockpile.

So, two—touched two issues there, but—certainly, the 2011 does position us to get that first phase completed.

Senator ISAKSON. Dr. Anastasio.

Dr. ANASTASIO. Well, sir, I think, as Paul Hommert said, I would agree that there are two phases. The first is, How do we get started? And that's the FY 2011 budget. And, as I said, that's an excellent start, and shows a strong commitment on the part of the administration.

As you properly noted in my testimony, I am concerned—and it's a real concern—about the out-year funding. And the concern is that there are very legitimate demands in the program for our nuclear facility refurbishment, for our needs to address the stockpile issues. And it's not just the B61, it's the fact that most of the weapons need attention over the next decade or two.

But, we also can't sacrifice our science and technology and engineering base to do those more immediate needs. So, the question is, How do you have an adequately funded program that is balanced so that all three legs of the stool are in a place where you don't kind of slide off because one leg's too short? That's going to put the overall program at risk.

So, we need to have a balanced program that can be sustained throughout the life of the activity we have to do. And I think there are good steps to take, for Congress to go ahead and appropriate the funds that the President's requested.

I would also say, another good way to stabilize the program is for this national consensus to be formed around the appropriate direction to go forward with the nuclear weapons program. This is a consensus that we've been lacking for 15 or 20 years. And I think it's important for that, as well.

Senator ISAKSON. I commend you for that statement, because what I've heard both of you say—and tell me if I'm wrong; I don't want to put anything on the record that isn't right—but, I heard both of you say, in the immediate term, the funding is adequate to do what you're going to do. But, given the knowledge you have of science and the unknown in the years out, there may be need for more funds. Is that a fair statement?

Dr. ANASTASIO. Well, even more so, that the work we're doing today is because of the investments we made in science——

Senator ISAKSON. Right.

Dr. ANASTASIO [continuing]. And engineering 10 years ago. So, the work we have to do 10 years from now is going to derive from the investments we make in science and engineering today. And if we're not making those investments, that puts at risk our ability to take on those unknowns that we are confident will arise, because they always have.

Senator ISAKSON. And heightened pressure—you said—the others didn't, but I would assume they agree—that we do believe that the Russians are reinvigorating their nuclear stockpile and their weapons system, and modernizing, as well.

Dr. HOMMERT. Yes, I concur with that.

Senator ISAKSON. OK.

Dr. Miller, this is not about nuclear power or science or engineering, it's about budgets. You said you had laid off 2,000 people, between you and Dr. Anastasio.

Dr. MILLER. Two thousand at each laboratory.

Senator ISAKSON. Two thousand each. Would you tell me, did you do that at the direction of someone above?

Dr. MILLER. Let's see. Yes, it was certainly with the concurrence of the Department of Energy and the National Nuclear Security Administration (NNSA). It was a budget necessity. In terms of the funding that I had available, it would not support the larger workforce.

Senator ISAKSON. Well, the only reason I make that point is because we have added Federal employees throughout the system over the last 2 years by about 146,000. And if you are having to reduce yours by 2,000 each, some of whom are highly educated, very critical scientific people, I don't know how good a modernization system you can do if you're being forced to lay off your brightest and your best. I just make that as—you don't have to—I said that, you didn't say it. But, I just wanted to get that on the record.

And last, Dr. Anastasio, this is also not a nuclear question, by any stretch. In your statement, you say, next year you're going to have to put in $77 million for a pension shortfall, and, estimated, it will be $200 million in 2013, is that right?

Dr. ANASTASIO. In 2012.

Senator ISAKSON. 2012?

Dr. ANASTASIO. Yes, sir.

Senator ISAKSON. Are you in a separate pension fund from the employee retirement system of the Federal Government?

Dr. ANASTASIO. Yes, sir. Our employees are not employees of the Federal Government; none of our employees are Federal employees. We're all in a private pension plan. And we have a plan that is—I'll try to make it simple—we have a legacy with the University of California, so we have a set of people who are currently in that legacy plan, but now managed by us. New employees are in a 401(k)-like plan. But, the legacy employees are not part of that. And it's that defined benefit plan that, just like all the other pension plans in the country, has stress on it. And so, the NNSA, our sponsor, is well aware of these issues, and we're trying to work closely with them to find the right path forward.

Senator ISAKSON. Well, the reason I ask the question is because we just passed, 2 weeks ago in the Congress, two choices that pension funds have to smooth and amortize that immediate obligation.

Dr. ANASTASIO. Yes, sir.

