

Urgent Next Steps: Warhead Elimination and Deeper Cuts

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Prepared Statement
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Summary

The START Treaty provides a framework that could be used to accomplish much deeper cuts in the U.S. and C.I.S./Russian strategic arsenals. Survivable verifiable arsenals with 1000 strategic warheads each could be constructed using already deployed weapons systems.

The START Treaty does not even address the fate of the warheads that the reductions will free. The U.S. and C.I.S. now have a historic opportunity to rectify this omission by extending arms control to cover nuclear warheads and the fissile materials out of which they are produced. The Bush Administration is ignoring this opportunity.

My testimony makes two main points:

1. The START Treaty, as it has been brought before you, provides a good framework for much deeper cuts in the U.S. and C.I.S. strategic arsenals. Survivable verifiable arsenals with 1000 strategic warheads each could be constructed using already deployed weapons systems. Deeper cuts would reduce the danger of accidental or unauthorized launch. The Senate should push for them.
2. The START Treaty does not even address the fate of the warheads that the reductions will free. The U.S. and C.I.S. now have a historic opportunity to rectify this omission by extending arms control to cover nuclear warheads and the fissile materials out of which they are produced. The Bush Administration is ignoring this opportunity. The Senate should not allow the Administration to continue to neglect this opportunity to dramatically increase U.S. and international security.

THE FEASIBILITY OF DEEPER CUTS

The overall warhead numbers in the START Treaty were set during a rather chilly period of the Cold War in the mid-1980s, when many still feared the possibility of a Soviet-led Warsaw Pact attack on Western Europe. Now the Warsaw Pact is no more, the Soviet Union is no more and, by general agreement, the threat that justified the U.S. nuclear buildup to in the 1950s (see Figure 1)¹ is no more.

The only remaining purpose of our nuclear arsenal is to deter (by being able to respond to) a nuclear attack on the U.S. or our friends by another nuclear power.

How Large an Arsenal Do We Need?

How large a strategic arsenal do we need for this purpose? The following criteria have recently been offered in a study commissioned by the director of U.S. strategic targeting, Air Force General Lee Butler:²

- 1) The U.S. should not have smaller strategic nuclear forces than the Commonwealth of Independent States (C.I.S.); and
- 2) The U.S. force should not be smaller than those of Britain, France and China combined -- thus maintaining our status as a nuclear "superpower."

The authors of the study declared themselves "comfortable" with a U.S. strategic force carrying 5,000 warheads. However, their criteria could equally well be satisfied with a strategic force carrying as few as

To protect against any breakout from these limits, surplus warheads and cruise missiles would be destroyed; reentry-vehicle "buses" for downloaded ballistic missiles would be replaced with buses with reduced capacities; and external carriage of cruise missiles on bombers would be banned, the pylons for such carriage would be destroyed and the "hard points" for their attachment covered over "by a process equivalent to welding" as has already been agreed for the B-1 in the START treaty.

As shown in Table 1, a very similar 1000-warhead force could be constructed by Russia by shifting its 300+ SS-25 single-warhead ICBMs from their mobile carriers to silos; downloading the missiles in up to a total of 456 launch tubes on 26 modern ballistic-missile submarines (6 Typhoons, 7 Delta IVs, and 13 Delta IIIs); and 60 Bear-H bombers loaded up to their maximum internal carrying capacity of 6 cruise missiles each. I discussed the feasibility of such a Russian force last week with General Gellii Batenin, arms-control advisor to Russian Foreign Minister Kozyrev.

With such forces, no plausible cheating or breakout from the 1000-warhead limits could threaten either country's retaliatory capability. Assuming current at-sea rates, the U.S., for example, would have hidden in the sea at all times Trident submarines carrying 288 warheads, each with an average destructive power equal to seven Hiroshima bombs. In addition, at least 50 ICBMs (20 percent of the total), each carrying a warhead with 8 times the destructive power of Hiroshima bomb, could be expected to survive even a worst-case attack.

