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# Arms Control and Strategic Nuclear Weapons: Unilateral vs. Bilateral Reductions

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## Arms Control and Strategic Nuclear Weapons: Unilateral vs. Bilateral Reductions

On November 13, 2001, President Bush announced that he planned to reduce U.S. strategic nuclear weapons to between 1,700 and 2,000 operationally deployed warheads. He noted that he would make these reductions unilaterally, without pursuing a formal arms control agreement with Russia. President Putin welcomed the proposed reductions, but argued that they should be made through a formal treaty. Although the United States eventually agreed to sign a “legally binding” agreement, officials in the Bush Administration have argued that the United States should not be bound by formal arms control treaties. It argues that many of these agreements do not limit threats to the United States but they do restrict U.S. flexibility in ensuring its national security. But, the absence of formal arms control treaties would bring about changes in the role of Congress; the Senate has a constitutionally-mandated role in giving advice and consent to the ratification of formal treaties but would have no role in approving informal agreements. This approach would also change the role of arms control in the relationship between the United States and Russia.

The United States and Soviet Union used negotiated treaties and unilateral measures to reduce their nuclear forces. The START I Treaty, which reduced strategic offensive nuclear weapons, and START II Treaty, which did not enter into force, are examples of the former; the 1991 Presidential nuclear initiatives, which eliminated non-strategic nuclear weapons, are an example of the latter. A review of these cases highlights relative strengths and weaknesses of these two mechanisms. Formal treaties allow the participants to understand and predict future changes in forces and threats, allow for transparency in monitoring those forces, and allow for balanced and equitable trades between the forces of the participating parties. On the other hand, the search for balanced trades and the need for detailed definitions tends to lengthen the negotiating process, while the detailed provisions and requirements lengthen and add to the cost of the implementation process. Unilateral measures, on the other hand, can be devised and implemented more quickly, allow for more “sweeping changes,” and provide the participants with the flexibility to reverse their reductions, if necessary. However, they often do not provide transparency or predictability, and there is the potential for destabilizing reversals.

The Bush Administration’s proposals demonstrate many, but not all of these characteristics. The President announced his proposed reductions relatively quickly, but he plans to implement them at a slow pace, over 10 years. And, although his reductions appear to move well beyond those implemented under START I, they are no more “sweeping” than reductions that have been considered for the past 10 years under START II and a potential START III Treaty. The President did not propose any new monitoring measures, but the United States and Russia are likely to continue to implement the monitoring regime from START I to improve transparency with future reductions. Finally, the President and his advisers have highlighted the fact that these measures will provide the United States with the flexibility to reduce or restore its forces quickly. Russia, on the other hand, may feel threatened by the U.S. ability to reverse its weapons reductions. And, without precise definitions of those weapons that will be eliminated, disputes and suspicion could arise in the future.

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## Introduction

The United States and Soviet Union signed numerous treaties and agreements that were designed to limit, reduce, and sometimes eliminate offensive nuclear weapons. Some critics claimed the agreements did little to enhance U.S. security – they either did not limit the threat from the Soviet Union while constraining U.S. forces or they restrained weapons that the nations had already decided they did not need to maintain their security. Nevertheless, these agreements, and the negotiations that produced them, often played a central role and served to measure the level of tension in the relationship between the United States and Soviet Union. The United States and Russia did not sign any new agreements during the Clinton Administration, but the arms control process continued with the implementation of the 1991 START I (Strategic Arms Reduction) Treaty, the debate over START II, and preliminary discussions on a START III Treaty.<sup>1</sup>

During the election campaign in 2000 and his early months in office in 2001, President Bush pledged to set aside the arms control negotiating process and to reduce U.S. strategic nuclear forces unilaterally, to the “lowest possible number consistent with our national security.” The depth of the reductions would be determined by a review conducted by the Secretary of Defense, but the President expected that the United States could reduce its forces “significantly” below the START II level “without compromising our security in any way.”<sup>2</sup> This approach to weapons reductions reflected the President and his advisers’ views on the relatively low value of negotiated arms control and the need to alter the U.S.-Russian relationship after the Cold War. Specifically, the President stated that “we can and will change the size, the composition, the character of our nuclear forces in a way that reflects the reality that the Cold War is over.”<sup>3</sup>

After receiving the results of the Department of Defense review of U.S. nuclear forces and nuclear posture, President Bush announced his plans for reductions in U.S. nuclear forces during a summit meeting with Russia’s President Vladimir Putin in

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<sup>1</sup>For a brief description of these treaties see the Appendix at the end of this report and U.S. Library of Congress, Congressional Research Service. *Arms Control and Nonproliferation Activities: A Catalog of Recent Events*. CRS Report RL30033. Updated January 25, 2001.

<sup>2</sup>Campaign 2000. Governor George Bush Holds News Conference at National Press Club. Transcript. The Federal Document Clearing House. May 23, 2000.

<sup>3</sup>News Event. George W. Bush, President of the United States, Delivers Remarks on Missile Defense. Transcript. The Federal Document Clearing House. May 1, 2001.

Washington, on November 13, 2001. He stated that the United States would reduce its “operationally deployed strategic nuclear warheads to a level between 1,700 and 2,200 over the next decade.” This number falls below the 3,000-3,500 warheads that would have been permitted by the 1993 START II Treaty, and, on its face, goes below the 2,000-2,500 warheads planned for START III. However, because the START Treaties use counting rules to attribute warheads to the parties’ forces, and because these counting rules could include weapons that are not “operationally deployed,” the President’s decision may reduce U.S. forces to levels similar to those that would have been consistent with START III.<sup>4</sup>

The President indicated that the United States would reduce its forces unilaterally, without signing a formal agreement with Russia. He stated that “a new relationship based upon trust and cooperation is one that doesn’t need endless hours of arms control discussions... We don’t need arms control negotiations to reduce our weaponry in a significant way.”<sup>5</sup>

President Putin offered a mixed response. He stated that he appreciated the President’s decision to reduce U.S. strategic offensive weapons and noted that Russia “will try to respond in kind.”<sup>6</sup> He did not offer any specific numbers on this occasion, but he has, in the past, proposed that the United States and Russia reduce their strategic offensive forces to 1,500 warheads or fewer. Many experts believe that Russia is likely to retain only 1,000-1,500 warheads by the end of the decade, and that it will lack the economic resources to produce more than a few hundred new land-based missiles and, perhaps, a few new ballistic missile submarines.<sup>7</sup>

President Putin has emphasized that he would like to use the formal arms control process to reduce U.S. and Russia forces. He emphasized that the U.S.-Russian dialogue on strategic offensive and defensive weapons should focus on “reaching a reliable and verifiable agreement on further reductions of the U.S. and Russian weapons.” He added that Russia was prepared to “present all our agreements in a treaty form, including the issues of verification and control.”<sup>8</sup>

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<sup>4</sup>See the Appendix at the end of this report.

<sup>5</sup>The White House, Office of the Press Secretary. Press Conference. President Bush and President Putin Discuss New Relationship. November 13, 2001. President Bush did, however, alter this position, agreeing, in early 2002, that the two sides should seek a formal agreement that would “outlive both of us.”

<sup>6</sup>*Ibid.*

<sup>7</sup>Williams, Daniel. Russia to Cut Its Nuclear Stockpile; Putin Decides to Shift Funds to Rebuild Conventional Forces. *Washington Post*. August 13, 2000. p. A16. See, also, Wolfsthal, John Brook, Cristina-Astrid Chuen, and Emily Ewell Daughtry, editors. *Nuclear Status Report. Nuclear Weapons, Fissile Material, and Export Controls in the Former Soviet Union*. Monterey Institute of International Studies and Carnegie Endowment for International Peace. June 2000. p. 35.

<sup>8</sup>The White House, Office of the Press Secretary. Press Conference. President Bush and President Putin Discuss New Relationship. November 13, 2001.

The exchange during the Washington summit highlighted an ongoing debate – within the Administration, among analysts, and between the United States and Russia – about the relative strengths and weaknesses of unilateral reductions and bilateral arms control agreements. Officials in the Bush Administration have questioned the value of formal arms control agreements. Following a general discussion of these views, the report examines strengths and weakness often attributed to these two forms of arms control. It concludes with review of the Bush Administration’s proposals to identify how they incorporate some strengths and accept some weaknesses of unilateral arms reductions.

## Changing U.S. Policy and Priorities

### Bush Administration Views on Arms Control

**Multilateral Regimes.** The President and others in his Administration have argued that bilateral and multilateral arms control treaties do not necessarily serve U.S. national interests. In an article published during the campaign, Condoleeza Rice, the National Security Adviser, suggested that the United States “has a special role in the world and should not adhere to every international convention and agreement that someone thinks to propose.”<sup>9</sup> Administration officials claim that they do not oppose all agreements, but that it will review them “on a case-by-case” basis and reject them if they place undue constraints on the United States without doing much to limit the threats to the United States.<sup>10</sup> These considerations have led the Administration to reject several multilateral treaty regimes, including the Protocol to the Biological Weapons Convention<sup>11</sup> and the Comprehensive Test Ban Treaty.<sup>12</sup>

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<sup>9</sup>Rice, Condoleeza. Promoting the National Interest. Foreign Affairs. January/February 2000. pp. 47-48.

<sup>10</sup>Bush Administration Reviewing the Value of Arms Control Agreements. InsideDefense.com. August 28, 2001.

