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**DEFENDING AMERICA
REDEFINING THE CONCEPTUAL BORDERS
OF HOMELAND DEFENSE**

**Russia and the US: National Missile Defenses, START,
the ABM Treaty, and Nuclear Modernization**

A Background Paper

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Introduction

The following report is a rough initial draft of a section of a full report on Homeland Defense being prepared as part of the CSIS Homeland Defense project. It is a rough working draft, and reflects solely the views of the author and not of the CSIS team working on the project. It is being circulated for comment and reaction and will be substantially modified and updated before being included in the final report.

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The current nuclear threat to the US is summarized in Table III.2. It is important to note that only two nations listed in this Table – Russia and China – currently present a significant nuclear threat to the American homeland. Russia still maintains massive nuclear forces and long-range strike capabilities. China is developing the capability to greatly modernize its missile and nuclear forces. While they are extremely unlikely to seek to use missiles to achieve strategic dominance, they do compete with the US in several key regions. As a result, the strategic-driven threats of the Cold War may be replaced by theater-driven threats in the future.

As is the case with every aspect of the potential threat to the American Homeland, there are sharply diverse views of the present and future nature of these two threats. There are many different ways to count strategic forces and to estimate what each nation can do to modify such forces or create new ones.

There are some analysts that see Russia's retention of massive nuclear forces threat as a political anachronism that has come to symbolize Russia's last remaining symbol of being a global superpower. There are others that see Russian nationalism, Russia's possession of vast numbers of nuclear weapons, and Russia's technology and military-industrial base, as evidence that Russia may yet reemerge as a major threat. They point to the new defense doctrine that Russia adopted in January 6, 2000 as evidence that Russia still sees itself as a nuclear power and one willing to use nuclear forces to pressure or intimidate other states.¹

Similarly, some analysts see China as a regional power whose ICBM and SLBM forces are at worst symbols of prestige and who view the reemergence of China as a world power as largely benign and as oriented towards regional concerns and expanding China's economic power. Other analysts see China as the potential peer competitor to the US in the 21st Century, and as a nation whose regional interests and competition with the US will drive it to deploy a significant nuclear threat to the US.

Only time can resolve these uncertainties, but some of the best estimates seem to come from recent studies by the US intelligence community. The National Intelligence Council produced a study entitled "Foreign Missile Developments and the Ballistic Missile Threat to the United States Through 2015," which was made public in September 1999.

Like the Rumsfeld Commission, its content is limited by the inability to disclose the classified evidence on which it is based. At the same time, this study does provide considerable detail on the considered judgment of the US intelligence community, updates much of the threat analysis provided in the Rumsfeld Commission report, and describes a range of views rather than a single viewpoint. It also reflects changes in the US in which the US intelligence community views the missile threat to the American homeland that deserve careful consideration. Walpole, the introduced this report to Congress by stating that,²

“This year we examined future capabilities for several countries that have or have had ballistic missiles or space launch programs or intentions. Our approach for this year’s report differs with past efforts in three major ways.

- First, we have projected missile developments through the year 2015; previous reports projected the threat through 2010. Thus, we have added five years of further development.
- Second, using intelligence information and expertise inside and outside the Intelligence Community, we examined scenarios by which a country *could* acquire an ICBM and assessed the *likelihood* of various scenarios. ...We did not attempt to address all of the potential political, economic, and social changes that could occur. Rather, we analyzed the level of success and the pace countries have experienced in their development efforts, technology transfers, political motives, military incentives, and economic resources. From that basis, we projected *possible* and *likely* missile developments by 2015 independent of significant political and economic changes.
- Third, because countries could threaten to use ballistic missiles following limited flight-testing and before a missile is *deployed* in the traditional sense, we use the first successful flight test to indicate an “initial threat availability.” Emerging long-range missile powers do not appear to rely on robust test programs to ensure a missile’s accuracy and reliability or to intend to deploy a large number of long-range missiles to dedicated, long-term sites. A nation may decide that the ability to threaten with one or two missiles is sufficient. With shorter flight test programs—perhaps only one test—and potentially simple deployment schemes, the time between the initial flight test and the availability of a missile for military use is likely to be shortened. Using the date of the first projected flight test as the initial indicator of the threat recognizes that an adversary armed with even a single missile capable of delivering a weapon of mass destruction may consider it threatening. Using the first flight test also results in threat projections a few years earlier than those based on traditional definitions of deployment.

This NIC document makes it clear that Russia and China continue to pose major potential threats to the US homeland:³

“We project that during the next 15 years the United States most likely will face ICBM threats from Russia, China, and North Korea, probably from Iran, and possibly from Iraq, although the threats will consist of dramatically fewer weapons than today because of significant reductions we expect in Russian strategic forces.

“The Russian threat will continue to be the most robust and lethal, considerably more so than that posed by China, and orders of magnitude more than that posed by the other three.

“Initial North Korean, Iranian, and Iraqi ICBMs would probably be fewer in number—a few to tens rather than hundreds or thousands, constrained to smaller payload capabilities, and less reliable and accurate than their Russian and Chinese counterparts.

“Countries with emerging ICBM capabilities are likely to view their relatively few ICBMs more as weapons of deterrence and coercive diplomacy than as weapons of war, recognizing that their use could bring devastating consequences. Thus, the emerging threats posed to the United States by these countries will be very different than the Cold War threat.”

These conclusions help illustrate why the analysis of the Russian and Chinese missile threat cannot be decoupled from any effort to evaluate the threats that determine the merits of a given NMD architecture. At the same time, the debate over national missile defense often ignores this reality. Only a few Americans now seriously argue for either the kind of relatively leak-proof missile defense that President Reagan once called for to deal with the Soviet strategic missile threat to the US, or for a more limited defense against the Russian threat like GPALS. No one now calls for a revitalization of US air defenses to deal with the Russian threat, or for any kind of defense against low-flying cruise missiles.

The present NMD architecture only calls for a deployment of one to two land-based anti-ballistic missile complexes which designed to deal with maximum missile threats of 10-20 near-simultaneously launched missiles, against the US. Such a limited NMD system might offer protection against an accidental Russian or Chinese launch, but could not protect the US against a medium or full-scale attack by current Russian forces or from the forces China is capable of deploying in the near to mid-term.

Table III.2The Nuclear Dimension – Part One

<u>Country</u>	<u>Sea-Based</u>	<u>Land Based</u>	<u>Air Force</u>
<u>US</u> (33,500 nuclear weapons)*	18 SSBM/432 SLBM +1/16 Poseidon C-3 tubes in ex-SSBN 10 SSBN-734 with up to 24 Trident D-5 (240 SLBM) 8 SSBN-726 with up 24 Trident C-4 (192 SLBM)	500 Minuteman II/III 50 Peacekeeper MX	178 Active. 315 START accountable 2/17 B-2A 5/70 B-52H with up to 20 ALCM (AGM-86) each 7/91 B-1B
<u>Russia</u> (62,500 nuclear weapons)*	21 SSBN/332 SLBM 3 Typhoon with 20 SS-N-20 each (60) 7 Delta IV with 16 SS-N-23 each (112) 7 Delta II with 16 SS-N-18 each (112) 4 Delta I with 12 SS-N-8 each (48) In addition, 16 SSBN and 228 missiles remain START accountable: 3 Typhoon/60 SS-N-20 6 Delta III/96 SS-N-18 2 Delta II/32 SS-N-8 6 Delta I/70 SS-N-8 11 Oscar SSGN with ABMs 24 SS-N-19 3 Yankee SSGN with 20+ SS-N-21 1 Yankee SSGN/12 SS-NX-24 10 Akula SSN/SS-N-21 3 Sierra SSN/SS-N-21 12 Victor III/SS-N-15	180 SS-18 (RS-20) Mostly Mod 4/5 w/ 10 MIRV 160 SS-19 (RS-18) Mostly Mod 3,6 MIRV 15 SS-27 Topol M2 with 20 entering service SS-24 (RS22) with 10 MIRV 36 Rail in Russia 10 Silo in Russia 370 SS-25 (RS12M) single warhead mobile (360) & silo launch (10) in Russia 36 SH-11 Galosh & 64 SH-08 Gazelle	74 START-accountable 14 Test & 44 in Ukraine 68 Tu-95H6 with AS-15 ALCM 6 Tu-160 (8 more to come from Ukraine) 7 Tu-95 & 5 Tu-160 test aircraft. 158 Tu-22M/MR (92 in storage)

* Without nuclear warhead or weapons.

Table III.2

The Nuclear Dimension – Part Two

<u>Country</u>	<u>Sea-Based</u>	<u>Land Based</u>	<u>Air Force</u>
<u>France</u> (1,400 nuclear weapons)*	4 SSBN/64 SLBM 2 L'Inflexible with 16 M-4?TN-70 or 71 each 2 Le Triomphant with 16 M-45/TN-75 each		3/60 Mirage-2000N (AMSP) 36 Super Etendard AMSP plus 16 in storage
<u>United Kingdom</u> (1,100 nuclear weapons)*	3 SSBN/48 SLBM 3 Vanguard SSBN with up to 16 Trident D-5 each and maximum of 48 warheads per boat. (Each missile can be MIRV'd to 8 warheads, But some had only 1.		
<u>China</u> (500-1,300 nuclear weapons)*	1 Xia SSBN with 12 CSS-N-3 (J-1) 1 Romeo SSGN?	15-20 CC-4 (DF-5) MIRV ICBM 20+ CSS-3 (DF-4) ICBM 38 CSS-2 (DF-3 IRBM) 8 CSS-5 DF-21 IRBM 150 DF-15 CSS-6/M-9 SRBM (600 km) ? DF-11 CSS-7/M-11 SRBM (120-300 KM)	Up to 120 H-6, Some nuclear capable. 200+ H-5?

* Estimate by Sergei Rogov

Source: Adapted by Anthony H. Cordesman from the IISS, Military Balance, 1999-2000 and 2000-2001

Russia, NMD, and START II/III

There are many different views of the risk that Russia would ever launch missiles against the US homeland or try to use its intercontinental missile forces to actively intimidate the US. Some see the end of the Cold War as having virtually ended the threat of Russian use. Others see a serious risk of the reemergence of a hard-line Russia and some new form of nuclear arms race.

Russia is a very different power from the former Soviet Union (FSU). In 1991, the FSU deployed a total of 10,280 operational strategic nuclear weapons, and 2,509 strategic nuclear delivery vehicles. In 2000, it deployed only 5,870 operational warheads – a 43% reduction – and 1,207 delivery vehicles – a 52% reduction.⁴ Nevertheless, Russia remains a major power and one capable of posing a complex mix of threats to the US. A Department of Defense report on Russian forces, issued in January 2001, summarized developments as follows:⁵

The Russian nuclear warhead stockpile is being reduced as a result of tactical nuclear warhead reduction initiatives, while the START I treaty (which entered into force in December 1994) and system aging have resulted in the reduction of deployed strategic warheads. In December 2000, the stockpile was estimated to be well under 25,000 warheads, a reduction of over 11,000 warheads since eliminations began in 1992. By the end of 2010, the overall stockpile likely will be further reduced, depending on the economic situation in Russia, Moscow's willingness and ability to abide by tactical nuclear warhead reduction pledges, and future arms control agreements. Moscow has consolidated many of its strategic and tactical warheads at central storage locations, and numerous warhead storage sites for holding warheads have been deactivated since the early 1990s. While this consolidation has improved security, current resource shortages have subjected the nuclear storage system to stresses and risks for which it was not designed. Indeed, warhead reductions have had the collateral effect of increasing near- to mid-term fissile material storage requirements, pending the long-term elimination relevant weapons-usable fissile materials.

While Russia's strategic nuclear forces will retain considerable capability over the next ten years and will serve as its primary means of deterrence, the overall force is expected to continue to decrease because of arms control, economic constraints, and aging equipment. Within ten years, the number of operational strategic warheads will continue to decline. At the same time, however, production of warheads will continue into the 21st century as new strategic missile systems are deployed and obsolete warheads replaced.

For strategic delivery, Russia retains a significant strategic ballistic missile force of some 1,130 operational ICBMs and SLBMs. There no longer are any operation-ally deployed ICBMs in Ukraine, Kazakhstan, and Belarus. More than 1,250 FSU ICBMs and SLBMs have been removed from the overall force since 1991. This force is likely to decline further as a result of systems aging, chronic funding problems, and arms control agreements. On the other hand, Russia has begun deployment of a new ICBM, the SS-27 (TOPOL-M), and has other missiles planned for deployment in the 21st century.

Because of economic and other difficulties facing Russia and its armed forces, tactical nuclear weapons will remain a viable component of its general purpose forces for at least the next decade. Russia likely

believes that maintaining tactical nuclear forces is a less expensive way to compensate for its current problems in maintaining conventional force capabilities.

In late 1991 and early 1992, Russia agreed in the Presidential Nuclear Initiatives to a dramatic reduction in its tactical nuclear forces, including the elimination of its ground-launched tactical weapons. Russia still has significant numbers and types of delivery systems capable of performing the tactical nuclear mission. For example, Russia continues to have large inventories of tactical SRBMs (SS-21s), deactivated SCUDs, and a variety of artillery capable of delivering NBC weapons. In fact, Russia employed its tactical SRBMs (with conventional warheads) against the Chechens in the fall of 1999. Air systems include fighter aircraft and bombers. Naval tactical nuclear systems include torpedoes, anti-shipping and anti-submarine warfare missiles, and air-launched munitions carried on naval aircraft. Further, Russia's industrial base can support production of the full range of solid-and liquid-propellant ballistic missiles, space launch vehicles, and all associated technologies.

In November 1993, the Russian Ministry of Defense formally dropped its wholly declaratory "no first use" of nuclear weapons policy. In its place, the Ministry of Defense published its Basic Provisions of the Military Doctrine of the Russian Federation, in which it articulated its current nuclear policy: The current Russian doctrine and strategy involving the use of nuclear weapons, reiterated in October 1999, states that "the possibility of the use of nuclear weapons has not been excluded if the situation deteriorates during the course of conventional war." A revised version of this document was approved by then-Acting President Putin in January 2000, which further lowers the threshold for nuclear use in order to protect Russia's national interests and territorial integrity; it states: "The application of all forces and means, including nuclear weapons, if necessary to repel armed aggression, if all other measures for resolving the crisis situation have been exhausted or proven ineffective." In April 2000, the Russians elaborated on this threshold, stating that "the Russian Federation retains the right to use nuclear weapons in response to the use of nuclear weapons, or other types of weapons of mass destruction against itself or its allies, and also in response to large scale aggression with the use conventional weapons in situations critical to the national security of the Russian Federation."

It is important to note that the Russian threat to the US is not limited to nuclear weapons. Ken Alibeck, the former Deputy Director of the FSU's BIO-PREPARAT, the principal FSU agency for the research, development, and production of biological weapons, has stated that the FSU had a massive biological warfare program that involved tens of thousands of personnel. It produced thousands of tons of agent annually, including anthrax, smallpox, plague, tularemia, glanders, and Venezuelan equine encephalitis. The primary purpose of smallpox, anthrax, and plague production was for strategic use against "deep targets" in the United States. The Soviet goal was to create large numbers of casualties and extensive disruption of vital civilian and military activities.⁶

It is unclear that this program is no longer active. The dual-use nature of virtually all materials involved in production process makes it difficult to determine conclusively the exact size and scope of the former Soviet program, or any remaining effort. Alibeck has stated that

even though the FSU became a signatory to the 1972 BWC, it continued a massive program to develop and manufacture biological weapons. Alibek claims that over 60,000 people were involved in the research, development, and production of biological weapons in the Soviet Union in the late-1980s and early-1990s, and that the annual production capacity of all of the facilities involved was several thousand tons of various agents.

A Department of Defense report on proliferation in January 2001 warns that the Russian biological program may remain a continuing threat,

...The Russian government has publicly committed to ending the former Soviet biological weapons program and claims to have ended the program in 1992. Nevertheless, serious concerns remain about Russia's offensive biological warfare capabilities and the status of some elements of the offensive biological warfare capability inherited from the FSU.

Since the breakup of the Soviet Union, more extensive downsizing and restructuring of the program have taken place. Many of the key research and production facilities have taken severe cuts in funding and personnel. However, some key components of the former Soviet program may remain largely intact and may support a possible future mobilization capability for the production of biological agents and delivery systems. Despite Russian ratification of the BWC, work outside the scope of legitimate biological defense activity may be occurring now at selected facilities within Russia, and the United States continues to receive unconfirmed reports of some ongoing offensive biological warfare activities.

A National Intelligence Council report has summarized the Russian ballistic missile threat to the US as follows:⁷

"Russia's strategic offensive forces are experiencing serious budget constraints but will remain the cornerstone of its military power. Russia expects its forces to deter both nuclear and conventional military threats and is prepared to conduct limited nuclear strikes to warn off an enemy or alter the course of a battle.

- Russia currently has about 1,000 strategic ballistic missiles with 4,500 warheads.
- Its strategic force will remain formidable through and beyond 2015, but the size of this force will decrease dramatically—well below arms control limits—primarily because of budget constraints.
- Russia will maintain as many strategic missiles and associated nuclear warheads as it believes it can afford, but well short of START I or II limitations.
- —If Russia ratifies START II, with its ban on multiple warheads on ICBMs, it would probably be able to maintain only about half of the weapons it could maintain without the ban.
- We judge that an unauthorized or accidental launch of a Russian strategic missile is highly unlikely so long as current technical and procedural safeguards are in place."

