104TH CONGRESS, 1st Session | SENATE | EXEC. REPORT 104–10

START II TREATY

DECEMBER 15, 1995.—Ordered to be printed

Mr. HELMS, from the Committee on Foreign Relations, submitted the following

REPORT

together with

ADDITIONAL VIEWS

[To accompany Treaty Doc. 103–1]

The Committee on Foreign Relations to which was referred the Treaty Between the United States of America and the Russian Federation of Further Reduction and Limitation of Strategic Offensive Arms (the START II Treaty) signed at Moscow on January 3, 1993, including the following documents, which are integral parts thereof: the Elimination and Conversion Protocol; the Exhibitions and Inspections Protocol; and the Memorandum of Attribution having considered the same, reports favorably thereon and recommends that the Senate give its advice and consent to ratification thereof subject to 6 conditions and 7 declarations as set forth in this report and the accompanying resolution of ratification.

CONTENTS

I. PURPOSE

The Treaty Between the United States of America and the Russian Federation on Further Reduction and Limitation of Strategic Offensive Arms (The START II Treaty) will commit the United States and Russia to deeper reductions in strategic offensive nuclear weapons, building upon the Treaty between the United States of America and the Union of Soviet Socialist Republics on the Reduction and Limitation of Strategic Offensive Arms (The START Treaty). Whereas START theoretically limits each States Party to 6,000 total warheads deployed on 1,600 strategic nuclear delivery vehicles (a 30 to 40 percent reduction in existing arsenals), the START II Treaty contemplates a substantially lower limit of 3,500 deployed warheads, a ban on all land-based, multiple warhead ballistic missiles, and limitations on the number of warheads deployed on submarine launched ballistic missiles. Furthermore, unlike START, all warheads deployed on heavy bombers will be attributable under START II counting rules. Taken together, START and START II will reduce the deployed strategic offensive arms of the United States and Russia by roughly two-thirds.

CENTRAL LIMITS IN START II

Weapon System	Phase I	Phase II (complete by 2003)
Total warheads	3,800–4,250	3,000–3,500
MIRVed ICBM warheads	1,200	0
Heavy ICBM warheads	650	0
SLBM warheads	2,160	1,750

START II is a bilateral treaty between the United States and the Russian Federation, in contrast with START, which also includes Belarus, Kazakstan, and Ukraine as Parties. In accordance with Lisbon Protocol, the other three Parties to the START Treaty have joined the Non-Proliferation Treaty and have pledged and are proceeding to eliminate strategic offensive arms located on their territories. No nuclear warheads or deployed strategic offensive arms should be located on their territories by the completion of the first phase of the reductions under START II.

START II is to be implemented simultaneously with START. Seven years after START's entry into force neither Party may deploy in excess of 4,250 strategic warheads. By January 1, 2003, the total number of warheads deployed by each Party will not exceed 3,500. Furthermore, beyond that date no warheads are to be deployed on land-based, intercontinental ballistic missiles with multiple independently targetable nuclear warheads (MIRVed ICBMs) or on heavy ICBMs.

In addition to central limits, the Treaty contains a number of other prohibitions and exemptions, such as provisions allowing for the downloading of all SLBMs and some multiple warhead ICBMs, the elimination or conversion of launchers (including the conversion of 90 SS–18 launchers to accommodate the single-warhead SS–25), the elimination of the SS–18 class of heavy ICBMs and conversion of SS–18 silos, and procedures for inspecting and counting warheads deployed on heavy bombers.

The inspection regime established under START will be used to verify START II provisions, except as otherwise provided. In addition to the use of national technical means, on-site inspection, and technical exhibitions, the START II Treaty provides for additional inspections to confirm the elimination of heavy ICBMs and their launch canisters and to confirm ICBM silo conversions. The Treaty also provides for exhibitions and inspections to observe the variety of nuclear weapons with which heavy bombers are actually equipped in order to ascertain their relevant observable differences. For the U.S. this means Russian inspection of the weapons carriage areas of a B–2 bomber—something not allowed under START inspection provisions. Portions of the B–2 can be "shrouded," however, to safeguard the bomber's sensitive technical characteristics during inspections.

Negotiations on START II, conducted throughout 1992, were premised on U.S. interest in eliminating MIRVed ICBMs and Russian interest in reducing nuclear arsenals to a sustainable level given political and economic realities following the dissolution of the Soviet Union. As a result, Presidents Bush and Yeltsin agreed at a June 1992 summit to a complete ban on MIRVed ICBMs, warhead limitations on SLBMs, and a central limit of 3,500 accountable warheads. They also issued the Joint Statement on a Global Protection System, endorsing the concept of U.S.-Russian cooperation on ballistic missile defense as a stabilizing complement to well-structured reductions in strategic offensive forces.

However, a number of developments in the fall of 1992 complicated negotiations, including a number of new Russian proposals that differed from the agreed framework and which raised concerns regarding new break-out opportunities for Russia. During the final weeks of December 1992, the United States made two significant concessions. Specifically, the downloading rule established in START was relaxed to permit Russia to maintain 105 of its 170 SS–19 ICBMs as single-warhead missiles, and it was further agreed that Russia would be allowed to deploy single-warhead missiles in 90 of its 154 SS–18 silos. In return, Russia agreed to destroy all of its SS–18 missiles. Russia also agreed that the 90 SS–18 launchers it retained would be converted using procedures designed to make reconversion difficult.

Notwithstanding these modifications, the critical components of the START II Treaty remained intact. Presidents Bush and Yeltsin signed the Treaty on January 3, 1993 and it was submitted to the Senate for advice and consent and referred to the Committee on Foreign Relations on January 20, 1993. Discussions on ballistic missile defense cooperation continued throughout the Bush Administration but were discontinued by the Clinton Administration.

II. Treaty Terms

The Treaty between the United States of America and the Russian Federation on Further Reduction and Limitation of Strategic Offensive Arms (The START II Treaty) consists of the main Treaty text and three documents formally transmitted to the Senate by the President on January 20, 1993, for the Senate's advice and consent to ratification. START II is a treaty with a preamble and 8

articles of an initial duration the same as that of the START Treaty, two protocols, and a memorandum of understanding as follows:

—The Protocol on Procedures Governing Elimination of Heavy ICBMs and on Procedures Governing Conversion of Silo Launchers of Heavy ICBMs Relating to the Treaty Between the United States of America and the Russian Federation on Further Reduction and Limitation of Strategic Offensive Arms (the Elimination and Conversion Protocol);

—The Protocol on Exhibitions and Inspections of Heavy Bombers Relating to the Treaty Between the United States of America and the Russian Federation on Further Reduction and Limitation of Strategic Offensive Arms (the Exhibitions and Inspections Protocol); and

—The Memorandum of Understanding on Warhead Attribution and Heavy Bomber Data Relating to the Treaty Between the United States of America and the Russian Federation on Further Reduction and Limitation of Strategic Offensive Arms (the Memorandum on Attribution).

The President also transmitted documents associated with, but not integral parts of, the Protocols or the START II Treaty. These documents are three exchanges of letters embodying legally binding commitments from the Russian Federation and the United States concerning the removal of SS–18 missiles from Kazakstan, the deployment of nuclear weapons on heavy bombers, and Russian conversion of SS–18 missile silos. These documents are relevant to the consideration of the START II Treaty by the Senate. No new U.S. security assurances or guarantees are associated with any of these letters.

A. THE TREATY TEXT

Article I obligates the Parties to meet START reductions and to reduce their ICBMs, SLBMs, respective launchers, and heavy bombers so that by January 1, 2003, the aggregate number for deployed warheads does not exceed 3,500. The following sublimits are also applied: 1,750 for deployed SLBMs, no ICBMs to which more than one warhead is attributed, no deployed heavy ICBMs, no deployed launchers of an ICBM to which more than one warhead is attributed, no deployed launchers of heavy ICBMs, and no heavy ICBMs. Launchers may either be destroyed or converted (the procedures for which are specified elsewhere) and, in most cases, the missiles need not be destroyed. To reach the above levels there is not a specific legal obligation to reduce at a given rate.]

Article II states an exception to the requirement for launchers. Ninety heavy ICBM silo launchers may be converted to accommodate SS–25 type ICBMs. Russia further pledges its best efforts to reach an agreement with Kazakstan on the return of heavy SS–18 ICBMs for destruction. Each party has the right to inspect the destruction of heavy ICBMs and their launch canisters, as well as the conversion of silo launchers for heavy ICBMs. Both Parties agree not to transfer heavy ICBMs to any recipient whatsoever; nor will they produce, acquire, flight-test, or deploy ICBMs to which more than one warhead is attributed.

Article III sets forth the rules for reducing the warhead attribution (i.e. "downloading") of existing types of ICBMs and SLBMs

other than heavy ICBMs. START II bans downloading of heavy ICBMs as well as new types of ICBMs and SLBMs but it allows the Parties to exceed the START limit of 1,250 on total warhead downloading and the 500 warhead limit on downloading ICBMs and SLBMs other than the U.S. Minuteman III and the Russian SS–N–18. The Parties also are allowed to download by up to five warheads up to 105 of one of the two types of ICBMs or SLBMs permitted to be downloaded by subparagraph 5(c)(ii) of Article III of the START Treaty. As a practical matter, this means Russia will retain 105 SS–19 missiles whose elimination otherwise would be required. Reentry vehicle platform destruction is not required. The uploading of ICBMs or SLBMs which have been downloaded is banned.

Article IV establishes constraints on heavy bombers, specifying that the number of nuclear warheads attributed to a deployed heavy bomber shall be equal to the number of nuclear weapons with which any bomber of that type or variant is actually equipped. The number of warheads attributed to a heavy bomber of a given type or variant of a type is listed in the Memorandum on Attribution. The Memorandum requires a one-time exhibition, no later than 180 days after entry into force, of one heavy bomber of each type and variant to demonstrate the number of nuclear weapons for which such bombers are actually equipped. Each Party can increase or decrease the number of warheads for which a heavy bomber is actually equipped, but this requires a repeated exhibition. Each party may reorient to a conventional role heavy bombers not accountable under START as being equipped with air launched cruise missiles. This is in addition to the right under START to convert up to 76 heavy bombers, using specified procedures, to a non-nuclear role. Reoriented heavy bombers must have segregated basing and may not be used in nuclear missions, nuclear exercises, nor can their crews train or exercise for nuclear missions. Each party has the one-time right, with a 90-day notice, to return heavy bombers to a nuclear role. Reoriented bombers must be based at least 100 kilometers away from storage areas for heavy bomber nuclear armaments, and are subject to inspection. If only some bombers of a given type are reoriented, then those bombers must be distinguished from the nuclear types in a manner observable by National Technical Means.

Article V establishes that the provisions of the START Treaty, including its verification provisions, shall be used for implementing START II. The Bilateral Implementation Commission (BIC) shall be established to serve as the framework within which the Parties will seek to resolve any questions related to compliance with the START II Treaty, and the forum by which Parties might agree on any additional measures necessary to improve the viability and effectiveness of START II.

Article VI specifies that the Treaty is subject to ratification prior to entering into force, and will not enter into force prior to the START Treaty. The ban on the transfer of heavy ICBMs to a third state or states shall be provisionally applied as of the date of signature of START II. The START II Treaty will remain in force for the duration of the START Treaty. Both Parties have the right to withdraw from the Treaty with six months notice if extraordinary

events related to the subject matter of this Treaty have jeopardized a Party's supreme interests.

Article VII is identical in content to Article XVIII of the START Treaty, providing for amendments to the START II Treaty. Such amendments would be subject to ratification as specified in Article VI of the Treaty.

Article VIII provides for the registration of the Treaty with the United Nations in accordance with Article 102 of the Charter of the United Nations.

Final Provision of the START II Treaty records that the Treaty was done at Moscow on January 3, 1993, in two copies, each in the English and Russian languages, and each being equally authentic.

B. INTEGRAL ADDITIONAL DOCUMENTS

The Treaty includes other documents which the President and the Secretary indicated are "integral" parts of the Treaty, and are submitted for consideration as legally binding parts of the Treaty:

—an Elimination and Conversion Protocol setting forth elimination and conversion procedures for heavy ICBMs and heavy ICBM launchers;

—an Exhibition and Inspections Protocol setting forth requirements on exhibitions and inspections of heavy bombers; and

—a Memorandum of Understanding that includes the required data on the treaty-limited items possessed by the Parties.

C. SEPARATE LETTERS

Associated with the START II Treaty are three separate, legally binding exchanges of letters, two of which were signed by Andrey Kozyrev, Russian Minister of Foreign Affairs, and Lawrence Eagleburger, U.S. Secretary of State, and one exchange of letters signed by Pavel Grachev, Russian Minister of Defense, and Richard Cheney, U.S. Secretary of Defense. No new U.S. obligations are entailed in these letters.

III. BILATERAL MILITARY IMPLICATIONS

The committee considered the START II Treaty during a period of fundamental transformation in the international security environment. START II is a bilateral arms control agreement committing the United States and Russia to even deeper reductions in their strategic nuclear arsenals than contemplated under the START Treaty. The Treaty provides that by the year 2003 the United States and Russia must reduce their deployed strategic warheads to a level at or below 3,500—a more than two-thirds reduction over current levels. When fully implemented, it will eliminate completely all land-based multiple warhead (MIRVed) ICBMs, including all of the Russian "heavy" SS–18 ICBMs, thereby accomplishing two longstanding U.S. negotiating goals. However, both U.S. nuclear doctrine and U.S. strategic forces must evolve to meet the challenges of the post-Cold War era. Consequently, as shall be discussed later in this report, any assessment of the military implications of the START II Treaty must consider the changing nature

of a complex and multipolar world. More directly, START II's bipolar military significance and verifiability both are linked integrally to the full implementation of START and the anticipated composition of the post-START II Russian strategic forces. It should also be recalled that START II was negotiated in the context of a robust national missile defense program intended to enhance strategic stability and possible cooperation with Russia on the same. A national missile defense system remains imperative to enhance stability under START II; safeguard against potential changes in Russia; and defend against other emerging ballistic missile threats to the United States.

Linkages with the START Treaty

The START Treaty provides for the following principal, maximum numerical limitations on the strategic arsenals of the United States and Russia:

1,600 deployed strategic nuclear delivery vehicles (ICBMs, SLBMs, and Heavy Bombers);

6,000 accountable warheads (ICBMs, SLBMs, and Heavy Bombers);

4,900 ballistic missile warheads (ICBMs and SLBMs);

1,100 warheads on land-mobile ICBMs;

1,540 warheads deployed on no more than 154 Soviet SS–18s;

1,250 total warhead limit on downloading;

500 total warhead sublimit on downloading for ICBMs and SLBMs other than the U.S. Minuteman III and the Russian SS–N–18 SLBM; and

3,600 metric tons throw-weight ceiling.

Further, a set of politically binding side agreements under START limits each side to 880 deployed sea-launched cruise missiles (SLCMs) in any one year, and limits Russia to 500 Backfire bombers, which are understood not to possess intercontinental range nor in-flight refueling capability.

In addition to these limits, START requires the destruction of strategic launchers (bombers, silos, and submarine launchers), but does not require destruction of nuclear warheads or missiles (other than mobile missiles beyond the non-deployed limit of 250). Instead, START allows the use of retired missiles as space-launch vehicles and for missile defense programs, with corresponding verification provisions designed to constrain illicit activities.

Taken altogether, the START Treaty will produce the following reductions:

TOTAL ACTUAL WARHEADS

	As of EIF	START limits	Net reduction	Percent reduction
United States (MOU)	13,000	8,500	4,500	35
Soviet (MOU)	11,000	6,500	4,500	41

ACCOUNTABLE START WARHEADS

	As of EIF [1]	START limits	Net reduction	Percent reduction
United States (MOU)	10,563	6,000	4,563	43

ACCOUNTABLE START WARHEADS—Continued

	As of EIF [1]	START limits	Net reduction	Percent reduction
Soviet (MOU)	10,271	6,000	4,271	42

[1] Entry into Force

BALLISTIC MISSILE WARHEADS

	As of EIF	START limits	Net reduction	Percent reduction
United States (MOU)	8,210	4,900	3,310	40
Soviet (MOU)	9,416	4,900	4,516	48

STRATEGIC NUCLEAR DELIVERY VEHICLES

	As of EIF	START limits	Net reduction	Percent reduction
United States (MOU)	2,246	1,245	1,00	145
Soviet (MOU)	2,500	1,424	1,076	43

Note.—Estimates depend upon particular force structure assumptions.

HEAVY ICBM's

	As of EIF	START limits	Net reduction	Percent reduction
United States (MOU)	0	0	0	0
Soviet (MOU)	308	154	154	50

The START Treaty was signed as a bilateral agreement between the United States and the Soviet Union on July 31, 1991, after nine years of negotiation. Although the Treaty was transmitted to the Senate for its advice and consent to ratification on November 25, 1991, the Soviet Union dissolved formally on December 25, 1991. The dissolution of the Soviet Union introduced a number of complex state succession issues into the Senate's consideration of the START Treaty. Most importantly, strategic offensive nuclear weapons were left deployed in four former Soviet republics: Russia, Belarus, Ukraine and Kazakstan:

1992 DISPOSITION OF STRATEGIC NUCLEAR WEAPONS IN THE FORMER SOVIET UNION (FSU)

	Kazakstan	Ukraine	Belarus	Russia	Total
ICBM's	104 SS–18s	46 SS–24s (silo), 130 SS–19s (silo)	54 SS–25s (mobile)	1,067	1,401
ICBM warheads	1,040	1,240	54	4,278	6,612
SLBM's	0	0	0	940	940
SLBM warheads	0	0	0	2,804	2,804
SSBN's	0	0	0	0	62
Bombers	40 Bear Hs	14 Bear Hs, 16 Blackjacks, 4 Heavy Bombers	0	88	162
Bomber warheads	370	416	0	800	1,600
IC/HB bases	3	4	2	2	31

Note.—Estimates of the total number of warheads on Ukrainian territory are open to question. In testimony before the committee on October 4, 1994, Assistant Secretary of Defense Ashton Carter indicated that Ukraine had 1,734 warheads prior to START's EIF, as opposed to the 1,564 cited in the START MOU.

In order to resolve this key succession problem, the START Treaty was converted into a multilateral treaty among the United States, Russia, Belarus, Kazakstan, and Ukraine by means of the

May 23, 1992, Lisbon Protocol (Treaty Doc. 102–32). Constituting an amendment to, and an integral part of, the START Treaty, the Protocol provided that the four former Soviet republics would together assume the legal obligations of the USSR for the START Treaty. It further obligated the four states to make arrangements among themselves as necessary to implement the Treaty's limitations, to permit verification of the Treaty's provisions on their territory, and to allocate costs. It also obligated Belarus, Ukraine and Kazakstan to accede to the 1968 Nuclear Non-Proliferation Treaty (NPT) in the status of non-nuclear-weapons states as soon as possible.