Senator ISAKSON. And I hope you'll take advantage of it, because this number probably didn't calculate—did——

Dr. ANASTASIO. Actually, it does.

Senator ISAKSON. It does?

Dr. ANASTASIO. We've been following your actions very closely, and it includes that smoothing.

Senator ISAKSON. OK.

Dr. ANASTASIO. Without going into the details, we're more dominated by the discount rate, because our plan doesn't have new people entering, because new employees go in the 401(k) plan.

Senator ISAKSON. Right.

Dr. ANASTASIO. The crux of the way the plan works, is that it's our liabilities that are the more sensitive issue. And so, it's the discount rate, for which we have no control, obviously, and the state of the economy—that's the thing that really drives our cost. And so, that has been a good step forward for us. There are other things Congress could do to help relieve the situation, if that were possible.

Senator ISAKSON. Well, I'm the only Isakson in the Senate phonebook, so give me a call. [Laughter.]

Dr. ANASTASIO. Yes sir. I would be happy to do that.

Dr. HOMMERT. Senator, I'd just add, we have a similar problem, and we do appreciate the legislative relief. It was a help. But, our—we still have a remaining issue to face over the next 5 years in this area.

Senator ISAKSON. We probably should have a meeting, because it'd be very—I thought, when I asked the question, you were independent of the Federal retiree system, and——

Dr. ANASTASIO. We do. We are. And since now we're not under University of California, which was a nonprofit, of course, we're in a for-profit situation, so we fall under the Pension Protection Act. And again, your legislative relief in that regard did help. But, there's more. There are still challenges before us.

Senator ISAKSON. Well, I will tell my staff to look for a call. And maybe we can have a——

Dr. ANASTASIO. Yes, sir.

Senator ISAKSON [continuing]. Meeting convenient to both of you. And we'll try and help all we can.

Dr. ANASTASIO. We greatly appreciate that, Senator.

Dr. MILLER. We welcome that, Senator.

Senator ISAKSON. Thank you, Mr. Chairman.

Senator LUGAR [presiding]. Thank you, Senator Isakson.

Please remember Senator Isakson's name so that you can have the proper communication. [Laughter.]

Senator Risch.

Senator RISCH. Thank you. Thank you, Mr. Chairman.

First of all, let me say for the record, I want to respond to something Senator Kerry said. I wish he hadn't left, although I'm sure he'll hear this. And we're going to have plenty of time for debate on this, on the floor. But, if I heard him right, I thought I heard, he said that we don't want to go too far with our defensive missile system because it might aggravate other countries to do other things. And I respectfully disagree. And I know we're going to have plenty of time for debate on this on the floor. I'm not as worried about the country that we're dealing with here—Russia—although I think we should have a missile defense system in place, even as far as they're concerned. But, I'm truly concerned about the rogue countries and our defensive posture, when it comes to incoming from rogue countries, such as North Korea or Iran. And I don't—I think that treaties aren't going to be the answer there. It's only going to be a defensive system.

But, today we're talking about modernization, and I have some questions for you. And if I get—I understand we're in an unclassified setting here—if I get too close, let me know, and we'll take it up at—in a classified setting.

First of all, as to the START Treaty that—or, the treaty that expired on December 8, did you get information from the inspectors regarding the type, size, the mechanical aspects of the Russian warheads, based upon their inspections, from that treaty?

Dr. HOMMERT. That's probably better left——

Dr. ANASTASIO. Yes.

Dr. HOMMERT [continuing]. To a different conversation, Senator.

Senator RISCH. OK, thank you.

Dr. ANASTASIO. It would be better in a different setting.

Senator RISCH. Let me move on.

The—as far as the—again, tell me if you can't answer this—I've been told about a comparison of the size of our warheads compared to the size of their warheads. In fact, I made—asked the specific question, in another setting, and they said I should ask the directors of the labs about that. So, here I am. Can you tell me about that? Or, again, are we—do we have to go to a classified setting for that?

Dr. MILLER. I think the specifics are better handled in a classified situation.

I would say that while the Russians have to abide by the same laws of physics that we do, the particular technology paths that

they have chosen appear to be different than the ones that we have chosen.

Senator RISCH. Can you—we've been told—again, I think this in a—in the public domain—we've been told that they are—the Russians are involved in a modernization program, and that they're further along than we are. I'll say that carefully. Can you compare that for me? Or, again, do we need to move a classified setting?