Paradoxically, these conclusions indicate that a limited US NMD system poses little threat to Russian capabilities. The Russian forces shown in Table III.1 are so large that they scarcely indicate that US deployment of a limited NMD system will threaten Russia's capability to achieve high levels of "assured destruction" against the US. Neither do the force ratios shown START-accountable force levels shown in Chart III.1 and Table III.3, and the more detailed threat analysis of Russian nuclear forces shown in Table III.4. The US has also never made any public statement indicating that the currently contemplated NMD system is capable of defeating Russian decoys and countermeasures.

As a result, both Russia and the US face major uncertainties regarding the interaction between NMD, arms control efforts to limit nuclear forces, nuclear modernization, and the ABM Treaty. The present terms of the various START treaties may be summarized as follows.

- START I:
 - 6000 accountable warheads on 1,600 offensive strategic delivery vehicles.
 - Only 4,900 warheads on ballistic missiles
 - Limit of 1,540 warheads on heavy ICBMs.
 - Limit of 1,100 warheads on mobile ICBMs.
 - Downloading permitted
 - Verification through JCIC (Joint Compliance and Inspection Committee), unimpeded NTM (National Technical Means) and SCC, unencrypted telemetry, OSI(On-site Inspection), NRRC
- START II:
 - 3,000 to 3,500 accountable warheads on offensive strategic delivery vehicles..
 - Limit of 1,750 warheads on SLBMs
 - No multiple warheads on ICBMs.
 - Can download maximum of 4 warheads, except for 6 warheads in case of SS-19.
 - This means all SS-18s and Peacekeepers must be destroyed.
 - Verification through JCIC, unimpeded NTM and SCC, unencrypted telemetry, OSI, NRRC, plus OSI
- START III:
 - Limit of 2,000-2,500 accountable warheads on offensive strategic delivery vehicles.
 - Possible cuts to 1,500 warheads. (Russian proposal)
 - Destruction of warheads with transparency.
 - Explore limits on nuclear armed, sea-launched cruise missiles. (US withdrew from service in 1991).
 - Explore limits and/or destruction of theater nuclear weapons.

Each of the prospective “build-downs” under the three current phases of START would still leave both Russia and the US with high levels of mutual assured destruction, parity in offensive capability, and with enough remaining nuclear forces so that both nations could continue to claim to be nuclear “superpowers.”

The Russian Perspective towards a US NMD System and Nuclear Force Modernization

The preservation of mutual assured destruction is only one of the issues shaping Russian perceptions of NMD. From a Russian perspective, Russian strategic nuclear parity with the US is one of the few remaining indications that Russia is a superpower that is “comparable” with the US in at least some ways. Furthermore, Russia already faces major problems in maintaining its

present strategic force levels and has sought to use the START negotiations to reduce both future US and Russian force levels to totals as low as 1,500 accountable warheads.

The basic problems Russia faces are force modernization and money. Russia has already cut its nuclear forces from around 10,000 deployed to less than 6,000. Its ICBMs can be modernized and rebuilt, but cumulative problems develop in terms of tolerances and fatigue that mean operational lifetimes are limited to around 20 years, and may be less than 10 years. Some experts notes that major components like rocket engines may be too difficult and costly for Russia to replace, particularly since key Ukrainian manufacturing plants have closed.⁸ Certainly, Russia faces major problems in trying to keep its current missile force active and “on-line.”

Most experts agree that Russia's future nuclear arsenal depends heavily on the production rate of its new missile, the SS-27 Topol-M. According to some estimates, this will be the only modern ICBM in the Russian arsenal ten years from now. At the time when START II was first discussed, Russia planned to produce 30-40 of these missiles a year. Only 20 were deployed in 1998-1999, however, and Russia will have only 130 single-warhead SS-27s by 2010 at the current production rate of roughly 10 missiles per year. If Russia reached a production rate of 20 missiles per year, it would have 230 missiles by 2010, At 50 missiles per year, it would have only 530 missiles by 2010.

Russia's ballistic missile nuclear submarine (SSBN) fleet is aging badly and suffers acutely from poor maintenance. A Carnegie Endowment estimate indicates only the relatively new Delta IV fleet will likely be operational by 2010.⁹ Each of the seven Delta IV SSBNs carries 16 SS-N-23 sea-launched ballistic missiles (SLBMs), for a total of 112 missiles. Each SS-N-23 has four multiple independent reentry vehicles (MIRVs), for a total of 448 sea-based warheads. The only alternative would be for Russia to renew the construction of its new *Borey* class SSBN. The prototype is now unfinished at the Severodvinsk Sevmash shipyard. The *Borey* class will probably carry twelve SLBMs, each with four warheads. It is not clear, however, what a crash construction effort could accomplish by 2010, and it is doubtful that Russia can afford it.

Russia faces problems with the non-missile leg of its strategic triad as well. Russia's two strategic bombers -- the Tu-95 Bear H and the Tu-160 Blackjack -- are now aging aircraft which have not had the extensive rebuilding and modernization effort that has gone into the B-52 or the level of modernization in the B-1B. The Bear H has had only limited modernization since 1990, and the production of new Blackjack bombers that began to be completed in May 2000 seems to be dated in terms of electronic warfare and penetration capabilities. According to the Carnegie estimate, Russia is likely to have 480 air-launched cruise missiles, or ALCMs, carried on only 30 Bear H bombers and 10 Blackjack bombers in 2010.

Alexei Arbatov, the Deputy Chairman of the Committee on Defense in the Russian Duma expressed these Russian concerns in some detail at a briefing to the Carnegie Endowment on May 9, 2000:¹⁰

"Let me start with the substance of this issue. START II was ratified in Russia by the Russian Parliament not because Russians think that the threat is lower, not because Russians think that nuclear weapons are less relevant, nor because the Russian Parliament and public think that the United States will be a partner for cooperation and security. START II was primarily ratified because the Russian public and political elite think that the nuclear threat is great, that the United States is keen on achieving superiority, and that nuclear weapons are still as relevant as ever for Russian security and U.S.-Russian relations.

"The principal argument in favor of START II...was that without START II, Russia's forces—with a shortage of funding—would go down in ten years to 1,000 warheads on their own. At the same time, the United States can easily afford to maintain the present level of its strategic forces. In this way, if there is no further arms control agreement, in ten years the United States may, inadvertently, acquire nuclear forces that are five or six times over that of Russia...without spending additional money...

"If Russia were to preserve its forces at the level of START I, which is 6,000 nuclear warheads, then over ten years Russia would have to spend about \$33 billion only on strategic nuclear forces and C3I systems. It would mean spending 65% of its total defense budget yearly only on strategic nuclear forces. If Russia were to keep its forces at the level of START II, which is about 3,000 weapons, then it would have to spend \$26 billion during the next ten years, which would annually account for about 50% of its overall defense budget. If Russia was to maintain its forces at the level agreed in the START III agreement, which is around 2,000 weapons, then we would have to spend \$14 billion in the next ten years—which would be about 27% of our present budget...

"If the United States keeps its forces at the level of START I and Russia's [forces] decline because of a shortage of funding, then in ten years the American second strike capability, would be 15 times bigger than Russia's second strike capability. At the level of START II the United States would have triple the superiority of Russia...Under START III there would be approximate parity between the two sides, which implies that for Russia, ratification of START II is primarily a way to reduce the American nuclear threat.

"...The second motive...is that Russia considers START II to be an additional guarantee of the viability and validity of the ABM Treaty of 1972...Putin made a very strong commitment, which is on the record,

that if the United States unilaterally withdrew from the ABM Treaty, Russia will withdraw from START II, and will go in for new MIRVed ICBMs. He also said...that Russia will withdraw from all regimes of arms control, including conventional arms control.

"Article IV [of the START II implementation law] clearly states that if agreement on START III is not reached by December 31, 2003, Russia will once again consider withdrawal from START II."

He also made the following comments on the relationship between Russia's ability to sustain its forces, START II, the ABM Treaty, and NMD:¹¹

"The ball is now in the American court; it is up to the United States to make further steps. If it is done we may achieve a real breakthrough in arms control, which will make it easier for us to come to an accommodation on European affairs, on Iran, on China, and many other issues of international security. However, if that does not happen, the new deadlock in arms control, and maybe even the disintegration of the arms control system will greatly aggravate the conflicts that we have in the world at large. That will be extremely detrimental to international security, to the security of Russia, and to the United States as well."

From a Russian perspective, reducing Russia's current strategic forces down to the force levels called for START II presents a massive financial challenge in terms of force modernization costs. Further, Russia fears that the US deployment of a limited NMD system might only be the first step in the deployment of a much larger system that might be able to limit Russia's capability to attack the US. At a minimum, US deployment of an NMD system threatens Russian prestige. At a maximum, it threatens Russia with American hegemony at a time Russia feels that US and Western intervention in Kosovo has shown it that it cannot trust in partnership with the West.

The START II Treaty forces Russia to dismantle its land-based MIRV'd ICBM force in ways that mean it must pay for massive deployment of new single-warhead Topol M2 (SS-27) ICBMs to keep up with the US. Some Russians also feel that building down to the START II limits would leave the US with a major advantage in MIRV'd SLBMs while Russia gives up its advantage in land-based ICBMs. At the same time, the present terms of START II allow the US to keep half of its MIRV'd SLBMs but Russia cannot keep any of its MIRV'd ICBMs.

This is why Russia has pressed hard to move forward with START III as soon as START II is ratified by both countries. It is also why Russia pressed to cut the number of allowable START III accountable warheads from the original figure of 2,000-2,500 to only 1,500 –

approximately 25% of the level now allowable under START I. The US has generally been sympathetic to these Russian arguments, although it questions Russian ability to run its forces down rapidly to only 1,500 warheads and to carry out the physical destruction of nuclear warheads proposed as a potential provision of START III.

Russia Force Modernization versus the Current US NMD Architecture

At the same time, the importance of the Russian force modernization issue in blocking any US-Russian deal over the US deployment of NMD should not be exaggerated. None of the currently contemplated NMD systems being discussed by the Clinton Administration and Congress could significantly degrade a massive Russian attack on either countervalue (city and economic) or counterforce (military) targets in the US. The impact of a US NMD system would only have token impact on a Russian attack if both sides forces remained at the 3,500 warheads permitted in START II, or the START III levels remained at 2,000-2,500 warheads. A one-site US NMD system with 100 interceptors would be comparatively easy for Russia to saturate. Even if the number of allowable interceptors was raised to 200 interceptors in two sites, Russia could still saturate the US missile defenses. A smaller Russian force may, however, might *seem* more marginal in the face of a US NMD system, particular once warheads are cut below 2,500 warheads.

Some Russians have raised the issue that a US NMD system would preclude Russia from limited or demonstrative strikes, while leaving this option open to the US.¹² These Russians also raise the question of whether the US can develop an NMD “break out” capability. They postulate various scenarios in which the US suddenly increases its number of NMD sites and interceptors and does so that the US achieves at least a damage limiting capability against Russian strategic offensive forces at a time Russia cannot afford to build back to the levels required to overcome a large US NMD system.¹³

It is hard to tell how serious such Russian concerns really are, and the degree to which Russia’s opposition to NMD is based on strategic military considerations as distinguished from

political ones. Russia would almost certainly be far more tolerant of a US NMD system if the Russian economic reform and growth were more successful, if Russian politics were less nationalistic, and if Kosovo, NATO expansion, the US Senate vote on the CTBT, and Chechnya had not seriously hurt US and Russian relations. At present, however, Russian politics are extremely nationalistic and relations with the US are poor. Such tensions have already helped block the Russian Duma's ratification of START II during 1995-1999, and lead Russia to extend the life of the SS-18 and Delta III submarines in the Pacific fleet.¹⁴

Virtually all Russians also seem to agree the present Russian strategic defense system deployed around Moscow is not comparable to any of the proposed US NMD systems. The Russian system consists of a 1970s-vintage mix of radars, battle management systems, 36 modified SH-11 (Galosh) interceptors, and 64 SH-08 Gazelle interceptors with some 1980s updates. This Russian system has only marginal capability against modern missile warheads, and is not an adequate substitute for the kind of NMD system that the US proposes to deploy.

Many Russians are also concerned about the US developing an NMD "breakout capability" that would allow the US to deploy a much larger NMD system capable of seriously reducing Russia's capability to damage the US, and some are concerned that such a system might evolve as a result of a US-Chinese arms race in which the US scaled up its NMD system in response to added Chinese deployments of ICBMs and SLBMs, and vice versa. Other Russians note, however, that any such actions would give Russia time in which to deploy added new strategic systems of its own, and that would create conditions where Russia might well be willing to bear the economic costs involved. As will be discussed later, the prospect of a three-cornered NMD-strategic offensive arms race is not one that either the US or China can easily dismiss.

The Problem of the ABM Treaty

These issues have already led Russia to adopt a much less friendly defense doctrine which no longer calls for partnership with the West, and they have led to threats to withdraw from START if the US deploys an NMD system in a form that is non-compliant with the ABM Treaty or even any NMD system at all. They are a major factor behind the Russian and

Belorussian, and Chinese resolution on the preservation and implementation of the ABM Treaty that the UN General Assembly adopted in December 1999.

This resolution used virtually the words set forth in Articles I and IX of the ABM Treaty, and called for the nations who had signed the treaty to, “restrict deployment of anti-ballistic missile defense systems, refrain from deployment of anti-ballistic missile defense systems on their territories, not to create the basis for such a defense, not to hand over to other countries, and not to deploy beyond their national territories anti-ballistic missile defense systems or their components mentioned in the given treaty.”

The Constraints in the ABM Treaty

The issue of renegotiating or abrogating the ABM Treaty has become critical to both NMD and START. While the US has made attempts to argue the legal case for a more liberal interpretation of the ABM Treaty, most experts feel the ABM Treaty has key provisions that prevent the deployment of any kind of operational NMD system, and severely restrict the development and deployment of the kind of wide-area theater missile defenses that allied and friendly nations could use for NMD purposes.

- Article I says that ABM systems cannot be deployed for the defense of the entire country.
- Agreed Statement D requires that ABM systems based on other physical principles require the agreement of the parties. These include components capable of substituting for interceptors, launchers, or radars.
- Article V prohibits development and testing of space, air, or sea-based ABM system or mobile land-based system and ABM interceptors. Launchers, and radars.
- Article III initially permitted two fixed land sites, one within 150 kilometers of capital and within 150 kilometers of an ICBM silo area. A protocol in 1974 limited to one site near capital or near ICBM silos. For the US, the Common Understanding specifies the area around Grand Forks, South Dakota.
- Each site limited to a maximum of 100 ABM launchers and interceptors.
- Limits EW radars to periphery of national territory; they must look outwards.
- Cannot deploy phased array radars beyond a given capability.
- Article VI prohibits any interceptors, launchers, and radars other than those allowed under Article III from have the capability to counter strategic missiles in flight.

- Non-ABM systems may not be tested in the ABM mode.
- Agreed Statement of 1997 between US and Russia agrees on the demarcation of ABM and theater ballistic missile (TBM) defense systems. It limits TMD systems to those with a velocity of no more than 5 kilometers per second, and the range of the target missiles used to test such a system to 3,500 kilometers. It proscribes the development, testing, and/or deployment of space-based interceptors or components based on alternative technologies that can substitute for ground based interceptors, and requires consultations if new technologies emerge which can be used for TMD systems.

Their Impact on Near-Term US NMD Deployment Decisions

The deployment of the currently contemplated US NMD system presents two critical near-term problems in terms of a violation of the ABM Treaty. The first is that the very phrase “national missile defense” system makes it clear that the system is intended to be national, and is not limited to the kind of area defense permitted under the treaty.

The second is that the US is currently planning to deploy the first site in Alaska to maximum coverage against North Korea and Iran, and this would mean deployment in a prohibited area. As a subset of this debate, some of the Department of Defense’s legal experts have argued that simply starting the construction work in Alaska would not be a violation of the treaty while many other US government legal experts believe that any move to physically start the construction of an NMD system is forbidden by the treaty. This debate seems to have been one of the factors leading President Clinton to defer any work on construction in Alaska in September 2000, and to leave the decision to his successor.

There are also questions about the need to place US radars outside the US, and US plans to go on to create a new space-based surveillance system that are discussed later in this report. The US argues that deploying new ground-based radars outside the US would not threaten Russian retaliatory capabilities, and that its new Space-Based Infra-Red Sensors (SBIRS) will only provide space-based infra-red warning of a missile launch, trajectory, and approximate aim point – improvements over capabilities the US and Russia have had for many years. At least some Russians feel that such efforts are either a sign that the US intends to go far beyond the limited system it is now talking about or that it will give the US the capability to rapidly deploy such a larger system.

Their Impact on Near-Term US TMD Deployment Decisions

As has been touched upon earlier, there is a further interaction between NMD, theater missile defense, the ABM Treaty, and START. In March 1997, both nations also agreed to ban space-based theater missile defense (TMD) systems, and that theater systems can only be tested at speeds greater than 3 kilometers per second if target has speed of less than 5 kilometers per second and range of less than 3,500 kilometers. This allows systems to be tested at speeds of more than 3 kilometers per second at targets with closing speeds of less than 5 kilometers per second and ranges less than 3,500 kilometers.

These speeds are adequate for the deployment of the Patriot PAC 3 and may be adequate to allow the deployment of the wide area version of THAAD. According to some experts, however, these speeds are not fast enough to allow the development of effective wide area theater missile defenses, particularly effective defenses against high apogee, long-range theater missile systems which have high closing speeds. They may be adequate for defense against systems like the extend-range Scud, but it is doubtful that they provide adequate range against newer systems like the Iranian Shahab 3.