In letters submitted with the Protocol, Belarus, Ukraine and Kazakstan pledged to eliminate all nuclear weapons and strategic offensive arms on their respective territories within seven years after entry into force of the START Treaty. All tactical nuclear weapons have been removed from the three states and transferred to Russia. However, the committee notes that Belarus, Ukraine and Kazakstan are under no legal obligation to transfer any nuclear weapons to Russia. They could—in theory—elect to eliminate such weapons on their own territories. Yet, because these countries lack the necessary facilities for local elimination, the Bush Administration's Article-by-Article Analysis of the Lisbon Protocol concluded: ''As a practical matter, we expect that nuclear weapons will be transferred to and eliminated in Russia.''

In addition to obligations undertaken with respect to the Lisbon Protocol, Belarus and Kazakstan have also concluded bilateral agreements with Russia to deactivate and transfer their strategic arsenals to Russia. Prior to START's entry into force, all Parties began deactivating and eliminating strategic systems to meet Treaty obligations. In this regard, as of September the Parties have achieved the following levels for strategic nuclear delivery vehicles (SNDVs) and warheads (WH).

NUMBER OF WEAPONS ATTRIBUTED TO THE FOUR PARTIES TO THE UNITED STATES

	SNDV/WH	
	As of Sept. 1, 1990	Sept. 1, 1995
Belarus	54/54	18/18
Kazakstan	144/1,360	48/480
Russia	2,092/7,345	1,513/6,769
Ukraine	210/1,512	220/1,592
Total for the former Soviet Union	2,500/10,271	1,799/8,859
United States	2,246/10,563	1,727/8,345

As of September 1995, the United States has:

Removed all nuclear warheads—approximately 3,900—from 450 Minuteman II ICBMs and from 384 Poseidon C–3 and C–4 SLBMs;

Destroyed 120 Minuteman II ICBM silo launchers and removed ICBMs from the remaining Minuteman II silo launchers;

Destroyed 320 Poseidon C–3 and C–4 SLBM launchers, which represents 20 ballistic missile submarines destroyed, and removed SLBMs from the remaining 64 launchers;

Eliminated 251 heavy bombers from Treaty accountability; roughly 135 heavy bombers remaining to be eliminated under START have been retired from operation and moved to an elimination facility.

The United States has thus completed 56 percent of its overall missile launcher and heavy bomber eliminations to be accomplished under START. As a result, the United States is already below START's first phase limits on delivery vehicles and accountable warheads, which do not take effect until December 1997.

Also as of December 1995, over 3,000 strategic warheads have been removed from deployment in Belarus, Kazakstan, and Ukraine, and over 2,500 of these have been transferred to Russia, including all warheads formerly located Kazakstan. The remaining warheads in Belarus and Ukraine are scheduled to be transferred to Russia in 1996. Furthermore, over 700 missile launchers and heavy bombers have been eliminated throughout the former Soviet Union. As a result of these eliminations, the combined total number of delivery vehicles and accountable warheads in the new independent states is also below START's first phase limits on these items.

From START to START II

In January 1992, President Bush proposed to ban MIRVed ICBMs and to limit actual warheads to 4,700. He further offered to reduce the number of U.S. Trident warheads by one-third. Although President Yeltsin agreed with the ban in principle, he considered the Bush proposal inequitable since it would affect primarily the land-based leg of Russia's strategic triad—traditionally Russia's forte—while allowing U.S. retention of a nuclear advantage in both heavy bombers and submarine-launched ballistic missile warheads. The impasse was resolved by U.S. agreement to deeper cuts in SLBMs. On June 17, 1992, Presidents Bush and Yeltsin signed a Joint Understanding in Washington that paved the way for the formal negotiation of the START II Treaty. On that same day they issued the Joint Statement on a Global Protection System providing for discussion of U.S.-Russian cooperation on ballistic missile defense. This followed-up on President Yeltsin's speech at the United Nations on January 31, 1992.

The START II Treaty, in contrast with START, is relatively brief and straightforward, calling for two phases of reductions in ICBMs, ICBM launchers, ICBM warheads, SLBMs, SLBM launchers, SLBM warheads, heavy bombers, and the nuclear payloads loaded onto heavy bombers. START II contains limits in some categories of weapons not addressed in the START Treaty, and in turn does not alter all START limits. In those cases where no limit is expressed in the latter treaty, START limits remain applicable.

COMPARISON OF CENTRAL LIMITS IN START AND START II

Weapon system	START	START II
Total delivery vehicles	1,600	No limit specified.
Warheads attributed to all delivery vehicles	6,000	3,000–3,500.
Warheads attributable to all ballistic missiles	4,900	No limit specified.
Warheads attributed to MIRVed ICBMs	No limit specified	0.
Warheads attributed to heavy ICBMs	1,540	0.

COMPARISON OF CENTRAL LIMITS IN START AND START II—Continued

Weapon system	START	START II
Warheads attributed to mobile ICBMs	1,100	No limit specified.
Warheads attributed to SLBMs	No limit specified	1,750.
Warheads attributed to heavy bombers	Discounted by 50%, or counted as a single warhead.	As actually deployed.

Besides the deeper cuts, the practical effect of the START II Treaty is the elimination of the U.S. MX missile, significant reductions in U.S. heavy bombers, and a sublimit on the number of warheads to be deployed on SLBMs—all areas of comparative advantage for the United States—in exchange for elimination of the Russian SS–18 heavy ICBM and a ban on MIRVed ICBMs.

Maintenance of the U.S. strategic deterrent

The committee has concluded that the START II Treaty will enhance U.S. security through reducing the overall levels of strategic nuclear arms possessed by both Russia and the United States, eliminating the Russian SS–18 heavy ICBM, and banning the deployment of ICBMs with more than one warhead. At the same time, START II does not fundamentally alter the deterrence value of the U.S. nuclear force posture, maintaining instead the two fundamental concerns of strategic parity and strategic stability. Parity undergirds U.S. deterrence strategy by ensuring a retaliatory capability threatening unacceptable costs that would outweigh benefits. Strategic stability—at least in the Cold War, bipolar vein—derives from the types of strategic offensive arms deployed by both Parties. In particular, stability depends upon an environment in which neither side has the incentive to engage in a pre-emptive strike. As such, these two concepts are intertwined. In testimony before the committee, the Chairman of the Joint Chiefs of Staff, General John Shalikashvilli, offered his judgment that the START II Treaty not only maintains the deterrent value of U.S. nuclear forces, but goes further than the START Treaty to ensure stability by emphasizing a survivable mix of forces. On the subject of parity, General Shalikashvilli noted:

> It was our view that with the 3,500 warheads allowed under this treaty we would remain capable of holding at risk a broad enough range of high value political and military targets to deter any rational adversary from launching a nuclear attack against our nation or our allies.
>
> Last September, we completed the Nuclear Posture Review (NPR)—an effort chartered to determine what roles our nuclear forces must meet to protect against future challenges to U.S. National Security interests. The NPR assumed the post-START II nuclear force levels and its analysis reconfirmed the calculations that were done before and during the negotiations for START II. The review reaffirmed both that we must maintain a viable nuclear deterrent in the post-Cold War world and that 3,500 warheads will be sufficient to hold at risk those assets which any foreseeable enemy would most value—the core determinant of effective deterrence.

On the question of strategic stability, General Shalikashvilli further concluded:

> In the past, with MIRVed ICBMs a significant part of the forces of both sides, there was much greater incentive to shoot first during a crisis. The inherent vulnerability of land-based missiles to a first strike, compounded by the consideration of losing the multiple warheads on MIRVed missiles, argued for launching these weapons before they could be disabled by an enemy strike. Thus, eliminating this entire category of nuclear weapons relieves the incentive to launch first, adding greatly to crisis stability. START II also eliminates the last of the heavy ICBMs—the remaining Russian SS–18s—which are hostage to the same logic and are therefore equally destabilizing in a crisis.
>
> In addition to eliminating these two kinds of systems, the restructuring of our triad made under the terms of this Treaty will improve stability in its own right. Our START II ICBM leg will be a less attractive target than has been the case in the past. That all of our remaining ICBMs will have single warheads will make them less valuable targets than MIRVed missiles. But, in addition, the combined calculus of rough equivalency in overall warheads between us and the Russians, and the fact that all remaining ICBMs will be equipped with single warheads, will make it highly unlikely that Russia will consider launching an effective first strike to disarm our ICBMs. Under the warhead calculus of this Treaty, to achieve the levels of confidence needed to disarm this one leg of our triad would require such a high proportion of Russia's overall warheads that this course would leave the attacker at a significant disadvantage. By any rational calculation, the costs would greatly outweigh any potential gains.

The committee finds the logic and objectives underpinning the U.S. negotiating position on START II to be based on sound reasoning concerning the size and composition of nuclear forces necessary to retain a credible deterrent force beyond the year 2003. Notwithstanding significant reductions under START and START II, U.S. nuclear forces will continue to be robust enough to sustain an appropriate targeting strategy and a suitable range of response options, even in the unlikely event of a massive first strike. The START II force levels provide enough survivable forces which, when coupled with survivable, sustained command and control systems, maintain U.S. national security. Stability would be further enhanced by a national missile defense against limited strikes whether by accidental launch or from third countries.

U.S. force survivability

The START Treaty limits each side to 6,000 accountable warheads (of which no more than 4,900 may be deployed on ICBMs and SLBMs). START II will limit the two Parties to roughly half of that ceiling—to between 3,500 and 3,000 warheads, of which no more than 1,750 may be deployed on SLBMs and of which none

may be deployed on MIRVed or ''heavy'' ICBMs. As can be seen in the table below, the Treaty will accomplish deep reductions in both U.S. and Russian strategic forces. This table reflects the judgment of Secretary of Defense Perry, who stated in testimony before the committee that the U.S. allocation of 3,500 warheads:

> * * * will be divided among ICBM, SLBMs and the bombs and warheads on our bombers. An approximate disposition of this force would be 500 ICBM warheads, fewer than 1700 SLBM warheads, and approximately 1300 warheads on bombers. * * * Based on present planning, that is the way we would distribute our forces under START II. I believe this would be, of course, entirely capable of carrying out our mission of strategic deterrence.

ILLUSTRATIVE COMPARISON OF U.S. AND RUSSIAN FORCES UNDER START AND START II

[As estimated by the Congressional Research Service]

	December 1994		START		START II	
	U.S.	Russia	U.S.	Russia	U.S.	Russia
ICBM warheads	2,499	6,078	1,444	2,800	500	805
SLBM warheads	3,648	2,560	3,456	2,096	1,680	1,712
Bomber weapons	4,884	1,784	4,504	1,888	1,260	744
Totals	11,031	10,422	9,404	6,784	3,440	3,261

Note: Because weapons that are deactivated but not eliminated continue to count under the force limits established in both START and START II, some of the warheads included on this table may be attributable to non-operational systems.

In general, the survivability of U.S. forces depends upon the nature of the attack, the mix of strategic nuclear delivery vehicles employed, and force preparedness. It is commonly accepted that the following percentages of warheads would survive a first-strike attack:

—ICBMs in silos (roughly 10 percent survivable)

—ICBMs on mobile trucks/trains in garrisons (roughly 10 percent)

—ICBMs on mobile platforms scattered to deployment areas (roughly 80–100 percent)

—SLBMs under normal U.S. operational practices (roughly 65 percent for Tridents)

—Heavy bomber weapons under day-to-day alert (roughly 30 percent).

Given these ratios, the committee finds that reductions under both START and START II have resulted in a more survivable U.S. force structure. Whereas these calculations yielded a survivable force estimate of just over 37 percent for the pre-START U.S. force posture, that estimate increases to 40 percent with START fully implemented, and to 44 percent, or 1,520 warheads, for a post-START II force structure. (500 ICBMs×10%=50 warheads; 1,680 SLBMs×65%=1,092 warheads; 1,260 Bomber Weapons×30%=378 warheads; total=1,520 warheads.)

Post-START II structure of U.S. forces

United States maintains a triad of strategic offensive forces. In this combination, ICBMs, SLBMs, and heavy bombers provide a redundant mix of mutually supporting capabilities. This is designed,

in part, to complicate an aggressors attack by requiring the targeting of each independent leg in an effort to reduce the effectiveness of a retaliatory second strike. Further, the triad serves as a hedge against both a system-wide flaw in one or another leg and the possibility of technological breakthrough, which might render a component of the triad obsolete or vulnerable. Finally, the triad offers flexibility in striking military targets. While the bomber leg of the triad will undergo deep reductions under START II—28 B–52H bombers will be eliminated and all B–1B bombers will be reoriented to conventional bombing roles—the composition of the ICBM and SLBM legs of the U.S. triad will remain fairly constant. The U.S. will operate four fewer Trident submarines and fifty fewer ICBMs (all MX missiles having been slated for elimination) than it would have under START. General Shalikashvilli contended in his testimony before the committee on March 1, 1995, that START and START II will improve the viability of the triad by eliminating those elements of the Russian force posture which most directly threatened its integrity.

Yet despite the effective retention of the nuclear triad posture in the post-START II force structure, the committee is concerned that no U.S. bombers are on day-to-day alert at present, having been removed from nuclear alert in September 1991. A short or no-notice attack therefore holds the prospect of destroying nearly all of the air-breathing leg of the triad as well as the vast majority of U.S. ICBMs, leaving the United States dependent upon those Trident submarines patrolling at sea. During the Cold War, the U.S. fielded 40 SSBNs. The post-START II force recommended in the Nuclear Posture Review will consist of just 14 Trident submarines (of which only 8 to 10 would be at sea at any given time). Thus the number of submarines that an adversary would need to locate at sea is markedly less.

Second, the committee is concerned that, with no new strategic systems under development, the United States will possess for the next several decades an aging fleet of strategic nuclear delivery vehicles. The last B–52 was produced in 1964, and the last Minuteman III ICBM was deployed in 1975. Yet these two systems comprise 61 percent of all U.S. nuclear delivery vehicles, and will carry 42 percent of the warheads allowed the United States. In contrast, it is likely that fully three quarters of all of Russia's post-START II strategic nuclear delivery vehicles will have been produced after 1985. The committee concurs with Admiral Chiles, Commander in Chief, U.S. Strategic Command, when he noted in a letter to Secretary Perry prior to the public release of the Nuclear Posture Review findings:

> With no new strategic systems anticipated for the foreseeable future, the challenge is to maintain existing systems in the absence of a supporting production base. Preservation of key strategic industrial-base capabilities is required to attract and retain the experienced personnel that will be needed to resolve inevitable problems with aging systems.

If the United States is to maintain a credible nuclear deterrent, it must accord a high priority to Minuteman life-extension programs and retention of both the bomber and submarine industrial bases.

Implications for the U.S. defense industrial base

Nowhere are qualitative and quantitative issues so intertwined as in the case of the B–2 bomber. The fact that the platform is so well positioned to capitalize upon technological innovations such as stealth capability, new precision-guided munitions, and information warfare, has much to do with its cost. Nor is it is surprising to find that the defense industrial base responsible for B–2 production has proven very sensitive to decreases in procurement. Reduction in the number of B–2s to be purchased to a total of 20 aircraft from the original plan for 132 has caused dramatic attrition in the ranks of subcontractors involved in B–2 production. Nearly half of the industry has '"haken out" between 1989 and 1995. Most importantly, key components of the bomber will no longer be produced after the construction of the twentieth aircraft. For example, the sole producer of the radar-absorbent body core of the B–2, the Hexcel Corporation, declared bankruptcy in late 1993.

There has been much discussion of late regarding the merits of commercial and military integration. Certainly it has often been the case that the technologies which have spurred technological revolutions originated outside the defense sector and were subsequently imported. Both the railroad and telegraph, and the rise of commercial automotive and aircraft production are excellent examples. Indeed, even the casting methods employed to fashion church bells proved applicable to creation of artillery tubes, leading the military historian Bernard Brodie to comment that "the early founders, whose task had been to fashion bells which tolled the eternal message of peace * * * contributed unintentionally to the discovery of one of man's most terrible weapons."

However, the committee does not agree with Secretary of Defense Perry's testimony on March 1, 1994, before a Senate Armed Services subcommittee that:

> The rationale for not maintaining the bomber industrial base is that we have a robust commercial base in building large transport planes * * * and [that] we could, in time, pivot from the commercial base to the building of bombers again as we have done in earlier eras in our history.

This policy ignores the fact that some elements of the defense industrial base are so uniquely military in their orientation that they are without parallel in the commercial sector. Such would be the case for the B–2, whose large composite structures depend upon facilities and know-how the reconstitution of which would prove an expensive proposition. The original development of the B–2, for example, involved $24 billion in sunk costs. Once dissipated, the loss of institutional memory and personnel would prove costly.

Debate on the preservation of the B–2 industrial base is in many respects similar to the discussion over the submarine industrial base. While the committee believes uniqueness, in and of itself, is not a convincing argument for retention of either capability, it does find central to both the B–2 and the submarine debates the ques-

tion of whether or not these platforms fulfill important roles, and the extent to which their respective industrial capabilities are critical to future security requirements. The criticality of these systems to the post-START II deterrent posture of the United States is beyond question. Together, these two platforms will bear the onus of carrying 61 percent of the U.S. nuclear arsenal—just 20 B–2 bombers will carry over 12 percent of the total, and an even fewer number of Trident submarines will carry 49 percent. In particular, the stealth capabilities and flexibility of the B–2 will become increasingly important in a world littered with sophisticated technologies such as radar systems, surface-to-air missiles, and nuclear, chemical, and biological threats.

The ongoing technological revolution

A number of defense planners have suggested that the United States finds itself in the midst of an ongoing "military-technical revolution." Developments associated with this revolution are particularly relevant to the question of how U.S. strategic forces will be structured, as well as to efforts at anticipating future threats. The Senate is challenged, in its consideration of the START II Treaty, to conceptualize future conflict in an environment already undergoing dramatic transformations. While the United States may seek to use emerging technologies in the future to compensate for force structure reductions and to maximize platform capabilities, it must be well positioned to capitalize upon such a development. Naturally the identification of such technologies becomes critical. Failure in this respect threatens the U.S. military with obsolescence. Just as importantly, such a failure would afford other countries the opportunity to offset current numerical or qualitative inferiorities vis-vis the U.S. deterrent with innovation, or to possibly to realize a sudden jump to parity.

Military-technical revolutions depend not only on the emergence of new technologies, but upon the adaptation of operations and organizations to maximize the employment of cutting-edge capabilities. German integration of aircraft operations and radios following the First World War enabled them to defeat the French and British in a six-week-long combined arms offensive. Today's global positioning receiver holds for the future battlefield what the radio posed for the Western Front in 1940.

However, the comparative advantage conferred by a given technology tends to be short-lived. The initial advantage by no means suggests continued dominance, or even competitiveness. This is a lesson of particular relevance to the submarine leg of the U.S. triad. It was, after all, the French who made substantial advances in sub-surface warfare during the nineteenth century, but the Germans who ultimately employed the submarine to devastating effect in both World Wars. Forty years later, it would seem that current U.S. superiority in this dimension of warfare make the Trident SSBN leg of the triad the most invulnerable of the three. Yet financial pressures may cause this advantage to evaporate, along with the submarine industrial base. This is a particularly troubling prospect given that Russian work on a fifth generation SSN continues apace and that a new Russian SSBN is scheduled to enter production shortly after the turn of the century. According to a public

report issued by the Office of Naval Intelligence: ''For the first time, Russia's front-line submarines are as quiet or quieter in some respects than America's best.'' The committee is concerned that, in light of continued Russian technological advances and the global spread of sophisticated technologies, the loss of the United States' industrial capability in either the subsurface or aerospace dimension of the battlefield would prove a serious error.