Dr. ANASTASIO. I think we certainly can concur that our best understanding is that they are in a modernization program, and that it has been a very active program for a number of years. As far as the details of exactly what they're doing, that's probably best left for another——

Senator RISCH. Thank you.

Dr. ANASTASIO [continuing]. Session.

Dr. MILLER. But——

Senator RISCH. And I appreciate that. I——

Dr. MILLER. I think one of the things that we can say in this setting, is that the state of their production complex is very different than the state of ours. And that, again, causes significant differences between the two countries.

Dr. HOMMERT. Senator, I—it's my understanding you may be visiting us with Senator Kyl——

Senator RISCH. I will be.

Dr. HOMMERT [continuing]. And Senator Corker.

Senator RISCH. I am.

Dr. HOMMERT. These are topics that we can go into at——

Senator RISCH. Thank you.

Dr. HOMMERT [continuing]. That time.

Senator RISCH. I'll look forward to that.

Thank you very much. Appreciate your responses.

And thank you, Mr. Chairman.

Senator LUGAR. Well, thank you very much, Senator Risch.

I'm advised—and this may or may not fit your convenience—but I have been advised that Senate security is prepared to host a classified session for you, after this session, with the witnesses, in the event you want to do that.

Senator RISCH. Thank you, Mr. Chairman.

Senator LUGAR. Let me thank each of you for very informed testimony. Obviously, you can tell the importance of this issue to the Senators who are here, as well as their representation of many other Senators—have been raising these questions. And likewise, the specific activity that our chairman, Senator Kerry, advised you—and this was the first, I think, public statement he had made about our visit with President Obama and Vice President Biden, and their assurances. We count this as a very important factor. We look forward to those communications from the Chief Executive, and I'm certain you will, too.

But, we look forward, if you will, to following up with you, as there may be more questions of members who were not able to be with us, because I am certain this will be an issue as we try to formulate our resolution of ratification, debate that in the committee, and then on the floor of the Senate.

So, thank you, again, in behalf of the chairman and all of our committee members.

The hearing is adjourned.
[Whereupon, at 4:10 p.m., the hearing was adjourned.]

ADDITIONAL MATERIAL SUBMITTED FOR THE RECORD

RESPONSES OF DR. GEORGE MILLER TO QUESTIONS SUBMITTED BY SENATOR CASEY

NUCLEAR COMPLEX PERSONNEL

Question. The Congressional Commission on the Strategic Posture of the United States stated that the "continued success [of the Stockpile Stewardship Program and the Life Extension Program] is endangered by recent personnel and funding cuts."

Can you please expand upon this statement and describe what type of personnel cuts you have experienced and how these cuts have directly affected the Stockpile Stewardship Program and the Life Extension Program?

Answer. Declining budgets and increased costs over the past 5 years created funding pressures that forced workforce reductions at LLNL. Between 2006 and 2009, LLNL's workforce was reduced by 25 percent. Available funding was insufficient to compensate for the increased costs and maintain the 2005 workforce levels. The number of personnel at LLNL directly supported by the Stockpile Stewardship Program (SSP) and Life Extension Programs (LEPs) decreased by 22 percent between 2006 and 2009.

The Laboratory implemented a strategic workforce reduction plan to minimize the risks to meeting our national security mission requirements. While we have been successful in supporting the needs of the current stockpile, numerous critical skill areas have been reduced to only a handful of individuals, as evidenced in the following examples:

- LLNL's hydrotest execution capability was reduced from two fully capable teams to one small team, and experimental throughput has declined.
- LLNL's technical support team in Nevada, which provides mission-specific expertise to maintain and conduct critical experiments at SSP facilities at the Nevada Test Site, has declined by more than 60 percent in the past 4 years, LLNL's reduced ability to support these mission-critical experimental facilities, combined with complex-wide financial challenges, have resulted in delays in the experiments schedule.
- One of the major science initiatives, known as the Boost Initiative, has been delayed 3 years to date and extended beyond its original planned completion date due to lack of funding and available skilled staff to support this initiative.

Additionally, warhead surveillance rates are lower, there are numerous examples of underutilization of SSP facilities that have caused delays in key scientific deliverables for assessing the stockpile, and LEPs have been deferred.

The Laboratory is continuing to work very closely with NNSA to manage available resources in a prioritized structure to ensure our national security mission requirements are met. The President's FY 2011 budget request seeks increased funding to reverse the declining budget trends and provide stable and reliable funding levels to maintain sufficient capability to ensure the viability of the U.S. nuclear stockpile and the critically skilled workforce that underpins it.