This is a potentially critical issue in terms of US cooperation in missile defense with allied and friendly states. States in Europe, the Middle East, and Asia do not require either the area coverage or range of intercept needed in a US NMD system. On the other hand, they do need the equivalent of TMD systems that are capable of NMD-like intercepts of advanced ballistic missiles. As such, the ABM Treaty is a major potential barrier to the transfer of US TMD technology and the integration of Homeland defense into a cohesive counterproliferation strategy.

Linking NMD to Changes in the ABM Treaty

As a result, the US may ultimately have to consider just how valuable the ABM Treaty really is if it is to create an effective Homeland defense and counterproliferation capability. Present US policy still seeks to preserve both the ABM Treaty and START II as essential aspects

of US policy. Undersecretary Walter Slocombe provided the following summary of the resulting mix of US and Russian attitudes towards NMD, START, and the ABM Treaty in his speech to the CSIS on November 5, 1999:¹⁵

“Our NMD development program has been and will continue to be carried out in compliance with the ABM Treaty. That compliance in the development phase has not slowed or curtailed the effort. The technical experts who have directed this program have concluded that this architecture that I have described is the best suited to the quickest possible deployment of an effective national missile defense.

It is, however, clear that deployment – as distinct from development – of the NMD, will require Treaty modifications, and we have made clear to Russia that we will seek to negotiate such modifications, proceeding in good faith.

The goal of both preserving the Treaty and having the option to deploy an effective limited defense is a wholly reasonable one. There is no substantive reason we should find ourselves in the position of having to choose between having the capability to defend our people against rogue state ballistic missile attack, on the one hand, and jeopardizing our interest in strategic stability, a sound relationship with Russia, and further reductions in American and Russian strategic offensive arms on the other.

There are several reasons why we should not have to face that choice.

First, and most important, the system we would deploy would not in any way threaten Russia's deterrent. Whatever the merits of the prior SDI plans for a massive defense against a deliberate Soviet attack, the fact is that the system we would deploy is completely different from a large-scale territorial defense against each other that greatly concerned the United States and the Soviet Union during the Cold War.

Second, the ABM Treaty already allows a limited ballistic missile defense system, though to be sure, not a nationwide one. Indeed, the ABM Treaty from its inception in 1972 has permitted such deployment, and Russia has long maintained such an ABM system around Moscow...

Third, the ABM Treaty, even when modified to permit deployment of a limited defense system, will remain fully viable and a key element in our broad strategy to reduce further the nuclear threat. This is so because the limited defense system we have in mind is fully compatible with the fundamental purpose of the ABM Treaty. That purpose is not to ban defenses altogether -- since it does not do that -- but to ensure that each party's strategic deterrent is not threatened by the missile defenses of the other party...

Indeed, the real threat to the viability of the Treaty in contemporary conditions comes not from efforts to modify it to reflect current reality -- namely the threat from rogue missiles, or, in the Treaty's own terms, the "strategic situation" -- but from a fixed refusal to modify it to permit the United States -- and for that matter, Russia, which potentially faces the same problem -- to build effective defenses against those threats. Neither the ABM Treaty nor any other international treaty can remain viable if it fails to reflect contemporary reality -- in this case, the problem of rogue state ballistic missile proliferation.

Over the past years, we have kept Russia fully informed of our NMD policy, and of our progress on work toward an NMD system, such as our initiation earlier this year of the analysis of the environmental impact of an interceptor deployment in Alaska. More recently we have begun detailed discussion with the Russians about our deployment architecture and the necessity of adapting the ABM Treaty to permit it.

Specifically in June, Presidents Clinton and Yeltsin agreed to begin discussions that will address both

updating the ABM Treaty in light of U.S. NMD plans, and further reductions in strategic offensive arms. Since late August we have been talking in detail with Russia at senior levels about the system we have in mind and its implications for the Treaty. And over the past several months, we have closely consulted with allies regarding both our policy and our approach to Russia.

We are now seeking Russia's agreement to those changes to the ABM Treaty required to permit us to meet our initial goal. We have judged it right to leave to President Clinton's successor and to the successor of President Yeltsin the longer-term issue of follow-on negotiations on further changes to the Treaty required to permit deployment to meet larger, more complex threats. But we have made clear that we expect such negotiations would need to begin in 2001, in order to ensure that the United States could begin the necessary construction of additional components, possibly including foreign-based ABM radars, so those components would be ready to provide a defense against a more sophisticated threat, which may emerge later in the next decade.

Central to this issue is that both the United States and Russia face the potential of rogue state ballistic missile threats. The President has told President Yeltsin, and Secretary of Defense Cohen has told Russian Minister of Defense Sergeyev on his recent visit to Moscow that we want to work cooperatively with Russia on these matters. In this regard we have recently proposed a number of specific projects for cooperation to the Russian government. These measures, which could include cooperative operation of satellite systems and cooperative modernization of troubled Russian missile attack warning radars, would be designed to serve two goals. They would both help Russia and the United States move together to meet a common rogue state threat, and also provide tangible assurance that the U.S. system is not aimed at Russian deterrence...

As has been clear so far from Russian public statements, the Russian government reaction has so far been negative. That said, however, the Russians agree that it is important to discuss this matter. As to the prospects of eventual Russian agreement to the necessary modifications to the treaty, Secretary Cohen has said: "We will negotiate with the Russians and try to persuade them it is in our interest and their interest to remain within the framework of modifying the treaty.... I believe that we can persuade them that we are serious about holding on to the structure of the ABM Treaty, but that it needs to be modified to give us this protection for our own country."

If in the end we are unsuccessful in these negotiations, the President would have to decide whether to withdraw from the ABM Treaty under the supreme national interest clause. That right of withdrawal is expressly provided for in the Treaty, and it always remains an option. We will, however, make every effort to secure what we think to be the right outcome in our national interest and that of Russia and the rest of the world, which is modification of the ABM Treaty so that our planned NMD system can go forward, while preserving the treaty as a key component of strategic stability for the future.

In summary, our planning and our development, our technological work for an NMD system is well advanced. It seeks to anticipate future rogue state threats and to develop systems that can defend against such threats, which I have to say appear very close on the horizon. Our NMD program remains on a highly accelerated track to ensure that we are positioned to respond in a timely fashion. And we continue to work with Russia to pursue negotiated changes to the ABM Treaty so that the Treaty can be preserved while we maintain our option to deploy a national missile defense system."

Michael Krepon of the Stimson Center, provided the following arguments in favoring of linking the deployment of NMD to revising the ABM Treaty in his testimony to the House Armed Services Committee on November 10, 1999,:

Limited defenses, if proven under rigorous testing, can offer political as well as military benefits, and can be pursued within the context of co-operative threat reduction efforts. Will limited defenses work perfectly if needed? If perfection is the required standard, then government spending of all kinds would be greatly reduced. Does it make sense to seek to intercept missiles when there are other, simpler means of wreaking havoc with weapons of mass destruction? Yes B as long as counters to other means of delivery are also pursued.

Under troubling post-Cold War circumstances, a modest insurance policy against missile threats is worth buying. Buying too much insurance is not a wise use of taxpayer dollars. Abrogating treaties to deploy heavy defenses against light threats is profoundly unwise, in my view.

The launch of extended-range missiles carrying weapons of mass destruction B and the resulting break down of deterrence—would be a seminal event. National and theater missile defenses can help lessen the likelihood of this tragic circumstance by demonstrating US resolve to defend forces and friends, as well as by countering states that seek to use missiles to extend their coercive influence in troubled regions. The political utility of missile defenses could be as important as their military effectiveness B if missile defenses are pursued in the context of collaborative approaches rather than by trashing treaties.

The approach suggested here involves bilateral US-Russian negotiations as well as extensive consultations between the executive and legislative branches in both countries. While amended treaty constraints are envisaged, less formal arrangements could well play a larger role. Co-operative threat reduction efforts would need to extend beyond current Nunn-Lugar and lab-to-lab programs. The next frontiers for co-operative threat reduction are reduced launch readiness for nuclear forces and the verifiable, irreversible dismantlement of nuclear warheads—tasks best tackled outside of treaties.

At the same time, there are those who argue that the ABM Treaty is now dated and serves little purpose. For example, Jim Wolsey, the former Director of Central Intelligence (DCI), provided the following arguments against linking NMD to the ABM Treaty in his testimony to the House Armed Services Committee on November 10, 1999:

My point with respect to the ABM Treaty in today's world is really twofold.

- First, there is common ground possible, today, between those who have been on different sides of the ABM Treaty debate in the past. Both those who have opposed the treaty for many years (often in company with early support of the more ambitious forms of SDI) and those, such as myself, who supported the treaty during the same period and were skeptical of ambitious SDI, need to realize that what matter, today, are the decisions that now need to be made, not ancient jousts between SDI supporters and ABM Treaty supporters during the era before the fall of the Berlin wall...
- Second, if one focuses on the strategic realities of today, I would submit that there is no strategic rationale for the ABM Treaty. The old rationale for our wanting to limit Soviet defenses, as spelled out above, does not apply to today's Russia or the Russia of the foreseeable future, even if that nation turns more hostile to the U.S. than it is today. Russia is no longer capable of threatening Europe with many divisions of conventional forces so it would have no advantage in a crisis on that continent. Consequently we do not need to rely in any day-to-day sense on our strategic offensive nuclear forces to protect our NATO allies from Russian conventional attack. Moreover, Russian strategic nuclear forces do not threaten a substantial share of our nuclear deterrent: the deterrent that we do maintain is no longer heavily reliant on fixed land-based ICBM's that might be vulnerable to Russian attack, and hence we have no reason to want to limit Russian defenses to ensure that our retaliatory forces would

be able to penetrate Russian defenses.

The only rationale for the ABM Treaty today is one rooted in current foreign relations concerns: the Russians do not want us to withdraw from it, so doing so would, presumably, upset them and perhaps lead them to do other things that we don't want. For example, for the umpteenth time they may threaten to refuse to ratify the START II Treaty. But it seems to me there is a limit to the degree to which we should let this sort of thing influence us. The Russians were willing in 1992, following President Yeltsin's remarkable speech in January of that year, to consider substantial revisions to the ABM Treaty and to discuss mutual work on ballistic missile defenses with us. Perhaps this or the next Russian government will prove similarly reasonable in the future. That doesn't look likely today, but it is still worth offering, in my view, to work with the Russians in the way that we began in 1992 and abandoned in 1993. If that proves fruitless there are ample legal and strategic grounds for no longer considering ourselves bound by the Treaty. We cannot perpetually let our security vis-a-vis the likes of North Korea, Iran, and Iraq be held hostage to Russia's not wanting us to have defenses.

In my view only a shift to a fundamentally different kind of treaty dealing with ballistic missile defenses or a withdrawal from the 1972 treaty would meet our strategic needs. Even if one believes that a full defense against an all-out Russian attack is not attainable, the 1972 treaty clearly hinders our ability to defend ourselves against a number of lesser and plausible threats during this post-cold war era: blackmail by rogue states, an accidental launch from a more chaotic Russia, or a threat from China in the midst of, e.g., a crisis over Taiwan. As interpreted by, particularly, this Administration, the treaty is even undermining the effectiveness of our theater ballistic missile defenses, systems that are not supposed to be covered by the treaty. A very limited one- or two-site defense of the U.S., of the sort that might be compatible with a treaty that has been only modestly amended, would be essentially worthless against some perfectly plausible threats, such as ship-launched ballistic missiles, that we identified during the deliberations of the Rumsfeld Commission. Indeed against some very plausible threats, such as ballistic missiles carrying clusters of biological weapons that may be released early in the trajectory, only boost-phase intercept from space offers a likely response.

The Initial US-Russian Negotiations on NMD

The US was slow to react to Russia's growing perception of the seriousness of the "threat" US deployment of NMD might present to its offensive nuclear parity, and to understand just how serious the coupling between START, NMD, theater missile defense, and the revision of the ABM Treaty was becoming in Russian eyes. The US only began to seriously negotiate with Russia on NMD in 1996, and the Clinton Administration only began to offer serious incentives to Russia to accept NMD and changes to the ABM Treaty in 1999. Even then, press reports indicated that the initial incentives consisted largely of US aid in improving Russian early warning systems.

The chronology of the Clinton Administration's initial efforts is summarized below:

- 1996: Clinton pledges the 3+3 program for NMD: Active R&D during 1997-2000, deploy during 2001-2003.

- January 1998: Clinton adds \$6.6 billion to FY1999-2005 defense budget, delays deployment of NMD to 2003-2005 because of R&D risk.
- April 21, 1999: Senate approves American Missile Protection Act of 1998, calling for deployment as soon as system is ready. Fails in September vote, 59:41.
- Senate and House approve similar bill in 1999, after language is adopted calling for negotiations with Russians to amend ABM Treaty, etc. Senate accepts House version on March 18, 1999, signed July 23, 1999 (97:3, 317:105).
- January 1999: Clinton announces will seek renegotiation of ABM Treaty under Article XIII, which says can do so in response to changes "in the strategic situation." Yeltsin agrees renegotiation is possible. Some Russians do not.
- June 1999 Summit: Agree to negotiation in late summer.
- When meet during August 17-19, 1999 Russians say cannot renegotiate. (Kosovo may be a key factor as is Russian fear of loss of nuclear status and parity. Some Russians begin to raise the idea of MIRVing the SS-27/Topol M to three warheads to compensate for US NMD.
- Fall 1999: US offers aid on Russian EW radar sites in Siberia. Russia refuses.
- December 1999: Russia again defers Duma debate on START III, takes stand that the ABM Treaty cannot be renegotiated.
- February 2000, US negotiations with Russia again fail to produce positive result on NMD and changes to the ABM Treaty.
- June 2000 Summit: Leaders sign agreements to dispose of 68 tons of weapons-grade plutonium and share early warning capabilities to detect missile launches in order to avoid mistaken counter attacks. No deal on ABM.

At the same time, Russia continued to play its own political games with START II and CTBT, and attempted to portray the US as anti-arms control rather than as anti-proliferation. During April 2000, the Duma voted to ratify both START II and the CTBT with the qualification that this ratification was dependent on US adherence to the ABM Treaty – a de facto effort to block the US NMD program.

On the day of the Duma's vote in support of START II, Russian Foreign Minister Igor Ivanov said, "The ball is now in the court of the United States," and that "Russia would not be bound by its strategic arms reduction obligations" if the United States withdrew from the Anti-Ballistic Missile Treaty. Col. Gen. Valery Manilov, a deputy chief of the general staff of the Russian military, warned that Russia was prepared to respond to a breakdown in the ABM Treaty

with "asymmetrical" systems that could undermine American advances in missile defense. "Our scientific, technological and military potentials are capable of offsetting the harm resulting from the disintegration of the system of disarmament agreements."¹⁶

Ivanov stated a similar position in a speech to the UN on April 25, a day after Secretary Albright had defended the US record on arms control and proliferation. He stated to representatives of more than 150 nations on the second day of four-week international conference on the NPT that Russia was prepared to make deep cuts in its nuclear warheads, but not if the United States plans to construct a missile defense system that would "destroy" the 1972 pact, the Antiballistic Missile Treaty. "The prevailing system of arms control agreements is a complex and quite fragile structure...Once one of its key elements has been weakened, the entire system is destabilized. The collapse of the ABM treaty would, therefore, undermine the entirety of disarmament agreements concluded over the last 30 years. (This prospect) affects national security interests of every state and of the international community as a whole."¹⁷

New US Views on a Possible Deal with Russia

What Ivanov did not address was the fact that the US and Russia had begun much more serious negotiations on these issues in January 2000. US and Russian delegations met in Geneva on January 19-21, 2000. John Holum, senior adviser for arms control and international security affairs at the State Department, headed the U.S. delegation. Yuri Kapralov, head of the Russian Foreign Ministry's arms control department, led the Russian delegation.

The US presented a series of documents relating to NMD to the Russian delegations, which were translated by Ministry of Foreign Affairs and then leaked to the *Bulletin* of Atomic Scientists in the US.¹⁸ The documents included an "NMD Protocol: Topics for Discussion; an "Annex on Verification: Topics for Discussion;" "Russia's Concerns," "Response to the Russian Proposal," "Unilateral Statement," "Protocol to the Treaty," and an "Annex to the Protocol."¹⁹

The US Argument that NMD Would Not Degrade the Russian Threat

The US documents attempted to assure Russia that even if the US and Russia agreed to

reduce their warheads to between 1,500 and 2,000, as proposed in Start III, the Russian nuclear force would be able to penetrate the American defensive shield. The documents also provide a unique insight into the Administration's calculation of what a near to mid-term NMD system could and could not do against the Russian threat:²⁰

"Russia now keeps its strategic arsenal on constant alert and apparently will do so even at START-III levels. Russian forces under START-III could make an annihilating counterattack even under conditions of a surprise disarming first strike by the USA in combination with a limited US NMD system.

As a result of this Russian response initiated from nuclear-powered ballistic missile submarines at sea, land-based mobile missiles, silo-based ICBM and bombers that would survive the first strike, a minimum of a few hundred warheads could be delivered. Moreover, Russian forces have sophisticated decoy systems and other defense penetration aids, and this means that it would not have to count on simply exhausting defensive resources to overcome them. Furthermore, the surviving Russian forces would be so large and sophisticated that they could carry out an assault to enhance the offensive, which no rogue state would be capable of.