SLBMs

Under START II the United States will deploy 14 Trident submarines, each equipped with 24 D–5 SLBMs. As was to be the case under START, roughly half of all U.S. warheads will be deployed on submarines. SLBMs will comprise 77 percent of all ballistic missiles in the post-START II arsenal (versus 71 percent under START).

ILLUSTRATIVE U.S. SUBMARINE FORCES UNDER START AND START II

[As estimated by the Congressional Research Service]

	December 1994		Expected, START		Expected, START II	
	SLBMs	Warheads	SLBMs	Warheads	SLBMs	Warheads
Poseidon C–3	48	480	0	0	0	0
Poseidon C–4	96	768	0	0	0	0
Trident C–4	192	1,536	192	1,536	0	0
Trident D–5	168	1,344	240	1,920	336	1,680
Totals	456	3,648	432	3,456	336	1,680

Heavy bombers

START II's attribution rules for heavy bombers differ significantly from those in START. Under the START Treaty, each of the first 150 U.S. bombers equipped to carry air-launched cruise missiles (ALCMs) was counted as having 10 warheads, though these bombers in fact are capable of carrying as many as 20 ALCMs. Similarly, each of the first 210 Russian bombers equipped with cruise missiles was counted as 8 warheads though in reality each could carry up to 16. Every additional ALCM-equipped bomber would be attributed with the full number of warheads that they were equipped to carry. All other bombers carrying nuclear gravity bombs or short-range nuclear missiles were attributed one warhead (despite the fact that U.S. bombers, for example, can carry up to 24 of these weapons). These counting rules would have allowed both sides to deploy nuclear weapons in excess of the 6,000 warhead limit imposed on delivery vehicles by START.

Under the START II Treaty, bombers are attributed with the actual number of warheads with which they can be equipped. As a practical matter, this will produce major changes in the heavy bomber leg of the U.S. strategic triad. In order to meet the 3,500 warhead central limit of START II, all B–1B bombers are likely to be reoriented to conventional missions. Further, the U.S. will retain fewer B–52s in inventory, and may equip many of those with 12 ALCMs rather than the 20 allowed under START. The committee anticipates that the net effect of changes in attribution rules, coupled with lower warhead limits, will be a much reduced heavy bomber force of less than 90 bombers carrying roughly 1,260 war-

heads. The committee notes that, all other considerations aside, the incorporation of an additional 20 B–2 bombers into the U.S. force structure would only require the retirement of 16 B–52H bombers, thereby increasing the number of U.S. strategic nuclear delivery platforms without altering the basic warhead allocations of the triad.

As it now stands, the heavy bomber component will likely constitute less than 40 percent of the total number of deployed warheads in the total strategic force—a decrease of roughly 10 percent from the expected START nuclear force posture.

ILLUSTRATIVE U.S. HEAVY BOMBER FORCES UNDER START AND START II

[As estimated by the Congressional Research Service]

	December 1994		Expected, START		Expected, START II		
	Aircraft	Warheads	Aircraft	Warheads	MOU	Aircraft	Warheads
B–52G	53	636	0	0	12	0	0
B–52H	94	1,880	94	1,880	20	[1] 66	940
B–1B	96	2,304	96	2,304	16	0	0
B–2	4	64	20	320	16	20	320
Totals	247	4,884	210	4,504		86	1,260

[1] B–52G and B–52H.

ICBM's

The land-based component of the U.S. triad will also be significantly reduced under the START II Treaty. Whereas the United States planned to field 550 ICBMs under the START force posture, under START II it will field 500 missiles, eliminating its arsenal of 50 MX Peacekeeper ICBMs with 10 warheads each. The Minuteman III, which is to be deployed with one warhead under force planning for both Treaties, will become the sole ICBM in the U.S. inventory. The land-based share of the total U.S. warhead allotment remains unchanged from START to START II (at 15 percent). However, the number of ballistic missiles that will be deployed on land versus the number deployed at sea will decrease to less than one quarter of the total.

ILLUSTRATIVE U.S. ICBM FORCES UNDER START AND START II

[As estimated by the Congressional Research Service]

	December 1994		Expected, START		Expected, START II	
	ICBMs	Warheads	ICBMs	Warheads	ICBMs	Warheads
Minuteman II	409	409	0	0	0	0
Minuteman III	530	1,590	500	944	500	500
MX	50	500	50	500	0	0
Totals	989	2,499	550	1,444	500	500

Post-START II structure of Russian forces

Like the United States, Russia maintains a strategic triad of land-based, submarine, and bomber forces. Unlike the United States, however, Russia's strategic forces are dominated by the land-based component. Even more so than in the case of START, ICBMs will bear the brunt of Russia's reductions under START II. Under START, Russia could be expected to deploy roughly 60 per-

cent of its ballistic missile warheads on ICBMs. The committee anticipates that START II will produce a significant shift in the composition of Russian strategic forces, leading Russia to deploy approximately 30 percent of its ballistic missile warheads on land-based systems. The other 70 percent likely will be deployed on SLBMs. Even with this shift in priorities, START II will have very little effect on either the submarine or bomber-based legs of the Russian strategic triad since—in any event—Russia would have eliminated the bulk of these systems to comply with START and to reduce maintenance and operations costs.

SLBM's

In the case of submarine-launched ballistic missiles, as noted previously, START II contains a sublimit of 1,750 SLBMs. Projections of Russia's future SLBM force structure are contingent upon a number of variables. Given Russian Defense Minister Grachev's high prioritization of a new generation of ballistic missile submarines (SSBN), the committee believes it reasonable to assume that Russia will deploy roughly the treaty-maximum number of warheads. One difference, however, may be that the SS–N–18 missiles, which would have been downloaded under START from seven to three warheads, will instead be eliminated.

ILLUSTRATIVE RUSSIAN SUBMARINE FORCES UNDER START AND START II

[As estimated by the Congressional Research Service]

	December, 1994		Expected, START		Expected, START II	
	SLBM's	Warheads	SLBM's	Warheads	SLBM's	Warheads
SS–N–6	32	32	0	0	0	0
SS–N–8	256	256	0	0	0	0
SS–N–17	0	0	0	0	0	0
SS–N–18	208	624	128	384	0	0
SS–N–20	120	1,200	120	1,200	120	1,200
SS–N–23	112	448	128	512	128	512
Totals	728	2,560	376	2,096	248	1,712

Bombers

According to President Yeltsin, Russia has ceased production of heavy bombers. Soviet declarations on bombers in the START MOU were already within START limits, and thus no reduction in the size of the Russian heavy bomber force was anticipated. However, the counting rules for START II differ from those of START, attributing the actual number of warheads deployed on every heavy bomber. Whereas under START, 150 U.S. and 180 Soviet bombers equipped with long-range air-launched cruise missiles (ALCMs) were discounted by up to 50 percent, and all other bombers equipped with nuclear weapons other than ALCMs were counted as having only one warhead, under START II these platforms are attributed with their actual nuclear payloads. Thus, in a departure from a Russian force structure designed to meet START limits, the committee expects that Russia may choose to retire or reorient the Bear B/G heavy bomber.

ILLUSTRATIVE RUSSIAN HEAVY BOMBER FORCES UNDER START AND START II

[As estimated by the Congressional Research Service]

	December, 1994		Expected, START		Expected, START II		
	Aircraft	Warheads	Aircraft	Warheads	MOU	Aircraft	Warheads
Bear B/G	.35	140	60	240	1 or 2	0	0
Bear H	84	1,344	85	1,360	6 or 16	57	912
Blackjack	25	300	24	288	12	5	60
Totals	144	1,784	169	1,888		62	972

ICBM's

In order to reach a mix of forces permitted under START II, Russia will be required to remove from service roughly 2,500 warheads deployed on 250 missiles. However, most of this reduction will be achieved by the total elimination of the SS–18 MIRVed heavy ICBM force. Furthermore, because of the MIRV ban and the limitations on down-loading, Russia will also be forced to eliminate its mobile SS–24 ICBM force (the Russian equivalent of the MX).

While the central numerical limits of START II are important, START II requirements for the downloading or elimination of all MIRVed ICBMs and the elimination of all of Russia's SS–18 missiles—believed to be the only Russian missile capable of destroying hardened targets such as ICBM silos—are even more important. MIRVed ICBMs deployed in fixed silos have long been considered destabilizing by the U.S. since they make inviting targets—one attacking warhead delivered onto a silo holds the prospect for preemptively destroying up to ten warheads per missile. This vulnerability in turn is thought to contribute, at a minimum, to a "launch-on-warning" posture, and—in a worst-case scenario—to a first-strike nuclear strategy. The committee notes that in 1983, the Scowcroft Commission found that "the Soviets now probably possess the necessary combination of ICBM numbers, reliability, accuracy, and warhead yield to destroy almost all of the 1,047 U.S. ICBM silos, using only a portion of their own ICBM force."

The START Treaty did little to alleviate this concern. Although it reduced the number of deployed SS–18s from 308 to 154, it also reduced the number of U.S. silo-based ICBMs from 1,000 to 550. Thus the ratio of SS–18 warheads to U.S. silos decreased only marginally, from 3.08:1 to 2.80:1. Under START II, the elimination of all SS–18 missiles assuages this longstanding concern. By altering fundamentally the capabilities of the Russian strategic rocket forces, shifting Russian emphasis to more survivable platforms such as submarines and mobile ICBMs, it is possible that the Treaty will also prompt revision of Russia's nuclear posture and doctrine.

START II creates a managed process of nuclear arms reductions. While much of Russia's motivation to engage in deeper cuts may stem from economic imperatives, reliance upon these incentives alone can provide no assurance that reductions would be undertaken in a sustained or stabilizing fashion. In his testimony before the committee, Ambassador Linton Brooks noted that:

> * * * I do not believe that economics and goodwill exchange of information is a substitute for these treaties, be-

> cause economics will in fact not drive you to a stabilizing force structure. The cheapest way for the Russian Federation to reduce is to keep the new SS–24s and the new SS–18s and throw away all that expensive single warhead mobile stuff and all those submarines. That is not in our interest, because it would then lead to a very destabilizing force structure.

Retention of the SS–18 is not an option under START II. Furthermore, by allowing Russia to convert 90 SS–18 silos and by relaxing START downloading rules—which will have the cumulative effect of allowing Russia to deploy 90 additional SS–25 type missiles and to maintain 105 SS–19 missiles—the START II Treaty makes more palatable the elimination of the newer, ten-warhead SS–24, which probably would have been retained by Russia in a START force structure. In addition, Russia may deploy several hundred new, single-warhead missiles to build-up to the central limits of the START II Treaty. The post-START II Russian ICBM force will be significantly smaller and different in composition than it is currently.

ILLUSTRATIVE RUSSIAN ICBM FORCES UNDER START AND START II

[As estimated by the Congressional Research Service]

	December 1994		Expected, START		Expected, START II	
	ICBMs	Warheads	ICBMs	Warheads	ICBMs	Warheads
SS–11	20	20	0	0	0	0
SS–13	20	20	0	0	0	0
SS–17	11	44	0	0	0	0
SS–18	292	2,920	154	1,540	0	0
SS–19	300	1,800	0	0	105	105
SS–24 silo-based	56	560	0	0	0	0
SS–24 rail-based	36	360	96	960	0	0
SS–2520	354	354	300	300	700	700
Totals	1,089	6,078	550	2,800	805	805

IV. MULTILATERAL IMPLICATIONS

The committee recognizes that familiar Cold War assumptions about Soviet military power as the key threat to U.S. survival, the predictability of the rigid, bipolar arena and attendant East-West alliances, the rationality of actors and the primacy of mutual-assured destruction in deterrence strategy, the political, military, and economic role of the United States within NATO, the strategic value of nuclear weapons, and the global nature of U.S. security concerns can be called into question as bases for strategic thought, planning, and action. At the same time, the committee believes that we have only a rudimentary understanding of the emerging environment with which the United States will be forced to contend. The end of the Cold War ushered in unprecedented change in several key respects, each with significant strategic military implications. Already the world has witnessed an increased assertiveness by states with regional ambitions; the proliferation of nuclear, chemical, and biological weapons; and the proliferation of conventional armaments, sensitive, dual-use technologies, and ballistic missile capability.

The juxtaposition of these trends in countless combinations at the regional, state, and sub-state level offer the potential for a wide range of conflicts, some of which may impinge upon U.S. national security interests. Consequently, this new security environment will demand greater recourse to a broad range of political, economic, and military responses than did the relatively predictable Cold War era. Recent commitments to reductions in the U.S. strategic arsenal notwithstanding, the committee finds that nuclear deterrence will remain the fundamental guarantor of U.S. security. Nuclear weapons will serve an indispensable role in U.S. national security policy for the foreseeable future. The objective of nuclear arms control must therefore be the maintenance of nuclear forces at a level commensurate with the nation's national security needs, and specifically its targeting requirements. The task of understanding the military implications of the START II Treaty is rendered challenging since a variety of new threats such as regional assertiveness by various states increasingly is likely to be coupled with the spread of weapons of mass destruction (WMD) and sophisticated conventional weapons systems such as ballistic missiles. This creates the potential for an expansion in the number of strategic targeting requirements at precisely the same time that the U.S. arsenal is being dramatically reduced. The committee therefore believes that the United States should only proceed with strategic nuclear arms control to the extent that an equilibrium is maintained between targets and strategic capability.

Further reductions

The committee finds that nuclear targeting policy and arms control can prove mutually reinforcing. Both START and START II reduce moderately the U.S. target list, thereby decreasing the need for strategic weapons. It has been estimated in open source literature that START will eliminate roughly 20 percent of the U.S. targeting requirement. Implementation of START II will further reduce the number of targets in the single integrated operational plan (SIOP), as long as other countries do not deploy additional strategic offensive arms. However, the committee notes other countries are seeking nuclear capability. For example, China not only fields two dozen SLBMs, several hundred heavy bomber warheads, and roughly 24 medium and long-range ballistic missiles, but has several modernization initiatives ongoing. The following table uses estimates of China's nuclear arsenal drawn from the Carnegie Endowment's "Tracking Nuclear Proliferation, 1995":

ESTIMATES OF CHINA'S NUCLEAR ARSENAL

Type	Operating parameters	Number
Dong Feng–3(3A)/CSS–2 (IRBM)	DF–3: 2,650 km range/2,150 kg payload/1–3 Mt Warhead DF–3A: 2,800 km/2,159 kg/2 Mt Warhead.	50
Dong Feng–4/CSS–3 (IRBM)	4,750 km/2,200 kg/3.3 Mt Warhead/1–3 Mt Warhead	20
Dong Feng–5(5A)/CSS–4 (ICBM)	DF–5: 12,000 km/3,200 kg/3.3 Mt Warhead DF–5A: 13,000 km/3,200 kg/4–5 Mt Warhead.	4
Dong Feng–21(21A)/CSS–6 (Road-Mobile IRBM).	DF–21: 1,700 km/600 kg DF–21A: 1,800 km/600 kg	36
Julang–1/CSS–N–3 (SLBM)	1,700 km/600 kg/200–300 Kt Warhead	24

In addition to these forces, the Chinese military operates several tactical, solid-fuel, road-mobile missiles such as the M–9. Further, China is also developing for deployment by the end of the 1990s four intermediate and long-range ballistic missile systems: the land-mobile Dong Feng–25 (1,700 km/2,000 kg); the land-mobile Dong-Feng–31 (8,000 km/700 kg/200–300 Kt Warhead); the silo-based Dong Feng–41 (12,000 km/800 kg/200–300 Kt Warhead; and the Julang–2 second-generation SLBM (8,000 km/700kg/200–300 Kt Warhead).

Based upon a U.S. Army memorandum provided to the Congressional Budget Office detailing the 1991/1992 SIOP for a large military-industrial economy, the committee believes the counter-force target reductions afforded by START II, largely in the areas of silos and launch centers, will allow the United States to meet narrowly its targeting requirements. However, this depends upon U.S. deployment of the full START II Treaty—allowable number of warheads, the down-sizing of a sizeable percentage of the infrastructure supporting Russia's nuclear arsenal, the absence of significant, new nuclear deployments elsewhere in the world, and the replacement—rather than augmentation—of aging Chinese delivery vehicles with second or third generation systems.

General Colin Powell's stated before the Senate Committee on Armed Services on July 28, 1992, that the viability of the U.S. strategic triad depends upon the avoidance of "pressure to go lower than START II, precipitously lower than START II, so it makes it hard for all three legs to remain coherent legs, to make the land-based size too small or the number of bombers too low or the number of submarines and warheads and missiles aboard too small." This statement highlights the importance of evaluating carefully further reductions beyond START II. The committee will review any such a possibility in light of its broad effect upon U.S. national security, targeting requirements, and the effect upon the U.S. triad and strategic stability.

The proliferation of weapons of mass destruction

R. James Woolsey, former Director of Central Intelligence, testified in February, 1993, before a Senate Governmental Affairs subcommittee that more than twenty-five countries either possess or are in the process of acquiring WMD capabilities, as well as the means for delivering these weapons. The committee is concerned that this trend may be exacerbated by the fact that more than thirty thousand warheads are scattered throughout Ukraine, Belarus, Kazakstan, and Russia. Adding to this problem—as a consequence of the START II Treaty—is the fact that thousands of additional warheads will be removed from Russian delivery vehicles and stored in facilities where security is suspect. On this matter, the committee notes that neither START nor START II require the dismantlement of the warheads downloaded to meet treaty limits. Thus the size of Russia's fissile material stocks likely will increase as warheads are withdrawn to Russia from Belarus, Ukraine, and Kazakstan.

Weakened centralized control in Russia over nuclear materials stocks has created a serious proliferation problem. Former Director Woolsey also stated in testimony before Congress that Russian

criminal organizations, in particular, have established elaborate infrastructures that ultimately may be used to facilitate the transfer of this material to rogue states. In the last ten years, the number, size, and range of activities of non-state "criminal" organizations has burgeoned in most regions of the world. President Boris Yeltsin, for example, stated in 1993 that organized crime constituted a major threat to Russia's strategic interests. The committee believes these organizations also threaten the security of the United States by potentially accelerating the spread of nuclear weapons.