Question. What do you believe is needed to ensure that we maintain a proper level of trained scientists and engineers to ensure the safety of our stockpile?

Answer. Maintaining a quality workforce with the specialized scientific and technical talent to execute the Stockpile Stewardship Program (SSP) requires a well-defined national security mission that is consistently supported by successive administrations and Congresses. Stable and reliable funding is critical to attracting and retaining a skilled and knowledgeable workforce. Opportunities must be made available for stimulating research in support of program goals.

A vigorous SSP includes a robust science, technology, and engineering (ST&E) effort to ensure a pipeline of trained personnel. In addition to a strong ST&E effort, the program must include adequate opportunities to exercise skills in the complete design-through-production cycle, which is essential in the training of laboratory and production plant personnel.

Lawrence Livermore National Laboratory (LLNL) welcomes the National Nuclear Security Administration's (NNSA) intent to assign responsibility for the W78 Life Extension Program (LEP) to LLNL. For the W78 LEP, LLNL's design and engineering cadre will work the entire design/engineering/manufacturing process for an inte-

grated weapon system, which serves to maintain key competencies and capabilities at the Laboratory.

It is also vitally important to provide the flexibility to retain access to retired weapons experts and ensure their availability to train and mentor the next generation of stockpile stewards.

Question. The Commission also stated that the national nuclear laboratories should have an expanded national security role, which includes fundamental research, energy technologies and intelligence support. Do you believe that these are roles that the laboratories should or can take on? Why or why not?

Answer. The National Nuclear Security Administration laboratories are truly national laboratories with unique materials science, physics, chemistry, and engineering capabilities that are applicable to a broad range of national priorities. The laboratories currently have active programs in nonproliferation, nuclear counterterrorism, intelligence, energy and environmental security, and fundamental research. For example, Lawrence Livermore National Laboratory (LLNL) has actively applied its nuclear weapons expertise and technical capabilities to provide uniquely valuable intelligence analysis of foreign nuclear weapons systems and to monitor proliferation risks.

The nation has benefitted greatly from applying the expertise derived from the nuclear weapons activities of the laboratories it mission areas beyond the U.S. stockpile maintenance efforts.. For example, this year LLNL's research garnered six R&D 100 Awards. Sponsored by R&D Magazine, R&D 100 Awards are a mark of excellence widely known to industry, government and academia. They are often dubbed the "Oscars of Invention" because they honor the most innovative ideas of the year. One of this year's awards recognized LLNL's pioneering efforts to develop a new material (strontium-iodide doped with europium) to significantly improve radiation detectors to identify nuclear materials. The U.S. Department of Homeland Security (DHS) is supporting the development of this material for use in devices to counter nuclear smuggling. Since 1978, the Laboratory has earned 135 total R&D 100 Awards.

Research opportunities beyond the core nuclear weapons program provide challenging opportunities to exercise and improve critical skills that are essential to the success of the Stockpile Stewardship Program. Active programs in energy, intelligence, nonproliferation, nuclear counterterrorism, intelligence, energy and environmental security, and fundamental science enhance the Laboratory's ability to recruit and retain highly skilled scientists and engineers.

RESPONSES OF DR. MICHAEL ANASTASIO TO QUESTIONS SUBMITTED BY SENATOR CASEY

NUCLEAR COMPLEX PERSONNEL

The Congressional Commission on the Strategic Posture of the United States stated that the "continued success [of the Stockpile Stewardship Program and the Life Extension Program] is endangered by recent personnel and funding cuts."

Question. Can you please expand upon this statement and describe what type of personnel cuts you have experienced and how these cuts have directly affected the Stockpile Stewardship Program and the Life Extension Program?

Answer. From the time of contract transition in June 2006 to present, staffing at Los Alamos National Laboratory has decreased by 2,175 people. The breakdown of this number is as follows:

- 548 were scientists;
- 57 were engineers;
- 67 were technicians; and
- 1,503 were "other," which includes non-technical staff and support staff.

These reductions were the result of a voluntary separation program, reductions in our flexible workforce, natural attrition and significant oversight by lab management on new hires. These actions were taken reluctantly but in recognition of declining budgets and a need to avoid a demoralizing involuntary separation.