<sup>11</sup>The United States signed the Biological and Toxin Weapons Convention in 1972 and ratified it in 1975. Since 1994, the BWC’s Ad Hoc Group of Experts has been negotiating a protocol on verification and compliance; it completed its work in 2001. President Bush has stated that the United States will not sign the Protocol, in spite of growing concerns about the potential for biological weapons use by terrorists. The Administration argues that it will be too intrusive for U.S. industry and that it will do little to detect or deter cheating in other nations. See U.S. Library of Congress. Congressional Research Service. Biological Weapons: A Primer. CRS Report RL31059. By Stephen R. Bowman. July 24, 2001.

<sup>12</sup>The United States signed the CTBT in 1996. The Senate refused to give its advice and consent to ratification in October 1999. The Bush Administration has indicated that it will not ask the Senate for its advice and consent on ratification; it did not participate in a November 2001 U.N. conference on the Treaty; and, although it has pledged to maintain the ongoing moratorium on testing, it maintains that the United States has a right to resume testing to ensure the safety and reliability of its nuclear weapons. See CRS Issue Brief IB92099, *Nuclear Weapons: Comprehensive Test Ban Treaty*, by Jonathan Medalia. Updated Regularly.

The Bush Administration has not criticized or backed away from the 1968 Nuclear Nonproliferation Treaty. This Treaty does not, however, restrict the U.S. nuclear weapons program and many analysts believe it has been relatively successful in establishing an international norm that limits the proliferation of nuclear weapons.

**Bilateral Treaties.** Bush Administration officials have argued against the negotiation of new bilateral arms control agreements, in part, because they believe the process can be too slow and too rigid. Specifically, according to one official, “formal arms control agreements that require so much time to negotiate and are negotiated at a level of detail that has become astounding... will not allow us to make the kinds of adjustments to our own forces in the timeframes we need to make them.”<sup>13</sup> In contrast, according to Administration officials, unilateral measures would allow the United States to reduce its forces quickly when they were no longer needed and restore forces quickly if conditions changed again.

This view represents a sharp departure from policies supported by Republicans and conservatives, including many who work in the Bush Administration, for much of the Cold War. During that time, many argued that arms control agreements must include detailed definitions and provisions. They also insisted on complex monitoring and verification regimes that would permit the United States to detect a full range of possible violations. This approach would assure Soviet compliance with obligations, even if it produced lengthy negotiations and long, complex treaties.

The Bush Administration has argued, however, that arms control negotiations represent an adversarial process between the United States and Russia and they are no longer appropriate because, according to the President and others in his Administration, “Russia is no longer our enemy.”<sup>14</sup> Accordingly, the two nations should work together to lessen or eliminate threats to their security, rather than pursue agreements based on the premise that each is a threat to the other. For many months, the Administration’s critics questioned this view, noting that the United States and Russia continued to deploy enough nuclear weapons to destroy the other and to posture those weapons in ways that threatened targets in the other nation. They argued that the political relationship may have improved, but it could deteriorate again in the future. However, after the September 11 attacks on the World Trade Center and Pentagon, Russia and the United States opened new channels of communication and cooperation. Some assert that this new relationship truly does seem to signify a change in the security environment for both nations and a real reduction in the need for and role of arms control in their relationship.

In the Administration’s view, the 1972 Anti-Ballistic Missile Treaty embodies all the negative characteristics of formal arms control. It constrains the U.S. ability to develop and deploy ballistic missile defenses, without controlling the capabilities of potential adversaries who might develop ballistic missiles. It is not appropriate to the new relationship between the United States and Russia. Because it embodies a

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<sup>13</sup>Bush Administration Reviewing Value of Arms Control Agreements. InsideDefense.com. August 28, 2001.

<sup>14</sup>Rumsfeld, Donald H. Toward 21<sup>st</sup> Century Deterrence. Wall Street Journal. June 27, 2001.

“bargain” where each side pledges not to develop defenses so that the other can be assured of an effective retaliatory attack, it assumes that the United States and Russia are adversaries poised to engage in a massive nuclear war. Hence, the Administration would like to replace the ABM Treaty with a new strategic framework that allows for ongoing consultation and cooperation without codifying limits on U.S. or Russian offensive or defensive weapons in a formal treaty.

Although the Bush Administration initially opposed the negotiation of any new agreements with Russia, it altered its position in deference to Russia’s President Putin. In the months after the Crawford summit, the United States and Russia held discussions on the possible format for and content of a new arms control agreement. In early 2002, Secretary of State Powell stated that the two sides would seek to reach a “legally binding” accord. In May 2002, shortly before the planned summit in Moscow, President Bush announced that the two sides had completed a Treaty that would limit their offensive nuclear weapons. This Treaty, however, would be short – around 3 pages – and would lack many of the complex definitions, collateral constraints, and implementation requirements common in previous arms control agreements. It would not attempt to shape or structure the remaining forces on the two sides and would only remain in force for 10 years, after which time the two sides could restore or reduce their forces as they saw fit. In essence, it contained the same ambiguities and flexibility that had been included in the President’s announcement in November 2001 (this is discussed in more detail below).

## **Arms Control without Treaties**

Many officials in the Bush Administration and analysts outside government believe the United States and Russia could cooperate in reducing their strategic offensive nuclear weapons without signing a formal arms control treaty. They could provide each other with information about their plans and programs, and, possibly, employ some cooperative monitoring measures to help each nation confirm changes in the other’s forces. This type of arms control process may differ from the formal negotiations and treaty-defined implementation rules of the Cold War era in the following ways:

**The Role of Congress.** The U.S. Constitution states that the President “shall have the power, by and with the Advice and Consent of the Senate, to make Treaties, provided two-thirds of the Senators present concur.”<sup>15</sup> Consequently, the President cannot sign and implement an arms control treaty that would limit or reduce U.S. nuclear weapons without gaining the approval of at least 67 Senators. He can, however, limit or reduce U.S. nuclear forces without seeking the advice and consent of the Senate if he does so unilaterally. In such a circumstance, he would act, as Commander-in-Chief of the U.S. military, to establish U.S. military doctrine, policy, and force structure in accordance with his views on U.S. national security.

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<sup>15</sup>United States Senate, Committee on Foreign Relations. *Treaties and Other International Agreements: The Role of the United States Senate*. Committee Print, prepared by the U.S. Library of Congress, Congressional Research Service. p. 2.

Congress would, nevertheless, have an opportunity to review and vote on the President's plans through the annual Authorization and Appropriations Bills for the Department of Defense. If Congress did not approve of plans to reduce U.S. nuclear weapons, it could deny the use of appropriated funds for activities that would deactivate or dismantle specified weapons systems. Congress employed this mechanism in FY1998, when it mandated that funds "available to the Department of Defense may not be obligated or expended during fiscal year 1998 for retiring or dismantling, or for preparing to retire or dismantle" nuclear weapons below specified levels that were consistent with the START I Treaty.<sup>16</sup> Initially, this legislation was designed to provide the Russian parliament with an incentive to approve the START II Treaty because it clearly stated that U.S. forces would not decline further until START II entered into force. The Clinton Administration sought to ease the restriction in subsequent years as the budgetary cost to retain aging systems increased. But many in Congress believed the Clinton Administration might go too far in reducing U.S. nuclear weapons so Congress included similar provisions in the Defense Authorization Bills for FY1999, FY2000, and FY2001. It did, however, repeal this language for the Bush Administration in the FY2002 Defense Bill.

**The Role of Arms Control.** During the 1990s, as the relationship between the United States and Russia improved, their cooperation expanded to include a wide range of economic, political, and military issues. However, even without a new treaty since January 1993, arms control has remained on their cooperative agenda. They have worked together to implement START I, sharing data and cooperating in a range of on-site inspections, and they sought to reach agreement on further reductions. Arms control also remained important to Russia as a measure of its political status. As Russia experienced economic and political disruptions during the 1990s, its nuclear weapons were often seen as its sole remaining claim to superpower status. Therefore, negotiations with the United States to limit and reduce those weapons were seen as a measure of Russia's status as an equal to the United States. This consideration apparently supported Russia's insistence on the signing of a new agreement that would codify the plans for reductions outlined in late 2001.

During the 1990s, however, many analysts inside and outside government grew convinced that the United States no longer needed arms control to limit the Russian threat. They expected Russian forces to decline sharply, under economic pressure, as Russia retired older systems without producing large numbers of new weapons. Therefore, the United States would not need to limit its own forces in an effort to convince Russia to reduce its arsenal. Furthermore, arms control may become less important in Russia's measure of its relationship with the United States as other economic and political issues take a central role on their agenda for discussions.

**Changing Priorities.** The Administration's preference for unilateral reductions in nuclear weapons also exhibits a change in priorities for U.S. nuclear force planning. In the past, arms control offered a measure of predictability, providing the United States and Russia with information about the capabilities of

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<sup>16</sup>The prohibition could be waived if the START II Treaty entered into force. See U.S. Congress. National Defense Authorization Act for Fiscal Year 1998. Conference Report to accompany H.R. 1119. (H.Rept. 105-340, Section 1302.) October 23, 1997. p. 332.

existing nuclear weapons and plans for future forces. The level of detail in this information increased sharply in the late 1980s and 1990s, as agreements such as the Intermediate-Range Nuclear Forces (INF) Treaty and the START I Treaty mandated extensive data exchanges and allowed for frequent on-site inspections.