Regardless of the means by which states seek to acquire weapons-grade material, their motivations invariably are similar, and may be categorized as either fundamentally military, political, or economic in nature. The following list of rationales also apply to chemical and biological weapons proliferation. In that respect, five Middle Eastern countries reportedly possess undeclared offensive biological weapons programs—Iran, Iraq, Israel, Libya, and Syria. These five, plus Egypt, also possess chemical arsenals. Thus just as it is conceivable that a growing number of states will possess nuclear devices, is it also likely that the "poor man's bomb"—either biological or chemical weapons—will spread to new countries for the following reasons:

RATIONALES FOR THE ACQUISITION OF WEAPONS OF MASS DESTRUCTION

Military	Political	Economic
(1) To deter or coerce a regional adversary.	(1) To obtain international prestige and political leverage.	(1) To obtain "more bang for the buck."
(2) To deter a larger power, such as the United States.	(2) To garner domestic support and pride.	(2) For the benefits and backward-linkages of a national technical infrastructure.
(3) To possess a weapon of last resort	(3) To offset a lack of extended security guarantees, real or perceived.	(3) For their ease of acquisition as biproducts of civilian biological and chemical industrial development.
(4) To equalize a military imbalance, real or perceived.		

The importance accorded to WMD by states is not limited solely to the deterrence value these types of weapons afford. In fact, the cost-benefit calculus for the acquisition and use of these weapons likely will not conform to U.S. conceptions of "rationality." The committee views this as important since General Shalikashvili unequivocally linked the value of U.S. strategic offensive weapons to their deterrent effect upon "rational" actors.

The spread of ballistic and cruise missile technology

The proliferation of WMD is rendered all the more troubling by the increasing availability of sophisticated weapons systems and sensitive technologies. The collapse of the Soviet Union led to a reduction in barriers traditionally blocking arms collaboration between many states. Moreover, the increasingly competitive nature of the global arms market and reductions in military budgets have led many governments and defense industries to conclude that collaborative arms development and production offer the best prospects for maintaining research, development, and production capabilities. As a consequence, the transnational design, development,

and production of weapons systems is becoming increasingly common. Economic trends have changed the structure of defense industries worldwide, made many sorts of critical and dual-use technology affordable and available, and altered states' perspectives on the enforcement, efficacy, and economic wisdom of various export controls. Although these controls can serve as important retardants on the development of ballistic missiles, they have been weakened in the United States, Europe, Russia, and elsewhere by the quest for access to export markets and an "export or die" mentality on the part of many firms and governments. This trend has increased the diffusion of sensitive technologies and know how around the globe.

Roughly thirty countries already possess ballistic missile systems. Nine developing countries also produce ballistic missiles—Argentina, Egypt, India, Iran, Iraq, Israel, North Korea, South Korea, and South Africa. Four others—Brazil, Libya, Pakistan, and Syria—are pursuing the means for production. The committee is concerned that the number of states with ballistic missile arsenals continues to grow, and that several states are in the process of acquiring large inventories.

Several industrialized countries also possess cruise missiles capable of carrying a nuclear warhead. At least thirty other countries are currently seeking to develop cruise missile systems. While few cruise missiles can carry a 500 kg nuclear warhead, at this point, and while most have a range of less than 200 km, most are capable of delivering chemical or biological warheads and some missiles exceed 300 km in range. The spread of dual-use technologies will enable more effective integration of global positioning systems, larger turbojet, turbofan, and ramjet engines, larger fuel tanks, and larger wings. This will extend range and payload capabilities for cruise missiles and reduce their circular error probable (CEP). The committee notes that China, for example, has tested a supersonic unmanned aerial vehicle (UAV) and Israel is building an air-launched cruise missile with a range of over 400 km.

Many countries engaged in the development of ballistic and cruise missile capabilities have proven alarmingly willing to collaborate, both covertly and in some cases quite openly. At least ten countries in the Third World and four republics of the former Soviet Union field either Soviet-made missiles or some variant. The most prevalent evidence of cooperation in ballistic missile development is the prominence of the single-stage, liquid-fueled SCUD–B, which has a range of 300 km and is capable of carrying a 1,000 kilogram payload. Libya, North Korea, and Egypt have all transferred missiles to other countries, and the committee believes China may have sold intermediate range missiles to Saudi Arabia, M–11s to Pakistan, and missiles or technology to Iran, Syria, and North Korea. The latter of these states is now the predominant source of both missiles and missile production facilities.

Ballistic missiles provide an extremely efficient means for delivering weapons of mass destruction. When coupled with a nuclear, chemical, or biological program, missiles enable states to hold at risk neighboring populations, and potentially the United States as well. Indeed, the primary motivation for acquiring such systems may not be military in nature, but political. First and foremost,

ballistic missiles armed with WMD are instruments of intimidation.

However, as suggested in the preceding table, they also may be used to achieve military objectives. Drawing a number of lessons from the Gulf War, Iranian defense planners with recent acquisitions have oriented their country's military towards a posture presumably designed to deter the United States from engaging in military activities in the Gulf. Iranian analysts have openly claimed that missile systems represent a critical deterrent to outside attack, arguing in the Iranian press that Iran should "build up its own short, medium and long-range surface-to-surface as well as surface-to-air missiles." Another country of concern is North Korea, which is developing a series of missiles—the Taepo Dong-1 and -2—with ranges in excess of 3,000 kilometers. In sum, the committee believes that countries with interests antithetical to those of the United States view nuclear, chemical, and biological weapons as affording the opportunity to offset numerical and qualitative conventional inferiorities with the U.S. military.

The problem of post-cold-war deterrence: Who-whom?

Deterrence during the Cold War was based upon assumptions of rationality which allowed states to predict reactions with a fair degree of success. Communication and the centralization of command and control allowed for mutual familiarity between the United States and the Soviet Union over one another's plans for reaction in crisis situations. In other words, the potential for an action-reaction spiral was controlled by strategic parity at the top of the escalatory ladder. The committee believes that the Nuclear Posture Review puts forward a START II Treaty-compliant force based on Cold War deterrence assumptions despite the fact that the post-Cold-War era has none of the predictability or parity of its balanced, bipolar predecessor.

The conventional/nuclear balance seems to have reversed completely in this new era. Whereas strategic forces were previously essential to the U.S. as a means of countering the conventional superiority of the Warsaw Pact, now the commitment of conventional forces may prove critical to countering or reversing the proliferation of WMD in the Third World. In parallel, the acquisition of WMD may be accelerated by desires to counter conventional imbalances. This shift was aptly enunciated by Chairman Aspin in 1992, when he declared that while nuclear weapons may still serve as "great equalizers," it is now the United States that is the potential "equalizee."

In short, the psychological assumptions underpinning the doctrine of Mutually Assured Destruction (MAD) may no longer prove applicable. The security environment is no longer such that deterrence can be postulated in a consistent, reliable framework. Instead, the U.S. is posed with the problem of determining who is to be deterred and how.

National objectives and strategic cultures will prove critical variables affecting the utility of deterrence. Perhaps the greatest challenge for the United States in the next century will be to deter regional aggressors that may use tactics common to low-intensity conflicts in order to secure their objectives. Military power may

prove markedly asymmetrical in favor of the U.S., thus if conventional military action alone does not offer future aggressors prospects for success, it will be relegated to a secondary role. Operations might be characterized by terrorism, subversion, and efforts at blackmail using WMD capabilities. In other words, future aggressors may increasingly employ strategies that tend towards the indirect and unconventional, emphasizing nuclear, chemical, and biological weapons to deter the U.S. and/or allies.

Accordingly the most important aspects of the country's order of battle will not be the number of main battle tanks, armored fighting vehicles, and artillery that it fields, but the number of nuclear, chemical, and biological munitions, types of delivery systems, and access to commercial satellite communications networks it possesses, and the way it seeks to shield these capabilities—presumably among civilians or hostages—from the deep-strike capabilities of the United States. The committee therefore concludes that nuclear deterrence will require additional flexibility, require a case by case approach, and may prove to have reduced efficacy in some instances.

Theater missile defense

The threat to the United States is changing. In responding to the challenge of proliferation, the United States has four options at its disposal: (1) deterrence against the use of the system in question; (2) unilateral counter-proliferation initiatives; (3) the use of arms control and nonproliferation endeavors to restrict the spread of WMD systems and dual-use technologies; and (4) passive and active defenses against the use of WMD and ballistic/cruise missiles.

At the theater level, WMD proliferation and the spread of missile delivery vehicles will likely circumscribe U.S. crisis response capability. The use of forward-based tactical platforms such as aircraft carriers will become more difficult with the increased likelihood that U.S. forces will be detected and engaged at their points of entry into theater. Indeed, the fact that a number of regional powers are actively seeking missile capability and nuclear weapons may ultimately preclude the U.S. military from forward deployments unprotected by ballistic missile defenses. It is with this logic that the Director of the Defense Department's Office of Net Assessment, Andrew Marshall, has warned against the creation of "large, juicy targets." Moreover, the spread of these technologies raises the possibility that states may seek to deter the U.S. from intervening at all in a region in defense of its security interests. Some on the committee therefore view as critical the development of effective theater missile defenses (TMD) to protect U.S. troops, and is concerned that the effectiveness and capability of programs such as the Theater High Altitude Area Defense, Navy Upper Tier, and Brilliant Eyes systems not be constrained. Other members would oppose any program or development that jeopardizes the continued viability of the ABM Treaty. In response, some feel that any deliberate degradation of a TMD system's capability holds the prospect of rendering U.S. troops more vulnerable than need be the case, or than is acceptable, in the turbulent post-Cold War environment.

The committee is concerned that the Administration is considering an expansion of the ABM Treaty's limitations to include TMD

systems through a joint declaration, and intends to exercise its constitutional responsibilities to review carefully for advice and consent any proposed modification or multilateralization of the Treaty, or agreement to limit the location or deployment of theater missile defenses.

National missile defense

The committee notes that the United States remains a party to the 1972 Anti-Ballistic Missile Treaty, which limits the development and deployment of national missile defenses. The intent of that treaty, formulated in the midst of the Cold War, was to circumvent the possibility of an expensive and potentially dangerous action-reaction spiral whereby the United States and the Soviet Union sought to overcompensate for one another's ballistic missile defenses by increasing their offensive arsenals.

Some on the committee feel that robust missile defense programs have proven conducive to promoting arms control initiatives. In the 1980s, the Strategic Defense Initiative helped break the "log-jam" on offensive reductions, directly contributing to conclusion of the Intermediate-range Nuclear Force Treaty, and indirectly to START and the Treaty on Conventional Armed Forces in Europe. The committee notes that the Joint Understanding of June 17, 1992—which created the framework for the START II Treaty—was concluded in conjunction with a Joint Statement on a Global Protection System signed on the same day. This fact is explicitly referenced in the Preamble to the START II. However, the committee is concerned that U.S.-Russian discussions on cooperation on defenses against ballistic missiles have fallen by the wayside.

The Chairman believes a number of factors combine to bring into question the value of the ABM Treaty in the post-Cold War world. Major technological advances have been made by Russia and the U.S. in the last quarter of a century. Also, there has been a considerable improvement in relations between the two countries following the dissolution of the Soviet Union. At its most basic level, the logic of the ABM Treaty assumes hostility between Russia and the United States. Clearly, while a certain degree of wariness still permeates U.S.-Russian relations, the world has moved beyond the Cold War. Further, the mounting problem of WMD and ballistic missile proliferation, the uncertainties of the new security environment which complicate the role of deterrence, and continuing concerns over the potential for turbulence in the former Soviet Union all suggest that—in a world of multiple potential nuclear threats—the most likely nuclear danger to the U.S. is not a massive, preemptive Russian strike, but the deliberate or accidental launch of a few warheads. Such a danger is unpredictable, undeterrable, and something to which the United States—currently without any national missile defense whatsoever—is completely vulnerable.

Some on the committee believe that this argument can easily be carried too far. They believe it ignores the fact that the United States has no effective defense against bomber attack or transport of a nuclear device by terrorists. More importantly, it completely discounts U.S. intelligence capabilities and our considerable economic, diplomatic, and military strengths to deal with such a threat. Consistent with this view, the least desirable solution

would be to spend tens of billions of dollars developing and deploying a terminal defense, anti-ballistic missile system.

In this later respect, the committee notes that though the possibility of an outright nuclear exchange between Russia and the United States is at an all-time low, the risk of mishap has not decreased proportionately to reductions in the Russian nuclear arsenal. In fact, the post-START II Russian force will be far more mobile than its predominantly silo-based predecessor. This poses a potential problem for command and control of the arsenal in the event of internal turmoil in Russia

While some on the committee disagree with this assessment, others conclude that the reduction of the U.S. strategic offensive arsenal under START and START II must be conducted in connection with a review of U.S. deterrence doctrine and the value of strategic missile defenses in ensuring U.S. national security. In conclusion, the Chairman notes that a clearly articulated defense strategy and credible national missile defense system can possess a deterrent value of their own, and need not threaten the viability of the Russian nuclear triad.

V. Verification and Compliance

START II builds upon the verification provisions established in the START Treaty. Unless otherwise specified, the counting rules, notifications, verification, conversion, and elimination procedures from START are used in START II. Having already concluded that the START Treaty is essentially verifiable (see Exec. Rept. 102–53, pp. 27–64 for the committee's analysis of START's verifiability), the Joint Chiefs of Staff analyzed START II to determine whether its additional verification procedures, in conjunction with those of START, offer the United States an acceptable level of confidence in verifying compliance and in detecting significant violations, and whether the verification procedures provide essential safeguards for protecting U.S. national security assets against unnecessary or unwarranted intrusion. The committee concurs, in general, with the Joint Chiefs' assessment that START II's verification procedures are adequate for monitoring Russian compliance while remaining sufficiently restrictive to safeguard U.S. interests.

Militarily significant violations

The committee notes that a lack of consensus exists over the definition of "military significance." All violations, intentional or otherwise, are significant. With dramatically lower levels of strategic offensive arms, the degree of risk to national security posed by possible violations is proportionately greater for even minor cases of noncompliance. The danger is that the resulting inequalities may undermine strategic parity. Thus a military significant violation would be one upsetting the strategic equilibrium maintained between the United States and Russia, and between U.S. targeting requirements and strategic nuclear assets. Such a violation inevitably would necessitate an adjustment in the U.S. force structure. Therefore, as then-Secretary of State James Baker put it in testimony before the committee in January, 1992, a key criterion in evaluating whether a treaty is verifiable "is whether, if the other side attempts to move beyond the limits of the Treaty in any mili-

tarily significant way, we would be able to detect such a violation before it became a threat to national security.''

That said, the quantifiability of ''significance'' is less than clear. Secretary of Defense Perry set a fairly high benchmark when he argued before the committee on March 1, 1995, that:

> It is clear that * * * the violation would have to result in an increase of a substantial number of warheads, certainly measured in the many hundreds to have a chance of meeting this definition of military significance.

For its part, the committee assesses a lower threshold to the question of military significance, and is more concerned about noncompliance in terms of strategic nuclear delivery vehicles than warheads. The committee expects the projected U.S. warhead stockpile after implementation of START II to total roughly 8,500 (including spares), and to be adequate to ensure U.S. national security in the near term.

THE PROJECTED U.S. STOCKPILE AFTER IMPLEMENTATION OF START II

[Prepared for Tri-Valley CARE's by Greg Mello]

Weapon	Use	Yield (Kt)	No.	Produced	IHE [1]	FRP [1]
B61–7	Strategic bomb	c. 10–350	450	1985–(pits 1966–1971)	yes	no
B61–mods 3/4/10.	Tactical bomb	1–150	100	1979–1990	yes	no
W76	SLBM C–4/D–5	100	1,280	1978–1987	no	no
W80–0	SLCM	5 & 150	350	1984–1990	yes	no
W80–1	ALCM	5 & 150	400	1982–1990	yes	no
B–83	Strategic bomb	low to 1,200	500	1983–1990	yes	yes
W87–0	ICBM	300	500	1986–1989	yes	yes
W88	SLBM D–5	475	400	1989–1990	no	no
Reserve stockpile after START II (''Bulletin of the Atomic Scientists,'' Jan./Feb. 1995)						
W76	SLBM C–4/D–5	100	1,000	1978–1987	no	no
W78	ICBM	335	1,000	1979–	no	no
B53–1(?), B61 & B83, W80–1.	Gravity bombs and ALCM's.	5 to 1,200; 9,000 for B53–1.	1,500	B–53: 1962–1965	B53 lacks IHP, FRP, or full electrical safety	

Total weapons after START II: Roughly 8,500 (including spares).

[1] IHE: Internal High Explosive; FRP: Fire Resistant Pit.

In order to retain a sufficiently-sized stockpile, the committee expects the Department of Energy to regulate its warhead disassembly process. According to a Clinton Administration response to questions asked by Senator Lugar during the course of committee consideration of START II, DOE has dismantled nearly 8,200 warheads in the last six fiscal years as follows:

Weapons dismantled

Year:	*No.*
1989	1,208
1990	1,151
1991	1,595
1992	1,303
1993	1,556
1994	1,371

The committee notes that the assembly of a nuclear weapon is an exacting procedure requiring approximately 2,000 steps to com-

bine hundreds of subassemblies and parts (depending upon the type of weapon or warhead). Because reconstitution of the U.S. stockpile would prove a time-consuming enterprise, a balance must be struck between warhead dismantlement and the maintenance of a hedge against Russian noncompliance. The same can be said for strategic nuclear delivery vehicles. However, the committee finds that the potential uploading of all multiple warhead Trident II D–5 buses and reorientation of the B–1B heavy bomber provide acceptable interim assurances against even a dramatic breakout in SNDVs deploying as many as 2,500 additional warheads. It is in this context that the committee believes the aforementioned U.S. stockpile will prove adequate, and expects all C–4 SLBMs to be back-fitted for the D–5. The committee further urges the Administration, as an additional assurance, to retain in storage all multiple warhead Minuteman III buses if they are replaced with single-warhead buses.

These measures will prove sufficient to meet the national security needs of the United States in the near term. However, some on the committee are concerned that through neglect and the application of some types of environmental restrictions the infrastructure supporting the U.S. nuclear deterrent has entered a precipitous decline. With the last U.S. warhead having been manufactured five years ago, and a cut-off on tritium production (which has a half-life of 12.3 years), U.S. warheads will eventually lose their effectiveness. Purified tritium gas from retired warheads will only meet U.S. stockpile requirements for perhaps another fifteen years—yet the restart of tritium production likely will take that long. Russia, on the other hand, continues the manufacture of highly-enriched uranium, plutonium, and tritium, and will not encounter such a dilemma. The committee believes this issue to be of looming importance to the maintenance of a viable nuclear deterrent under the START II Treaty.

U.S. verification issues under START II

Verification of START II will be based largely upon capabilities and provisions designed to verify START, and generally reflect the same assumptions and considerations. The two central elements of START II are the elimination of MIRVed ICBMs (including all heavy ICBMs) by the year 2003, and deeper reductions in the same basic categories of strategic offensive arms as START. Accordingly, the conceptual basis for verification of START II verification is the same as that for START. The same capabilities and measures that provide for verification of START limits on launchers, missiles, and attributable warheads will be relied upon to verify the lower aggregate limits of START II. The combination of START and START II-mandated on-site inspections, U.S. National Technical Means, and the increasing transparency of Russian society will afford the United States opportunity to detect in a timely fashion a violation of the magnitude contemplated by Secretary Perry in his aforementioned testimony. The committee notes, though, that there are some types of violations which the U.S. will find difficult to detect. The Deputy Director of Intelligence for the Central Intelligence Agency, Douglas MacEachin, stated in testimony before the committee on February 28, 1995:

> As with monitoring START I, the Intelligence Community will be able to monitor many—and the most significant—provisions of START II with high confidence. In some areas, though, we will have uncertainty.