These surviving warheads would contain a huge destructive potential and constitute a more than adequate deterrent in the post-Cold War era. It would, for example, still be large enough so that we would not have to adopt the "immoral" strategy of threatening cities as a deterrent to a nuclear attack on our military forces. With hundreds of warheads surviving even a "bolt-out-of-the-blue" surprise attack, we would have the option of retaliating against military targets with more than a hundred warheads and still hold hostage the cities of the attacker. Larger-scale counterforce attacks would kill so many civilians that the distinction from counter-city attacks would become meaningless.⁶ The deterrent strategy associated with a 1000-warhead force would therefore be no less moral than the counterforce strategies around which today's forces are designed.

Although the cost of a 1000-warhead force would be higher *per deployed warhead*, it would cost billions of dollars per year less than the START force. This is the comparison that matters.

Why Cut Deeper?

The fundamental purpose of cuts deeper than envisioned in START would be to move us toward postures that are less subject to accidental or unauthorized launch. As is generally accepted today, the danger of

declared locations in containers whose seals and tags can be checked by joint teams of U.S. and C.I.S. inspectors.

Upon delivery of the warheads to the dismantlement facility, the inspectors could check that the tags and seals were intact and that the characteristics of the penetrating neutron and gamma radiation coming out of the container matched the declared warhead identity (see Figure 2)⁹. The perimeter of the dismantlement facility would also be monitored to verify that the recovered fissile material was placed under safeguards (see Figure 3).¹⁰ After the fissile materials are changed into forms that no longer contain warhead-design information, they could be placed under safeguards administered by the International Atomic Energy Agency.

A more comprehensive warhead-verification scheme would include declarations of the numbers, types, and locations of *all* nuclear warheads -- both deployed and in storage -- and the total quantities of fissile materials in the warheads and in weapons-complex stockpiles. Russian Foreign Minister Kozyrev recently proposed that all five acknowledged nuclear-weapon states make such declarations¹¹ and a bill has been introduced in the House of Representatives that would provide Congressional encouragement for such exchanges of information.¹²

The dismantlement of warheads and placement of their contained enriched uranium and plutonium under international safeguards should logically be coupled to a cutoff in the further production of unsafeguarded enriched uranium and plutonium. In fact, the U.S. halted production of enriched uranium or plutonium for warheads some years ago and has no plans to resume production. Given a stable or declining arsenal, fissile materials for replacement warheads can be recovered from the warheads that they are replacing.

The verification arrangements for a production ban would include the verified shutdown of all dedicated military plutonium production facilities (a few are still operating in Russia), and the establishment of international safeguards on all civilian facilities that contain or could produce significant quantities of fissile materials. Such safeguards have already been accepted by the more than 40 states with significant nuclear activities (including Germany and Japan) that have signed the Non-proliferation Treaty as non-nuclear-weapon states.

President Gorbachev embraced the idea of a verified cutoff of the production of fissile material for warheads in 1989 and President Yeltsin reasserted Russian interest in this proposal as recently as 29 January.¹³ A U.S.-Russia agreement to permanently end the production of fissile materials for weapons would also strengthen the legitimacy of our efforts to persuade Israel, India and Pakistan to halt further production of unsafeguarded fissile materials. Persuading these countries and Britain, France and China to join in a cutoff that would, in effect, establish a worldwide ban on the production of unsafeguarded fissile materials and provide a verifiable basis for reductions.