Furthermore, it is highly unlikely that any enemy would ever contemplate a first strike, since it would have to assume that Russian ICBM's and submarine-launched ballistic missiles/nuclear-powered ballistic missile submarines in port would be launched after tactical warning, which would neutralize the effectiveness of the assault. In this case Russia's response to an assault would obviously be to send about a thousand warheads, together with two to three times more decoys, accompanied by other advanced defense penetration aids...

The planned American strategic nuclear forces deployed under the START-III ceilings would also be able to be on constant alert or on crisis alert to deliver many hundreds of warheads in response to any assailant.

Both the United States and the Russian Federation therefore have solid capabilities to respond to a strike from any assailant with a large number of retaliatory weapons.

Furthermore, the tremendous risks associated with initiating a nuclear war under any circumstances make these theoretical calculations largely irrelevant. Obviously, neither side could ever contemplate such an assault."

...The first phase of deployment will be limited to 100 interceptor missiles. Ultimately, when a second deployment position is added, there will be 200 or so interceptor missiles. This will be enough to knock out several dozen warheads accompanied by advanced defense penetration aids, but inadequate to counter a larger Russian counterstrike.

Deployment of a significant number of additional interceptor missiles and their silos would require major construction, which would take several years to complete, and this could easily be detected by national technical means of verification. In fact, our experience to date indicates that the speed with which the US could build interceptor missiles, not radars, is a key factor preventing rapid expansion. In any case, in view of the openness of budgetary processes in the US, this hypothetical increase in the number of interceptor missiles would be known several years before the expanded forces would first be deployed.

... In the long term, even a US NMD system with two deployment regions, as we are planning, would not permit the establishment of multi-layer defense. Moreover, a two-region system would enable us to maintain an effective single layer with exoatmospheric capability to intercept several dozen single-warhead

missiles accompanied by sophisticated defense penetration aids launched from North Korea or the Near East/Persian Gulf regions...

For more than 30 years the classic argument in favor of strategic stability and against the deployment of a large-scale strategic missile defense system has been based on concerns that one side might have the ability to make a surprise disarming first strike against the enemy and then deploy a broad strategic missile defense system to knock out the enemy's combat resources which had survived the first strike and were being launched against the assailant. We have clearly stated that the US missile defense system to be developed by the US Government is a very limited strategic missile defense system intended to protect against a threat from some rogue state, which may, at most, use a few dozen warheads accompanied by advanced defense penetration aids. We also proposed steps to ensure Russia's confidence that the US system is in fact limited and deployed within the bounds of the agreed-upon terms of the amended ABM treaty. This classic argument is, therefore, simply inapplicable to defense, where capabilities are just as limited as they would have been in connection with proposals on the US NMD system. Nor could the system be upgraded to alter this reality, except over the long term, which would create conditions for considerable advance warning.

...The Clinton administration is now considering a US limited NMD system to counter missile threats by rogue states. It is intended to intercept long-range missiles launched from North Korea or from the Near East/Persian Gulf region midway toward the United States.

Consequently, advanced early warning radars, as well as ABM tracking radars associated with the proposed system should detect approaching warheads and track them in flight in space above the upper levels of the Northern Hemisphere, as shown on the attached diagrams.

As a result, the architecture of our US NMD requires that the existing early warning system radars around Clear, Alaska; Thule, Greenland; Fylingdales, UK; Beale AFB in California; and Otis AFB in Massachusetts be upgraded to provide the necessary warning and tracking of missiles from rogue states.

These same radars could, of course, detect and track any long-range missiles headed toward the United States that might have been launched from any country in the Northern Hemisphere. It is the case that the system has to track the approach route for minimum-energy attack trajectories of ballistic missiles launched from North Korea and the Persian Gulf/Near East. This is not a sign of our intent to focus the US limited NMD system on possible attacks by Russia and China.

...The initial level of defense we are striving for would have only one SHF ABM radar deployed in Alaska. Even a US national missile defense system with a large number of SHF radars, which we would like to deploy in the long term, would not be able to deal with an arsenal of the size and sophistication that Russia would likely deploy under START-III.

...In accordance with START-3 levels proposed for the USA and Russia, Russian ICBM's and submarine-launched ballistic missiles clearly would carry more than 1,000 warheads accompanied by twice that many decoys and defense penetration aids. Authoritative written Russian sources claim that the Russian Government understands that the capabilities of its defense penetration aids are extremely high. These same written sources, supplemented by the statements of senior Russian military personnel and defense industry representatives, clearly present the idea that the Russian Government anticipates that its defense penetration aids could easily overcome the US NMD system. The limited NMD system that the USA is developing relies on hit-to-kill technology, in which the interceptor missile destroys the warhead on impact with it.

This approach clearly differs from the use of the interceptor missiles with nuclear warheads in the Russian system deployed around Moscow, which could destroy several warheads with one interceptor missile.

In the American hit-to-kill system at least one interceptor missile has to be launched against each warhead and “authentic object.” By this we mean a decoy or its likeness, which are frequently accompanied by aids to overcome defense (active and passive jamming, etc.) which cannot be distinguished from warheads. To achieve high certainty that no warhead is overcoming the defense system, one has to launch a multitude of interceptor missiles against each warhead or authentic decoy combined with additional defense penetration aids.

In view of the operational realities of the defense of a large area, a limited strategic missile defense system consisting of 100 non-nuclear interceptor missiles will be able in the best case to destroy 20-25 warheads on impact with comparatively primitive defense penetration aids. Two hundred interceptor missiles could destroy 40-50 warheads. We do not think that reducing Russia’s ability to counterattack by 20-50 warheads would substantially affect Russia’s strategic deterrence, even at START-III levels.

...The bottom line is clear: the strategic missile defense system for the limited US NMD system which we are calling for could protect only against a few dozen ICBM warheads accompanied by sophisticated defense penetration aids.

According to press reports, the US followed the presentation of this document by briefing the Russian foreign minister and other Russian officials in depth at the Pentagon during their visit to Washington in April 2000.²¹

Suggested US Protocols to Revise the ABM Treaty

The US also presented a new set of draft protocols to revise the ABM Treaty in ways that would permit both the US and Russia to deploy a limited NMD system of 100 launch points and interceptors over a 150 kilometer radius at any place on their territory. It also permitted both nations to enable strategic ballistic missile attack warning radars in existence on December 1, 1999 to perform ABM radar functions to support the limited territorial missile defense system and to deploy one additional ABM radar each at any site within their national territory.

The Clinton Administration’s proposals did not directly amend the text of the treaty, but rather suggested revising it by adding two “protocols” to allow the first phase of a missile defense and provide extensive measures for verification of the system’s missiles and radars. It was felt that this was easier than trying to revise the wording of the treaty line by line and allowed the Russians to declare that the treaty itself remained unchanged.²²

The protocol also only covered the first phase of the American missile defense system intended to counter an attack from North Korea. The administration stopped short of asking the

Russians to approve immediately the second phase of the system, which would be based at a still undecided location to counter threats from the Middle East and Persian Gulf. However, an article in the protocol explicitly allows either side to reopen negotiations as soon as March 1, 2001 “to take into account further changes in the strategic situation.”

The full text of the protocol on the ABM Treaty read as follows:²³

PROTOCOL TO THE TREATY BETWEEN THE UNION OF SOVIET SOCIALIST REPUBLICS AND THE UNITED STATES OF AMERICA ON THE LIMITATION OF ANTI-BALLISTIC MISSILE SYSTEMS[1]

-----, the Parties to the Treaty between the Union of Soviet Socialist Republics and the United States of America on the Limitation of Anti-ballistic Missile Systems, signed May 26, 1972, with amendments introduced by the Protocol of July 3, 1974, hereinafter referred to as the Treaty,

Recognizing the importance of the Treaty for strategic stability,

Noting the commitment of the Parties to the Treaty to consider proposals to increase the viability of the Treaty as necessary,

Considering changes in the strategic situation that have occurred as a result of the proliferation among states of weapons of mass destruction and long-range ballistic missiles which threaten international peace and security,

Recognizing the necessity of protecting their citizens and, consequently, their territories from the threat that these states will use long-range ballistic missiles and recognizing that this threat is increasing and that the defensive capabilities necessary to protect against this threat must also increase, from which it follows that the Treaty must be updated as necessary to permit the creation of the necessary defense,

Intending to adapt the Treaty to these changes in the strategic situation,

Proceeding from the understanding that the deployment of ABM systems for limited defense of their respective national territories will neither threaten nor allow a threat to the strategic deterrent forces of either Party,

Undertaking to carry out this deployment on the basis of cooperation and transparency, and

Reaffirming their commitment to continue consultations aimed at strengthening and improving the efficacy of the Treaty,

Have agreed as follows:

Article I

The United States of America and the Russian Federation shall be permitted to deploy a missile defense system for purposes of limited defense of their national territory against limited long-range ballistic missile strikes as an alternative to deploying the ABM systems permitted by Articles I and III of the Treaty.

Article II

The limited territorial missile defense system permitted by Article I hereof shall be subject to the following provisions:

- a) With regard to the provisions of Article I of the Treaty, the United States and the Russian Federation may each deploy no more than 100 ABM launchers and no more than 100 antimissile missiles at launching positions within one deployment region within their national territory. The radius of this limited territorial defense deployment region may not exceed 150 km;
- b) With regard to the provisions of Article VI, subparagraph a and Article IX of the Treaty, the United States and the Russian Federation shall be permitted to enable strategic ballistic missile attack warning radars in existence on December 1, 1999 to perform ABM radar functions to support the limited territorial missile defense system deployed in accordance herewith;
- c) The United States and the Russian Federation may deploy one additional ABM radar each at any site within their national territory.

Article III

If the United States or the Russian Federation decides to deploy a limited territorial missile defense system pursuant to the provisions hereof as an alternative to deploying the missile defense permitted by Articles I and III of the Treaty,

- a) ABM launchers deployed in accordance with Article III of the Treaty that are not operational, under construction or undergoing testing, overhaul, repair, or refurbishment on December 1, 1999 will not have to be dismantled or destroyed. These launchers shall not be counted in the number provided for by Article II, subparagraph a hereof;
- b) ABM launchers deployed pursuant to Article III of the Treaty that are operational, under construction or undergoing testing, major overhaul, repair, or refurbishment as of December 1, 1999 shall be dismantled or destroyed so that there shall be no more than 100 ABM launchers deployed at any time;
- c) ABM radars deployed pursuant to Article III of the Treaty on December 1, 1999 will not have to be dismantled or destroyed.

Article IV

To increase confidence in compliance and ensure compliance with the Treaty and with this Protocol, the Parties shall carry out the provisions of the Annex, which shall be an integral part hereof.

Article V

Except for changes specified hereby, all existing rights and duties of the Parties to the Treaty shall remain in force and shall be applicable to the limited national defense system.

Article VI

At the request of one of the Parties, but no sooner than March 1, 2001, the Parties shall commence good

faith negotiations to review this Protocol to take into account further changes in the strategic situation caused by the proliferation of weapons of mass destruction and long-range ballistic missiles which therefore might require deployment of more effective limited national territorial defense systems necessary to counter these long-range missiles.

Article VII This Protocol shall be subject to ratification in accordance with the constitutional procedures of each Party and shall enter into force on the day of exchange of the Protocol ratification instruments.

ANNEX TO THE PROTOCOL TO THE TREATY BETWEEN THE UNION OF SOVIET SOCIALIST REPUBLICS AND THE UNITED STATES OF AMERICA ON THE LIMITATION OF ANTI-BALLISTIC MISSILE SYSTEMS

In accordance with the provisions of the Protocol to the Treaty between the Union of Soviet Socialist Republics and the United States of America on the Limitation of Anti-ballistic Missile Systems signed -----, 2000, hereinafter Protocol, the Parties hereby agree on the following steps to build confidence in compliance and ensure compliance with the provisions of the Treaty between the Union of Soviet Socialist Republics and the United States of America on the Limitation of Anti-ballistic Missile Systems, hereinafter Treaty, and of the Protocol.

Section I

1. In accordance herewith, the Parties shall carry out an initial exchange of information and notifications no later than 90 days after the Protocol enters into force. This exchange shall reflect data on the effective date of the Protocol. Unless otherwise agreed, this information shall be updated annually on January 1 of each year and shall be provided no later than April 1 of that year. The annual update of information shall not be required to report data that remained unchanged since the previous information exchange. This information exchange shall not be required until the first installation by the United States of an anti-missile missile on an ABM launcher within an ABM system deployment region.

2. Each Party shall submit the following information on its missile defense system:

a) anti-missile missiles:

i) designation/name; type of warhead (nuclear; high-explosive fragmentation, neutron); the number of stages; the length and maximum diameter of the anti-missile missile, which by its configuration is intended both for installation on an ABM launcher and for storage; the type of fuel (solid or liquid); the length and maximum diameter of the anti-missile missile outside its launch container;

ii) the number and location, with regard to each facility, of the deployed anti-missile missiles (i.e., anti-missile missiles installed on ABM launchers within an ABM system deployment region) and non-deployed anti-missile missiles;

iii) photographs of each type of anti-missile missile that, by its configuration, is intended both for installation on an ABM launcher and for storage; each type of anti-missile missile outside its launch container; a silo loader indicated in paragraph 2, subparagraph d of this section;

b) ABM launchers:

i) designation/name; diameter;

ii) number and geographic coordinates of deployed ABM launchers;

c) ABM radars:²⁴

i) designation/name; frequency range (using designations accepted by the International Electrical Communications Union);

ii) the number and geographic coordinates of each ABM radar;

d) the number of silo loaders in the ABM deployment region and intended for installing anti-missile missiles in ABM launchers;

e) the general concept of the operation of the Party's missile defense system (in a form of the Party's choice);

f) the status of the Party's plans and programs with respect to its missile defense system (in a form of the Party's choice).

3. Each Party shall provide the following information with respect to ABM Test Ranges for testing its missile defense system;

a) the name and geographic coordinates of all such ABM test ranges;

b) the number and geographic coordinates of ABM launchers, ABM radars, anti-missile missile maintenance facilities and anti-missile missile storage facilities in the ABM test range.

4. Each Party shall report the name and geographic coordinates of each strategic ballistic missile attack warning radar.

5. Each Party shall provide the following information on the following facilities located outside its ABM system deployment area:

a) the name and geographic coordinates of all final assembly sites for anti-missile missiles, anti-missile missile maintenance facilities, and anti-missile missile storage facilities;

b) with respect to each facility subject to inspection in accordance with Section III herein, a diagram of the facility shall be provided to the other Parties in accordance with paragraph 1 herein or no later than 30 days after initial notification of a facility at which non-deployed anti-missile missiles are located in accordance with Section II, paragraph 7 hereof.

6. Each Party shall provide the following information on the region where its own ABM will be located:

a) a diagram of the entire deployment region showing the location of each ABM launcher, each anti-missile missile maintenance facility, and each anti-missile missile storage facility;

b) with respect to an ABM deployment region established after the Protocol enters into force, the Party shall provide a diagram of that region no later than 30 days prior to the installation of the first anti-missile missile on an ABM launcher within the ABM system deployment region. This diagram shall show the actual or planned location of each ABM launcher, each anti-missile missile maintenance facility, and each anti-missile missile storage facility.

Section II

In accordance with Section I, paragraph 1 of this Annex, each Party shall provide the following notifications of its ABM system. These notifications shall be provided within the bounds of the initial exchange of information and notifications. In the future these notifications will be provided in accordance with the provisions of this Section II.

The provision of these notifications is not required before the United States has installed an anti-missile missile on an ABM launcher within the ABM system deployment region.

1. Notifications provided under the initial information exchange as specified in Section I, paragraph 1 or no later than within 90 days of the date of commencement of:

a) any construction or assembly work which is not earthmoving (soil excavation) associated with the construction of anti-missile missiles; or

b) any construction or assembly work associated with the construction of antennae (arrays), structures associated with an ABM radar antenna or antenna pedestal supports that are not parts of buildings pertaining to ABM radars.

2. Notifications to be provided within no less than 90 days of the first installation of an anti-missile missile on an ABM launcher within the ABM system deployment region.

3. Notifications to be provided within no less than 10 days of the launch of an anti-missile missile. These notifications shall indicate the designation/name of the anti-missile missile and the geographic coordinates of the anti-missile missile launch site.

4. Notifications to be provided within no less than ----- days, of the maiden launch of each new type (to be defined by the Party providing the notification) of anti-missile missile.

5. Notifications to be provided no later than 48 hours after completion thereof, of the transit of an anti-missile missile between the ABM system deployment region, anti-missile missile maintenance facilities which are not within the ABM system deployment region, anti-missile missile storage facilities which are not within the ABM system deployment region, and anti-missile missile final assembly facilities.

6. Notifications to be provided no later than 5 days after completion thereof, of the dismantling or elimination of an anti-missile missile (including elimination as the result of an accident or elimination by launch).

7. Notifications of a facility not previously indicated in accordance with Section I, paragraph 5, subparagraph a and paragraph 6, subparagraph a to be provided no less than 30 days before the first arrival of an anti-missile missile at that facility.