START II will necessitate—in addition to the monitoring of locational prohibitions and qualitative restrictions on technical characteristics and capabilities (such as re-entry vehicle telemetry data and throw-weight) as provided for by START—the following new tasks:

Monitoring deployed warhead reduction to 3,500;

Monitoring the sublimit of 1,750 for SLBMs;

Monitoring the ban on the flight-testing, acquisition, and deployment of MIRVed ICBMs after January 1, 2003;

Verifying the conversion of up to 90 SS–18 silos to accommodate the smaller, SS–25 type missile, and continued compliance with START II's conversion provisions;

Monitoring Russian compliance with START II downloading rules for 105 SS–19 ICBMs;

Monitoring the payloads of Russian heavy bombers; and

Monitoring the activities of Russian heavy bombers reoriented to conventional roles.

To augment the intelligence community's capabilities in fulfilling these responsibilities, the START II Treaty provides for four new types of on-site inspections in addition to the thirteen types allowed under START. These inspections consist of observations of all the eliminations of SS–18s that are not launched to destruction, inspection of converted SS–18 silos, four additional re-entry vehicle inspections per year at converted SS–18 silo sites, and weapons bay inspections of heavy bombers during all short-notice and special heavy bomber exhibitions. Furthermore, START II provides for a detailed exchange of data beyond that required under START on heavy bombers, the downloading of missiles, heavy ICBM elimination, and SS–18 silo conversion. For a full discussion of the intelligence community's monitoring responsibilities for the START Treaty, the committee refers to its report for that treaty (Exec. Rept. 102–53, pp. 27–64 for the committee's analysis of START's verifiability).

All of these measures depend in some fashion upon Russian cooperation. Even with new inspections and data exchanges, the committee underscores the necessity for the intelligence community to continue to rely upon U.S. NTM to verify the Treaty. Given uncertainties about Russia's political future, the committee believes the maintenance of an independent collection means to be critical and is concerned about Deputy Director Douglas MacEachin's statement from the aforementioned testimony that:

> The Intelligence Community has reduced its resources devoted to Russian military developments across the board and since 1993, when the Senate first considered the START II Treaty we have witnessed a steady erosion of trained analysts on Russian strategic forces issues.

Furthermore, there are differences in the two treaties that add to, modify, or in a few cases reduce, U.S. verification challenges. For example, while the ability of the United States to verify aggregate

numbers of deployed ICBM silo-based missiles and their associated launchers and deployed SLBM launchers and their associated missiles is generally the same and subject to the same concerns and considerations, START II requires the elimination or conversion of all deployed and non-deployed mobile launchers of MIRVed ICBMs, with the exception of launchers for ICBMs (other than heavy ICBMs) permitted at space launch facilities. The Treaty also requires that the number of warheads attributed to deployed ICBMs of types to which more than one warhead is attributed be reduced to zero. It further allows downloading by more than four warheads of the SS–19 missile. Since the SS–24 ICBM is attributed with ten reentry vehicles, all SS–24 launchers (except those permitted for space launch purposes) must be eliminated or converted to launchers of single-warhead ICBMs. Consequently, after the end of the elimination period, the problems associated with verifying numbers of deployed rail-mobile ICBMs and launchers (generally the most difficult deployed systems to verify) will be reduced since any single detection of such a launcher (except at a space launch facility), or of an SS–24 missile loaded in any launcher, would be a clear Treaty violation.

Heavy ICBMs must be eliminated under START II, and their launchers must be eliminated or converted. Currently, the United States can confidently verify the number of deployed heavy ICBMs and their silo launchers. This should remain true even after the conversion of up to 90 heavy ICBM silos. For a cheating scenario involving the covert deployment of illegal heavy ICBMs in converted heavy ICBM silos to be successful, several things would have to be achieved. First, the silo would have to be reconverted without detection (or the conversion would have to be successfully "faked"). Second, a clandestine supply of heavy ICBMs would have to be available. Third, the illegal missiles would have to be transported to the silos, installed, and fueled without detection. Each of these steps likely would prove complicated enough that, taken together, such an effort would be very difficult for the Russians to accomplish without detection.

Under current Russian practices, the United States has high confidence in its ability to identify the type of ICBM deployed in a given launcher. Since the U.S. also has similarly high confidence in which types of ICBMs have been tested with more than one warhead, the U.S. expects to remain capable of verifying the ban on fixed launchers for MIRVed ICBMs once it goes into effect. Further, the ban on flight testing or launching (other than space launches) of MIRVed ICBMs should reinforce these confidences over time.

However, there are scenarios for which U.S. confidences could be significantly lower. These involve covert deployment of previously developed MIRVed ICBMs, the deployment of MIRVed missiles such as SLBMs in heavy ICBM silos instead of the single-warhead missile allowed, the uploading of warheads on existing buses such as on the SS–19, the deployment of heavy bombers with more warheads than currently attributed, and Russian break-out of the SS–25 mobile missile.

Warheads on deployed ballistic missiles

Cheating scenarios involving the testing of ICBMs in ways designed to conceal the maximum numbers of warheads with which they have been tested, with which they are capable of releasing, or involving deception with respect to the weight of the lightest reentry vehicle released, will be countered significantly by U.S. interpretation of telemetry data. Furthermore, after January 1, 2003 launches of MIRVed ICBMs with re-entry vehicles will be prohibited. The committee notes that Russia will be allowed to launch non-heavy, MIRVed ICBM airframes without reentry vehicles from space launch facilities after 2003, though these activities too will be monitored by U.S. NTM. On the other hand, since MIRVed SLBMs will still be permitted, no similar restriction will be applied. The committee is concerned with the possible development of a common missile (one developed for use as both an ICBM and an SLBM) that would complicate verification questions.

Further, because for the purposes of economy the U.S. agreed to relax the START requirement that multiple reentry vehicle buses be removed, Russia will be allowed to retain its six-warhead bus on the SS–19. The START II Treaty contains provisions tailored to allow Russian retention of 105 SS–19s. The committee notes that this provides one of the most obvious break-out potentials in the START II Treaty, since over a short period of time Russia could upload these ICBMs and restore 525 warheads to its arsenal. The United States, on the other, likely will remove its three-warhead buses for the Minuteman III arsenal and will be unable to respond without a massive retrofit operation. This possible liability can be offset only by the uploading potential of the Trident II D–5 which, though having a smaller "footprint" than the Minuteman III, is also widely believed to have hard-target kill-capability, and by continued viability of the U.S. strategic triad.

The conversion of SS–18 silos

START II presents a different problem with regard to converted heavy ICBM silos. START II provides for on-site inspection to confirm the required conversion procedures for heavy ICBM silos. After the completion of these specified procedures, the Treaty also allows Russia to carry out further conversion measures, presumably to complete conversion for a single-warhead missile. However, the Treaty does not provide for any on-site inspection or other specified access to observe or fully identify the nature of these later conversion procedures. Although the Treaty prohibits emplacement in such converted silos of a missile with a launch canister greater than 2.5 meters in diameter, and the Russians have undertaken a political commitment to deploy in these converted launchers only a single-warhead ICBMs of the SS–25 type, the possibility exists that Russia could further modify the converted SS–18 silos to enable them to launch a different missile than the one declared.

Heavy bombers and attributable warheads

The START II Treaty requires that, unless all of a given type or variant of heavy bomber are reoriented to a conventional role, there must be differences observable to NTM and visible during inspections, between heavy bombers. However, these required dif-

ferences are left to the choice of the reorienting Party, and there is no requirement that they be functionally related. Moreover, inspections of heavy bombers reoriented to a conventional role are limited to inspecting only the observable differences in the bombers, and not the internal portions of weapons bays. Under these circumstances, it would not be difficult for the Russians to actually load reoriented bombers with nuclear weapons if they so chose. The committee recognizes that Russia might plan to use them in that fashion in either a breakout scenario, or in contingency planning surrounding Russian verification of U.S. compliance with START II. Though START II provides additional restrictions on reoriented bombers, these only modestly increase the risk of detection in this scenario. Separate basing makes easier the counting of declared bombers, but due to the inherent mobility of aircraft, this will not prove meaningful in terms of preventing the pickup (or delivery) of nuclear weapons.

Warhead attribution for bombers is meant to capture the number of nuclear weapons for which the type bomber is actually equipped. In other words, bombers will be attributed with a number of warheads supposedly equal to the number with which that type of bomber is operationally deployed. Inspecting Parties will only be able to confirm at an exhibition the number of nuclear weapons that the exhibiting Party loads on the bomber at that time. This number may not necessarily prove the maximum number for which the bomber is designed to carry or is capable of carrying. The committee believes it is possible for both the United States and Russia to equip a bomber with more weapons than specified. However, while the detection of such activities designed to equip a bomber with more weapons than specified might be difficult, the testing and regular training required to maintain this sort of capability on a day-to-day operational basis would likely be detected over time. As a consequence, such scenarios would appear to be more suited to breakout than cheating.

Monitoring mobile missiles

Perhaps the most significant verification concern for the United States is a potential mismatch between Russia's anticipated modernization programs and U.S. capabilities to monitor mobile missile deployments and missile inventories. According to testimony before the committee on several occasions, the Intelligence Community's confidence will be highest when monitoring mandated restrictions such as the elimination of SS–18 ICBMs and when accounting for the number of deployed silo-based single-warhead ICBMs, submarine-launched ballistic missiles, and heavy bombers remaining in the Russian arsenal. In addition, the ban on MIRVed ICBMs will be managed through tracking the elimination of MIRVed ICBM launchers and by analyzing the flight test data of new missiles.

With the signing of the START Treaty, Russia and the United States have demonstrated telemetry tapes and installed telemetry playback equipment on one another's territory. Thus the Intelligence Community is now receiving telemetry tapes and associated interpretive data which will provide the United States a measure of confidence that many START and START II provisions, such as

the ban on flight-testing more than one re-entry vehicle, are being observed.

However, as MIRVed ICBM systems are eliminated, the committee expects the single-warhead SS–25 road-mobile force to expand. The monitoring of missile production activity and mobile missile deployments has proven more difficult than the monitoring of reductions in other systems. During its consideration of the START Treaty, then-Director of Central Intelligence, Robert Gates, testified in open session that:

> Not surprisingly, the same areas where we have the most concern with regard to monitoring the [START] treaty provisions are the areas where we would be most concerned about cheating. Because of the inherent covert nature of mobile missiles, the cheating scenarios that would be particularly troublesome are those that would involve the covert production and deployment of such missiles and their launchers.

An outgrowth of the historical difficulty in monitoring missile production is that estimates of Russia's nondeployed missile inventory are less than certain. While Russia is not believed to have maintained a large-scale program to store several hundred or more undeclared, nondeployed strategic ballistic missiles, it is possible that some undeclared missiles have been stored at unidentified facilities. Since the mobile SS–25 likely will become the mainstay of the land-based leg of the Russian strategic triad the committee is concerned about possible imbalances in deployed SNDVs.

Counterbalancing this concern somewhat, are a number of interlocking provisions in the START Treaty regarding mobile missiles. These provisions render more easily detectable any militarily significant, covert deployment of Russian mobile missiles. Though the effectiveness of a combination of provisions, ranging from continuous portal monitoring of the Votkinsk facility (where the SS–25 currently is produced) to suspect site inspections and locational restrictions on mobile ICBMs, stages, and solid rocket motors, can only be gauged over time, the committee believes these provisions to be adequate, provided Russia continues along the path to greater openness. Failing that, new concerns over Russian motivations to engage in clandestine activity may emerge, calling into question the verifiability of both START and START II.

Secretary Perry underscored the importance of Russian openness when he stated that:

> There are three factors which make cheating, I think, improbable in START II. The first is just the general openness of communications and exchange of personnel which now exists between our two countries. For example, I have, myself, been to the Russian test range at Baikinur. I have been to the operational test side at Pervomaysk. I have examined the missiles and their control centers in great detail. I have discussed detailed issues about these programs with the scientists in the program and with the operational officers in the Strategic Rocket Forces. That kind of communication makes it very difficult to execute successfully a cheating program.

For his part, General Shalikashvili noted:

> * * * we think it is very difficult to picture a scenario that would give an advantage to the Russians to cheat. They have already, under the treaty, the ability to successfully accomplish deterrence and accomplish the military task of covering necessary targets. So any cheating would at best give them some ability to increase their reserve. And the cost of being caught at cheating would far outweigh any of that advantage.
>
> Therefore, I see very little incentive for them to cheat, but I am also very confident that should they, we would be in a very good position through the inspections and verification procedures, to detect that.

Motivations to cheat and the Russian record of compliance

These assurances, in and of themselves, cannot constitute an acceptable level of comfort with the verification provisions of START II. Senate consideration of the START II Treaty will take place in the context of growing concern about the economic and political stability of the Russian Federation as well as growing tensions with its newly-independent neighbors. Even as START has been ratified by all Parties and each signatory has undertaken steps to accelerate its implementation, tensions have increased between Russia and neighboring states as a result of Russian military action in Chechnya. Moscow has simultaneously begun to reorder Russia's "legitimate" security requirements in both the conventional and nuclear areas. The military implications of rising tensions within Russia and on its peripheries are not clear but portend difficulties for any arms control accord. The committee is concerned that the poor showing of the Russian army in Chechnya and the dismal outlook for Russian conventional forces in the near- and mid-term have revived interest in certain circles in a "cheap nuclear fix." Certainly suspicions about Russian nuclear intentions could create delays on the part of Ukraine and Kazakstan in meeting their denuclearization commitments, and may prompt the U.S. to reconsider its posture.

Despite all of this, the committee believes the Senate should ratify the START II Treaty, demanding that the Russian Federation break with its own lackluster treaty compliance track-record and that inherited from its predecessor. It is critical that Russia alter its behavior, for example with its ongoing biological weapons program, its failure to begin implementing the Bilateral Destruction Agreement for its chemical weapons program, its failure to meet the time-line for destruction under the Treaty on Conventional Armed Forces in Europe, and persistent evidence of Russian noncompliance with the ABM Treaty. The committee believes some of these difficulties may be attributable to a Cold War overhang in strategic culture and weapons programs, and that START II affords a useful means of dialogue and engagement. In the balance, the committee has determined that, with the triad of 3,500 warheads remaining once START II is implemented, the size and mix of U.S. nuclear forces will be sufficient to deter Russia even in the event of a break-out.

VI. START II IMPLEMENTATION

The Department of Defense and the Congressional Budget Office have both provided preliminary cost estimates of START II implementation using the following assumptions: (1) the United States will draw down to the aggregate limit of no more than 3,500 warheads by January 1, 2003; (2) this reduction will include the elimination of all Peacekeeper launchers; (3) the United States will retain 14 Trident submarines, with each Trident II D–5 downloaded to 5 warheads. These assumptions are based on the results of the Nuclear Posture Review (NPR), but do not reflect NPR programmatic costs.

These estimates also assume that the United States will exercise all START II on-site inspection rights, including those for the elimination of all SS–18 missiles and their launch canisters, the conversion of 90 SS–18 silos and the four additional reentry vehicle on-site inspections (RVSOI) allowed annually at converted SS–18 silos. Likewise, heavy bomber inspection and protection are included in these figures.

A preliminary estimate suggests that the total costs might amount to approximately $201.9 million between 1995 and the end of the second Treaty reduction phase in 2003. These costs break are as follows:

	Million
Elimination of MIRVed ICBMs	$42.5
Reduction of deployed SLBM warheads	110.0
ICBM launcher elimination	14.5
Bomber exhibitions	1.3
Data reporting	2.0
Bomber conversion	10.5
Verification of SS–18 silo conversion	12.6
Verification of missile and launch canister elimination	2.8
Verification of rail-mobile ICBM launcher elimination	2.9
Additional reentry vehicle inspectors	2.8
Total	201.9

The figures show the total estimated cost of U.S. compliance to be approximately $180.8 million with the majority of that (about 61 percent) to be dedicated to deployed SLBM warhead reductions. Total START II costs for verification of Russian compliance are approximately at $21.1 million, with the verification of silo conversions representing about 60 percent of that total.

It is important to contrast these relatively small, eight year costs for START II with the START implementation costs for just FY1994 and FY1995. For this period, the Department of Defense budgeted approximately $180 million for START implementation. This investment forms the basis for meeting START II requirements and will allow these reductions to be undertaken at moderate cost.

Two additional inspection and security issues are worthy of mention. First, START II does not add any new inspectable facilities in the U.S. (although the portion of Whiteman A.F.B. where the B–2 bomber is deployed will be subject to inspection under START II only). This will help minimize costs as well as security concerns. Second, U.S. heavy bombers, particularly the B–2, will be subject to more intrusive exhibitions and inspections than under the

START Treaty. The START II Treaty requires inspections to verify that heavy bombers are not actually equipped for more nuclear weapons than declared, but also allows portions of the heavy bomber not related to this determination to be shrouded. The U.S. Air Force is developing an inspection implementation plan that will ensure protection of sensitive/classified information during the inspection/exhibition.

The On-Site Inspection Agency (OSIA)

The Committee has confidence in the proven competency of the On-Site Inspection Agency. OSIA has assured the committee that it will be ready to implement START II as soon as it is ratified and enters into force; its personnel have conducted 468 INF inspections, 278 escort missions, 22 START exhibitions, 218 START mock inspections and have almost 7 full years of day-to-day experience in portal monitoring. On March 1, 1995, OSIA began START baseline operations. This 120-day intensive period will position that agency to execute START II effectively.

OSIA has submitted a detailed assessment of operational differences confronting U.S. inspectors under START II versus those under the START Treaty. Those additional verification provisions involving OSIA include:

Extensive U.S. inspection permitted of the detailed procedures for converting SS–18 silos to launch single-warhead ICBMs of the type SS–25;

An additional four inspections per year to confirm that only single-warhead ICBMs are installed in the 90 converted SS–18 silos;

Detailed procedures for destroying SS–18 missiles and launch canisters in the presence of U.S. inspectors;

One-time exhibitions to demonstrate the number of nuclear weapons for which heavy bombers are actually equipped; and

Exhibition of observable differences between nuclear heavy bombers and heavy bombers of the same type and variant reoriented to a conventional role.

Though some of these inspections, such as data updates, reentry vehicle (RV), conversion or elimination, and heavy bomber distinguishability exhibitions, are to be accomplished within the context of START, there are several unique START II inspections and exhibitions which place greater demands on OSIA personnel and resources. These range from heavy ICBM missile and associated launch canister eliminations to conversion of heavy ICBM silos, additional reentry vehicle on-site inspections related to the converted heavy ICBM silos, inspections of eliminations of mobile ICBMs and their launchers, additional heavy bomber actual equipage exhibitions, inspections of heavy bombers reoriented to a conventional role, and inspections of heavy bombers reoriented to a conventional role and subsequently returned to a nuclear role.