Warheads in U.S. and C.I.S./Russian Strategic Nuclear Arsenals^a

	<u>1991^b</u>	<u>After</u> <u>START red.^c</u>	<u>Bush Jan. 91</u> <u>Proposal</u>	<u>1000-warhead</u> <u>Forces</u>
U.S.				
ICBMs				
Minuteman III	500x3	500x1.8 av	500x1	248x1
MX	<u>50x10</u>	<u>50x10</u>	<u>0</u>	<u>0</u>
	2000	1400	500	248
SLBMs				
Trident I	384x8	192x8	-	-
Trident II	<u>96x4</u>	<u>240x8</u>	<u>-</u>	<u>-</u>
	3456	3456	2300	432
Bombers				
B52-ALCM	138x17(av)	80x20	-	0
B-1,2	<u>95x16</u>	<u>84x16</u>	<u>-</u>	<u>40x8</u>
	3866	2944	1900	320
TOTALS	~9322	7800	4700	1000
	(C.I.S.)	(Russia)	(Russia) ^d	(Russia)
ICBMs				
SS-18	308x10	154x10	0	0
SS-19	210x6	0	0	0
SS-24	94x10	94x10	0	0
SS-25	<u>315x1</u>	<u>315</u>	<u>315</u>	<u>300</u>
	5595	2795	315	300
SLBMs				
SS-N-6,8	376x1	0	0	0
SS-N-18	224x3	224x3	224x3	-
SS-N-20	120x10	120x8	120x8	-
SS-N-23	<u>112x4</u>	<u>112x4</u>	<u>112x4</u>	<u>-</u>
	2696	2080	2080	440
Bombers				
Bear H	27x3	27x3	27x3	0
Bear-H-ALCM	57x16	57x16	57x16	60x6
Blackjack-ALCM	<u>16x12</u>	<u>16x12</u>	<u>16x12</u>	<u>0</u>
	1185	1185	1185	360
TOTALS	~9476	6060	3580	1000

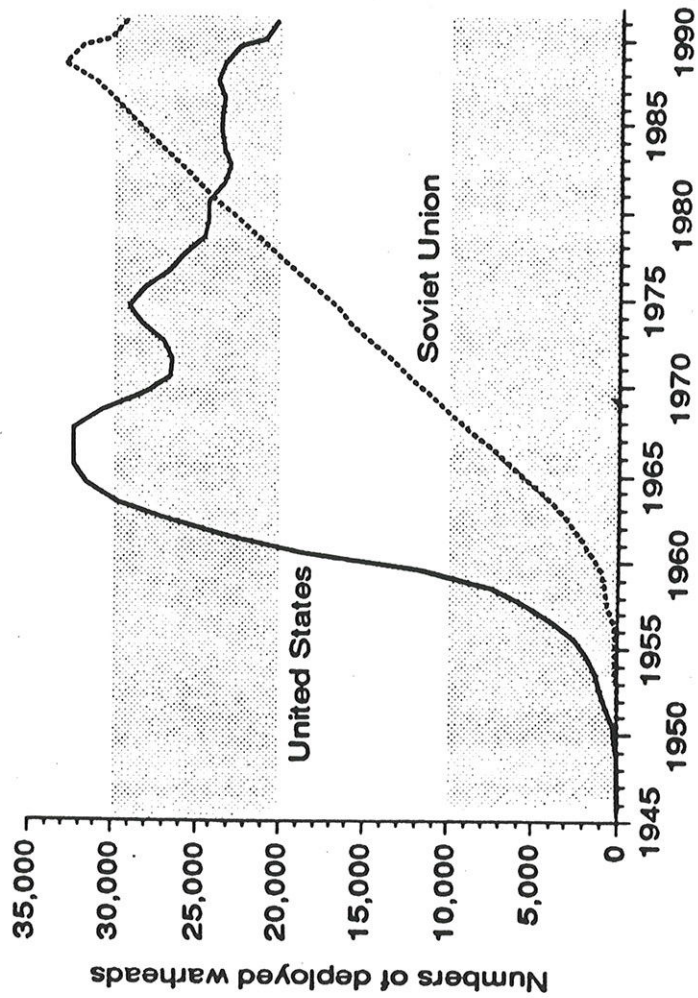
^a Number of missiles or bombers times the number of warheads carried by each.

^b 1991 numbers from "Nuclear Notebook" section of *The Bulletin of Atomic Scientists*, except for bomber loadings.

^c Our projection. The START treaty counts U.S. and C.I.S. bombers equipped to air-launched cruise missiles as carrying 10 and 8 warheads each respectively and bombers not equipped to carry cruise missiles as carrying only one. By these counting rules, the U.S. and C.I.S. strategic forces would carry 5740 and 5486 warheads respectively.

^d Our projection.