Section III

1. Each Party shall have the right to perform the following inspection activity in accordance with procedures subject to the approval of the Parties. This inspection activity shall not be performed prior to the initial installation by the United States of an anti-missile missile on an ABM launcher within the ABM system deployment region:

a) commencing 30 days after the date of the initial installation of an anti-missile missile on an ABM launcher within the ABM system deployment region, but no less than 90 days after an agreement is reached on the specific procedures for performing this inspection, each Party shall have the right to perform

inspections with respect to raw data to confirm the accuracy of the information submitted on the number and location of non-deployed anti-missile missiles and ABM launchers. These inspections shall be performed in the ABM system deployment region, including at anti-missile missile maintenance facilities and at anti-missile missile storage facilities within this ABM system deployment region;

b) commencing 60 days after the date of the initial installation of an anti-missile missile on an ABM launcher within the ABM system deployment region, but no less than 90 days after an agreement is reached on the specific procedures for performing this inspection, each Party shall have the right to perform a total of ---- short-notice site inspections in each treaty year to confirm the accuracy of the information provided on the numbers and locations of non-deployed anti-missile missiles and ABM launchers. These inspections shall be performed in the ABM system deployment region, including at anti-missile missile maintenance facilities and anti-missile missile storage facilities at the same locations.

2. If either Party has a concern with respect to compliance with the provisions of this Protocol, that Party may express this concern under the framework of the Standing Consultative Commission and request that specific measures be taken to alleviate this concern. These measures may include, but not be limited to, a visit with special right of access to a facility or place where, in the opinion of the requesting Party, the activity that raised the concern occurred. The receiving Party shall provide a response no later than 7 days after receipt of such request. The receiving Party's response shall include:

a) consent or refusal to take the proposed specific measure to alleviate the concern, including, if a visit with special access right is proposed, the date, place, and procedure for such visit; or

b) a proposal on a specific alternative measure to alleviate the concern, including, if a visit with special access right is proposed, the date, place, and procedures for such visit.

3. Each Party shall, in accordance with procedures subject to an agreement between the Parties, give demonstrations of each type (as defined by the Party giving the demonstration) of anti-missile missile and ABM launcher to be used in its ABM system. The goal of these demonstrations is to provide the opportunity to confirm the accuracy of dimensional information contained in the notifications to be provided in accordance with the provisions of Section 1, paragraph 2, subparagraph a and of paragraph 2, subparagraph b of this Annex:

a) with regard to anti-missile missiles and ABM launchers included in the initial exchange of information and notifications in accordance with Section I, paragraph 1 of this Annex, the time of these demonstrations shall be subject to agreement by the Parties;

b) with regard to anti-missile missiles and ABM launchers not included in the initial exchange of information and notifications in accordance with Section I, paragraph 1 of this Annex, these demonstrations shall be given within a 30-day period commencing:

i) with respect to anti-missile missiles, at a time and place subject to agreement by the Parties;

ii) with respect to ABM launchers, on the date of the initial installation of an anti-missile missile in such ABM launcher; [sic]

5. [sic] For the efficient performance of their functions in fulfillment of the provisions of this Annex, but not in their personal interest, inspectors shall be granted the same privileges and immunities enjoyed by diplomatic agents in accordance with the Vienna Conventions on Diplomatic Relations of April 18, 1961.

Section IV

1. Either Party may, on a voluntary basis, organize for the other Party a demonstration of its system or the components thereof or other activities pertaining to missile defense; an observation of the launchings of its anti-missile missiles; or a visit to facilities related to missile defense and the area where its missile defense system is located. In each specific case, the participating Parties shall agree in advance on the goal of these demonstrations, observations and visits and on the steps to accomplish them.

2. Each Party may, on a voluntary basis, provide any other information or any other notifications not mentioned in the other provisions of this Annex. In addition, either Party may, on a voluntary basis, provide information in accordance with Sections I and II hereof before this information is required to be provided. This information and these notifications shall be provided on the matters, to the extent, and within the timeframes that each Party itself shall determine.

Section V

1. Each Party shall use the channels of the Nuclear Risk Reduction Centers or equivalent intergovernmental communications channels to provide and receive notifications and to exchange information in accordance with the provisions of this Annex.

2. Each Party undertakes not to disclose information provided in accordance herewith except with the express consent of the Party that provided that information.

Section VI

Upon the entry into force of the Protocol, the Parties undertake to propose and agree upon, within the framework of the Standing Consultative Commission, additional administrative and technical procedures that may be necessary to carry out the provisions of this Annex. These administrative and technical procedures shall be devised as quickly as possible.

It is also important to note that even if Russian had approved these agreements, such approval would be only part of the story. Even if the Russians approved the protocols, the US Senate would still have to approve them before they took effect. More than 25 Republican senators have already said they would not accept Mr. Clinton's proposed changes, on the grounds that they would limit a NMD system too much.

US Proposals for Transparency and Inspection

The draft protocols gave Russia the right to inspect virtually every aspect of a US NMD deployment, as well as required the US to give Russia warning of virtually any deployment activity.²⁵

The US proposed an approach based on the following four fundamental elements:

- Information exchange with annual updating sufficient to give a comprehensive picture of key elements in

the system (among other things, the number and location of ABM interceptor missiles, both deployed and non-deployed);

- Notification of key events, in preparation and past, pertaining to the ABM system to assist in observation of compliance with the provisions of the Protocol;
- Inspections to verify raw data and short-notice inspections to ensure safeguards of the accuracy attained within the bounds of the exchange of information and notifications to be provided by each Party;
- A mechanism for resolving matters of concern related to compliance, such as visits with special access rights within the bounds of the START. Using this mechanism, for example, one Party can request a visit to facilities inaccessible under other circumstances to verify the presence or absence of ABM interceptor missiles.

The protocol discussing the inspection regime called for an exceptional degree of transparency and read as follows:

These measures are aimed at increasing the transparency and predictability of our respective actions related to the ABM Treaty, as well as confidence that any system intended to provide limited national defense will not jeopardize the strategic deterrence of the other Party. By mutual agreement, the information exchanges, notifications and inspections specified in the Annex will not be required until the United States' first installation of an ABM interceptor at an ABM launcher within the ABM system deployment region. As a result, the Russian Federation will not unilaterally bear the burden of providing the proposed notifications and verification measures.

...The United States, for example, is prepared to consider the matter of providing certain information and notifications on a voluntary basis, if necessary, even before its first installation of an ABM interceptor in an ABM launcher within the ABM system deployment region.

...The key provision on reporting in the Protocol we propose remains, of course, a quantitative maximum number of ABM launchers (just as in Articles III and IV of the 1972 ABM Treaty). The US approach requires declaring the total number of ABM interceptor missiles transported from their respective final assembly facilities. With respect to ABM deployment regions and other facilities subject to inspection, launch position diagrams are to be provided. Demonstrations and information exchanges will be carried out with respect to all "types" of ABM interceptor missiles and ABM launchers.

...The US approach to developing the control regime for the revised ABM Treaty calls for several notifications of measures in progress and completed. Notifications will, for example, be provided on flight tests within the bounds of national missile defense, on the first installation of an ABM interceptor missile on an ABM launcher in the ABM system deployment region, on movement between facilities, dismantling or elimination, and construction of new ABM-related facilities.

The US approach includes certain types of onsite inspections, both to verify raw data and a quota for short-notice inspections to be performed to confirm the accuracy of the information provided on ABM interceptor and ABM launcher numbers and locations within the ABM system deployment region. The US approach assumes that after the first US ABM interceptor missile is installed on an ABM launcher in the ABM system deployment region, there will be demonstrations of each type of ABM launcher and ABM interceptor missile.

Other steps to increase transparency will include voluntary demonstrations, observation, and visits using

approved procedures. If there arises a sufficiently serious, ambiguous situation or matter related to compliance with the Protocol, either side may decide within the bounds of the Annex to request that the mechanism that we took from the control regime under the START-I Treaty be used, i.e., visits with special access rights...

Creating a Global Monitoring System (GMS)

The same press reports indicated that the US responded to Russia proposals to create a Global Monitoring System (GMS) and a coordinated Russian-American approach to countering the worldwide proliferation of missiles and missile technology. The US responded to the Russian proposals to create a Global Monitoring System (GMS) as follows:

The GMS proposal apparently has four basic elements:

The first is global monitoring of missile launches, which encompasses notification, exchange of early warning information, and the establishment of an international center, is a continuation of our joint effort on the initiative on missile launch information exchange put forth by our Presidents in September 1998.

Wide access to information contained in launch notifications and universal launch monitoring would be an important tool in building trust.

We agree that the principle of broad international participation is important to the success of launch notifications, and we can support the voluntary participation of any state provided that this participation does not legitimize the missile programs of rogue states.

Broad international participation in early warning or early detection information exchange or the establishment of an international monitoring center for this purpose will go beyond the framework of our concept in this area, but we are ready to study this idea in the future.

It is important that we gradually move toward bilateral agreements and understandings before we expand our efforts to involve others.

We are completely convinced that the first step in establishing any international system should be the signing of the agreements on exchanging missile launch information and notification of planned launches which we have been working on together. We hope that these discussions can be renewed in early February.

As soon as we reach an understanding on the agreement on notification of scheduled launches, we will be ready to discuss a diplomatic strategy to achieve broad international participation in this effort.

Previously we also informed you that we are ready to discuss the possibility of including, where necessary and reasonable, individual members of the "Big Eight" in the Joint Warning Center as a first step in carrying out President Yeltsin's initiative set forth at the Big Eight meeting in Cologne.

We have many questions about the second proposed element of the GMS, namely guarantees of the security of any state participating in the GMS.

Safeguarding the security of states that halt their missile programs is unfeasible.

We must, however, better understand what Russia thinks about this before further continuing discussion of this element.

The third element of the GMS pertains to incentives, including aid to national space programs for states that turn away from possessing missile systems.

We agree that in certain cases incentives can play an important role as part of an overall approach to a specific country in countering missile technology proliferation.

In our approaches to North Korea with regard to both issues of the proliferation of nuclear and missile technologies, we have found that positive incentives can be effective, at least in deterring proliferation activities.

One-size-fits-all approaches to incentives would, however, be counterproductive in countering missile technology proliferation, and it is not clear that this can be done on a multilateral basis (in contrast to a bilateral basis)--we would welcome your assessments.

We are especially concerned about offering aid within the framework of national space programs. It is difficult to "aid" space efforts, especially a space launch, without promoting the proliferation of missile technologies. These technologies overlap much more than do technologies for the development of nuclear reactors for peaceful civilian use and those for a nuclear weapons development program.

While we are not ready to provide aid to national programs for the development of booster rockets, other space-related incentives might be considered, such as providing rocket-launching services at favorable prices for key countries...

And finally, as regards the consultation mechanism, we are in favor of holding regular consultations among countries involved in this matter.

We do not believe that broad multilateral discussions will be productive at this time. These issues should be discussed within the framework of the MTCR [Missile Technology Control Regime] (and groups of MTCR partners) before they are moved outside this framework.

Discussions within the framework of MTCR partners, the Big Eight, and Russian-American bilateral discussions are possible ways to study these ideas in depth. We would not want GMS proposals to diminish the effectiveness of existing forums.

Other Proposals for US and Russian Cooperation

The US responded to other Russian proposals to create a coordinated Russian-American approach to countering the worldwide proliferation of missiles and missile technology as follows:

Your additional proposals on cooperation were based on ideas that the USA put forth at our discussions of the ABM Treaty, for example, exchanging information on missile system proliferation, joint actions toward computer modeling and renewing and continuing our TMD [theater missile defense] testing programs.

We welcome your interest in these areas of possible cooperation that we proposed during our discussion of

the ABM Treaty. We will be ready to study your ideas in detail in future meetings.

It is not clear from Russia's statement whether you are proposing that additional aspects of cooperation will be effected on a bilateral basis or with multilateral involvement.

From our side, we would like to study whether multilateral participation is logical in each individual case. We previously stated our desire to discuss with Russia the possibility of including individual Big Eight countries in the TMD testing program as a first step in implementing the initiative put forth by President Yeltsin in Cologne.

There is one Russian proposal pertaining to additional cooperation that raises some concern, namely the proposal to carry out confidence-building measures agreed to in the context of demarcation agreements on ABM's and theater ABM's on a bilateral basis. We do not believe that this will be proper.

Approach to Cooperation

We fully concur with point 5 of your draft statement that cooperation in countering missile and missile technology proliferation "should be long term and established in phases."

In general we believe that we should build a firm foundation for cooperation, first on a bilateral basis and later by involving Big Eight states and other states participating in the MTCR as necessary.

We are convinced that steps toward starting negotiations on an international agreement on GMS at a meeting in Moscow at the beginning of this year, as you suggest, will be premature.

This meeting is not only premature because of the many bilateral issues requiring our analysis, but also because both our sides agreed at the plenary meeting on the MTCR in Noordwijk in October of last year to continue discussion of approaches to the global threat of missile technology proliferation at a special meeting of MTCR partners in Paris in March.

To be honest, we were disappointed by the fact that Russia has moved away from the understanding on MTCR and invited non-partners to the conference it has proposed.

The Russian Reaction to the New US Proposals

Nevertheless, the US did not succeed in obtaining a favorable response from Russia. At a news conference after three days of talks that centered on national missile defense, the Russian foreign minister, Igor S. Ivanov, and Secretary of State Madeleine K. Albright did nothing more than say that discussions would continue when Mr. Clinton and Mr. Putin were to meet in Moscow in June. Mr. Ivanov said that "considerable differences" remained, and repeated that Russia believed the ABM treaty should "remain a cornerstone of strategic stability." Dr. Albright responded by saying that the administration, too, wanted to preserve the treaty but also wanted to adapt it to "21st-century needs," a reference to the missile threats that intelligence experts have

warned are fast approaching.

Foreign Minister Igor Ivanov also stated that Russia continued to strongly object to the proposed treaty changes and that it was prepared to counter any expansion of an anti-missile defense system in the United States, "No doubt, this is a very bad scenario, but we are ready for it. Russia has the money and capability for that, and the Americans know it." ²⁶ Ivanov did not spell out exactly how Moscow would respond to the deployment of an expanded U.S. missile defense, but said it would be "not by political, but other means," implying the deployment of either additional missile or improved countermeasures.

It was clear that these differences could have a significant impact on arms control because the US Congress and Russian Duma have passed resolutions that link NMD to START II, and to reductions that would reduce each side's strategic arsenal from 6,000 warheads to between 3,000 and 3,500 warheads by 2007. In 1996 when the Duma was delaying ratification, the US Congress adopted a law forbidding the United States to reduce its arsenal below the 6,000 warheads permitted under START I until the START II Treaty entered into force. The Duma's ratification of START II might normally lead Congress to reconsider this legislation, but the Duma's ratification of START II is conditional upon a satisfactory resolution of the ABM issue. As a result, START II cannot enter into force, and the problem is made worse by Russia's focus on using the CTBT as a means of embarrassing the US, and Senator Helms view that no major decisions should take place on arms control until a new Administration comes to office.

The Clinton-Putin June 2000 Summit and Russian ABM Proposals

These negotiating issues grew steadily more complex as Russia presented its own view of missile defense. In early June 2000, President Clinton and Putin met for their first summit in Moscow. In the days leading up to the summit Putin made a slight shift in Russian policy and did more to acknowledge the potential threat from missile proliferation. He also expressed Russia's willingness to cooperate with the US and Europe, although he made it clear that Russia still did not agree with changes to the ABM treaty.

In an interview with Tom Brokaw on June 1, 2000 Putin remarked:

There is a system of agreement that has been created in the area of anti-ballistic missiles. It works and it works effectively. And we believe that it shouldn't be destroyed. But we are in agreement that there are new threats arising. And we think we must react to that. We have a proposal to do it together. The point is that the defense of all territory means the defense of only the triad that only Russia has today, the nuclear triad. Outer space, the world's oceans, and the territory of our country. But if you are talking about threats that are directed at Russia or at the United States, specific territory today, there are countries that have that capability today that can only do that from their own land. They don't have nuclear submarines or that don't have planes with atomic weapons on board so we put up these umbrellas above potential areas of threat. We could jointly with this umbrella protect all of Europe. We have these possibilities both technically and politically. We would like to propose them and we would like to discuss that issue with President Clinton²⁷

Some progress was made during the summit. Agreements were signed on the joint disposal of 68 tons of weapons grade plutonium and the sharing of early warning systems, and both sides recognized the seriousness of the threat posed by proliferation, and the need to move forward in resolving their differences regarding the ABM Treaty.²⁸ However, no deal was reached on ABM and Putin continued to oppose any deployment of the US NMD system.²⁹

The Russian "Boost Phase Defense" Proposal

Russia also became active in promoting its own "boost phase defense" approach to missile defense which would rely on the interception of a missile in the period after launch. It has used this concept to oppose NMD, to try to preserve the present terms of the ABM Treaty, and to seek European and other support for the Russian position. The Russian program called for the use of undefined new approaches to boost phase intercepts. The plan had two key elements. The first was to create a system to defend US and Russian territory by shooting down missiles as they are launched. In the case of North Korea, this meant deploying anti-missile interceptors near the Korean border. The second element was to use theater missile systems of the kind permitted under the ABM Treaty to protect Europe, and presumably other regions in the Middle East and Asia which Russia did not want to address as part of a US-Russian agreement.³⁰

The intensity of Russias advocacy of such a system to the US and European community is illustrated by the following brief chronology:

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- June 5, 2000: Putin advocates collaborative “boost phase defense” system which would shoot down missiles soon after launch. Proposal opposite to NMD proposed by the US.
- June 9, 2000: Secretary Cohen and NATO officials meet with Russian Defense Minister Igor Sergeev in Brussels and are briefed on the Russian proposed joint “European nonstrategic defense” project. Cohen responds, “If that in fact is what Russia has in mind, then there’s a serious problem.” Cohen adds that Russian proposal does not “appear feasible or desirable for protecting up against the kind of threats that are emerging.”³¹
- June 12-13. Secretary Cohen visits Moscow to meet with Putin and Ivanov. Russian Defense Minister Igor Sergeev states that the US NMD proposal would trigger a new arms race, and calls for a different approach based on diplomacy: “We propose the creation of a political umbrella by joint efforts on the political front among the US, Russia, and other nations to fend off missile threats (through) mutual agreements and mutual obligations under tight control.”³²
- June 15: Putin speaks to business leaders in Berlin.³³ He portrays Russia as the emerging ally of Germany and the new Europe and the US as failing to respond to European concerns: “Our cooperation could take the form of building a nonstrategic missile defense system reliably covering all of Europe from the Atlantic to the Urals. We think this is all possible technologically and politically. All we need is the political will.” Putin appears to be referring to theater defense missiles like some form of the SA-10 or SA-13. He says that, “there is no risk of all-out war in Europe.” He says the US is leading the way to a “very dangerous arms race” and the NMD system would be a blow, especially in Europe.” He states the NMD system is “directed against Europe,” and that Russia, “would respond in an appropriate way.”