Although the United States and Russia might employ some of these cooperative measures as they reduce their forces in the future, the Bush Administration has indicated that it places a higher priority on maintaining U.S. flexibility. Without formal treaty limits, or with an agreement that lacks specific elimination provisions (as is the case in the new agreement), the United States could reduce or restore its forces quickly. This is important because, according to the Administration, we live in an unpredictable world, where threats can emerge and recede rapidly and static, predictable forces may stand in the way of an appropriate response.<sup>17</sup>

## Questions and Concerns

Some Members of Congress and analysts outside government have raised questions about the Bush Administration's policy and priorities on arms control. Some have questioned whether the President has the authority to reduce U.S. nuclear weapons without consulting Congress. Others have questioned whether this approach will produce stability and security in the long run. They note that Russia and the United States will maintain sizeable nuclear arsenals for the foreseeable future, and that they could once again pose a threat to each other if their political relationship should change.<sup>18</sup> Without the formal elimination procedures present in earlier treaties, either side could restore weapons to its forces. Russia may be particularly concerned about the U.S. ability in this regard because the United States may retain many of the warheads removed from operationally deployed forces in its stockpile. Furthermore, without cooperative monitoring and transparency measures, each side may be uncertain about the emerging forces of the other.

Critics also argue that the absence of formal U.S.-Russian agreements could undermine international stability and other nations' confidence in their security. Several of the United States' allies have expressed their support for a formal arms control framework, noting that the predictability and transparency inherent in such a system can ease security concerns among nations who are not direct parties to the agreement.<sup>19</sup> At the same time, some argue that the U.S. disregard for formal treaty regimes could spread to other nations. Some might choose to withdraw from other treaties, such as the Nuclear Non-proliferation Treaty, that the United States deems to be beneficial. Also, some argue, potential adversaries, such as China, might expand their own nuclear forces in response to U.S. programs (see below).

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<sup>17</sup>Dao, James. Rumsfeld Calls on Europe to Rethink Arms Control. *New York Times*. June 11, 2001.

<sup>18</sup>Kempster, Norman. Bush's Resolve to Trust Putin on Arms Control Stirs Worry. *Los Angeles Times*. July 28, 2001. p.1

<sup>19</sup>Gordon, Michael. U.S. Weighing Future of Arms Pacts. *New York Times*. May 9, 2001. p. 1. See also, Norman Kempster. Bush's Resolve to Trust Putin on Arms Control Stirs Worry. *Los Angeles Times*. July 28, 2001. p.1

Therefore, critics assert, the Bush Administration's approach could, in the long run, produce reactions that might undermine U.S. security.

## **Unilateral and Bilateral Arms Control: Illustrative Cases**

During the past 20 years, the United States has pursued both bilateral arms control treaties and unilateral, reciprocal reductions with first, the Soviet Union, and later, Russia. These include the bilateral Strategic Arms Reduction Treaties (START I and START II), and the unilateral, reciprocal reductions in non-strategic nuclear weapons (the Presidential Nuclear Initiatives – PNIs) in 1991. These efforts exhibit many of the characteristics often attributed to unilateral and bilateral arms reductions.

### **The Strategic Arms Reduction Talks**

**The Reductions.** The United States and Soviet Union signed the first Strategic Arms Reduction Treaty on July 31, 1991. START I limits the parties<sup>20</sup> to 6,000 warheads on 1,600 strategic offensive delivery vehicles — land-based intercontinental ballistic missiles (ICBMs), submarine-launched ballistic missiles (SLBMs) and heavy bombers. This represented a reduction of approximately one-third from the number of weapons the United States and Soviet Union deployed during the Cold War. The Treaty assigns a number of warheads to each type of missile and heavy bomber through counting rules. Because these counting rules “discount” the number of weapons that might actually be carried by some types of bombers, the number of actual warheads deployed by the United States and Russia could exceed the number of warheads assigned to deployed systems.

The collapse of the Soviet Union and end of the Cold War led many to conclude that the number of weapons permitted by START I could be reduced significantly without harming U.S. national security. Consequently, the United States and Russia signed START II on January 3, 1993. It limits each side to 3,000-3,500 accountable warheads on strategic offensive delivery vehicles, a further 50 percent reduction from START I levels. The Treaty also bans all multiple warhead ICBMs (MIRVed ICBMs). For the most part, START II would use the same verification regime as START I. Unlike START I, however, START II includes all the weapons carried on bombers in its counting rules, so the number of warheads that could be deployed by the United States and Russia would not exceed the number counted under the Treaty.

**Timeframe for Negotiations.** The United States and Soviet Union opened the Strategic Arms Reduction Talks in 1982. The talks stalled in the mid-1980s when the Soviet Union walked out after the United States deployed intermediate-

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<sup>20</sup>A Protocol signed in 1992 named Ukraine, Russia, Kazakhstan, and Belarus as the successors to the Soviet Union for START. Each of these nations had Soviet strategic offensive nuclear weapons on their territories. Ukraine, Kazakhstan, and Belarus have all eliminated their nuclear weapons and delivery vehicles, leaving Russia as the sole nuclear successor to the Soviet Union.

range missiles in Europe. The negotiations resumed in earnest in 1985. They took another brief hiatus in early 1989, while the first Bush Administration reviewed U.S. arms control policy, and concluded in July 1991. The Treaty entered into force in December 1994, after Ukraine, Belarus, and Kazakhstan agreed to return the nuclear warheads on their territories to Russia and joined the Nuclear Nonproliferation Treaty as non-nuclear nations. The Treaty allows for a 7-year implementation period, which concluded on December 5, 2001. Consequently, START I took 16-19 years from the start of negotiations to the completion of reductions.

The United States and Russia began negotiations on START II in early 1992 and signed the Treaty in January 1993. This relatively quick pace reflects, in part, the fact that START II uses the verification regime from START I. The Treaty initially called for the reductions to be complete by the beginning of 2003, a period of ten years after it was signed. However, in 1997, the United States and Russia agreed to extend the elimination period to the end of 2007 because Russia had not yet approved ratification.<sup>21</sup> Hence, even with a relatively short time for negotiation, START II would have taken 16 years from the beginning of the negotiations to the end of the eliminations.

**Details in Definitions and Provisions.** The full text of the documents associated with START I fills 290 pages. The Treaty itself, which includes the basic limits on U.S. and Soviet forces and the types of inspections that the parties can use to monitor compliance with the Treaty limits, is only 16 pages. However, the document includes 8 annexes and protocols, along with a number of other associated agreements and documents. Each of these documents adds details and complex procedures to the requirements contained in the basic treaty. For example, a six-page Definitions Annex includes 124 detailed definitions of the weapons systems, facilities, procedures, and other terms in the Treaty. A seven-page Conversion and Elimination Protocol outlines the precise procedures that the countries must follow when eliminating or converting weapons systems so that they will no longer count under the Treaty. The 70-page Inspection Protocol identifies the precise procedures and equipment that must be used before, during, and after the numerous inspections listed in the Treaty.

In contrast, the START II Treaty contains only 30 pages of documents – the 10-page basic text, a 7-page Protocol that adds to the provisions in the START I Treaty’s Protocol on Elimination, a 4-page Protocol outlining the procedures to be used during the display of heavy bombers, and a Memorandum of Understanding that contains the data needed to attribute warhead numbers to delivery vehicles. However, because much of the detail included in annexes and protocols to START I was to be used during the implementation of START II, this second Treaty did not need as much text to impose the same complex definitions and procedures.

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<sup>21</sup>Russia eventually ratified the Treaty in April 2000, but it included conditions in its Law on Ratification that have prevented the Treaty from entering into force.

## The 1991 Presidential Nuclear Initiatives

**The Reductions.** On September 27, 1991, in a speech to the nation, President George H.W. Bush announced a number of changes he planned to make to the U.S. nuclear arsenal.<sup>22</sup> He stated that the United States would withdraw from deployment and eliminate all of its land-based non-strategic nuclear weapons (those with ranges less than 3,600 miles) and withdraw its non-strategic naval nuclear weapons deployed on attack submarines and surface ships. Some weapons would be placed in storage and others would be eliminated. These measures would affect more than 2,000 land-based and sea-based non-strategic nuclear weapons. He also announced that he would remove from alert all U.S. strategic bombers and 450 Minuteman II ICBMs that were to be eliminated under START II. He also cancelled several modernization programs for strategic and non-strategic nuclear weapons. He indicated that the United States would implement these measures regardless of the Soviet reaction, but he invited Soviet President Gorbachev to take similar steps.

On October 5, 1991, Soviet President Mikhail Gorbachev replied that he, too, would withdraw and eliminate non-strategic nuclear weapons.<sup>23</sup> He stated that the Soviet Union would destroy all nuclear artillery ammunition and warheads for tactical missiles; remove warheads for nuclear anti-aircraft missiles and destroy some of them; destroy all nuclear land-mines; and remove all naval non-strategic weapons from submarines and surface ships and ground-based naval aviation, destroying some of them. Estimates of the number of non-strategic weapons deployed by the Soviet Union varied, but many analysts expected these measures to affect several thousand weapons. President Gorbachev also announced that he would remove bombers and more than 500 ballistic missiles from alert and cancel many modernization programs. Russia's President Boris Yeltsin pledged to continue implementing these measures after the Soviet Union collapsed at the end of 1991.