Figure 1
History of the numbers
of warheads deployed
by the US and USSR



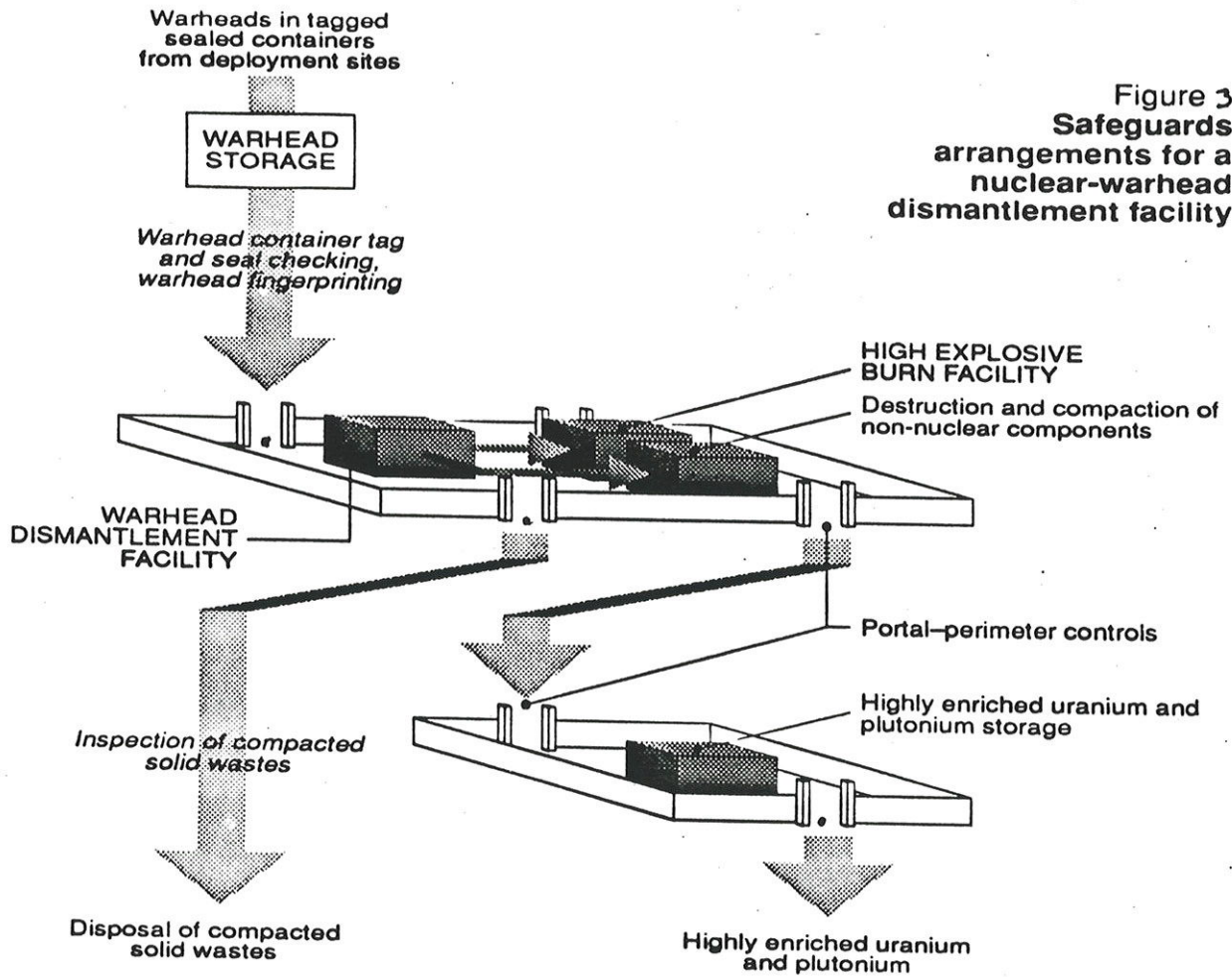


Figure 3
Safeguards
arrangements for a
nuclear-warhead
dismantlement facility