The US Reaction to the Russian Proposal

The Clinton Administration regarded Russia’s proposal as unacceptable. Like similar proposals by a number of strong US opponents to NMD, they meant rejecting any form of US-based NMD, and relying on the forward intercept of all launches in the boost phase. They also presented technical problems. The Russian system has little credibility in intercepting accidental or unauthorized launches in Russia or China. It also relies on technologies that are far less proven than the elements of the US NMD system, and requires either extensive strategic warning or the constant deployment of boost phase defense assets over a large portion of the globe.

The availability, cost, and effectiveness of any Russian system is unknown. Even in early 2001, senior Russian officials stated they had no guidance as to specifics, although such a system might involve some variant of the S-300 and S-400 surface-to-air and anti-tactical ballistic missile systems. If so, this would raise even more questions about range and the ability to cover wide areas in a threat country than sea or air based defenses.

US experts have proposed various forms of sea and air-based defenses to provide mobile

coverage of launch areas, and many of these ideas offer considerable technical promise. At the same time, there are as many technical uncertainties in developing and deploying boost phase defenses as there are in developing ground-based or spaced-based interceptors.. There are questions about the ability of any form of boost phase defense to target advanced missiles because of uncertainties regarding their speed and the inability to distinguish the cold body of the missile from the surrounding plume, and no one has yet advanced the outline of a credible proposal for actual deployment.

In any case, Russia seems to have proposed a “boost phase defense” more as a political tool to kill NMD than a credible defense proposal. In addition, the Russian proposal holds that it will be in compliance with the current ABM Treaty, meaning defensive missiles would be limited to a range of 2,200 miles, a distance too limited to provide defensive capabilities for the American homeland and much of Europe.³⁴

Secretary of Defense William Cohen described the Russian proposal, and the state of US and Russian negotiations, as follows in an interview on National Public Radio on July 7, 2000,

Q: If the U.S. were to go ahead with a national missile defense system, why shouldn't the Russians and other nuclear powers develop at least countermeasures to defeat such a system, if not their own national missile defense systems?

Secretary Cohen: First of all, the Russians have the only anti-ballistic missile system in the world today—one that's centered around Moscow. It is limited in area and scope, but nonetheless it's the only one in existence.

Secondly, I met with President Putin during my recent visit to Moscow and also during the course of my visit in Moscow the same Strategic Rocket Forces commander put a statement out in the Moscow news indicating there are at least five to eight nations that were presenting an emerging threat to use intercontinental ballistic missiles.

The third point I'd point out is this system, limited as it is, and we have taken pains to point this out in great detail to the Russians and others, would not in any way undercut the Russian strategic systems. They have many thousands of nuclear weapons now. Those will be reduced under the START agreements, but even so under the reductions, be they to 2,000 or 2,500 or indeed 1,500 which the Russians have proposed, they would still have more than enough to overwhelm any limited system that we would construct.

So there is no threat to the Russian system, and I think the argument being made now is not with merit. But that's something I think they clearly are trying to divide the Europeans and to divide the American people in the suggestions they're making.

Q: But if such a system would actually make the U.S. safer, why wouldn't a Chinese missile defense

system make China safer, or a French missile defense system make France safer? Why is it only the United States?

Secretary Cohen: Well it's not only the United States. As a matter of fact during my visit to Moscow and during President Clinton's visit to Moscow the issue was discussed or at least raised that perhaps they could work with NATO to have a theater missile defense system, and we have said we are eager to do that. We have at least five programs underway now as far as research and development to construct a theater missile defense system to protect our soldiers and our forces out in the field, so to speak.

We have agreed with the Russians that let's work together. If you have a system that we can share and work with, we're prepared to do that.

Secondly, they also suggested—not during the Summit, but prior to the Summit in a news broadcast—that they had a system that would help protect the Europeans and presumably the United States with a so-called boost phase intercept system. We have tried to get clarification on that, but I represented to President Putin and to my counterpart Marshal Sergeyev and others, that we are eager to explore that with the Russians as well. But so far it has been simply a “concept” without any substance that we can determine that they would be forthcoming with. But we are eager to see what kind of technology they are suggesting, that we could have a boost phase intercept that we could work on together. It would not be a substitute for our system, but certainly something we could work together on. But so far it has been mostly rhetoric and nothing behind it.

Russian Opposition to the US NMD System Continues to Accelerate and Russian Efforts in China and Europe

The Russian effort to block NMD did not, diminish in the period that followed, and was still strong when President Bush took office in January 2001.. General Leonid Ivashov, the head of a department within the Ministry of Defense stated on June 29, 2000 that, “When estimating the threat of missile strikes, the Americans give priority to...technological capability of this state or another to build missiles...meanwhile there is a complete absence of evaluation of the motivation...”³⁵

President Putin met with Chinese President Jiang Zemin on July 5, 2000 and stated that any US deployment of NMD, “will signify the undermining of the global balance.” The two heads of state then issued a statement in which they agreed that the ABM Treaty should not be altered. Putin said at a news conference following the meeting that Russia would consider it highly significant if Washington proceeds with the project despite the Russian legislature's recent ratification of the START II arms reduction treaty and his own suggestion that Russia and the United States create a joint missile defense system. If despite “decisive support by China and other states... decisions are taken nevertheless aimed at disruption of the 1972 treaty, this will

signify the undermining of the world balance.” The same day, Gen. Vladimir Yakovlev, head of Russia’s strategic rocket forces, said that Russia might respond by increasing the number of warheads on its Topol-M missile, or by building mid-range ballistic missiles – an obvious attempt to put pressure on Europe.³⁶

On July 7, 2000, the day after the failure of a key US missile test, Russian generals stated that the failure of a missile interceptor test proved that the national missile defense proposed by the United States is unworkable. General Vladimir Yakovlev, commander of Russia’s Strategic Rocket Forces, stated that, “In its present technical design, the tested national missile defense will not be able to secure protection of US territory, and attempts to deploy such a system will be an empty waste of money.” Colonel Genreal Leonid Ivashov, chief of the Defense Ministry’s department of international cooperation, also stated that the failure showed that such defenses were unworkable. “Both Russian and American professionals in the anti-ballistic missile sphere are perfectly aware that it is impossible to create a system of absolute protection...Russia will always be able to defeat any US missile-defense system...The only question is whether it is worth investing such significant amounts of money in this scheme when it could be resolved by political means.” General Valery Manilov, deputy head of the army general staff, stated that the US NMD program is “politically dangerous and strategically wrong. There will always be the possibility of creating more perfect offensive systems and this can pose a new threat.”³⁷

On July 17 and 18, 2000, Chinese President Jiang Zemin and Russian President Vladimir Putin held closed-door talks and then issued a joint attack on US plans to build an anti-missile system.³⁸

The 1972 Treaty on the Limitation of Anti-Ballistic Missile Systems (hereinafter referred to as the ABM Treaty) remains the cornerstone of global strategic stability and international security, and constitutes the basis for a framework of the key international agreements designed to reduce and limit offensive strategic weapons and to prevent the proliferation of weapons of mass destruction. The maintenance of and strict compliance with the ABM Treaty is thus of paramount importance.

With the above view, the US program to establish national missile defense, a system prohibited under the ABM Treaty, has aroused grave concern. China and Russia hold that this program is, in essence, aimed at seeking unilateral military and security superiority. Such a program, if implemented, will give rise to most serious negative consequences on the security of not only Russia, China and other countries, but the United States itself and global strategic stability as well. In this context, China and Russia have registered their

unequivocal opposition to the above program.

To undermine the ABM Treaty will trigger off another round of arms race and subsequently reverse the positive trend emerged in world politics after the end of the Cold War. This will undoubtedly not be in the fundamental interest of any country in the world. The country which press for amending this fundamental treaty on the disarmament front will have to bear the full responsibility for undermining international stability and security, and for all the consequences that may arise therefrom.

The assessment of the current international reality has demonstrated that it is totally untenable to press for amending the ABM Treaty on the pretext of so-called missile threats from some countries. The so-called "amendment" proposal by the relevant country is, in effect, aimed at covering its attempt to violate the provisions of the ABM treaty. To amend the text of the ABM Treaty is tantamount to an act of undermining the ABM Treaty and will inevitably bring about a series of negative consequences. Under the current strategic situation, it is of great practical significance to preserve the integrity and effectiveness of the ABM Treaty.

In meeting the new challenges of international security, maintaining world peace and protecting the legitimate security interests of all countries, the correct approach is, instead of scrapping the ABM Treaty, to promote the establishment of a new, just and equitable international political order, do away with the practice of power politics and the abuse of force in international affairs and further strengthen regional and international security. In the meantime, it is essential that Russia and the United States continue and deepen their process of reducing offensive strategic weapons on the basis of strict compliance with the ABM Treaty, and engage other nuclear weapon states in such a process in due course in the future. It is imperative that international efforts be intensified to prevent the proliferation of weapons of mass destruction and their delivery vehicles through political, legal and diplomatic means, to explore the possibility of gradually working out a global control system in prevention of the proliferation of missiles and related technologies, and to conduct extensive and non-discriminatory dialogue and cooperation in this field.

One of the five documents they signed stated that, "The nature of the [American missile defense] plan is to seek unilateral military and security advantages...Implementing this plan will have the most grave adverse consequences not only for the security of Russia, China and other countries, but also for the security of the United States and global strategic stability...Therefore China and Russia are firmly opposed to such a system." The Russian and Chinese leader called upon the US to continue to adhere to Anti-Ballistic Missile Treaty and warned that altering the treaty "will trigger an arms race and lead to an about-face in the positive trend that appeared in world politics after the end of the Cold War." They also stated that, "the pretext of a missile threat is totally unjustified."³⁹

Impact on President Clinton's Decision to Delay Deployment

It was hardly a coincidence that Putin timed this statement to be issued only days before he attended the G8 meeting in Okinawa, Japan. Putin continued with the theme that NMD posed an

unacceptable threat to arms control throughout the summer of 2000. Russia's resistance to the deployment of NMD, and the fears it would present major problems for arms control were certainly one of the factor that led President Clinton's to delay a deployment decision on September 1, 2000. The White House statement announcing the delay stated that,⁴⁰

The development of our NMD is part of the Administration's comprehensive national security strategy to prevent potential adversaries from threatening the United States with such weapons and acquiring the weapons in the first place.

Arms control agreements with Russia are an important part of this strategy because they ensure stability and predictability between the United States and Russia, promote the dismantling of nuclear weapons, and help complete the transition from confrontation to cooperation with Russia. The Anti-Ballistic Missile (ABM) Treaty of 1972 limits anti-missile defenses according to a simple principle: neither side should deploy defenses that would undermine the other's nuclear deterrent, and thus tempt the other to strike first in a crisis or take countermeasures that would make both our countries less secure.

This announcement will provide additional time to pursue with Russia the goal of adapting the ABM treaty to permit the deployment of a limited NMD that would not undermine strategic stability. The United States will also continue to consult with Allies and continue the dialogue with China and other states.

President Clinton provided further details on this aspect of his decision during his speech on the subject at Georgetown University the same day, and he clearly tied his decision to broaden concerns regarding arms control and strategic stability,⁴¹

None of these elements of our national security strategy can be pursued in isolation. Each is important and we have made progress in each area. For example, Russia and the United States already have destroyed about 25,000 nuclear weapons in the last decade. And we have agreed that in a Start III treaty we will go 80 percent below the levels of a decade ago.

We extended the nuclear nonproliferation treaty indefinitely. We were the very first nation to sign the comprehensive test ban treaty, an idea first embraced by President Kennedy and Eisenhower. Sixty nations now have ratified the test ban treaty. I believe the United States Senate made a serious error in failing to ratify it last year and I hope it will do so next year.

We also negotiated and ratified the international convention to ban chemical weapons and strengthened the convention against biological weapons. We've used our export controls to deny terrorists and potential adversaries access to the materials and equipment needed to build these kinds of weapons.

... I want you to know that I have reached this decision about not deploying the N.M.D. after careful deliberation. My decision will not have a significant impact on the date the overall system could be deployed in the next administration, if the next president decides to go forward. . . .

In the meantime, we will continue to work with our allies and with Russia to strengthen their understanding and support for our efforts to meet the emerging ballistic missile threat, and to explore creative ways that we can cooperate to enhance their security against this threat, as well.

An effective N.M.D. could play an important part of our national security strategy. But it could not be the sum total of that strategy. It can never be the sum total of that strategy for dealing with nuclear and missile threats. Moreover, ballistic missiles armed with nuclear weapons, as I said earlier, do not represent the sum total of the threats we face. Those include chemical and biological weapons, and a range of deadly technologies for deploying them.

... We must work with our allies and with Russia to prevent potential adversaries from ever threatening us with nuclear, chemical and biological weapons of mass destruction in the first place, and to make sure they know the devastating consequences of doing so. . . .

... A key part of the international security structure we have built with Russia, and therefore a key part of our national security, is the Antiballistic Missile Treaty, signed by President Nixon in 1972. The A.B.M. treaty limits antimissile defenses according to a simple principle: neither side should deploy defenses that would undermine the other side's nuclear deterrent and thus tempt the other side to strike first in a crisis or to take countermeasures that would make both our countries less secure.

Strategic stability based on mutual deterrence is still important despite the end of the cold war. Why? Because the United States and Russia still have nuclear arsenals that can devastate each other. And this is still a period of transition in our relationships.

... Now, here's the issue: N.M.D., if deployed, would require us either to adjust the treaty or to withdraw from it, not because N.M.D. poses a challenge to the strategic stability I just discussed, but because by its very words, N.M.D. prohibits *any* national missile defense.

... Thus far, Russia has been reluctant to agree, fearing, I think, frankly, that in some sense this system or its future—some future incarnation of it—could threaten the reliability of its deterrent, and therefore strategic, stability.

Nevertheless, at our summit in Moscow in June, President Putin and I did agree that the world has changed since the A.B.M. treaty was signed 28 years ago and that the proliferation of missile technology has resulted in new threats that may require amending that treaty.

And again I say these threats are not threats to the United States alone. Russia agrees that there is an emerging missile threat. In fact, given its place on the map, it is particularly vulnerable to this emerging threat.

... President Putin and I have agreed to intensify our work on strategic defense while pursuing in parallel deeper arms reductions in Start III. He and I have instructed our experts to develop further cooperative initiatives in areas such as theater missile defense, early warning and missile threat discussions for our meeting just next week in New York.

Apart from the Russians, another critical diplomatic consideration in the N.M.D. decision is the view of our NATO allies. They have all made clear that they hope the United States will pursue strategic defense in a way that preserves, not abrogates, the ABM Treaty. If we decide to proceed with N.M.D. deployment, we must have their support because key components of N.M.D. would be based on their territories.

The decision I have made also gives the United States time to answer our allies' questions and consult further on the path ahead.

Finally, we must consider the impact of a decision to deploy on security in Asia. As the next president makes a deployment decision, he will need to avoid stimulating an already dangerous regional nuclear capability from China to South Asia.

Now let me be clear: no nation can ever have a veto over American security, even if the United States and Russia cannot reach agreement; even if we cannot secure the support of our allies at first; even if we conclude that the Chinese will respond to N.M.D. by increasing their arsenal of nuclear weapons substantially with a corollary inevitable impact in India and then in Pakistan.

... Clearly, therefore, it would be far better to move forward in the context of the A.B.M. treaty and allied support. Our efforts to make that possible have not been completed. For me, the bottom line on this decision is this: because the emerging missile threat is real, we have an obligation to pursue a missile defense system that could enhance our security.