**Timeframe for the Reductions.** Although some of the measures announced by President Bush may have been under review for several months, reports indicate that the package announced on September 27 had been compiled, reviewed, and approved in a matter of weeks. The failed coup in Moscow in August 1991 had raised concerns about the safety of Soviet non-strategic nuclear weapons.<sup>24</sup> Officials in the Bush Administration hoped that, by announcing withdrawals of U.S. non-strategic nuclear weapons, the Soviet Union would do the same and ease the growing concerns. Furthermore, with the collapse of the Warsaw Pact, much of the rationale for U.S. deployment of short-range nuclear weapons in Europe had disappeared.

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<sup>22</sup>For the text of the President's speech see, Larson, Jeffrey A. and Kurt J. Klingenberger, editors. *Controlling Non-Strategic Nuclear Weapons. Obstacles and Opportunities.* United States Air Force, Institute for National Security Studies. July 2001. pp. 273-279.

<sup>23</sup>Larson and Klingenberger. pp. 281-283.

<sup>24</sup>These were stored and deployed at hundreds of facilities both in Russia and other Soviet republics. They may also have lacked the sophisticated command and control devices that were used on strategic nuclear weapons. Hence, some analysts feared they might be lost, sold, or used by unauthorized commanders.

The United States implemented these measures very quickly. Bombers and ICBMs were removed from alert status in a matter of days or weeks. Non-strategic nuclear weapons were removed from bases in Europe and naval vessels by the end of 1993, two years after the President announced the initiative. The warhead dismantlement process may be moving more slowly, but this is due to the limits on capacity at the Pantex Plant in Texas, where the work is done.

It is possible that President Gorbachev compiled his list of measures in the 10 days between the speech by President Bush and his response. Eliminating the weapons apparently took a bit longer, however, in part because of the greater number of weapons involved. According to some estimates, the naval systems were removed from deployment by the end of 1993, but the army and air force systems remained in the field until 1996 and 1997.<sup>25</sup> The elimination of warheads may be proceeding far more slowly because Russia may not have the capacity or funding to dismantle more than a few hundred warheads each year.

**Details in Definitions and Provisions.** The United States and Russia never codified these reductions in a formal treaty; the presidential speeches are the primary source of the list of measures adopted by each nation. As a result, there are few details available about the types of weapons included in the measures or the actions taken to deactivate and dismantle those weapons. There also is little unclassified data about the number of weapons eliminated and the number of weapons remaining outside the scope of the measures, particularly in Russia.

## **Comparison of Unilateral and Bilateral Approaches**

The discussion that follows provides an in-depth analysis of some of the characteristics of unilateral and bilateral arms control that are evident in the cases of the START Treaties and 1991 PNIs. It divides these characteristics into two groups – strengths and weaknesses. In placing characteristics into these groups, this report seeks to be consistent with U.S. arms control policy during the past 15 years when the United States sought to reduce the numbers of nuclear weapons while maintaining stability in the nuclear balance between the United States and Soviet Union or Russia. The report employs a broad concept for stability – it is assumed to exist when nations feel confident in their ability to maintain their security (strategic stability); when nations do not believe they must rapidly build up forces in peacetime to enhance their security (arms race stability), and when nations do not believe they must strike first during a crisis to ensure their security or survival (crisis stability).

### **Bilateral Treaties – Strengths**

**Predictability.** Many analysts believe that formal arms control negotiations and the resulting treaties enhance stability because they improve each nation's ability to understand the other's forces and capabilities and allow both nations to predict

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<sup>25</sup>Handler, Joshua. *The September 1991 PNIs and the Elimination, Storage, and Security Aspects of TNWs*. Presentation for seminar at the United Nations, New York, September 24, 2001.

how those forces might change in the future. During negotiations, the nations may share details about existing forces and insights into plans for the future so that each can understand how threats may emerge and evolve. The limits in an agreement can also provide each nation with confidence about the future size and capabilities of the other nation's forces. A treaty's monitoring provisions and detailed restrictions on activities can also provide the parties with confidence that they will not be surprised by actions taken by the other nation and that they will have sufficient warning if the other nation seeks to evade the limits in a treaty.

Some analysts also argue that the predictability offered by arms control treaties can enhance stability for nations that are not parties to the treaty, and in the international community at-large. For example, nations in Europe that are not parties to the 1987 Intermediate-Range Forces (INF) Treaty or the START Treaties can still be confident that the Treaty has reduced, and in some cases eliminated, missiles that had threatened their territories. The 1972 ABM Treaty is also often cited as an example of the benefits of predictability. Although the Treaty only affects missile defense programs in the United States and Russia, nations such as China may believe that its missiles could deter an attack by the United States because the United States cannot deploy defenses sufficient to intercept a retaliatory attack. From this perspective, the ABM Treaty may enhance stability between the United States and China. Furthermore, if the Treaty did not exist, China might feel compelled to expand its offensive forces to penetrate U.S. defenses. But an expansion in Chinese forces could undermine India's confidence in its ability to deter China, leading to an expansion in India's forces. And an expansion in India's forces could raise concerns and possibly lead to an arms build-up in Pakistan.

Others, however, dispute the view that U.S.-Russian arms control treaties affect international stability. Specifically many argue that China might modernize its nuclear arsenal regardless of U.S. missile defense plans and that India and Pakistan would alter their forces in response to their security needs vis-a-vis each other, with little attention paid to a global balance that included U.S. missile defenses.

**Transparency.** The arms control process has played a key role in providing the participating nations with access to and an understanding of the military forces and activities of the other participants. During the 1970s, the United States and Russia relied almost exclusively on their own national technical means (NTM) to monitor forces and activities limited by arms control agreements. These included the satellites and remote sensing technologies that each nation employed to monitor the other, regardless of arms control obligations. Beginning in 1987, with the INF Treaty, the parties also added extensive data exchanges, notifications, and on-site inspections to their mechanisms for monitoring forces and verifying compliance with arms control treaties. Many viewed these measures as a way to build trust, foster cooperation, and confirm information already collected by NTM. They created a degree of openness and transparency that is now a familiar characteristic of the arms control process.

The United States and Russia could build openness and transparency without the presence of formal arms control treaties. The Nunn-Lugar Cooperative Threat Reduction Program (CTR), which the United States is using to assist Russia with transportation, storage and dismantlement of nuclear weapons and delivery vehicles

provides the United States with access to a wide range of military activities, facilities, and weapons systems in Russia.<sup>26</sup> However, cooperation and transparency in the CTR program has limits. Russia is unwilling to allow the United States access to many of its nuclear facilities and Russia has no access to U.S. nuclear facilities or weapons through this program.

**Balance and Equality.** When negotiating formal treaties, the United States and Soviet Union sought provisions that appeared balanced and equal, in spite of differences in their weapons systems and force structures. The need to determine balanced trades between different types of weapons systems often added months or years to the negotiating process. But this process ensured that the parties interacted as equals – with an equal sense of security and an equal sense of sacrifice – in a way that appeared to enhance strategic stability. Furthermore, each nation acknowledged that the size and structure of the other nation’s forces could affect its own security.

When the United States announced that it would reduce its nuclear forces regardless of Russia’s response, as it did in September 1991 and as President Bush did in November 2001, it indicated that the balance of forces between the two nations had little or no relevance in security calculations. Some view this as a positive development. In 1991, after the collapse of the Warsaw Pact, the United States no longer needed to deploy ground-based nuclear weapons in Europe to deter or respond to an attack there. Similarly, in 2001, President Bush stated that Cold War is over and the U.S. relationship with Russia has improved. Therefore, the United States can reduce its forces without regard for the size or structure of Russia’s forces. But some in Russia view the absence of U.S. concern about Russia’s forces as a negative development. With nuclear weapons as Russia’s last remaining measure of superpower status, some see U.S. disregard for those weapons as a disregard for Russia as a major nation.

## **Bilateral Treaties – Weaknesses**

**Length of negotiations.** Many analysts argue arms control negotiations cannot keep up with either the weapons-planning process or changes in the international environment. When the START I negotiations began, the United States and Soviet Union were adversaries in a tense relationship. Two months after the nations signed the Treaty, President Bush cancelled several weapons systems – such as the program to develop a mobile basing mode for the MX Peacekeeper missile and the program to develop a small single-warhead mobile ICBM – that would have been covered by the agreement. And 6 months after signing the Treaty, in December 1991, the Soviet Union ceased to exist. At that time, many experts agreed that the number of weapons permitted by START I was too high, particularly in light of growing concerns about the command and control of these weapons and their safety and security after the demise of the Soviet Union. Many analysts saw the relatively quick conclusion of START II, with the United States and Russia agreeing in less than one year to reduce their forces by an additional 50%, as evidence that the arms control process could move more quickly in a less adversarial environment.

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<sup>26</sup>For details see, CRS Report 97-1027 F, *Nunn-Lugar Cooperative Threat Reduction Programs: Issues for Congress*, by Amy F. Woolf. Updated March 23, 2001.

However, that Treaty faced long delays in the ratification process and had not yet entered in to force at the end of 2001. Yet many, including President Bush, believe the relationship between the United States and Russia has improved enough to permit far deeper reductions in their strategic offensive forces.