From an operational standpoint—the planning and arranging for the logistical infrastructure needed to conduct an inspection or escort mission—START II inspections and eliminations would closely resemble those conducted under INF and those set to occur under START. Team composition will be, as in INF and START, a mixture of weapons specialists and linguists. Weapons accountability,

however, poses of distinct challenge. Because the Treaties use different counting rules, specific weapons systems may be attributed with different numbers of warheads under each Treaty. Since a single inspection will do "double-duty" for both treaties, a thorough knowledge of both treaties by inspection team members (especially team chiefs) is essential. The terms of both Treaties would be in force simultaneously. Both sets of inspection records must reflect the weapons accountability of the particular agreement to which they apply. The key here is that the counting process and record keeping for both treaties would occur during the same inspection. These accounting differences apply to both sides, and a U.S. inspector or escort's job would require these different rules to be applied properly in every inspection.

VII. COMMITTEE ACTION

On behalf of the United States, President Bush signed the START II Treaty on January 3, 1993 in Moscow in the Russian Federation. The Treaty, along with two Protocols, a Memorandum of Understanding, and Letters Signed by U.S. and Russian Representatives was transmitted to the Senate on January 20, 1993 and referred on the same day to the Committee on Foreign Relations.

The committee held public hearings on the Treaty and related strategic nuclear matters in May and June 1992 with Administration witnesses, and again in January, February, and March 1995 with Administration and private-sector witnesses.

January 31, 1995 (open session)

The Honorable Warren Christopher, Secretary of State, with:
The Honorable Linton Brooks, Chief U.S. Negotiator to the START II Negotiations;
The Honorable John Holum, Director, U.S. Arms Control and Disarmament Agency.

February 28, 1995 (open and closed sessions)

Mr. Douglas MacEachin, Deputy Director for Intelligence, Central Intelligence Agency.

March 1, 1995 (open session)

The Honorable William Perry, Secretary of Defense;
General John Shalikashvili, Joint Chiefs of Staff.

March 29, 1995 (open session)

Mr. Stephen Hadley, Esquire, Attorney, Shea and Gardner;
Mr. Sven Kraemer, President, Global 2000;
Mr. Michael Krepon, President, Henry L. Stimson Center;
Mr. Jack Mendelsohn, Deputy Director, The Arms Control Association.

May 11, 1993 (open session)

The Honorable Warren Christopher, Secretary of State.

May 18, 1993 (open session)

The Honorable Linton Brooks, Chief U.S. Negotiator to the START II Negotiations;
Mr. Thomas Graham, Jr., Acting Director, U.S. Arms Control and Disarmament Agency;
Mr. Douglas MacEachin, Deputy Director for Intelligence, Central Intelligence Agency.

June 17, 1993 (open session)

The Honorable Lawrence Eagleburger, Former Secretary of State.

June 24, 1993 (open and closed sessions)

The Honorable R. James Woolsey, Director of Central Intelligence.

At a markup on December 12, 1995, the committee considered a draft resolution of ratification including six conditions and seven declarations. All were agreed to by the committee by a roll call vote of 18–0.

The conditions and declarations and the rationale for approving them are as follows:

Condition 1: Noncompliance

Since reductions under START II build upon those mandated by START, the provisions of the two treaties are interrelated. However, START II is a bilateral treaty and does not include all Parties to START (Belarus, Kazakstan, and Ukraine). Implementation of the START II Treaty must take into account the possibility and effect of noncompliance by START Parties that are not Parties to the START II Treaty. Under such circumstances, the U.S. would be forced to question its continued adherence to START II since, as a practical matter, noncompliance by one of these states would likely consist of their retaining some form of a nuclear capability. Condition (1) establishes the framework by which the President may seek to bring a noncompliant Party into compliance, or by which the President may accommodate the changed circumstances. Any modification or change in obligations shall be submitted for the advice and consent of the Senate, and in the event that noncompliance persists, the President shall seek a Senate resolution of support for continued U.S. adherence to one or both START treaties.

Condition 2: Treaty obligations

It has been implied by senior government officials in the Russian Federation that Russian ratification of the START II Treaty is contingent upon continued adherence by the United States to Russian interpretations of U.S. obligations under the Anti-Ballistic Missile Treaty. The U.S. government does not accept such a linkage. This provision states the view of the Senate that in ratifying this treaty, no such linkage may be implied.

Condition 3: Financing implementation

Article I, paragraph 6, provides for an accelerated schedule of reductions in the event that both Parties agree on a program of financial assistance to fulfill the Treaty. The second phase of reduc-

tions would be completed two years earlier, by December 31, 2000 (as opposed to January 1, 2003), if agreement on assistance can be reached. However, ratification and implementation of START II is in no way contingent upon such an agreement. As a means of ensuring Russian commitment to the Treaty, Russia must share a substantial portion—if not all—of the burden of Russian implementation of START II.

Condition 4: Exchange of letters

The President also transmitted to the Senate documents associated with the START II Treaty. These documents are three exchanges of letters embodying agreements on various aspects of the Treaty.

(4a) The first exchange of letters pertains to the negotiation of an agreement between Russia and Kazakstan regarding SS–18 missiles and launchers on the territory of Kazakstan. In his response to Russian Foreign Minister Kozyrev's commitment to spare no effort to conclude such an agreement (both made on December 29, 1992), Secretary of State Eagleburger made it clear that the START II Treaty would be submitted to the United States Senate for its advice and consent based on the understanding that the agreement referred to by Minister Kozyrev (providing for the movement to Russia and elimination of heavy ICBMs from Kazakstan) would be signed and implemented, and that all deployed and nondeployed heavy ICBMs and associated launch canisters now located on the territory of Kazakstan will have been removed to Russia and destroyed no later than seven years after entry into force of the START Treaty. The Senate will ratify the START II Treaty based upon the understanding that the SS–18 heavy ICBM will be eliminated as an entire class of missile.

(4b) The second exchange of letters between Secretary of State Eagleburger and Russian Foreign Minister Kozyrev, dated December 29, 1992, and December 31, 1992, relates to heavy bombers and constitutes the assurance of the United States of America, during the duration of the START II Treaty, never to have more nuclear weapons deployed on any heavy bomber than the number specified in the Memorandum on Attribution for that type or variant. This letter creates no new legal obligation for the United States. It simply reiterates U.S. Treaty obligations per paragraph 3 of Article IV of the START II Treaty.

(4c) The third exchange of letters between Russian Minister of Defense Grachev and Secretary of Defense Cheney, dated December 29, 1992, and January 3, 1993, sets forth a number of assurances on Russian intent regarding the conversion and retention of silo launchers originally designed for the RS–20/SS–18 heavy ICBM. Minister Grachev reaffirms the steps that Russia will take to convert these silos and assures the Secretary of Defense that only SS–25 type missiles will be deployed in these converted silos.

Specifically, Russia provides commitments to install a restrictive ring 2.9 meters in diameter in the top of the SS–18 silo launcher, to fill the base of the launcher with five meters of concrete, to refrain from installing in the silo any missile launch canister with a diameter in excess of 2.5 meters, to install only RS 12M/SS–25 missiles in the converted silos, and to allow for verification of the silo

conversion. All but one of these assurances are contained in either the main text of the START II Treaty, or in its Elimination and Conversion Protocol. The commitment to only install SS–25 type missiles in the converted silos represents a new obligation undertaken by the Russian Federation.

These documents are relevant to the consideration of the Treaty by the Senate, and are of the same force and effect as the provisions of the START II Treaty. These letters are understood to be legally binding, carrying with them the obligation of both Parties to comply with the commitment associated with the letters and the right of each Party to enforce the obligation under international law.

Condition 5: Space-launch vehicles

The Elimination and Conversion Protocol of the START II Treaty provides two alternatives for eliminating heavy ICBMs: either through physical destruction or by use as a space-launch vehicle (SLV). Under the START Treaty, Russia is similarly allowed to use ballistic missiles to deliver objects into the upper atmosphere or outer space. These provisions highlight the fact that SLVs are virtually indistinguishable from nuclear-capable ballistic missiles. The Administration has indicated that agreement has been reached with the Russian Federation under which there will be strict accountability for all ballistic missiles associated with the START Treaty. The Senate reaffirms its position that SLVs comprised of any item limited by START or START II are subject to the obligations of the relevant treaty.

Condition 6: National technical means and Cuba

This condition reiterates the Clinton Administration's position—expressed in a letter to the Committee dated April 6, 1995—that the obligation of Parties to both START and START II not to interfere with one another's national technical means of verification does not preclude the United States from pursuing options to urge the Russian Federation to dismantle its electronic eavesdropping facility at Lourdes, Cuba. Removal of that facility in no way constitutes interference with Russian Treaty verification capability, but rather the removal of an asset devoted to signals intelligence collection against the United States.

Declaration 1: Cooperative threat reductions

Neither START nor START II require the dismantlement of the warheads downloaded to meet treaty limits. The Russian Federation will possess exactly as much fissionable, weapons-grade material (possibly as much as 900 tons) as it had before START II was negotiated. Indeed, the size of Russia's fissile material stocks will increase since warheads are being withdrawn to Russia from Belarus, Ukraine, and Kazakstan. For example, approximately 632 of Kazakstan's 810 warheads had been returned to Russia by March 1995.

The ultimate disposition of these stocks is of concern to the United States. Given that political and economic uncertainty have weakened centralized control over nuclear weapons materials, Russia has emerged as a serious proliferation concern. Several inci-

dents involving the smuggling of weapons-usable materials in Russia and Europe underscore this concern. Former Director of Central Intelligence R. James Woolsey stated in testimony before Congress that Russian criminal organizations, in particular, have established elaborate infrastructures that may ultimately be used to facilitate the transfer of fissile material to states seeking to accelerate their own weapons development programs, such as Iran, Libya, or North Korea.

Accordingly, the committee encourages the Administration to continue vigorously with current Safe and Secure Dismantlement Talks. Every avenue should be pursued to improve confidence in the integrity of Russia's nuclear material stockpiles and the irreversibility of the process of nuclear weapons reduction.

Declaration 2: Asymmetry in reductions

Unlike START, which mandates a minimum rate of reductions in items such as heavy ICBM launchers, START II contains no specific legal obligations by either Party to reduce at a given rate. Rather, START II requires only that reductions be of a "sustained" nature. Thus Russia is not obligated to eliminate or convert a specified number of missiles or launchers per year. Russian failure to engage in a significant, sustained effort would prompt, at a minimum, concerns over Russian intent to comply with START II commitments. In addition, given the current pace of U.S. reductions, the cost and long lead-time associated with reconstitution of nuclear forces, and the increased significance of each warhead in a reduced arsenal, asymmetry in the implementation of START II could create a strategic imbalance whereby the United States would be incapable of meeting its targeting requirements. The Chairman is concerned that the initial process of U.S. dismantlement under START ran far in advance of Russia's. At the time of the release of the Administration's Nuclear Posture Review, the U.S. had decreased its arsenal to 6,000 deliverable warheads, whereas Russia retained roughly 9,000.

The resolution of ratification indicates that the committee believes that the United States needs to articulate a clear policy regarding the pace of disarmament to be conducted under the START II Treaty in order to avoid any strategic imbalance endangering the national security of the United States. The Senate therefore urges the President to regulate reductions under both START and START II to avoid such a possibility.

Declaration 3: Expanding strategic arsenals in countries other than Russia

Both the START Treaty and the START II Treaty deal solely with the strategic arsenals of the former Soviet Union and the United States. However, the resolution recognizes that the spread of weapons of mass destruction and ballistic missile technology could lead to a new and significant threat to the United States. The United States should not ignore these trends. Given that nuclear weapons will remain the cornerstone of U.S. deterrent strategy notwithstanding reductions under START or START II, in the event of such a development—or the possibility of such a development—the President should consult with the Senate on an urgent basis

to determine whether continued adherence to START II Treaty levels remains in the national security interests of the United States.

Declaration 4: Substantial further reductions

Consistent with its pledge under the Treaty on the Non-Proliferation of Nuclear Weapons to pursue in good faith negotiations on the issue of nuclear disarmament, the Senate calls upon the parties to this treaty to seek further strategic offensive arms reductions as consistent with their national security interests and calls upon the nuclear-weapon states to give careful and early consideration to corresponding reductions.

Declaration 5: Missile technology control regime

The United States has urged a number of nations to become members of the Missile Technology Control Regime (MTCR)—or to adhere to its "guidelines"—in order to reduce the risks associated with the proliferation of ballistic missiles and other unmanned systems capable of delivering nuclear weapons. Established in 1987, the purpose of the regime is to limit transfers of equipment and technology that would contribute to unmanned nuclear weapons delivery systems capable of delivering a payload of at least 500 kilograms to a range of at least 300 kilometers. This Committee declaration urges the President to insist on the adherence of Belarus, Kazakstan, and Ukraine to the guidelines of the MTCR.

Declaration 6: Further arms reduction obligations

This declaration affirms the Committee's intention to consider agreements between the United States and other countries involving militarily significant obligations on U.S. forces only as treaties. Some in the Executive branch persist in the mistaken belief that it is constitutionally acceptable to undertake militarily significant accords by Executive agreements supported by a simple majority vote in both Houses of Congress.

Declaration 7: Treaty interpretation

The Committee declaration on Treaty Interpretation affirms that the principles of treaty interpretation, derived as a necessary implication from the Constitution, set forth in Condition (1) of the Senate's resolution of ratification of the INF Treaty (May 27, 1988) apply to all treaties. These principles apply regardless of whether the Senate chooses to say so in its consideration of any particular treaty.

Following this discussion, the committee voted 18–0 to recommend to the Senate that it advise and consent to the ratification of the START II Treaty, together with its Protocols and Memorandum of Understanding, all transmitted to the Senate in Treaty Doc. 103–1, subject to the Conditions and Declarations set forth in the Resolution of Ratification. Voting in the affirmative were Senators Helms, Pell, Lugar, Biden, Kassebaum, Sarbanes, Brown, Dodd, Coverdell, Kerry, Snowe, Robb, Thompson, Feingold, Thomas, Feinstein, Grams, and Ashcroft.

VIII. RESOLUTION OF RATIFICATION

Resolved (two-thirds of the Senators present concurring therein), That (a) the Senate advise and consent to the ratification of the Treaty Between the United States of America and the Russian Federation on Further Reduction and Limitation of Strategic Offensive Arms, signed at Moscow on January 3, 1993, including the following protocols and memorandum of understanding, all such documents being integral parts of and collectively referred to as the "START II Treaty" (contained in Treaty Document 103–1), subject to the conditions of subsection (b) and the declarations of subsection (c):

(1) The Protocol on Procedures Governing Elimination of Heavy ICBMs and on Procedures Governing Conversion of Silo Launchers of Heavy ICBMs Relating to the Treaty Between the United States of America and the Russian Federation on Further Reduction and Limitation of Strategic Offensive Arms (also known as the "Elimination and Conversion Protocol").

(2) The Protocol on Exhibitions and Inspections of Heavy Bombers Relating to the Treaty Between the United States and the Russian Federation on Further Reduction and Limitation of Strategic Offensive Arms (also known as the "Exhibitions and Inspections Protocol").

(3) The Memorandum of Understanding on Warhead Attribution and Heavy Bomber Data Relating to the Treaty Between the United States of America and the Russian Federation on Further Reduction and Limitation of Strategic Offensive Arms (also known as the "Memorandum on Attribution").

(b) CONDITIONS.—The advice and consent of the Senate to the ratification of the START II Treaty is subject to the following conditions, which shall be binding upon the President:

(1) NONCOMPLIANCE.—If the President determines that a party to the Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Reduction and Limitation of Strategic Offensive Arms, signed at Moscow on July 3, 1991 (in this resolution referred to as the "START Treaty") or to the START II Treaty is acting in a manner that is inconsistent with the object and purpose of the respective Treaty or is in violation of either the START or START II Treaty so as to threaten the national security interests of the United States, then the President shall

(A) consult with and promptly submit a report to the Senate detailing the effect of such actions on the START Treaties;

(B) seek on an urgent basis a meeting at the highest diplomatic level with the noncompliant party with the objective of bringing the noncompliant party into compliance;

(C) in the event that a party other than the Russian Federation is determined not to be in compliance—

(i) request consultations with the Russian Federation to assess the viability of both START Treaties and to determine if a change in obligations is required in either treaty to accommodate the changed circumstances, and

(ii) submit for the Senate's advice and consent to ratification any agreement changing the obligations of the United States; and

(D) in the event that noncompliance persists, seek a Senate resolution of support of continued adherence to one or both of the START Treaties, notwithstanding the changed circumstances affecting the object and purpose of one or both of the START Treaties.

(2) TREATY OBLIGATIONS.—Ratification by the United States of the START II Treaty obligates the United States to meet the conditions contained in this resolution of ratification and shall not be interpreted as an obligation by the United States to accept any modification, change in scope, or extension of the Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Anti-Ballistic Missile Systems, signed at Moscow on May 26, 1972 (commonly referred to as the "ABM Treaty").

(3) FINANCING IMPLEMENTATION.—The United States understands that in order to be assured of the Russian commitment to a reduction in arms levels, Russia must maintain a substantial stake in financing the implementation of the START II Treaty. The costs of implementing the START II Treaty should be borne by both parties to the Treaty. The exchange of instruments of ratification of the START II Treaty shall not be contingent upon the United States providing financial guarantees to pay for implementation of commitments by Russia under the START II Treaty.

(4) EXCHANGE OF LETTERS.—The exchange of letters—

(A) between Secretary of State Lawrence Eagleburger and Minister of Foreign Affairs Andrey Kozyrev, dated December 29, 1992, regarding SS–18 missiles and launchers now on the territory of Kazakstan,

(B) between Secretary of State Eagleburger and Minister of Foreign Affairs Kozyrev, dated December 29, 1992, and December 31, 1992, regarding heavy bombers, and

(C) between Minister of Defense Pavel Grachev and Secretary of Defense Richard Cheney, dated December 29, 1992, and January 3, 1993, making assurances on Russian intent regarding the conversion and retention of 90 silo launchers of RS–20 heavy intercontinental ballistic missiles (ICBMs) (all having been submitted to the Senate as associated with the START II Treaty),

are of the same force and effect as the provisions of the START II Treaty. The United States shall regard actions inconsistent with obligations under those exchanges of letters as equivalent under international law to actions inconsistent with the START II Treaty.

(5) SPACE-LAUNCH VEHICLES.—Space-launch vehicles composed of items that are limited by the START Treaty or the START II Treaty shall be subject to the obligations undertaken in the respective treaty.

(6) NTM AND CUBA.—The obligation of the United States under the START Treaty not to interfere with the national technical means (NTM) of verification of the other party to the

Treaty does not preclude the United States from pursuing the question of the removal of the electronic intercept facility operated by the Government of the Russian Federation at Lourdes, Cuba.