As for Russian President, Vladimir Putin, he immediately praised Clinton's decision as a "well-considered and responsible step." On September 3rd, he congratulated Clinton for putting off deployment of a national missile defense system. Putin said he had no doubt that Clinton's decision was taken strictly in the interests of the United States...I believe that this considered decision was taken after Clinton consulted his allies and hope that Russia's position was taken into account." He also stated that Clinton's decision was "important for international safety and raises the authority of the United States," and "will enable us to count on constructive dialogue with our American partners in the future."⁴²

Russian Capability to Increase the Nuclear Threat to the US

It is difficult to know how seriously the US should take Russian threats to withdraw from START if the next President does decide to deploy an NMD system. As has been discussed earlier, Senior Russian officials have repeatedly warned that Russia might do this, and that Russia might cooperate with China in creating an NMD system. Russia did adopt a much stronger policy on the role of nuclear arms in its strategy in late 1999, which shifted from a stated reliance on nuclear weapons only if Russia's national strategy was threatened to one that states nuclear weapons can be used, "in case of a need to repulse an armed aggression, if all other means of resolving the crisis are exhausted or have been ineffective." This statement was hardly a return to the Cold War, but the same document did condemn the role of NATO and the US in threatening Russian interests. It attacked the US for "unilateral" action and "evading the basic founding norms of international law." It also attacked NATO for acting in Kosovo without the support of the UN and says such action is, "fraught with the threat of destabilizing the entire strategic situation in the world."⁴³

It seems doubtful, however, that Russia could afford to quickly deploy additional nuclear forces even if it withdrew from START I. An analysis of the trends in Russian strategic forces by Alexander A. Pikayev for the Carnegie Endowment provides an assessment of the limits in Russian capabilities to react to US deployment of an NMD system that a number of US intelligence experts largely support,⁴⁴

...During the 1990s, Moscow did not face serious difficulties in maintaining the force levels required by START I. The exception lies in the strategic nuclear submarine (SSBN) fleet which, due to lack of financing, has been decommissioned ahead of the START I schedule. Since 1990, the number of operational SSBNs has been reduced 250 percent, affecting even relatively modern Delta III and Typhoon subs.

More importantly, nuclear-related procurement has been drastically curtailed. During the height of the Cold War, the Soviet Union produced more than one hundred nuclear missiles annually. In modern Russia, the production rate has never exceeded ten ICBMs per year, and not one new strategic nuclear submarine has been completed. (Construction of a new SSBN started in 1996, with initial plans for completion in 2002, but is now delayed until 2007.) Production of SLBMs and heavy bombers was halted (with many difficulties and delays in completing the assembly of the Tu-160 aircraft started before 1992).

In the 1990s, Russia set its strategic nuclear modernization programs according to START II provisions. It successfully completed development and testing of the new Topol M (SS-27) single-warhead ICBM, which can be deployed in both silo and road-mobile versions. The system was first deployed in late 1997, but only 10 missiles had been deployed by the end of 1998. Ideally, Moscow hopes to increase the production of Topol Ms to 30 to 40 ICBMs per year, but financial constraints will make achieving even this relatively modest task quite problematic. In July 1998, the Russian Security Council decided to develop a new SLBM based on Topol M technology. If the program is successful, the future sea leg of Russia's strategic triad will be based on light SLBMs carrying a small number of MIRVs per missile.

The combination of these three factors—early decommissioning of some strategic systems, very low procurement rates, and transition to light ballistic missiles with single or a few warheads—will most certainly lead to a radical decline in Russian strategic force levels around 2010, when Russia will start withdrawing its MIRV'd ICBMs from service. Unless new programs to develop MIRV'd ICBMs and to accelerate production of new SSBNs are adopted in the next few years, Russia's strategic nuclear deterrent force could fall below 1,000 deployed warheads sometime in the next two decades. Some Russian officials are predicting an even lower number of perhaps several hundred deployed strategic warheads.

While CIA and DIA officials are not willing to go on record with similar statements, a number clearly had similar views during a debate over an NIE on the subject in the summer of 2000.⁴⁵ In what seems to be a reliable report in the Washington Post, the US intelligence community was also reported to be deeply divided over how seriously to take Russian threats that if the United States deployed an NMD system, Russia would build new intermediate-range SS-20 missiles to threaten Europe. Some officials argued that Russia's finances and construction

capacity were so limited that it could either make more SS-20 IRBMs or more longer-range SS-27 ICBMs, but could not make both.

The NIE indicated that Russia's economy was not able to support a large buildup of its strategic missile forces, but that it could again deploy shorter-range missiles along its borders and resume adding multiple warheads to its ballistic missiles -- something Russia had agreed to stop as part of START II. It indicated that deploying an American national missile defense could cause Russia to place multiple warheads on ballistic missiles that now carry only one warhead. The report indicated that Russia had an interest in negotiating reductions in both countries' nuclear arsenals because it could scarcely afford to maintain the 5,000 or so warheads it now deploys. The NIE suggested that Russia might accept a trade-off that would strictly limit the American defensive system to 100 interceptor missiles based in Alaska, as the administration has proposed building by 2007, but that Russia could respond by increasing the warheads on each missile without such an agreement.

Russia might well, however, provide the funds to retain large numbers of its present forces that it would otherwise retire under START II and START III, and alter its alert and targeting procedures in ways that could make them more threatening. This could increase the risk of accidents, reliability, and accidental launch. More broadly, Russian and US rivalry might lead Russia to make additional transfers of dual-use and arms technology that would exacerbate the problem of proliferation. There is no way to predict just how much US and Russian relations and the strategic nuclear balance will deteriorate as a result of NMD, or the outcome for TMD. It is clear, however, that a unilateral US deployment of NMD in any form could create problems with Russia that partly offset the value of NMD, and any US NMD or TMD system that required US withdrawal from the ABM Treaty would make things worse.

Russia could also react by increasing other kinds of threats to the US and its allies. Russia's long internal crisis has already discredited much of the pressure for democratic and economic reform. The expansion of NATO, the growing US role in Central Asia, the inclusion of a number of former client states into the EC, and events in Bosnia and Kosovo have helped make

the US and the West a target for much of the reaction to Russia's failure to quickly achieve acceptance and prosperity. This has resulted in the rise of Russian nationalism. Competition of any kind over nuclear forces will make this situation worse, perhaps pushing Russia towards China or hostile regional alliances. Much more is involved than somewhat game theoretic calculations about nuclear warfighting. Furthermore, Russia still retains massive theater nuclear assets, and it is at least possible that Russia could react to reduced US vulnerability by increasing its threat to Europe.

Russia might also take a more subtle path to objecting to the US deployment of an NMD system and retaliate by increasing the flow of expertise, technology, and equipment to hostile states. Russia has long tolerated – or at least not rigorously enforced controls on such transfers to North Korea, Iran, and Iraq. A January 2000 report by the Director of Central Intelligence makes this clear,⁴⁶

Russian entities ... continued to supply a variety of ballistic missile-related goods and technical know-how to Iran and were expanding missile-related assistance to Syria and India. For example, Iran's earlier success in gaining technology and materials from Russian companies accelerated Iranian development of the Shahab-3 MRBM, which was first flight-tested in July 1998. Russian entities during the first six months of 1999 have provided substantial missile-related technology, training, and expertise to Iran that almost certainly will continue to accelerate Iranian efforts to build new indigenous ballistic missile systems.

During the first half of 1999, Russia also remained a key supplier for civilian nuclear programs in Iran. With respect to Iran's nuclear infrastructure, Russian assistance enhances Iran's ability to support a nuclear weapons development effort. By its very nature, even the transfer of civilian technology may be of use in Iran's nuclear weapons program. In addition, Russia supplied India with material for its civilian nuclear program during this reporting period.

Russian entities remain a significant source of biotechnology and chemicals for Iran. Russia's world-leading expertise in biological and chemical weapons would make it an attractive target for Iranians seeking technical information and training on BW and CW agent production processes.

Russia also was an important source of conventional weapons and spare parts for Iran, which is seeking to upgrade and replace its existing conventional weapons inventories.

Following intense and continuing engagement with the US, Russian officials took some positive steps to enhance oversight of Russian entities and their interaction with countries of concern. Russia has reiterated previous commitments to observe certain limits on its nuclear cooperation with Iran, such as not providing militarily useful nuclear technology, although-as indicated above-Russia continues to provide Iran with nuclear technology that could be applied to Iran's weapons program. President Yel'tsin in July 1999 signed a federal export control law, which formally makes WMD-related transfers a violation of law and codifies several existing decrees-including catch-all controls-yet may lessen punishment for violators.

Despite these decrees, the government's commitment, willingness, and ability to curb proliferation-related transfers remain uncertain. Moreover, economic conditions in Russia continued to deteriorate, putting more pressure on Russian entities to circumvent export controls. Despite some examples of restraint, Russian businesses continue to be major suppliers of WMD equipment, materials, and technology to Iran. Monitoring Russian proliferation behavior, therefore, will remain a very high priority.

... Iran already is producing Scud short-range ballistic missiles (SRBMs) and has built and publicly displayed prototypes for the Shahab-3 medium-range ballistic missile (MRBM), which had its initial flight test in July 1998 and probably has achieved "emergency operational capability"-i.e., Tehran could deploy a limited number of the Shahab-3 prototype missiles in an operational mode during a perceived crisis situation. In addition, Iran's Defense Minister last year publicly acknowledged the development of the Shahab-4, originally calling it a more capable ballistic missile than the Shahab-3, but later categorizing it as solely a space launch vehicle with no military applications. Iran's Defense Minister also has publicly mentioned plans for a "Shahab 5."

A Department of Defense report on proliferation issued in January 2001 reaches similar conclusions:⁴⁷

Russia expresses public support for various nonproliferation regimes and treaties and has ratified key arms control treaties. Some Russian entities have provided ballistic missile and nuclear technology to states of proliferation concern. Entities also have been a source of dual-use biological and chemical expertise and technology. Russia has been a key supplier for civilian nuclear programs in Iran, primarily focused on the Bushehr nuclear power plant project. This assistance provides cover for Iran's nuclear weapons development efforts. Because of the dual-use nature of many nuclear technologies involved, even the transfer of civilian technology may be of use in Iran's nuclear weapons program. In addition, Russia supplied India with technologies and materials for its unsafeguarded civilian nuclear program. Russian entities have been key sources of biotechnology and chemicals for Iran. Russia's world-leading expertise in biological and chemical weapons makes it an attractive source for Iranians seeking technical information and training on biological and chemical warfare agent production processes. During the last two years, Russian entities supplied a large quantity and variety of ballistic missile-related goods and technical know-how to countries such as Iran and India.

For example, Iran's earlier success in gaining technology and materials from Russian and North Korean companies accelerated Iranian development of the Shahab-3 MRBM, which was flight tested in July 1998 and again in July and September 2000. Russian entities provided substantial missile-related technology, training, and expertise to Iran, which has helped to accelerate Iranian efforts to build new indigenous ballistic missile systems. As a result, during 1998 and 1999 the United States imposed penalties against ten Russian entities for their assistance to the Iranian missile and nuclear programs. These penalties remain in place. Further, during the 1999 Moscow air show, the Russians unveiled a missile called the Iskander-E, which may be the export version of a new SRBM. The Russians claim that it has a range of 280 kilometers and a payload below 500 kilograms and therefore, sales would not violate the MTCR. Since the breakup of the Soviet Union, Russia has not sold any finished ballistic missiles to any country.

In recent years Russia has issued export control measures—including a July 1999 law-prohibiting the export of items that can be used for the development of NBC weapons- or missile-related materials. It has begun developing the foundation for a modern export control system. Despite these actions, Moscow's commitment, willingness, and ability to curb proliferation-related transfers remain uncertain. Moreover, economic conditions at many facilities continue to deteriorate, putting more pressure on Russian entities to circumvent export controls to gain hard currency.

Making a Russian Compromise Work: The Problem of Russian Goals and Perceptions

It is also impossible to rule out an eventual US-Russian compromise. Russian officials as senior as Putin must know that NMD does not pose a serious threat to Russian strategic offensive capabilities in a war fighting sense, and Russia could potentially benefit as much from NMD and TMD as the US. There are also a number of ways of compensating Russia for the US deployment of NMD by modifying the terms of the START agreements or sharing NMD technology and capabilities. At the same time, it is hard to deny the fact that Russia is on the one hand seeking to block a US NMD program that does not threaten it, and acting on the other hand as a major contributor to the very threat the current US NMD program is designed to defend against.

As a result, it is still possible that the US and Russia may come to an accommodation over these issues. A number of senior Russians feel that a US decision to deploy NMD may now be inevitable, and that the real question is what advantages Russia can gain from an eventual and grudging acceptance of this fact. They state privately that they believe it could be possible to negotiate a US-Russian agreement on NMD, the ABM Treaty, and START II and III, if US and Russian relations improve. They have raised a number of negotiating points they feel might give Russia the compensation it needs:

- US technical transparency on NMD that would assure Russia of the capabilities of the US system, that its ability to degrade a Russian attack was predictable, and that the US did not possess any break out capability to suddenly deploy a much larger system.
- Shifts in the START II/III numbers of allowable warheads to compensate Russia for the capabilities of the US NMD system by giving Russia a larger number of warheads.
- Allowing limited MIRVing of the Topol M2, perhaps to three warheads, to allow Russia to deploy a suitable number of warheads under the START III limit at an acceptable cost.
- Moving ahead with the idea of shared early warning, and a joint presence at each nation's early warning command center, to reduce fears of accidental launches and any confusion over launch activity and the other side's reaction.

The practical problem is that the present climate of US and Russian relations, and the

increasingly hard-line character of Russian nationalism, make such negotiations difficult. Russia also has shown relatively little concern with the potential “rogue state” threat to their own homeland. A number of Russians do acknowledge that Russia is potentially more vulnerable to proliferation than the US because potential attackers are closer and argue that Russia could benefit from its own NMD system.⁴⁸ At the same time, few Russians openly share the US concern over accidental launches and nuclear “accidents” and feel an NMD system would enhance US and Russian nuclear stability.

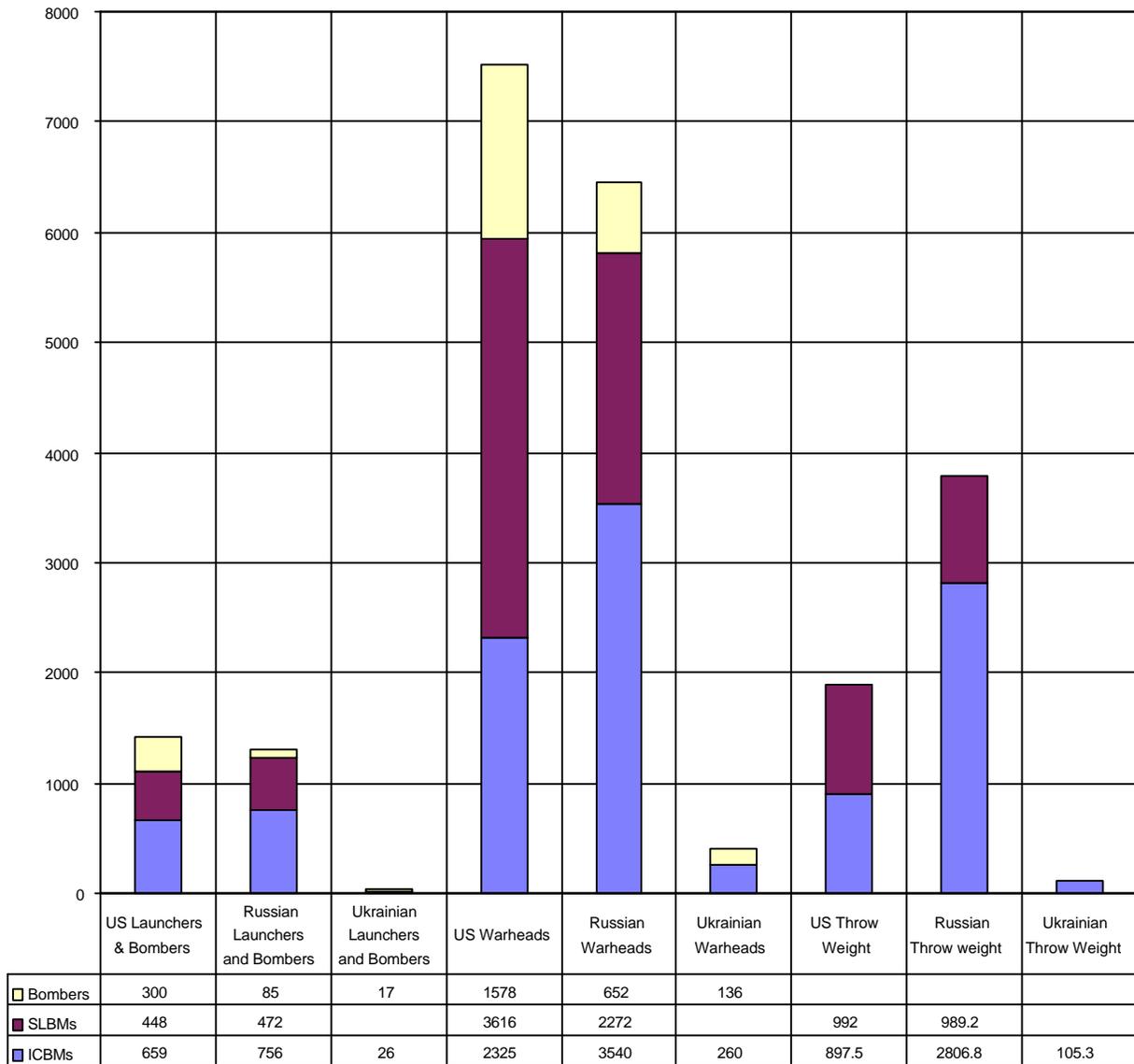
Few, if any, Russians seem to believe that Russia has any near to mid-term capability to afford the development and deployment of its own NMD system or that Russia would accept or could trust any direct transfer of NMD technology from the US. As a result, few Russians see dual US and Russian deployment of NMD as a practical negotiating option, no matter how desirable it might be in theory.

In short, the tensions between the US and Russia may make any Russian agreement to revise the ABM Treaty and accept US deployment of NMD nonnegotiable. It could block progress in the START Treaty and lead to a revival of some form of the US-Russian nuclear arms race – although probably on new terms more oriented towards enhancing national prestige and influence than towards serious war fighting capability. At best, the next President faces a major challenge in dealing with Russia politically and strategically, and particularly in terms of arms control, strategic nuclear modernization, and the competition for global influence.