**Length of Implementation.** START I allowed 7 years for the parties to reduce their forces. Although they eliminated many weapons more quickly than mandated by the Treaty, neither the United States nor Russia completed their eliminations until the deadline of December 5, 2001. The START II Treaty initially mandated that the United States and Russia complete their reductions by the beginning of 2003, ten years after they signed the Treaty. But, in September 1997, after delays in the ratification process, the two nations agreed to extend the elimination period to the end of 2007. Russia sought this extension, in part, because it did not have the resources to eliminate missile launchers and submarines as quickly as would have been required to meet the earlier deadline. In addition, many of Russia's aging systems would reach the end of their service lives by the end of the decade and, with the later deadline, Russian officials could argue that START II would not impose any undue burdens on the Russian military. This point helped win the approval of the Russian parliament in the vote to ratify START II.

Supporters argue that the lengthy implementation process is necessary because it will take time for the nations to comply with the detailed elimination procedures and it allows each nation to be certain that the other is meeting its obligations before it eliminates its own weapons. Critics argue, however, that this time-frame adds to costs of nuclear weapons by forcing the nations to operate and maintain them when they know they will eventually eliminate them. Furthermore, in an era when the United States is concerned about Russia's degraded command and control structure, the United States should encourage a quicker elimination process, not one that allows Russia to retain its aging systems for several additional years.

**High Cost of Implementation.** The START Treaties contain detailed provisions that outline procedures that parties must use when eliminating weapons or converting them for other uses. These provisions seek to ensure that the eliminated weapons cannot be used again in the future. For example, the United States and Soviet Union agreed to destroy the launch tubes on ballistic missile submarines and to excavate or explode ICBM silos to a depth of 8 meters under START I. The START II Treaty permits Russia to convert silos for SS-18 missiles to silos that hold smaller single-warhead missiles, but the Treaty specifies that Russia must fill the bottom of the silo with cement and install a metal ring around the top to ensure that the remaining dimensions are too small to hold an SS-18 ICBM. These provisions also help the parties monitor the elimination process and verify compliance with the Treaty. But these procedures can be costly to implement. For example, if the United States wanted to use old ballistic missile submarines for other purposes, it could not simply remove the ballistic missiles, fill or seal the launch tubes, and deploy the submarines with other weapons. It would have to cut out the portion of the submarine with the launch tubes in it and replace it with another structure, or accept that the warheads once carried on the submarine still counted under the Treaty.

**Absence of Future Flexibility.** Most arms control agreements contain provisions that allow a nation to withdraw from the Treaty so that it can protect or enhance its national security. Critics of formal arms control argue, however, that the United States could remain locked into arms control agreements, regardless of its national security needs, because it would be too difficult politically to withdraw from the agreement. They point to the U.S. experience with the ABM Treaty. Even though the Clinton Administration planned to deploy a missile defense system that was inconsistent with the ABM Treaty, it did not exercise the U.S. right to withdraw. Instead, it sought to convince Russia to accept a Protocol to the Treaty that would modify and relax its restrictions. The Bush Administration notified Russia of the planned U.S. withdrawal from the ABM in December 2001, but it still spent months seeking a mutual solution with Russia.

## **Unilateral Arms Reductions – Strengths**

**Speed in Decision-Making.** A Presidential decision to alter U.S. nuclear forces is likely to be reached more quickly if the reductions will be implemented unilaterally, rather than through a formal treaty. The President would still seek analyses and alternatives from the Department of Defense and other agencies, but, without plans for formal negotiations, the U.S. government would not need to develop a negotiating strategy and fall-back positions. Most experts also agree that, without the need to reach agreement with Russia on specific definitions or provisions, the President could incorporate his decision into U.S. policy guidance in a relatively short amount of time. He could incorporate the changes into the annual budget for the Department of Defense or announce them as a separate decision.

The United States might also begin to reduce its forces more quickly after a unilateral decision because there would be no need for a formal approval from either the U.S. Senate or the Russian parliament.<sup>27</sup> This process has added years to the implementation of the START agreements. For example, in late 1992, when the Russian parliament approved ratification of the START I Treaty, it stated that it would not exchange instruments of ratification and allow the Treaty to enter into force until Ukraine, Belarus, and Kazakhstan signed the Nuclear Non-proliferation Treaty (NPT) as non-nuclear states. Belarus and Kazakhstan took this step in 1993, but the parliament in Ukraine delayed its action until late 1994, delaying START I's entry into force by almost 2 years.

The START II Treaty faced even greater delays due to the need for approval by the Senate and the Russian Duma. The Senate Foreign Relations Committee held hearings on START II in March 1993, but delayed further debate until START I entered into force. Hearings resumed in early 1995, but a dispute over plans to reorganize the State Department and eliminate the Arms Control and Disarmament Agency delayed further action until January 1996, three years after Presidents Bush and Gorbachev signed the Treaty. The Russian Duma, began considering START II in July 1995 but concerns about the Treaty's effect on Russian forces and negative

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<sup>27</sup>The Russian parliament has two chambers, the Duma, or lower chamber, and the Federation Council.

reactions to other elements of U.S. foreign policy slowed the debate several times.<sup>28</sup> When the Duma finally approved START II on April 14, 2000, it stated that the Treaty could not enter into force until the United States ratified several 1997 agreements related to the 1972 ABM Treaty. The Clinton Administration never submitted these to the Senate, for fear they would be rejected, and, consequently, START II has never entered into force.

**Speed in Implementation.** When the United States alters its nuclear force posture through unilateral reductions, without the elimination provisions of a formal treaty, the changes can take place relatively quickly, through standard military practices. As was noted above, U.S. bombers and Minuteman II missiles were removed from their alert status in a matter of days after President Bush announced he would do so in September 1991. Nonstrategic nuclear weapons were removed from deployment in a matter of months. Furthermore, the absence of concern for the size or structure of Russian forces allows these changes to proceed without pause; there is no need to ensure that the Russia has also met its obligations.

On the other hand, with unilateral reductions, the United States (or Russia) could choose to implement the changes slowly. This possibility affected the debate in the Russian Duma *against* the START II Treaty. As time passed before the Treaty entered into force, some in Russia argued that Russia did not have the resources to eliminate its ballistic missile submarines and ICBM launchers by 2003. If the Treaty did not enter into force, Russia would still probably eliminate these weapons systems, but it could do so more slowly. After the United States and Russia agreed to extend the elimination period in START II to the end of 2007, President Putin told the Duma that Russia would not have to eliminate any of its older systems before the end of their service lives. This argument reportedly swayed some members of the Duma and convinced them to vote for START II.

**Allows for “sweeping” change.** After President Bush announced the withdrawal of U.S. land-based and sea-based non-strategic nuclear weapons in 1991, many analysts praised the measures because they would produce “sweeping” changes in the U.S. nuclear posture. The United States would withdraw and eliminate whole categories of nuclear weapons; Russia pledged to do the same. In contrast, some have argued that, in a negotiating process where both sides seek to maintain a balance and seek equivalent limits on their forces, formal arms control treaties only produce changes at the margins of the U.S. and Soviet nuclear arsenals. This observation was not universally true; the 1987 INF Treaty eliminated whole categories of nuclear weapons (intermediate-range ground launched missiles) and the 1993 START II Treaty called for a relatively deep 50 percent reduction in strategic offensive forces and the elimination of MIRVed ICBMs. But, after 9 years of negotiations, START I would eliminate only a few thousand strategic warheads on each side. The 1991 PNIs promised to eliminate the same number, or more, after just a few weeks of consideration and consultation.

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<sup>28</sup>For details see CRS Report 97-359 F, *START II Debate in the Russian Duma: Issues and Prospects*, by Amy F. Woolf. Updated April 17, 2000.

However, a broader analysis indicates that a similar dynamic may be at work in both types of arms reductions. A review of bilateral arms control treaties since the early 1970s indicates that the United States and Soviet Union were not willing to make deep reductions in their offensive nuclear weapons or eliminate entire categories of weapons because both nations believed these weapons were needed to maintain their national security. They accepted modest limits on their forces because they were not willing to make sweeping changes in their force postures as long as their relationship remained tense and potentially hostile. In the mid-1980s, when the United States deployed and then, under the INF Treaty, withdrew intermediate-range missiles from Europe, the atmosphere between the two nations had begun to change. Many analysts believe that during the negotiations, both sides adopted a political objective of improving their relationship. This allowed each to accept the elimination of weapons that had played as much of a political, as military role, in Europe in the 1980s. The START I Treaty codified more modest changes, but, by the time START II was negotiated in 1992, the Soviet Union had ceased to exist. Both nations recognized that this change in the international security environment allowed more sweeping political and military changes. Hence, START II reduced forces more deeply than START I.

Similarly, the 1991 PNIs were announced at a time when the changing international security environment allowed for more robust changes in nuclear forces than had been possible in the preceding years. Many of the weapons withdrawn from the U.S. arsenal were of little military utility after the collapse of the Warsaw Pact. The Soviet Union, too, had a political incentive to withdraw its nuclear forces from deployment areas in non-Russian republics to strengthen their control and security. Hence, although the United States and Soviet Union may have eliminated a greater number of weapons through unilateral measures than they did through bilateral treaties, the “sweeping” nature of the changes was arguably more a sign of the times than a result of the mechanism chosen for announcing the reductions.