The funding reductions in the stockpile stewardship program over the last several years have impacted a number of life extension programs including the W76 LEP and B61 Alt 357. These decisions accepted elevated technical risk, often against design agency recommendations, to save funds and meet accelerated schedules. In the W76 program, the decision to temporarily suspend production of a critical material for several years resulted in a 1-year delay in meeting the Navy's delivery schedule

while the design agency (Los Alamos) and the production agency (Y–12) worked to resolve material quality issues. On the B61 Alt 357, the Process Prove-In (PPI) phase at the production agency was reduced by over 60 percent to save money. The planned assessment of the units manufactured for assessment was never conducted and the units were transferred to active status to meet accelerated schedules. All units were later removed for technical issues.

At Los Alamos, the average age of career employees is now over 48 and 32 percent of all career employees are eligible to retire within the next 5 years. Without an infusion of younger talent who can become recipients and beneficiaries in the transfer of knowledge from those with decades of experience we will be at risk for loss of that knowledge. The laboratories rely on expert judgment supported by a strong experimental and computational capabilities and extensive peer review for our critical assessments. As we approach 18 years since our last nuclear test and over 20 years since our last weapon system development, I am concerned about our ability to transfer expertise from generation to generation. I am also concerned with attracting the scientists for the future. Critical to attracting the best scientists and engineers is having cutting-edge scientific tools and capabilities. If science is allowed to atrophy further, the "brain drain" will accelerate

Question. What do you believe is needed to ensure that we maintain a proper level of trained scientists and engineers to ensure the safety of our stockpile?

Answer. First, the Nation must reach a national consensus on a nuclear deterrence policy that can be supported by future Congresses and administrations. The report of the Congressional Bipartisan Commission and the Nuclear Posture Review are the foundational documents for this national consensus. Second, stable and sustained funding as outlined in the President's FY 2011 budget begins the investments needed to correct for decades of neglect in infrastructure. Third, as the NPR highlights the Nation must continue to invest and strengthen the ST&E base at the laboratories. It is the ST&E base that underpins our understanding and confidence in the deterrent in the absence of testing and prepares use for future challenges. Finally, congressional visits provide a visible and potent symbol to the staff that this Nation's policy leaders value the work conducted by Laboratory staff.

Hiring the "best and the brightest" is a challenge for the labs, and will continue to be so for the future. LANL has been successful in recruiting because of our strong postdoctoral fellowship programs (e.g., Oppenheimer, Rheines, and director-funded fellowships) and internal graduate and undergraduate student programs. Our student programs at the Laboratory continue to bring excellent students into the laboratory and provide a strong recruiting mechanism. The Laboratory currently has over 400 post-doctoral fellows and over 1,200 students at work this summer. Additionally, the national laboratories take advantage of DOE and NNSA funded programs like the Stockpile Stewardship Graduate Fellowship Program and the Computational Science Graduate Fellowship Programs to find and recruit the next generation.

To be able to do strategic hiring requires that the laboratories have the outstanding scientific and computing capabilities and experimental facilities, such as the Los Alamos Neutron Science Center (LANSCE) linear accelerator, that enable cutting-edge research. Without the capabilities and facilities, the students will simply go elsewhere. The best students have the most options—the challenge is to make the national laboratories the best option for their career.

Question. The Commission also stated that the national nuclear laboratories should have an expanded national security role, which includes fundamental research, energy technologies and intelligence support. Do you believe that these are roles that the laboratories should or can take on? Why or why not?

Answer. The three NNSA laboratories are unique scientific and engineering resources that can and are being applied to a range of national security challenges that confront the Nation. There is a tendency when people hear about the role the NNSA laboratories play in solving other national problems that these are simply nice "spinoffs." These provide more than just positive benefits for the Nation; rather, this work outside of the weapons program is essential to the conduct of the core nuclear weapons mission. We have a vibrant scientific workforce at Los Alamos, including around 2,500 Ph.D.s that are the core of our science base. The weapons program benefits directly when these scientists have the opportunity to extend their skills by working on challenging technical problems, like climate modeling, which then can validate and improve the methods in our 3-D weapons codes and solve challenges in the stockpile.

The issues that have arisen in the last 18 years of assuring the reliability of nuclear weapons without conducting a nuclear test are complex science and engineer-

ing problems. Some of these problems were anticipated—like the aging of certain components in a warhead—and others were totally unexpected. The success of the Stewardship program has been the ability to draw on a deep and rich science base at the laboratories. This science base is enriched by engaging on a broad range of scientific problems, many of which have a direct relevance to broader national security interests. A vibrant science, technology and engineering enterprise is essential to supporting the stewardship program, and at the same time it provides a powerful resource for issues such as nonproliferation, counterproliferation, counterterrorism, homeland security and intelligence assessments.

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