Chart III.1

The US, Russian, and Ukrainian Strategic Nuclear Triad Declared for Start I

(Declarations as of October 1, 2000)



Source: Adapted by Anthony H. Cordesman from data provided by US State Department, Bureau of Arms Control on October 1, 2000. Belarus and Kazakhstan report zero in every category.

Table III. 3Russian and US Strategic Nuclear Forces and Force Modernization: Part One

<u>Category of Date</u>	<u>Belarus</u>	<u>Kazakhstan</u>	<u>Russia</u>	<u>Ukraine</u>	<u>FSU</u>	<u>USA</u>
Deployed ICBMs and their Associated launchers, Deployed SLBMs and Their Associated Launchers and Deployed Heavy Bombers	0	0	1,313	43	1,356	1,407
Warheads Attributed to Deployed ICBMs, SLBMs, and Heavy Bombers	0	0	6,464	396	6,860	7,519
Warheads Attributed to Deployed ICBMs, SLBMs	0	0	5,812	260	6,072	5,941
Throw-weight of Deployed ICBMs And SLBMs in megatons	0	0	3,796.00	105.30	3901.30	1889.50

Source: US State Department, Bureau of Arms Control, as of October 1, 2000

Table III. 3

Russian and US Strategic Nuclear Forces and Force Modernization: Part TwoRussian/FSU Strategic Nuclear Warheads: Past, Present and Projected

	September 1990 ¹	July 1998 ²	April 2000	October 2000	December 2007 ³	December 2007 ⁴
SS-11	326	0	0	0	0	0
RS-12M	-	-	20	20	-	-
Road mobile	-	-	-	-	-	-
Silo	-	-	(20)	(20)	-	-
SS-13	40	0	0	0	0	0
SS-17	188	0	0	0	0	0
SS-18	3,080	1,800	1,800	1,800	0	0
SS-19	1,800	1,062	900	900	105 ⁵	105 ⁶
SS-24	890	920	460	460	0	0
Silo	-	-	(100)	(100)	-	-
Rail mobile	-	-	(360)	(360)	-	-
SS-25	288	360	360	360	250	100
SS-27	0	2	0	0	180 ⁷	180 ⁸
Subtotal	6,612	4,144	3,540	3,540	535	385
SS-N-6	192	16	0	0	0	0
SS-N-8	280	192	64	48	0	0
SS-N-17	12	0	0	0	0	0
SS-N-18	672	624	624	576	0	0
SS-N-20	1,200	1,200	1,200	1,200	1,000	600
SS-N-23	448	448	448	448	448	320
SS-NX-28	0	0	0	0	96 ⁹	96 ¹⁰
Subtotal	2,804	2,480	2,336	2,272	1,544	1,016
Bear	735	716	532	532	532	532
ALCM	-	-	(528)	(528)	-	-
Non-ALCM	-	-	(4)	(4)	-	-
Blackjack ALCM	120	200	120	120	64	64
Subtotal	855	916	648	648	800	568
TOTAL	10,271	7,540	6,524	6,464	~3,000 ¹¹	~2,000 ¹²

Source: [Arms Control Association](#), Fact Sheet January 1999 and US State Department, Bureau of Arms Control, April 4, 2000 and October 1, 2000.

Notes:

1. Warhead numbers are based on START I counting rules. Figures include weapons in Belarus, Kazakhstan, Russia and Ukraine. From 2000 on, warheads are only held in Russia.
2. Warhead numbers are based on START I counting rules. Figures include weapons in Russia and Ukraine only. Although Ukraine returned the last of its strategic nuclear warheads to Russia in 1996, they remain START-accountable until the delivery systems have been destroyed. The July 1998 START I MOU lists Ukraine as possessing 54 warheads on SS-19s, 460 warheads on SS-24s, 200 warheads on Bear bombers and 152 warheads on Blackjack bombers. Belarus and Kazakhstan have returned all of their nuclear warheads to Russia and have completed the destruction of their delivery vehicles, thereby removing them from START accountability.
3. Assumes that START II enters into force, but that START III is not successfully negotiated. Figures include weapons in Russia only and are based on START II counting rules. This means that the number of weapons counted for heavy bombers will be the number they are actually equipped to carry.
4. Assumes that START III is successfully negotiated. Under this treaty, the United States and Russia will be permitted to deploy 2,000-2,500 strategic warheads each.
5. START II permits Russia to download 105 SS-19s from six warheads each to one.
6. Assumes that Russia keeps these forces under START III.
7. Assumes that Russia will achieve and is able to sustain a production rate of about 20 SS-27s per year.
8. *ibid.*
9. Russia laid the keel for a new class of ballistic missile submarines (known as the Borey) in November 1996. According to the Office of Naval Intelligence, the submarines will be fitted with a new SLBM, possibly the SS-NX-28. Borey-class submarines are expected to carry at least 12 SLBMs. It is assumed that each SS-NX-28 will carry four warheads. The first of the Borey-class submarines may be operational around 2005,

depending on financial circumstances.

10. *ibid.*

11. This outcome largely depends on Russia's economic situation. Under some scenarios, Russia would deploy significantly fewer warheads.

12. *ibid.*

Table III. 3Russian and US Strategic Nuclear Forces and Force Modernization: Part ThreeU.S. Strategic Nuclear Warheads: Past, Present and Projected

	September <u>1990</u> ¹	July <u>1998</u> ²	April <u>2000</u>	October <u>2000</u>	December <u>2007</u> ³	December <u>2007</u> ⁴
MX	500	500	500	500	0	0
Minuteman III	1,500	1,950	1,908	1,824	500 ⁵	300 ⁶
Minuteman II	<u>450</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>0</u>
Subtotal	2,450	2,451	2,409	2,325	500	300
Poseidon (C-3)	1,920	320	320	160	0	0
Trident I (C-4)	3,072	1,536	1,536	1,536	0	0
Trident II (D-5)	<u>768</u>	<u>1,920</u>	<u>1,920</u>	<u>1,920</u>	<u>1,680</u> ⁷	<u>1,008</u> ⁸
Subtotal	5,760	3,776	3,776	3,616	1,680	1,008
B-52	2,258	1,644	1,467	1,467	980 ⁹	364 ¹⁰
B-1	95	91	91	91	0	0
B-2	<u>0</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>336</u>	<u>336</u>
Subtotal	2,353	1,755	1,578	1,578	1,316	700
TOTAL	10,563	7,982	7,763	7,519	~3,500	~2,000

Source: [Arms Control Association](#), Fact Sheet January 1999 and US State Department, Bureau of Arms Control, April 4, 2000, and October 1, 2000.

Notes:

1. Warhead numbers are based on START I counting rules. This results in bombers having fewer warheads attributed to them than they actually carry. On the other hand, even though all Poseidon submarines have been decommissioned, their C-3 SLBMs and associated warheads remain START-accountable until the delivery systems have been destroyed.
2. Same as above.
3. Assumes that START II enters into force, but that START III is not successfully negotiated. Figures are based on START II counting rules. This means that the number of weapons counted for heavy bombers will be the number they are actually equipped to carry.
4. Assumes that START III is successfully negotiated. Under this treaty, the United States and Russia will be permitted to deploy 2,000-2,500 strategic warheads each.
5. Assumes 500 Minuteman IIIs, with each missile carrying one warhead.
6. Assumes 300 Minuteman IIIs, with each missile carrying one warhead.
7. Assumes 14 Ohio-class submarines carrying 24 Trident II (D-5) missiles each, with all D-5s carrying five warheads.
8. Assumes 14 Ohio-class submarines carrying 24 Trident II (D-5) missiles each, with all D-5s carrying three warheads.
9. Assumes that the United States maintains its entire fleet of 71 B-52 bombers, but reduces their cruise-missile carrying capacity.
10. Assumes that the United States maintains its entire fleet of 71 B-52 bombers, but reduces their cruise-missile carrying capacity.

Table III.4
Estimate of Russian Nuclear Forces, 2000

<u>Type/Name</u>	<u>Launcher/ SLBMs</u>	<u>Year Deployed</u>	<u>Warheads x yield (kt)</u>	<u>Total warheads</u>	<u>Throwweight In</u>
<u>Megatons</u>					
<u>ICBMs</u>					
SS-18 Satan (RS-20)	180	1979	10 x 550/750	1,800	1,584.8
SS-19 Stiletto (RS-18)	150	1979	6 x 550	900	652.5
SS-24 Scalpel (RS-22)		1987	10 x 550		
Silo	10			100	40.5
Rail Mobile	36			360	145.8
Total	46			460	186.3
SS-25 Sickle (RS-12M)	360	1985	1 x 550	360	360
(SS-27 (Topol-M)	15	1997	1 x 550	10)*	
Total	756(180 Heavy)			3,540	2806.8
<u>SLBMs</u>					
SSN-8 Sawfly	64			64	70.4
SS-N-18 Stingray (RSM-50)	208	1978	3 x 500	624	343.20
SS-N-20 Sturgeon (RSM-52)	120	1983	10 x 200	200	306.0
SS-N-23 Skiff (RSM-54)	112/7	1986	4 x 100	448	313.60
Total	504			2,236	1,033.2
<u>BOMBERS</u>					
Tu-95/Bear-ALCM	66	1984	6 AS-15A ALCMs		174
Tu-95/Bear-Non-ALCM	4	1984	16 AS-15A ALCMs or bombs		560
Tu-160/Blackjack	8 (+8)	1987	AS-15B ALCMs or AS-16 SRAMs or bombs		72
Total	68		202		806
<u>NON-STRATEGIC WEAPONS</u>					
<u>Strategic Defense</u>					
ABM	64 SH-08 Gazelle, 36 SH-11 Gorgon		100		100
SAM	SA-5B Gammon, SA-10 Grumble		1100		1100
<u>Land-based Non-strategic</u>					
Bombers and Fighters	Backfire(158), Fencer (350)		508		1600
<u>Naval Non-strategic</u>					
Attack aircraft	Backfire (71), Fencer (75)		146		400
SLCMs	SS-N-9, SS-N-12, SS-N-19, SS-N-21, SS-N-22				500
ASW Weapons	SS-N-15, SS-N-16, torpedoes		300		
Total					~4,000
<u>OTHER WEAPONS</u>					
Reserve/Awaiting Dismantlement					~12,000
GRAND TOTAL			~2,700 MT (strategic weapons)		~22,250

NOTES

* Shown in some Western sources but not in State Department estimate.

1. Figures in this table represent total operational forces, not just forces accountable under START I.

2. Principle sources for this table include: The US State Department Fact Sheet on Aggregate Numbers of Strategic Offensive Arms, April 1, 2000, Washington, DC, US Department of State. The numbers have been updated in part by Anthony H. Cordesman, using the International Institute for Strategic Studies, *The Military Balance, 1999-2000 and 2000-2001*, (London: Oxford University Press) and data from the Carnegie Endowment.

¹ “Russia Lowers Threshold for Nuclear USE,” *Russia Today*, www.russiatoday.com:80/features.php3id=126338, January 7, 2000; *Washington Post*, January 15, 2000.

² http://www.cia.gov/cia/public_affairs/speeches/walpole.htm.

³ National Intelligence Council, “Foreign Missile Developments and the Ballistic Missile Threat to the United States Through 2015, (September 1999 (www.cia.gov/cia/publications/nie/nie99).

⁴ Department of Defense, *Proliferation and Response*, January 2001, p. 55.

⁵ Department of Defense, *Proliferation and Response*, January 2001, p. 54-56.

⁶ Department of Defense, *Proliferation and Response*, January 2001, p. 56-57.

⁷ National Intelligence Council, “Foreign Missile Developments and the Ballistic Missile Threat to the United States Through 2015, (September 1999 (www.cia.gov/cia/publications/nie/nie99).

⁸ “The Incredible Shrinking Russian Nuclear Force,” *Carnegie Endowment for International Peace, Non Proliferation Brief*, Vol 3. No. 17, May 31, 2000.

⁹ “The Incredible Shrinking Russian Nuclear Force,” *Carnegie Endowment for International Peace, Non Proliferation Brief*, Vol 3. No. 17, May 31, 2000.

¹⁰ Speech by Alexei Arbatov, Deputy Chairman of the Committee on Defense in the Russian Duma to the Carnegie Non-Proliferation Project, May 9, 2000, www.ceip.org/programs/npp/brief316.htm.

¹¹ Speech by Alexei Arbatov, Deputy Chairman of the Committee on Defense in the Russian Duma to the Carnegie Non-Proliferation Project, May 9, 2000, www.ceip.org/programs/npp/brief316.htm.

¹² Alexander A. Pikayev, “The Rise and Fall of START II: The Russian View,” Non-Proliferation Project, Global Policy Program, No. 6, September, 1999.

¹³ For an example of such hard-line commentary, see Aleksei Likovoid, “The UN Demands Preservation of the Anti-Ballistic Missile Defense Treaty,” *Nezavisimaya Gazeta*, December 15, 1999, p. 16.

¹⁴ IISS, *The Military Balance, 1999-2000*, London, IISS, 1999, p. 107.

¹⁵ Remarks of the Honorable Walter B. Slocombe, Under Secretary of Defense for Policy, to the Center for Strategic and International Studies Statesmen’s Forum, November 5, 1999.

¹⁶ *Washington Post*, April 22, 2000.

¹⁷ *New York Times*, April 26, 2000.

¹⁸ *New York Times*, April 28, 2000.

¹⁹ The full text of each document is available on the Internet at <http://www.bullatomsci.org/issues/2000/mj00/mj00schwartz.html>

²⁰ See *The Bulletin of the Atomic Scientists* (www.thebulletin.org).

²¹ *New York Times*, April 29, 2000.

²² See The full text of each document is available on the Internet at <http://www.bullatomsci.org/issues/2000/mj00/mj00schwartz.html>.

²³ See *The Bulletin of the Atomic Scientists* (www.thebulletin.org).

²⁴ The document refers to SHF radars, which are often referred to as X-band radars in discussions of the NMD system. SHF stands for “super high frequency” and is the frequency band 3 to 30 gigahertz. This includes the X-band (8-12 gigahertz).

²⁵ See *The Bulletin of the Atomic Scientists* (www.thebulletin.org).

²⁶ *Novye Izvestia*, April 29, 2000; Associated Press April 29, 2000, 1037.

²⁷ “Putin warns US on Missile Shield” *NBC Nightly News* June 1, 2000 <http://www.msnbc.com/news/386479.asp?cp1=1> June 12, 2000.

²⁸ “Joint Statement of the Presidents of the United States of America and the Russian Federation on Principles of Strategic Stability,” White House Briefing Room, June 4, 2000, www.whitehouse.gov/library.

²⁹ “Clinton Pushes Missile Plan” *AP* June, 5 2000 http://dailynews.yahoo.com/hx/ap/20000605/wl/clinton_44.html June 12, 2000.

³⁰ *New York Times*, June 14, 2000, p. A-12; *Washington Post*, June 14, 2000, p. A-1.

³¹ “Cohen Rejects Russia Defense Plan,” Associated Press, June 9, 2000 http://dailynews.yahoo.com/h/ap/20000609/wl/nato_10.html June 12, 2000.

³² Washington Post, June 14, 2000, p. A-34.

³³ New York Times, June 16, 2000, p. A-3.

³⁴ “Putin Seeks Allies in Quest To Fight US Missile Plan” New York Times June 11, 2000.

³⁵ Washington Post, June 30, 2000, p. A-27.

³⁶ Washington Post, Foreign Service, July 6, 2000; Page A14.

³⁷ Associated Press, July 8, 2000, 1459.

³⁸ Joint Statement by the Presidents of the People's Republic of China and the Russian Federation on Anti-Missile Defense
<http://www.fmprc.gov.cn/english/dhtml/read1.asp?pkey=20000718191529&title=Joint+Statement+by+the+Presidents+of%0D%0Athe+People%27s+Republic+of+China+and+the+Russian+Federation%0D%0Aon+Anti%2DMissile+Defense&findStr=Missile+defense>.

³⁹ Associated Press, July 18, 2000, 0644.

⁴⁰ The White House, Office of the Press Secretary, Fact Sheet, “National Missile Defense,” September 1, 2000.

⁴¹ The White House, Office of the Press Secretary, Text of Clinton Speech on National Missile Defense, September 2, 2000

⁴² Associated Press, September 3, 2000, 1528; Reuters, September 3, 2000, 0639.

⁴³ Wall Street Journal, January 17, 2000, p. 2.

⁴⁴ Alexander A. Pikayev, “The Rise and Fall of START II: The Russian View,” Non-Proliferation Project, Global Policy Program, No. 6, September, 1999. Dr. Pikayev was previously a director of the section on arms control and nonproliferation at the Institute of World Economy and International Relations, Russian Academy of Sciences; and chief counselor of the State Duma Committee on Defense (1996–1997) and Subcommittee on Arms Control and International Security (1994–1995).

⁴⁵ Washington Post, July 7, 2000; p. A-13.

⁴⁶ Non-Proliferation Center, Director of Central Intelligence, “Unclassified Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions 1 January Through 30 June 1999,” ODCI/CIA, January 2000.

⁴⁷ Department of Defense, Proliferation and Response, January 2001, p. 54-56.

⁴⁸ For example, see the views of Ambassador Yuri Nazarkin, Andrei Pointkovsky, and Vitaly Tsygichko “The Anti-Ballistic Missile Defense System is not Holy Writ, Segodnya, November 18, 1999, p. 4 as quoted in Defense and Security, November 22, 1999,