**Taking Political Credit.** During most of the Cold War era, the concept of “unilateral disarmament” had a strongly negative connotation in the United States. It was often used in political discussions by one side when it wanted to accuse the other side of undermining U.S. security by reducing or slowing the growth of U.S. nuclear forces. Nevertheless, the United States did alter its nuclear force deployments and force posture during this time, often eliminating large numbers of older weapons when a particular objective could be met with smaller numbers of new systems. Other systems, such as nuclear-armed air-defense missiles and nuclear-armed anti-ballistic missiles, were also eliminated when they were deemed to be not cost-effective. But these changes occurred without public announcement, as a part of ongoing modifications to the U.S. military posture.

In many ways, the unilateral reductions President Bush announced in 1991 resembled those that had been taken quietly throughout the Cold War era. He withdrew nuclear weapons that were no longer considered cost-effective. The shorter-range systems in Europe could only reach targets in eastern European nations that were no longer considered to be adversaries. In addition, the potential presence of non-strategic nuclear weapons on U.S. naval vessels had led some allies, such as New Zealand, to restrict U.S. access to naval bases on their territories. Furthermore, maintaining and training with those weapons placed a burden on U.S. military forces.

Even though changing political and military circumstances may have led to the weapons' withdrawal without a formal presidential announcement, President Bush could still take credit for and win public praise for changing the U.S. nuclear posture. The high public profile that accompanied the President's televised speech in September 1991 substantially changed the perception of unilateral arms reductions. By removing thousands of non-strategic nuclear weapons from overseas bases and U.S. naval forces, and by reducing the alert rates for some U.S. strategic weapons, President Bush had, according to some, broken through the slow pace of negotiated arms control, addressed concerns about security and control over Soviet non-strategic nuclear weapons, and reduced the nuclear threat.

**Flexibility.** In 1991, President Bush announced that many weapons would be eliminated but others, including the sea-based Tomahawk cruise missiles, would be retained in storage. He said they could be returned to U.S. naval vessels if the need arose. This component of the PNI highlights one of the key characteristics of unilateral reductions. They provide the United States (and Russia) with the ability to reverse the withdrawals and reductions if new threats emerge. The United States or Russia could withdraw from an arms control treaty to restore forces, but, as was noted above, the political cost of doing so might seem prohibitive.

Unilateral reductions would also provide the United States and Russia with flexibility in the timing of their reductions. In 1991, the United States removed its nuclear forces from alert in a matter of days and its non-strategic weapons from deployment in a matter of months. But these reductions do not have to be taken quickly. They could move more slowly to allow for renewed consideration of threats and security needs or to coincide with the normal retirement schedule for a weapons system. Treaties, on the other hand, often set an arbitrary time line for weapons eliminations, which can add to the costs and increase the complexity of the process.

## **Unilateral Reductions – Weaknesses**

**Absence of Cooperative Monitoring Measures.** When President Bush and President Gorbachev announced their intentions to withdraw and eliminate non-strategic nuclear forces in 1991, they did not include any cooperative monitoring measures in their proposals. As they had for nearly 30 years, the two nations would monitor the forces of the other nation with their own satellites and sensors – their national technical means (NTM) of verification. But they would not provide data on the numbers and locations of weapons covered by the PNIs, they would not notify each other when they planned to move those weapons, and they would not invite or permit inspections at storage or deployment areas. The United States and Russia did discuss their progress in implementing the PNIs, and provide some data on the status of their weapons, during the early 1990s, but this lacked the rigor of information required by arms control treaties.

The absence of cooperative monitoring measures can reduce a nation's confidence in its knowledge and understanding of nuclear force deployments in the other nation. However, in an environment where the nations are willing to pursue unilateral reductions, this reduced confidence may not be a problem. President Bush stated in 1991 that he would withdraw U.S. forces regardless of whether the Soviet Union did the same. Therefore, although the United States probably would have

liked precise information about the status of Soviet weapons, evidence that the Soviet Union (and Russia) had not followed through on its own withdrawals should not have affected the U.S. willingness to complete its reductions.

The improved U.S.-Russian relationship in the post-Soviet period may have further reduced the need for specific cooperative measures to monitor unilateral reductions. The United States and Russia have implemented a variety of different on-site inspections and have provided each other with vast quantities of data under the START I Treaty. They could extend these measures through the next decade, even after completing START I implementation, to provide added information about the status of the unilateral reductions. Furthermore, representatives from the U.S. government and U.S. industries are present at military facilities in Russia to implement projects funded by the Nunn-Lugar Cooperative Threat Reduction Program. Their presence provides the United States with detailed information about the status of some of Russia's nuclear weapons. However, the CTR program is not a complete substitute for cooperative monitoring measures. Russian officials do not have an equivalent presence at U.S. facilities.

**Difficulties in Verifying Compliance.** The ability to monitor forces and activities in another nation is only part of what is needed to verify compliance with arms control agreements. Before one nation can determine whether the other nation has met its obligations, it must have a clear understanding of the nature of those obligations. In bilateral treaties, this understanding is provided by the detailed definitions, collateral requirements, and precise limits on forces covered by the Treaty. Unilateral reductions often lack this precision. Even the best monitoring data cannot answer questions of whether a nation has satisfied its obligations when there is uncertainty about the steps required or when a nation is free to reverse its decision.

This problem became evident in early 2001, when press reports indicated that Russia had deployed non-strategic nuclear weapons in Kaliningrad.<sup>29</sup> This enclave, which is physically separate but politically a part of Russia, served as a major Soviet military installation, and probably housed significant numbers of non-strategic nuclear weapons prior to the 1991 withdrawals. Russia denied that it had deployed nuclear weapons to Kaliningrad in mid-2000, but the United States reportedly detected their movement and presence with its satellite technology.<sup>30</sup> The potential deployment of Russian nuclear weapons in this enclave, which is surrounded by nations that will become part of the European Economic Union, raised concerns among many U.S. and European officials. Some noted that Russia might be trying to pressure the EU and NATO to contain their expansion plans.

However, the United States and its allies in Europe had little legal recourse. When President Gorbachev announced that he would move nonstrategic nuclear weapons from deployment to storage areas, he did not indicate which category

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<sup>29</sup>Gertz, William. Russia Transfers Nuclear Arms to Baltics. *Washington Times*, January 3, 2001. p. 1. See also, Walter Pincus. Russia Moving Warheads. *Tactical Nuclear Arms going to Kaliningrad Base*. *Washington Post*, January 4, 2001.

<sup>30</sup>Gertz, William. Satellites Pinpoint Russian Nuclear Arms in Baltics. *Washington Times*, February 15, 2001. p. 1.

applied to the facilities in Kaliningrad; regardless, he was under no legal obligation to move weapons out of the enclave and he did not state that he would. Even if the weapons were moved to storage areas in Russia, that nation is under no legal obligation to keep nuclear weapons out of Kaliningrad. In the absence of well-defined, legally binding obligations, Russia can store and deploy its nuclear weapons at any site on its territory.

**Potential for Destabilizing Reversal.** As is noted above, those who support the use of unilateral measures, rather than bilateral treaties, to reduce nuclear weapons argue that the flexibility permitted by these measures, and the ability to reverse them if conditions warrant, is one of their key strengths. However, reversing the reductions can lead to uncertainty and instability. The absence of well-defined obligations and the absence of precise information about those forces can lead to further uncertainties about deployments and intentions. Furthermore, if one nation feels threatened by the other's actions, it, too, could choose to reverse its unilateral measures. If both nations then feel insecure or threatened, and both lack clear information about the status of the other's forces, the balance between the two could be unstable, resulting in a "rearmament race" or escalation of a crisis.

Some analysts argue that the reversal of unilateral reductions should not prove destabilizing in the current environment. Because the nations chose to reduce their forces regardless of the other's force postures, an increase in the other's forces would not necessarily be seen as threatening. Furthermore, the United States and Russia maintain many channels for communication and, therefore, would be able to defuse any crisis before it escalated.

## **Review of the Bush Administration Proposal**

As was noted above, President Bush announced that he would reduce U.S. strategic nuclear weapons to between 1,700 and 2,200 warheads over the next 10 years. Although he initially stated that he would do this unilaterally, without codifying the reductions in a Treaty, he has since to sign an agreement completed in mid-May 2002. This agreement incorporates many of the Administration's preferred positions, such as the absence of any rules requiring the elimination of delivery vehicles or non-deployed warheads; the counting of only those warheads actually deployed on operational delivery vehicles; a long implementation period, a short withdrawal period, and a date on which the Treaty will expire unless the parties agree to continue its limits. The Treaty also contains provisions calling for the extension of the START I verification regime, and the two sides reportedly will continue to seek agreement on additional transparency measures that would allow them to gain an understanding of the status of the other sides deployed forces. The remainder of this report reviews the Administration proposals that comprise this agreement to determine how it incorporates the strengths and weaknesses identified above.

### **Strengths**

**Speed in Decision-Making.** When President Bush announced his decision to reduce U.S. offensive nuclear weapons, he had been in office just over 9 months.

During the Presidential campaign and his first months in office, he had stated that he would make this decision after the Department of Defense completed a review of U.S. nuclear posture. This study began in early 2001, and was completed by the end of the year. The United States and Russia then held discussions for an additional 5 months before they completed an agreement based on the President's proposals. This time frame is significantly shorter than the 9 years of negotiations on START I and about the same as the year it took to complete START II. Although the United States can begin to reduce its forces as soon as Congress appropriates the need funds, this schedule could be slowed a bit by the need for Senate advice and consent to ratification and the approval of the Russian Duma. However, early reports indicate that both legislatures are likely to offer their approval with little delay.