(c) DECLARATIONS.—The advice and consent of the Senate to ratification of the START II Treaty is subject to the following declarations, which express the intent of the Senate:

(1) COOPERATIVE THREAT REDUCTIONS.—Pursuant to the Joint Statement on the Transparency and Irreversibility of the Process of Reducing Nuclear Weapons, agreed to in Moscow, May 10, 1995, between the President of the United States and the President of the Russian Federation, it is the sense of the Senate that both parties to the START II Treaty should attach high priority to—

(A) the exchange of detailed information on aggregate stockpiles of nuclear warheads, on stocks of fissile materials, and on their safety and security;

(B) the maintenance at distinct and secure storage facilities, on a reciprocal basis, of fissile materials removed from nuclear warheads and declared to be excess to national security requirements for the purpose of confirming the irreversibility of the process of nuclear weapons reduction; and

(C) the adoption of other cooperative measures to enhance confidence in the reciprocal declarations on fissile material stockpiles.

(2) ASYMMETRY IN REDUCTIONS.—It is the sense of the Senate that, in conducting the reductions mandated by the START or START II Treaty, the President should, within the parameters of the elimination schedules provided for in the START Treaties, regulate reductions in the United States strategic nuclear forces so that the number of accountable warheads under the START and START II Treaties possessed by the Russian Federation in no case exceeds the comparable number of accountable warheads possessed by the United States to an extent that a strategic imbalance endangering the national security interests of the United States results.

(3) EXPANDING STRATEGIC ARSENALS IN COUNTRIES OTHER THAN RUSSIA.—It is the sense of the Senate that, if during the time the START II Treaty remains in force or in advance of any further strategic offensive arms reductions the President determines there has been an expansion of the strategic arsenal of any country not party to the START II Treaty so as to jeopardize the supreme interests of the United States, then the President should consult on an urgent basis with the Senate to determine whether adherence to the START II Treaty remains in the national interest of the United States.

(4) SUBSTANTIAL FURTHER REDUCTIONS.—Cognizant of the obligation of the United States under Article VI of the Treaty on the Non-Proliferation on Nuclear Weapons of July 1, 1968 "to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at any early date and to nuclear disarmament and on a treaty on general and complete disarmament under strict and effective international con-

trol'', it is the sense of the Senate that in anticipation of the ratification and entry into force of the START II Treaty, the Senate calls upon the parties to the START II Treaty to seek further strategic offensive arms reductions consistent with their national security interests and calls upon the other nuclear weapon states to give careful and early consideration to corresponding reductions of their own nuclear arsenals.

(5) MISSILE TECHNOLOGY CONTROL REGIME.—The Senate urges the President to insist that the Republic of Belarus, the Republic of Kazakstan, Ukraine, and the Russian Federation abide by the guidelines of the Missile Technology Control Regime (MTCR). For purposes of this paragraph, the term ''Missile Technology Control Regime'' means the policy statement between the United States, the United Kingdom, the Federal Republic of Germany, France, Italy, Canada, and Japan, announced April 16, 1987, to restrict sensitive missile-relevant transfers based on the MTCR Annex, and any amendments thereto.

(6) FURTHER ARMS REDUCTION OBLIGATIONS.—The Senate declares its intention to consider for approval international agreements that would obligate the United States to reduce or limit the Armed Forces or armaments of the United States in a militarily significant manner only pursuant to the treaty power as set forth in Article II, Section 2, Clause 2 of the Constitution.

(7) TREATY INTERPRETATION.—The Senate affirms the applicability to all treaties of the constitutionally based principles of treaty interpretation set forth in Condition (1) of the resolution of ratification with respect to the INF Treaty. For purposes of this declaration, the term ''INF Treaty'' refers to 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, together with the related memorandum of understanding and protocols, approved by the Senate on May 27, 1988.

IX. ARTICLE-BY-ARTICLE ANALYSIS

President Bush submitted to the Senate a 75 page Article by Article Analysis of the START II Treaty text, Protocols, Memorandum of Attribution, and associated documents which is set forth in Treaty Doc. 103–1, pp. 1–75. The Treaty text, Protocols, Memorandum of Attribution, and associated documents, including the Article by Article Analysis, together with the testimony and other authoritative representations directed to the meaning and legal effect of the Treaty which were provided by officials from the Administration to various inquiries from the Senate during its consideration of the START II Treaty are all part of the ''shared understanding'' between the Executive Branch and the Senate as to both the meaning of the Treaty and the way the United States will interpret it—all in accordance with the constitutionally based Treaty interpretation principles clarified in Condition (1) of the INF Treaty and reaffirmed in the recent CFE Treaty.

The following summary is based upon the administration's summaries, analysis, testimony, and other submissions to the Commit-

tee on Foreign Relations. Due to the brevity of the Treaty, specific references are provided to the appropriate material only as necessary to assist the Senate's review.

I. THE START II TREATY

The Treaty between the United States of America and the Russian Federation on Further Reduction and Limitation of Strategic Offensive Arms (The START II Treaty) consists of the main Treaty text and three documents formally transmitted to the Senate by President George Bush on January 20, 1993 (Treaty Doc. 103–1) for the Senate's advice and consent to ratification pursuant to Article II, Section 2, Clause 2 of the Constitution.

Transmitted with the START II Treaty and its associated documents within Treaty Doc. 103–1 for the information of the Senate as associated with but not integral parts of the START II Treaty were three exchanges of letters embodying legally binding commitments from the Russian Federation and the United States concerning the removal of SS–18 missiles from Kazakstan, the deployment of nuclear weapons on heavy bombers, and Russian conversion of SS–18 missile silos. These documents are relevant to the consideration of the START II Treaty by the Senate.

A. The treaty text (Treaty Doc. 103–1, pp. 32–41; see pp. 1–18 for analysis)

Article I, paragraph 1, obligates the Parties to meet START reductions and then to continue to reduce so that by seven years after the START Treaty's entry into force (December 5, 2001), the aggregate number of warheads deployed by each Party on ICBMs, SLBMs, and heavy bombers does not exceed 4,250, as counted pursuant to Articles III and IV of the START II Treaty (Treaty Doc. 102–20, pp. 3–21; see pp. 743–771 for analysis). This is the first phase of START II reductions.

Paragraph 2 establishes the following warhead sublimits for the first phase of reductions:

2,160 for deployed SLBMs;
1,200 for ICBMs with more than one attributable warhead;
650 for deployed heavy ICBMs.

Paragraph 3 obligates the Parties to undertake a second phase of reductions so that by no later than January 1, 2003, the aggregate number of warheads deployed by each Party on ICBMs, SLBMs, and heavy bombers does not exceed 3,500.

Paragraph 4 establishes the following warhead sublimits for the second and final phase of reductions:

1,750 for deployed SLBMs;
0 for ICBMs with more than one attributable warhead;
0 for deployed heavy ICBMs.

Paragraph 5 commits both Parties to the two phase time-line. Upon completion of the first phase, the second phase of reductions will commence. However, neither this paragraph nor the Treaty contain specific legal obligations by either Party to reduce at a given rate. Unlike START, which mandates a minimum rate of reductions of heavy ICBM launchers, for example, START II requires only that reductions be of a "sustained" nature. Thus Russia is not obligated to eliminate or convert a specified number of missiles or

launchers per year, though failure to engage in a significant, sustained effort would prompt concerns over Russian intent to comply with START II commitments.

Paragraph 6 allows the possibility of accelerated reductions should both Parties agree on a program of assistance. Ratification and implementation of the START II Treaty is in no way contingent upon U.S. provision of any financial guarantees or a program of assistance.

Article II, paragraph 1, requires the elimination by January 1, 2003, of all MIRVed ICBM launchers (including nondeployed, test, and training launchers) or their conversion to accommodate only single-warhead ICBMs. Exempted from this provision are those launchers of non-"heavy" ICBMs permitted under the START Treaty to be located at space launch facilities.

Paragraph 2 exempts silo launchers of downloaded ICBMs from the requirement in paragraph 1, thus enabling the U.S. to retain all Minuteman III ICBMs and Russia to retain 105 SS–19 ICBMs. Russia gains the right to retain 105 SS–19s in Article III of the START II Treaty.

Paragraph 3 requires the elimination of silo launchers to be undertaken in accordance with Section II of the Conversion or Elimination Protocol to the START Treaty (Treaty Doc. 102–20, pp. 84–101; see pp. 873–895 for analysis). In addition, while most SS–18 launchers must be physically destroyed, including all those at space launch facilities, 90 launchers may be converted to accommodate single-warhead ICBMs. While the START Treaty requires destruction of 154 of the former Soviet Union's 308 heavy ICBM launchers by the conclusion of the first seven-year reduction phase (Treaty Doc. 102–20, p. 2; see pp. 741–743 for analysis and thirty third agreed statement at pp. 61–63 and 834–846), START II further requires elimination or conversion of all heavy ICBM launchers, although—as mentioned previously—90 of these may be converted. That leaves, as a practical matter, 64 heavy ICBM launchers that must be destroyed by the end of the second phase of reductions.

Paragraph 4 prohibits the emplacement of any ICBM launch canister with a diameter greater than 2.5 meters in any of the 90 converted heavy ICBM launchers. This prohibition reinforces the commitment made by Defense Minister Grachev to Secretary of Defense Cheney in a letter dated December 29, 1992 (Treaty Doc. 103–1, pp. 72–73; see p. 7 for analysis).

Paragraph 5 requires the elimination of heavy ICBM launchers at space launch facilities.

Paragraph 6 obligates both Parties to completely eliminate through destruction or by space-launch all deployed and non-deployed heavy ICBMs and their launch canisters by January 1, 2003.

Paragraph 7 specifies that each Party maintains the right to inspect the destruction of heavy ICBMs and heavy ICBM launch canisters, as well as the conversion of silo launchers for heavy ICBMs.

Paragraph 8 sets forth the commitment by both parties to not transfer heavy ICBMs to any state.

Paragraph 9 prohibits both Parties, beginning on January 1, 2003, from producing, acquiring from any other state, flight-testing, or deploying MIRVed ICBMs.

Article III, paragraph 1, specifies that START II will use the "counting" rules for attributing warheads established in Section I of the START Memorandum of Understanding for deployed ICBMs and SLBMs (Treaty Doc. 102–20, pp. 324–693; see pp. 1055 to 1066 for analysis), and by paragraph 4 of Article III of the START Treaty (Treaty Doc. 102–20, pp. 3–13; see pp. 743–762 for analysis) in the case of new intercontinental and submarine-launched ballistic missiles.

Paragraph 2 allows for the use of downloading to reduce the number of warheads attributed to a missile, following the same rules as established under START (Treaty Doc. 102–20, pp. 3–13; see pp. 743–762 for analysis). Like the START Treaty, START II bans downloading of heavy ICBMs and of new types of ICBMs and SLBMs.

Subparagraph 2(a) allows the Parties to exceed the START limit of 1,250 for the total allowable number of downloaded warheads.

Subparagraph 2(b) further relaxes START's sublimit on downloading of no more than 500 warheads to be removed from ICBMs and SLBMs other than the U.S. Minuteman III ICBM and the Russian SS–N–18 SLBM.

Subparagraph 2(c) relaxes the START prohibition, imposed under subparagraph 5(c)(iii) of Article III of that treaty (Treaty Doc. 102–20, pp. 3–13; see pp. 743–762 for analysis), on downloading more than four warheads per missile. Instead, each Party is allowed to remove up to five warheads from no more than 105 ICBMs of one type. Russia therefore will be enabled to download 105 SS–19s from six to one warhead, and will retain these missiles beyond the deadline banning all MIRVed ICBMs. These missiles will only be deployable in silos which possessed a missile of that type at the time of START's signing.

Subparagraph 2(d) permits both Parties to retain—rather than replace—reentry vehicle platforms downloaded by more than two warheads, in contrast to subparagraphs 5(b)(iii) and 5(b)(iv) of Article III of START (Treaty Doc. 102–20, pp. 3–13; see pp. 743–762 for analysis) which requires both Parties to remove and destroy reentry vehicle platforms in order to take advantage of downloading provisions.

Paragraph 3 prohibits the production, flight-testing, or deployment of ICBMs or SLBMs with more than the number of warheads attributed to it, and precludes the uploading of missiles that have been downloaded.

Article IV, paragraph 1, establishes constraints on heavy bombers. Whereas under START counting rules, 150 U.S. and 180 Soviet heavy bombers equipped with air-launch cruise missiles (ALCMs) are discounted by up to fifty percent in terms of the number of attributable warheads, and non-ALCM equipped heavy bombers are considered to have only one warhead, paragraph 1 specifies that all heavy bombers shall be attributed with the largest number of warheads with which any type or variant was actually equipped. Thus START II departs significantly from START in attributing warheads to heavy bombers.

Paragraph 2 sets forth the agreement that the number of warheads attributed to a heavy bomber of a given type or variant would be that number listed in the Memorandum on Attribution (MOA).

Paragraph 3 prohibits either side from equipping heavy bombers with more warheads than attributed in the MOA.

Paragraph 4 requires a one-time exhibition of each type and variant of heavy bomber in order to demonstrate, for the purposes of the Memorandum on Attribution, the number of nuclear weapons with which each type or variant of bomber will be equipped. These exhibitions are to be conducted no later than 180 days after START II's entry into force and, in another departure from START, will allow inspection of the B–2 Spirit heavy bomber.

Paragraph 5 allows the Parties to alter the number of warheads attributed to their heavy bombers, requiring 90-day advance notification and exhibition of either the last or the first heavy bomber so modified, depending on whether the Party wishes to increase or decrease the number of attributable warheads, or to introduce a new variant of heavy bomber.

Paragraph 6 requires that all inspections and exhibitions relating to the preceding two paragraphs be conducted according to the Exhibitions and Inspections Protocol, and as provided for in paragraph 1 of Article V of the START II Treaty.

Paragraph 7 allows Parties to reorient to a conventional role those heavy bombers not accountable under START as being equipped with ALCMs. Reorientation may be done without any conversion procedures, but the reoriented bombers must have observable differences from similar bombers with nuclear roles. This is in addition to the right under START to convert up to 76 heavy bombers to non-nuclear missions.

Paragraph 8, subparagraph 8(a), restricts the number of reoriented heavy bombers to 100 at any one time, subparagraph 8(b) requires segregated basing for the bombers, and 8(c) bans their participation in nuclear missions or exercises and prohibits their crews from training or exercising for nuclear missions. Finally, subparagraph 8(d) requires that if fewer than all of the bombers of a type or variant are to be reoriented, then those bombers must have differences observable by National Technical Means and by on-site inspections. These differences need not be functional, in contrast with the requirement under START that converted bombers be "distinguishable."

Paragraph 9 affords each Party the right, after a 90-day advance notification, to return reoriented heavy bombers to a nuclear role. However, these bombers may not again be reoriented. In order to aid in the enforcement of the prohibition on subsequent reorientation, if only a portion of the total of a given type or variant of heavy bomber are so reoriented, those bombers must have observable differences.

Paragraph 10 requires a minimum 100 kilometer separation between bases for conventionally-oriented heavy bombers and storage facilities for heavy bomber nuclear armaments.

Paragraph 11 requires that reoriented bombers remain subject to START Treaty provisions, including inspections. These bombers

will continue to be attributed one warhead each under START Treaty counting rules.

Paragraphs 12 and 13 provide for exhibitions of heavy bombers to demonstrate observable differences between types and variants oriented towards different missions (e.g. nuclear versus conventional).

Paragraph 14 requires that all inspections conducted pursuant to Article IV be done in accordance with the Exhibitions and Inspections Protocol.

Article V, paragraph 1 specifies that, except as provided for elsewhere in the START II Treaty, START provisions shall be used to verify and implement START II.

Paragraph 2 establishes the Bilateral Implementation Commission (BIC) to resolve compliance issues or to agree upon additional measures necessary to improve the viability and effectiveness of START II.

Article VI specifies that the Treaty is subject to ratification prior to entering into force, and will not enter into force prior to the START Treaty. Second, the START II ban on the transfer of heavy ICBMs to a third state or states shall be provisionally applied as of the date of signature of START II. It also stipulates that the START II Treaty will remain in force for the duration of the START Treaty. Both Parties have the right to withdraw from the Treaty with six months notice if extraordinary events related to the subject matter of this Treaty have jeopardized a Party's supreme interests.

Article VII is identical in content to Article XVIII of the START Treaty, providing for amendments to the START II Treaty. Such amendments would be subject to ratification as specified in Article VI of the Treaty.

Article VIII provides for the registration of the Treaty with the United Nations in accordance with Article 102 of the Charter of the United Nations.

Final Provision of the START II Treaty records that the Treaty was done at Moscow on January 3, 1993, in two copies, each in the English and Russian languages, and each being equally authentic.

B. The elimination and conversion protocol

The Elimination and Conversion Protocol consists of three sections, the first setting forth procedures for the elimination of heavy ICBMs and their launch canisters, the second establishing procedures for the conversion and confirmation of conversion of SS–18 silo launchers, silo training launchers, and silo test launchers, and the third discussing of inspection costs and equipment.

Section 1, Paragraph 1 provides two alternatives for eliminating heavy ICBMs. A Party may either use the procedures set forth in Section I, which are to take place at elimination facilities for ICBMs specified in the START Treaty, or it may eliminate heavy ICBMs by using them for delivering objects into the upper atmosphere or outer space. In both cases, advance notification must be provided, for the former via the Nuclear Risk Reduction Centers (NRCCs) 30 days in advance. The latter requires 24 hours of advance notice through the NRRCs.

Paragraph 2 provides that the inspected Party: shall remove the missile's reentry vehicles; may remove the electronic and electromechanical devices of the missiles's guidance and control system, as well as other elements not subject to elimination; shall remove the missile from its launch canister and disassemble the missile into stages; shall remove liquid propellant from the missile; may remove or actuate auxiliary pyrotechnic devices; may remove penetration aids, including devices for their attachment and release; and may remove propulsion units from the self-contained dispensing mechanism.

Paragraph 3 describes the confirmatory inspection to take place prior to the destruction. Inspectors may confirm the type and number of missiles to be eliminated by visual observation and measurement. On-site observation is necessary since National-Technical Means cannot confirm that the objects presented for destruction are real.

Paragraph 4 specifies the elimination process to be followed for destruction of heavy ICBMs. Missile stages, nozzles, and missile interstage skirts are to be cut into two pieces of approximately equal size; and the self-contained dispensing mechanism (as well as the front section), including the reentry vehicle platform and the front section shroud, are to be cut into two pieces of approximately equal size and crushed.

Paragraph 5 states that launch canisters of heavy ICBMs shall be cut into two or three pieces. These procedures apply to launch canisters eliminated with their heavy ICBMs, as well as to launch canisters for missiles eliminated through flight-testing, or through launching into the upper atmosphere or space. They also apply to empty launch canisters existing at the time of the Treaty's entry into force (EIF).

Paragraph 6 requires a factual written report containing the results of the inspection team's observation of the elimination process to confirm the conclusion of the inspection.

Paragraph 7 states that heavy ICBMs will no longer be subject to the limitations of this Treaty upon completion of the procedures set forth in Section I.

Section 2, paragraph 1 requires that conversion of silo launchers of heavy ICBMs (including silo training launchers of heavy ICBMs and silo test launchers of heavy ICBMs) be carried out in situ and be subject to inspection. Launchers of heavy ICBMs at space launch facilities may not be converted, but must be destroyed. Silo elimination will be done according to START rules.