Although the President announced his decision relatively quickly, many of the force structure changes he has authorized have been under consideration for more than 7 years. They are the same changes that would have occurred if the START II Treaty had entered into force. These include the elimination of 50 Peacekeeper ICBMs, the elimination or conversion of 4 Trident ballistic missile submarines, and the downloading of all 500 Minuteman III ICBMs, so that they carry one, instead of 3 warheads. DOD approved these changes in the U.S. nuclear force structure in 1994, but the services have been unable to implement them because Congress prohibited the use of funds for this purpose until START II entered into force. Other measures, such as the idea to count only operational weapons, rather than to use the counting rules in START I and START II, have been under consideration since 1997, when the United States and Russia agreed, in principle, to reduce their forces to between 2,000 and 2,500 warheads in a future START III Treaty.

**Speed in implementation.** President Bush has stated, and the new agreement confirms, that the United States will reduce its offensive nuclear forces over 10 years. This time frame is longer than the 7-year elimination period outlined in START I and equal to the 10 years initially expected for START II. Some of the changes in U.S. forces may occur relatively quickly, over the next 3-4 years, but, as is noted above, the Department of Defense has been waiting and preparing to make these changes for several years.

Several factors could slow the implementation of these reductions. First, even though the United States may not follow the complex elimination procedures outlined in START I, the process of deactivating and dismantling nuclear weapons can still be time-consuming. Warheads must be removed, transported and secured in storage areas. Missile stages with highly explosive fuel must be handled carefully and stored safely. The process of decommissioning or altering submarines so that they can perform other missions may also take several years. Finally, the Administration may plan to retain some weapons for a time, to assess changes in the international security environment, and to reduce or eliminate them in future years.

**Sweeping Change and Taking Credit.** After President Bush announced his planned reductions in U.S. strategic nuclear weapons, analysts and observers commented on the depth of the reductions that would be achieved by this initiative.

Some noted that it represented a reduction of two-thirds from current levels.<sup>31</sup> However, as was noted above, the Department of Defense has planned for the elimination of many the weapons covered by this initiative since 1994, when it identified a force consistent with the START II Treaty. In addition, in 1997, Presidents Clinton and Yeltsin agreed that the two sides would reduce their forces to between 2,000 and 2,500 warheads under a prospective START III Treaty. They never reached agreement on the formal terms of a treaty, but the willingness they demonstrated in 1997 indicates that the initiatives announced by the Bush Administration do not represent “sweeping change” in thinking about the *number* of nuclear weapons needed to safeguard U.S. national security.

To the contrary, the President has stated that the United States will reduce its forces to between 1,700 and 2,200 *operationally deployed* warheads. This accounting is likely to exclude submarines that are in overhaul, and possibly some of the weapons on the bomber force that would have counted under the rules used to attribute warheads to delivery vehicles under START I and START II.<sup>32</sup> Depending on how many delivery vehicles remain in the U.S. force, including these warheads in the calculation could increase the accountable number of warheads to over 2,700. Hence, the Bush proposal could result in fewer changes to U.S. forces than would have been necessary if the United States had concluded a START III Treaty along the lines of the 1997 framework.<sup>33</sup>

Nevertheless, because the Clinton Administration completed neither the ratification process for START II nor the negotiations on a START III, President Bush can take credit for implementing the reductions in U.S. forces. Because Congress has removed the prohibition on deactivation from the Defense Authorization Bill, he will be able to begin to deactivate and dismantle strategic forces in FY2002.

**Flexibility.** The President and many of his advisors have highlighted the fact that unilateral reductions provide greater flexibility than bilateral treaties. They often note that the United States will be able to begin and complete the reductions more quickly, eliminating weapons that are no longer needed for U.S. national security. Some analysts who support the President’s approach have also argued that unilateral reductions provide the United States with the ability to increase its forces if conditions change. Although the President mentioned during his press conference with President Putin that the United States would “destroy warheads” removed from U.S. nuclear forces, this is not likely to happen in the near term. According to Condoleezza Rice, the President’s National Security Adviser, the United States is more likely to move the warheads so that they are not “near the places at which they could be deployed... Their capabilities will not be accessible to the United States.”<sup>34</sup> But, she added, that it will take a long time to remove the warheads from deployment

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<sup>31</sup>Gordon, Michael. U.S. Arsenal: Treaties vs. Non-Treaties. New York Times. November 14, 2001. The United States currently can deploy between 7,000 and 7,500 warheads on its strategic offensive delivery vehicles. See Appendix A.

<sup>32</sup>Ibid.

<sup>33</sup>The details behind this analysis and calculation appear in the Appendix.

<sup>34</sup>Press Briefing. The White House. Office fo the Press Secretary. November 15, 2001.

and that their ultimate disposition is unclear. They could remain in storage, as a part of the U.S. stockpile, for many years.

This flexibility is likely to remain in the Treaty the United States and Russia have agreed to sign in May 2002. According to Secretary of State Powell, the Treaty does not require the elimination of any warheads or delivery vehicles.<sup>35</sup> Warheads can be held in storage for “test or replacement purposes.” The Treaty also will not contain any sublimits that the sides must comply with during the elimination period and it does not contain any provisions that would affect how each side chooses to structure its forces within the 1,700-2,000 warhead limit. Furthermore, either side will be able to withdraw after giving 90 days notice.

Hence even after it signs this Treaty, the United States could restore warheads removed in the next few years to its deployed forces. If the United States retained the force structure outlined in the Appendix, and if it restored 3 warheads to each Minuteman III ICBM, 8 warheads to each Trident SLBM on 14 Trident submarines, and between 12 and 20 nuclear-armed cruise missiles to each B-52 bomber, it could build to a force of between 5,500 and 6,000 warheads on its strategic offensive nuclear weapons. Although it is unlikely that the United States could restore a large number of warheads in a short period of time, it might still be able to add several hundred warheads to its bombers or missiles in a crisis.

## **Weaknesses**

**Cooperative Monitoring and Verification of Compliance.** The President’s proposal did not include any special provisions to allow for cooperative monitoring of U.S. and Russian nuclear forces. However, in the short Treaty based on these proposals, the United States and Russia have agreed to continue operating the verification regime outlined in the START I Treaty. START I provides for a number of on-site inspections that would otherwise end in the coming years. The parties may also continue to discuss their concerns in the Joint Compliance and Inspection Commission (JCIC) established by the Treaty. In addition, they have agreed to seek additional transparency measures that will enhance their ability to monitor the other sides’ forces. They had hoped to agree on these measures before the Treaty was signed, but, absent that, they are likely to continue the negotiations after the Moscow summit.

Even if the United States and Russia continue to monitor reductions in their forces with cooperative measures, questions could arise about compliance with the obligations to reduce forces. The absence of precise definitions of terms like “operationally deployed forces” and uncertainties about the eventual disposition of warheads removed from operational forces could create misunderstandings and disagreements. Russia, in particular, may grow concerned about the size and status of the remaining U.S. nuclear arsenal. This may be of little concern in the current environment where there is a cooperative relationship between the United States and Russia. The President’s proposal for unilateral reductions is premised on the fact that

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<sup>35</sup>United States Department of State. Press Briefing. Secretary Colin L. Powell. May 13, 2002.

nuclear weapons and arms control no longer serve as central features in the relationship between the two nations. Therefore, disagreements about the implementation of reductions in these weapons may not undermine or interfere with cooperation in other areas of the relationship.

Some critics of the Administration's approach argue, however, that the absence of codified limits and restrictions, precise definitions, and verification provisions could lead to disputes that might undermine the U.S.-Russian relationship. Since the positive relationship between the United States and Russia might change in the future, such uncertainties and concerns could prove destabilizing.

**Potential for Destabilizing Reversal.** In the past, Russian officials have objected to arms control provisions that provide the United States with the ability to increase its forces relatively quickly. Specifically, they complained about the "upload potential" that United States would have had under START II if it reduced its forces by removing warheads from deployed missiles. Similar criticism emerged during the U.S. and Russian discussions about the content of the new Treaty. The United States will retain a significant "upload" capability if it reduces its forces by removing additional warheads, instead of dismantling missiles and submarines, and declares that weapons in overhaul should not count against operational totals. Russia could seek to balance this U.S. advantage by increasing the warheads on its own ICBMs. Russia's new ICBM, the SS-27, has been tested with only one warhead. But many experts agree that Russia could retain its older missiles and deploy the new SS-27 with 3 or 4 warheads if it feared that its forces were declining more quickly and deeply than U.S. forces. But, if Russia deployed a greater number of warheads by retaining MIRVed ICBMs, U.S. officials and defense planners might choose to restore warheads to the U.S. force to offset Russia's increase.

The Bush Administration has argued that the new relationship between the United States and Russia has eliminated this type of calculation from the two nations' force planning processes. Neither nation needs to consider the forces of the other when sizing its own forces. Yet, critics have noted that, although this may be true in the political relationship between the nations, it is not necessarily true among military planners. The U.S. military still appears to determine U.S. nuclear requirements with consideration for the ability to deter Russia by threatening unacceptable damage against a range of Russian targets. And Russia still appears to consider U.S. nuclear forces as a threat to its security. According to some, the potential for instability could increase as the United States withdraws from the ABM Treaty and deploys missile defenses that Russia might view as a threat to its offensive forces. From Russia's perspective, the combination of robust missile defenses and uncertainty about the potential number of operational warheads in U.S. offensive forces could lead to grave concerns about Russia's security and pressure within the Russian military for increases in Russia's deployed nuclear forces.<sup>36</sup>

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<sup>36</sup>See, for example, Cirincione, Joseph and Jon B. Wolfsthal. What if the Strategic Framework Goes Bad? *Arms Control Today*. November 2001.

## **Conclusion**

Over the years, the United States and Russia have used both bilateral treaties and unilateral reductions to reduce their nuclear forces. On balance, it appears that unilateral measures may offer the opportunity for more rapid and comprehensive reductions than bilateral treaties. But treaties – if they contain precise definitions, detailed restrictions, and cooperative monitoring provisions – may do more than unilateral measures to promote and ensure stability. Some argue that stability and predictability are less important in the current environment than they have been in the past because the relationship between the United States and Russia has improved and now reflects cooperation and consultation across a much wider range of issues. Others, however, argue that this relationship could change in the future. They argue that, if it does, a comprehensive web of arms control agreements could provide predictability and transparency to ease concerns about nuclear weapons.

## Appendix

### U.S. Nuclear Forces Under Arms Control Scenarios

#### START I

START I limits the United States and Russia to 6,000 warheads on 1,600 strategic offensive delivery vehicles, with no more than 4,900 warheads on land-based intercontinental ballistic missiles (ICBMs). Counting rules assign a number of warheads to each type of missile and bomber. The number of warheads assigned to ICBMs and SLBMs usually equals the number actually deployed on that type of missile. But, bombers equipped with cruise missiles count as 10 warheads, even though they can carry up to 20 weapons, and bombers not equipped with cruise missiles count as one warhead, regardless of the number of weapons they can carry. The Treaty allows “downloading” of warheads to reduce the number of warheads attributed and carried on some multiple warhead (MIRVed) missiles.

START I contains a 7-year implementation period, which ended on December 5, 2001. The strategic nuclear forces that could remain in the U.S. arsenal appear on Table 1 below. This table calculates both the number of “attributed” warheads in the force, using the Treaty’s counting rules, and the number of actual weapons that could be carried by the listed weapons systems.

System	Launchers	Accountable Warheads	Actual Warheads/ Weapons
Minuteman III ICBMs <sup>(a)</sup>	500	944	944
Peacekeeper (MX) ICBMs	50	500	500
Trident I missiles (8 submarines)	192	1,536	1,536
Trident II missiles (10 submarines)	240	1,920	1,920
B-52H Bombers	94	940	1,880
B-1 Bombers <sup>(b)</sup>	91	91	0
B-2 Bombers	21	21	336
<b>Total</b>	<b>1,188</b>	<b>5,952</b>	<b>7,116</b>

Source: U.S. Department of State, Fact Sheet. CRS Estimates

(a) Some Minuteman III missiles have been downloaded to carry one or two warheads; others still carry 3 warheads.

(b) Although they still count under START I, B-1 bombers are no longer equipped for nuclear missions.

## START II

START II limits the United States and Russia to 3,000-3,500 each on their strategic offensive delivery vehicles. The Treaty also bans all multiple warhead ICBMs (MIRVed ICBMs). As under START I, the parties can reduce their deployed warheads and eliminate MIRVed ICBMs by downloading, or removing, warheads from deployed missiles. But the parties can remove, at most, 4 warheads from each missile, so ICBMs with 10 warheads must be eliminated, rather than downloaded. The treaty makes an exception for the Russian SS-19 missile, which carries 6 warheads. Russia can remove 5 warheads from 105 of these missiles so that they will remain as single-warhead missiles. Unlike START I, however, the counting rules for START II do not “discount” the number of warheads on bombers; they count as the number of weapons they are equipped to carry. Consequently, there is no difference between the number of attributed warheads and the number of actual warheads and weapons on U.S. deployed forces.

The START II Treaty has not entered into force and the Bush Administration has not indicated that it will complete the ratification process. However, in 1994, as a part of the Nuclear Posture Review, the Department of Defense identified a force structure consistent with the START II limits. This appears on Table 2.

System	Launchers	Accountable Warheads	Actual Warheads/ Weapons
Minuteman III ICBMs	500	500	500
Trident II missiles <sup>(a)</sup> (14 submarines)	336	1,680	1,680
B-52H Bombers <sup>(b)</sup>	76	940	940
B-2 Bombers	21	336	336
Total	933	3,456	3,456

Source: Department of Defense, CRS Estimates

(a) This table assumes the United States would have “downloaded” the Trident missiles so that each carried 5, rather than 8, warheads.

(b) B-52 bombers can carry 8, 12, or 20 nuclear-armed cruise missiles. This table assumes the aircraft in the force will carry combination of these numbers, for a total force of around 940 cruise missiles.

## START III

In March 1997, Presidents Clinton and Yeltsin agreed that the United States and Russia would negotiate a START III treaty as soon as START II entered into force. This treaty would limit each side to between 2,000-2,500 strategic nuclear warheads by December 31, 2007. The parties also hoped that the new Treaty would use the same counting rules and downloading rules for ballistic missiles as START I, and the same counting rules for bombers as START II (i.e. bombers would count as the

number of weapons they were equipped to carry). Because START II never entered into force, the United States and Russia never opened formal negotiations on START III. They held several rounds of informal discussions, but they remained far apart on the details of the limits and provisions they wanted in the Treaty.

Table 3, below, illustrates a force structure for the United States that would have been consistent with a limit of 2,500 warheads. It assumes that the United States would download its Trident SLBMs to carry 4 warheads, instead of 8 warheads, consistent with the START I rule limiting the amount of warheads removed from a missile to 4. It also assumes that each B-52 bomber that could carry nuclear weapons would be equipped to carry 12 cruise missiles. The remainder of the B-52 bombers would either be eliminated or converted so that they could only perform non-nuclear missions. The force structure in Table 3 eliminates some of each type of U.S. nuclear weapon. But this is just illustrative. The United States could have retained more bombers or ICBMs, for example, if it had eliminated more Trident submarines.

Table 3: Illustrative U.S. Strategic Nuclear Forces Consistent with START III			
System	Launchers	Attributed Warheads	Actual Warheads/ Weapons
Minuteman III ICBMs	350	350	350
Trident II missiles <sup>(a)</sup> (12 submarines)	288	1,152	1,152
B-52H Bombers <sup>(b)</sup>	55	660	660
B-2 Bombers	21	336	336
Total	714	2,498	2,498

Source: CRS estimates

During discussions of the U.S. force for START III, the Air Force and Navy expressed concerns about the options for reducing U.S. forces, particularly if START III relied on the same counting rules as START I and START II. The Navy did not want to eliminate Trident submarines, and possibly consolidate its fleet at one base on one ocean (they are currently deployed in Bangor, Washington and Kings Bay, Georgia) because this would interfere with the submarines’ operations and their ability to cover their targets. The Air Force did not want to eliminate B-52 bombers because they are often needed for conventional missions. And it did not want to convert some of the bombers so that they could not carry cruise missiles because the aircraft have been used to launch conventional long-range cruise missiles in conflicts. Both services pressed for changes in the counting rules so that they could exclude some of their delivery vehicles from the Treaty’s limits without altering or eliminating them.

### **Bush Administration Proposal**

By altering the measure of account for U.S. nuclear forces, from “attributed” warheads to “operationally deployed” warheads, the Administration’s proposal relieves the pressure that would have been imposed by START III to eliminate U.S.

nuclear delivery vehicles. Specifically, the United States could retain the same force structure as it planned to deploy under START II.

As Table 4, below, indicates, the Navy could retain all 14 Trident submarines that had been planned for START II. But the number of operationally deployed warheads on those submarines could decline below START II levels. For example, without the START I provision that limits downloading to only 4 warheads from each missile, the Navy could deploy Trident missiles with 3 warheads, instead of 8. In addition, the Navy could exclude Trident submarines in overhaul because they would not carry any operationally deployed warheads. Similarly, the Air Force could retain all 76 B-52 bombers and reduce the number of operationally deployed warheads in its force without altering any aircraft if it counted only operationally deployed long-range nuclear-armed cruise missiles, rather than the total number of cruise missiles the bombers were equipped to carry. To bring U.S. forces below the 2,200 limit, the Table below assumes that this number will decline to around 500 cruise missiles over the next 10 years.

Table 4 also lists the number of warheads that would be attributed to identified force structure if START counting rules were used to calculate warheads. Specifically, this number includes all 14 Trident submarines, and counts 4 warheads on each Trident missile. It also attributes 12 cruise missiles to each of the 76 B-52 bombers. If some of the bombers were equipped to carry 20 cruise missiles, this number would be 1,520, rather than 912. As is evident on the Table, the number of warheads attributed to this force by START counting rules exceeds the number of operationally deployed warheads by more than 500.

System	Launchers	Operationally Deployed Warheads	Warheads counted by START rules
Minuteman III ICBMs	500	500	500
Trident II missiles <sup>(a)</sup> (14 submarines)	336	864	1,344
B-52H Bombers <sup>(b)</sup>	76	500	912
B-2 Bombers	21	336	336
Total	933	2,200	2,756

Source: CRS estimates

(a) Although the launcher total includes all 14 Trident submarines, the warhead total excludes the two submarines that would be in overhaul at any given time. It calculates the number of warheads on 12 submarines, if each missile is equipped with 3 warheads.

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