Paragraph 2 provides that the missile and launch canister must be removed from a silo launcher prior to conversion.

Paragraph 3 states that Russia will be considered to have begun converting heavy ICBM silo launchers (including training and test launchers) as soon as the silo door is opened and the missile and its canister removed. Notification is to be provided according to paragraphs 1 and 2 of Section IV of the Notification Protocol to the START Treaty (Treaty Doc. 102–20, pp. 283–308; see pp. 1008–1033 for analysis).

Paragraph 4 sets forth the conversion process for heavy ICBM silos. They are: opening the door and removing the missile and launch canister; pouring five meters of concrete into the base of the

silo; and installing a restrictive ring with a diameter of no more than 2.9 meters into the upper portion of the silo in a way that precludes removal without destruction of the ring and its attachment to the silo wall.

Paragraph 5 provides the U.S. the right to confirm that the aforementioned procedures have been carried out. Russia is required to notify the U.S. (through the NRRCs) at least 30 days in advance of pouring the concrete, and upon completion of all of the procedures specified.

Paragraph 6 confers the right of the United States to observe the entire process of pouring concrete into each heavy ICBM silo that is to be converted, and to measure the diameter of the restrictive ring. Inspection teams are limited to ten inspectors drawn from the START list of inspectors, as specified by Section II of the Inspection Protocol to the START Treaty (Treaty Doc. 102–20, pp. 102–282; see pp. 896–1008 for analysis). These inspections shall not count against any inspection quotas established by the START Treaty. In addition, heavy ICBM elimination inspections do not count against START Treaty quotas.

Paragraph 7 provides an alternative method for confirming conversion, providing the right to measure the depth of each heavy ICBM silo that is to be converted before the concrete has been poured, and to return and remeasure the silo depth after the concrete has hardened. In addition, paragraph 7 provides for the right to measure the diameter of the restrictive ring. Inspection teams are limited to ten inspectors drawn from the START list of inspectors, as specified by Section II of the Inspection Protocol to the START Treaty (Treaty Doc. 102–20, pp. 102–282; see pp. 896–1008 for analysis), and these inspections do not count against any inspection quotas established by the START Treaty.

Paragraph 8 gives Russia the right to carry out further conversion measures after the completion of the procedures specified in paragraphs 6 or 7 or, if such procedures are not conducted, 30 days after notification of completion of the procedures specified in paragraph 4.

Paragraph 9 authorizes, in addition to the reentry vehicle inspections provided for in the START Treaty, four additional reentry vehicle inspections each year of ICBMs deployed in converted silo launchers. Procedures set forth in the Inspection Protocol to the START Treaty (Treaty Doc. 102–20, pp. 102–282; see pp. 896–1008 for analysis) will be used during these inspections. In addition to confirming that the missile installed in the converted silo has only one reentry vehicle, these inspections permit the U.S. visually to confirm the presence of the restrictive ring and of the launch canister and missile that Russia has placed in the silo.

Paragraph 10 states that, upon completion of the procedures specified in paragraphs 6 or 7, the silo being converted shall be considered to contain a deployed ICBM to which one warhead is attributed.

Section III provides the right to use equipment in these inspections agreed-upon in the Bilateral Implementation Commission. It also apportions nearly all the costs of these inspections to the United States since the U.S. has no heavy ICBMs to inspect.

C. The exhibitions and inspections protocol

The Protocol on Exhibitions and Inspections consists of a Preamble and two sections. It sets forth detailed procedures for the conduct of exhibitions of heavy bombers and for inspections conducted incident to those exhibitions.

Section I, paragraph 1 provides for heavy bomber exhibitions different from exhibitions required under the START Treaty. Paragraph 1 repeats the requirements of Article IV of the START II Treaty for three types of exhibitions:

(1) Exhibitions of heavy bombers equipped for nuclear armaments. The purpose of such an exhibition is to demonstrate to the other Party the number of nuclear weapons for which a heavy bomber is actually equipped. Similarly, an exhibition is required if the number of nuclear weapons for which a heavy bomber is actually equipped is changed.

(2) Exhibitions of heavy bombers reoriented to a conventional role. Such an exhibition is intended to demonstrate to the other Party the specified differences between reoriented bombers and other heavy bombers of the same type or variant that have a nuclear role. Such differences must be both observable by national technical means of verification and visible during on-site inspection.

(3) Exhibitions of heavy bombers reoriented to a conventional role and subsequently returned to a nuclear role. Such exhibitions serve both to demonstrate the number of nuclear weapons for which the heavy bomber actually will be equipped and to demonstrate the differences between the heavy bombers being returned and heavy bombers of the same type or variant that are either (a) still in a conventional role or (b) never were reoriented.

Paragraph 2 provides identical basic rules on location, date, duration, and inspection team composition for each of the three types of exhibitions. The procedures of the START Treaty apply to these exhibitions, except as modified by the Protocol. Specifically, each heavy bomber shall be subject to inspection for no more than two hours. Photographs must be provided to show all relevant differences between types and variants of reoriented/nonreoriented heavy bombers. Finally, these exhibitions do not count against START inspection quotas.

Section II, paragraph 1 provides rules for the inspections of heavy bombers during exhibitions. Section II also provides additional procedures for data update inspections and new facility inspections conducted pursuant to the START Treaty. New facility inspections are included since, under the provisions of Section VII of the Inspection Protocol to the START Treaty, such inspections include inspection of applicable heavy bombers at new airbases. Baseline exhibitions are to be conducted to provide an initial demonstration of the number of nuclear weapons for which heavy bombers of a given type and variant are actually equipped. The additional inspection procedures for data update and new facility inspections allow periodic reconfirmation of this attribution. However, no requirement exists to load armaments for inspections. Further, there is no requirement to give direct access to the underside of the wings of the B–2 in order to prove that no weapons are lo-

cated there. Nor would there be access to the interior of any heavy bomber (except for weapons bays).

Paragraph 2 provides a right to shroud portions of a heavy bomber not subject to inspection. This right applies to all heavy bombers, but is primarily intended to protect the B–2 and future bombers. Two hours are allocated for inspections during exhibitions, and 32 hours are provided for the conduct of data update or new facility inspections. Given this, there is a possible conflict between the two Treaties. In order to provide for a situation where more time would be required than allocated by the START Treaty, the United States will, if necessary, seek, in the Joint Compliance and Inspection Commission established by the START Treaty, the right to extend the period of inspection to allow for the completion of START II inspection procedures.

Paragraph 3 requires the in-country escort to provide the number of nuclear weapons for which the heavy bomber is actually equipped and to identify the differences that are observable by NTM and visible during inspection. Additional measures may be agreed upon by the Parties with respect to the Protocol to improve the viability and effectiveness of the START II Treaty. Pursuant to Article VI, the Protocol is deemed to be an integral part of the START II Treaty.

D. The memorandum on attribution

The Memorandum on Attribution (MOA) consists of a Preamble and five Sections. It establishes the database needed to record the following data:

The number of nuclear weapons for which each heavy bomber of a type and a variant is actually equipped;

The aggregate number of bomber weapons counted against the limits established in Article I of the Treaty;

The numbers and locations for heavy bombers reoriented to a conventional role and for heavy bombers subsequently returned to a nuclear role;

The differences observable to national technical means of verification for heavy bombers reoriented to a conventional role, and for heavy bombers reoriented to a conventional role that are subsequently returned to a nuclear role;

The number and location of ICBMs and SLBMs downloaded by amounts greater than allowed by the START Treaty, or ICBMs and SLBMs downloaded without destruction of the reentry vehicle platform;

The number and location of heavy ICBM silos converted to carry single-warhead ICBMs; and

The number of heavy ICBMs eliminated and remaining to be eliminated.

Only Treaty-related data that are different from the data in the START Memorandum of Understanding are included in this MOA.

Section I sets forth the number of warheads for which deployed heavy bombers (other than those reoriented to a conventional role) are actually equipped. The accuracy of the data provided is the responsibility of the Party owning the given heavy bomber. In addition, this Section provides a record of the aggregate number of warheads attributed to such heavy bombers. Under the START Treaty,

older U.S. heavy bombers awaiting elimination at the Davis-Monthan conversion or elimination facility are included in the Memorandum of Understanding, since such bombers count against the START Treaty delivery vehicle and warhead totals. Since these older bombers will be eliminated before the expiration of the seven year reductions period, when the first limits under START II must be reached, the number of nuclear weapons for which they are actually equipped was not included in the START II MOA.

Section II records the aggregate number of heavy bombers reoriented to a conventional role and the bases at which they are located. In addition, this Section allows the recording of observable differences. Since no heavy bombers have yet been reoriented to a conventional role, this Section is unlikely to contain any data when the first data exchange occurs 30 days after entry into force of the START II Treaty.

Section III provides data on the numbers and locations of ICBMs and SLBMs downloaded under the provisions of Article III of the Treaty. The format is identical to that of Section III of the START Treaty Memorandum of Understanding.

Section IV provides data on the numbers and locations of heavy ICBM silos (in practice, silo launchers for Russian SS–18 ICBMs) which have been converted pursuant to the Elimination and Conversion Protocol. Since the START Treaty requires that geographic coordinates not be released to the public, the locations referred to in this Section will be given by use of the silos designators found in the Memorandum of Understanding to the START Treaty. Section IV also provides data on the number of heavy ICBMs which remain deployed in Russia, remain nondeployed in Russia, or have been eliminated in order to measure progress toward the elimination of all heavy ICBMs.

Section V requires each Party to notify the other of changes in the attribution and data contained in this Memorandum. Unlike the START Treaty, the START II Treaty does not prescribe in detail the specific content of notifications.

X. ADDITIONAL VIEWS OF SENATOR CLAIBORNE PELL

It is an illuminating illustration of how far we have come in arms control that all 18 Members of the Committee on Foreign Relations gave their support to the START II Treaty and recommended that it be ratified. I recall that the very first of the strategic offensive arms agreements—the 1972 SALT I Interim Agreement—brought on extensive expressions of concern. In the end it was approved with some Members expressing relief that it would be of only limited duration—five years—and thus not sufficiently enduring to endanger the national security of the United States. The 1979 SALT II Agreement was a highly controversial, ambitious undertaking over which the Committee was deeply divided. The treaty was finally approved in a 9–6 vote. SALT I foundered after the brutal Russian invasion of Afghanistan. That treaty never came into force, although it set the stage for continued efforts. The START I Treaty in 1991 was the first offensive arms agreement to dramatically reduce the nuclear arsenals of the former Soviet Union and the United States. START I cut the arsenals by one-third, and this treaty will reduce by another one-third the nuclear forces possessed by the United States and the Russian Federation. It had overwhelming—but not unanimous—support in the Committee.

These major undertakings, together with the 1972 Anti-Ballistic Missile Treaty limiting strategic defensive arms, truly represent a continuum of arms control that has already had considerable benefits to the nations involved and promise still more over the next seven years.

There is no question that all of this effort, more than two decades-long, characterized by new initiatives that build upon earlier achievements step-by-step, has been critically important in the effort to curb the costly and essentially pointless arms competition that characterized much of the postwar period prior to the collapse of the Soviet Union. While I, together with many others, am pleased that we finally have reached a point at which we can anticipate the elimination of the most destabilizing weapons—land-based missiles with multiple warheads, it also is saddening to realize that this nation's leaders might have been wiser earlier. The pointless and wasteful MIRV competition that has been central to the arms race well might have been averted.

It is useful to recall that the Committee and the Senate endeavored in 1970 to forestall the development of MIRVed systems.

Senate Resolution 211 stated in part:

> * * * Whereas development of multiple independently targetable reentry vehicles by both the United States and the Soviet Union represents a fundamental and radical challenge to such stability;

> Whereas the possibility of agreed controls over strategic forces appears likely to diminish greatly if testing and deployment of multiple independently targetable reentry vehicles proceed;
>
> *Resolved further,* That the President should propose to the Government of Union of Soviet Socialist Republics an immediate suspension * * * of the further development of all offensive and defensive nuclear strategic weapons systems, subject to national verification or such measures of observation and inspection as may be appropriate.

Senate Resolution 211 was introduced by Senator Edward Brooke and 39 cosponsors (with three later additions) on June 17, 1969. The Foreign Relations Committee reported favorably S. Res. 211 on March 24, 1970, and it passed the Senate on April 9, 1970, on a vote of 72 to 6.

I remember well making the case to several senior Administration officials that we would do well to do our best to avoid a race in multiple-warhead missiles. Nonetheless, the Administration did not agree with the Senate on the matter, believing instead that the United States enjoyed a technological lead over the Soviet Union, and would do better if MIRVs were allowed. Accordingly, the United States never proposed, in any serious way, that MIRVs be banned in SALT I. Two decades later, Soviet MIRVs have become a matter of considerable concern, and much effort in START and further effort in connection with the de-MIRVing Treaty have been required to deal with the problem. Now, 25 years later, it is clear how prescient the Senate was. Now that we are coming full circle, only five of S. Res. 211's cosponsors—Senators Dole, Hatfield, Inouye, Kennedy and I—remain in the Senate.

I am reminded of the thought of T.S. Eliot in his poem, Little Gidding:

We shall not cease from exploration
And the end of all our exploring
Will be to arrive where we started
And know the place for the first time.

The achievements of SALT, START and the ABM Treaty demonstrate that the United States and the successors to the Soviet Union are fulfilling pledges made repeatedly since the 1963 Limited Test Ban Treaty to reduce their nuclear arsenals. These pledges were seen as justification by other nations for decisions to refrain from nuclear weapons testing, join the non-proliferation treaty as non-nuclear weapon states and, earlier this year, to agree upon the permanent extension of the Non-Proliferation Treaty.

I hope very much that we will have the wisdom to understand what has been achieved, the resolve to preserve our achievements, and the foresight to build upon them.

At present, the 1972 ABM Treaty is under serious assault by people who believe that the United States should have a nationwide defense against ballistic missile attack. This notion runs directly counter to the concept underlying the ABM Treaty—that ensuring that neither side could have an effective national defense against missile attack would reassure each side's confidence in the deterrent value of its strategic offensive forces, thus enhancing de-

terrence and opening the way to meaningful reductions. That concept has proved correct.

Those who insist that the United States should build a national defense regardless of whether it would destroy the ABM Treaty may, in the end, undermine both START I and START II and also destroy possibilities for further reduction during this era. A Russian decision not to ratify START II because of their concern about our commitment to the ABM Treaty could only lead to unwanted and unnecessary strategic uncertainty. Should the process of reduction be halted, the remaining Russian threat could be so great that the limited national defense now being advocated by some would be laughable. Should we then raise defense spending to cope with the threat, we would create further privations for taxpayers as the budget-balancing effort was destroyed, and we could find ourselves back in an arms race.

Surely, we need not repeat such past mistakes. We need to recognize that there are real new arms control challenges to be met and overcome. We should focus on these opportunities and bring our best thinking and diplomacy to bear. If we do our work well, we will surely avoid much needless and debilitating military spending.

In truth, there is no time to waste as we move to meet arms control challenges. Immediate priority should go to two activities; one within the province of the Senate, and a second within the province of the Executive Branch for the moment.

First, this Committee should complete at an early date the several additional hearings now contemplated on the Chemical Weapons Convention and proceed as soon as possible to consideration and, I would hope, approval of ratification. I chaired seven hearings on the Chemical Weapons Convention in 1994, and there was overwhelming evidence that the Convention merited and had gained wide-spread support in the Executive Branch, the Congress, the national security community and the chemical weapons industry.

Delay in further consideration has raised the possibility that the Russian Federation may act at an earlier date than the United States and that the United States may not be a party when the requisite 65 nations have joined and the Convention comes into force. It would be very unfortunate for the world to start establishing the regime under which the Chemical Weapons Convention will operate with the United States on the outside looking in. It would be far better for us to lend our considerable expertise to the venture and help ensure that this ground-breaking agreement prohibiting the manufacturing, storage, stockpiling, and use of chemical weapons is brought into force and enforced with the United States in a central role.

Second, the Administration should do everything it can to avoid any deviation from the path toward a comprehensive ban on all nuclear testing. The President has made the wise decisions that the United States will support a treaty that is permanently binding upon the parties and that will press for a treaty that completely bans all nuclear explosions.

Earlier this year the United States led the highly successful effort at the United Nations to secure the permanent extension of the Non-Proliferation Treaty. We made it clear to the non-nuclear weapons states represented that we took our obligation seriously to

end nuclear testing. We must not falter now for our own self-interest and for the interest of those who understand the imperative that we continue our best to control the proliferation of nuclear weapons.

As additional priorities we should undertake very serious analysis as to just what further steps to reduce the nuclear arsenals of the United States and the Russian Federation are in our interest and what kinds of reductions we might hope the other three nuclear powers—China, Britain, and France—might undertake. We will be much more comfortable with further reductions if all the nuclear powers are talking and cooperating and moving their arsenals to steadily lower levels. Each achievement in that regard will help reinforce the Non-Proliferation Treaty.

In recent years, the United States has led other nations in the development of sanctions to be applied to individuals and nations taking dangerous actions with regard to chemical, biological, and nuclear weapons proliferation as well as the missiles that might be used for their delivery. In most instances, we have led the world in our initiative and willingness to set higher standards. Fortuitously, we have been willing to lead, rather than wait for consensus. As a result, it should be clear to all that we and other responsible nations will not tolerate proliferation-related activities.

There should be no doubt that we face new and changing proliferation threats. We must be careful, however, neither to underrate nor to overrate the threat. If we underrate the threat, we and others will become law in meeting it. If we overrate, we are likely to waste precious resources over-responding. For instance, we do not want to spend major sums of money to develop a missile defense to counter a threat that many experts believe may never pose a serious threat to America.

We are trying through various means to get potential proliferant nations, such as China and North Korea, to constrain themselves in their activities and exports. We are quite properly trying to use diplomatic efforts throughout the world to deal with proliferation problems and to set nations with worrisome activities on a different course. It will enhance this effort considerably if we are willing to respond effectively, as required by law, to dangerous proliferation-related activities by others. For instance, when sanctions should be imposed for various activities, we must not shy away from making that decision. The Executive Branch should understand that in many cases it has the authority to waive the imposition of sanctions, should the President consider that to be in order. That is a far more preferable course and one that can be discussed freely by the Congress and Executive Branch. It is infinitely more honest and understandable than turning a blind eye to illicit activity, and it would avoid the danger of sending the wrong message to potential proliferators.

The international barriers to proliferation are being steadily broadened and strengthened. As a very important example, the Chemical Weapons Convention and the required implementing legislation will mean that much activity that was previously permitted will now be criminalized. Throughout the world, police will be able to investigate and stop chemical weapons schemes such as

the one that led to the Tokyo subway incident and more secure as a result.

More than ever the benefits of arms control as an enhancement of our national security and as a way to spare our citizenry needless expenditures and needless risks should be imminently clear. I am deeply convinced that the people steadily are becoming better informed on the merit of arms control and want it fostered and nurtured.

Many of the activities of arms control are separate, but as time has passed they are threads that have come together. A true fabric of sensible restraint is indeed being woven.

○