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## WHAT THE PENTAGON'S NUCLEAR DOCTRINE REVIEW SHOULD SAY

### INTRODUCTION

The Secretary of Defense soon will release a report outlining the new role of nuclear weapons in protecting the national security of the United States. Authored by a Pentagon task force headed by Assistant Secretary of Defense for Nuclear Security and Counterproliferation Ashton Carter, this report will make recommendations about issues related to nuclear weapons policy. These recommendations may touch on such important questions as nuclear strategy and doctrine, force structure, operating procedures for nuclear weapons, safety and reliability procedures, and the relationship between nuclear weapons and counterproliferation and arms control policy.

While it is impossible to predict the exact recommendations of the task force, there are disturbing trends in Clinton Administration defense and arms control policies that may well drive the findings of the report. For example, the Administration is already committed to negotiating a comprehensive ban on the testing of nuclear weapons. This will result in a U.S. nuclear arsenal that over the long run is neither safe nor reliable. Republican Senator Strom Thurmond of South Carolina on April 20 accused the Administration of preparing to eliminate intercontinental ballistic missiles (ICBMs) and therefore the so-called triad of land-, air-, and sea-based nuclear forces. If this were to happen, it would reduce the survivability of America's nuclear deterrent and limit U.S. ability to destroy important targets in the event of a nuclear conflict.

Before making these mistakes, the Carter task force should step back and consider alternatives. As it does, the task force should determine that:

- ✓ **Nuclear weapons will play an indispensable role in U.S. security policy for the foreseeable future.**
- ✓ **The central purpose of strategic (long-range) nuclear weapons should be to deter an attack and to limit damage in the event deterrence fails.** Thus, U.S. nuclear forces should exist in quantities sufficient to destroy potential enemy nuclear launch sites.

- ✓ **The central purpose of tactical (short-range) nuclear weapons should be to destroy enemy forces on the battlefield that might use nuclear, chemical, or biological munitions against U.S. or allied troops.**
- ✓ **The nuclear operating doctrine must be flexible enough to allow for rapid use of strategic and tactical nuclear forces.** Confidence-building measures such as “de-targeting” of the weapons, which might slow response times, must be rejected as policy options.
- ✓ **The safety of the nuclear stockpile cannot be maintained without regular testing, including nuclear warhead detonation.**
- ✓ **U.S. nuclear weapons present a barrier to, not an incentive for, the proliferation of nuclear weapons and other weapons of mass destruction.** The reason: These weapons reassure U.S. allies that might otherwise seek their own nuclear arsenals. Moreover, the presence of these weapons provides a deterrent against regional bullies.
- ✓ **The objective of nuclear arms control policy is to maintain strategic nuclear forces at a level commensurate with the number of strategic military and related targets to be destroyed in case of war.** It should not be merely for reducing the number of weapons for its own sake.

## ANSWERING SIX QUESTIONS

Given the changes in the global security environment since the end of the Cold War, a fresh look at the U.S. nuclear doctrine is needed. The U.S. no longer faces a single overarching nuclear-armed opponent, but an increasing number of states armed with both nuclear weapons and capable delivery systems.

Recognizing this important change, then-Secretary of Defense Les Aspin on October 29, 1993, appointed an internal Pentagon task force to establish a new nuclear posture for the U.S. The task force is chaired by Ashton Carter, who is Assistant Secretary of Defense for Nuclear Security and Counterproliferation. The task force has been organized into six working groups, each directed to answer one of six questions about nuclear policy.

Since its establishment, there have been unconfirmed reports that the task force plans to eliminate the nuclear “triad” of land-, air-, and sea-based strategic missiles. This would be a mistake and unlikely to find support in Congress.

Rather than attempting such a radical change to U.S. nuclear doctrine, there is much the task force can do to ensure the country retains a credible nuclear force. It could start by answering Aspin’s questions in ways that are consistent with the need to maintain a nuclear deterrent capable of meeting U.S. security needs.

### **Question #1: What should be the role of nuclear weapons in the U.S. security posture, given the new global environment?**

**Answer:** This question demands a clear answer that nuclear weapons should remain an indispensable part of the U.S. military posture for the foreseeable future. The task force

should explicitly acknowledge that nuclear weapons cannot be eliminated or otherwise disinventured. Further, the task force should conclude that an arms control policy aimed at zero nuclear weapons globally is not feasible or even desirable. During the 1992 presidential campaign, Bill Clinton made it clear that he understood this essential truth by declaring: "But as an irreducible minimum, we must retain a survivable nuclear force to deter any conceivable threat."<sup>1</sup>

In 1990, the Bush Administration stated that the primary strategic interest of the U.S. was: "The survival of the United States as a free and independent nation, with its fundamental values intact and its institutions and people secure."<sup>2</sup> This interest is no less important today. Nuclear weapons play their role in defending this interest by deterring any attack on the U.S. with weapons of mass destruction and by limiting an opponent's ability to strike American territory should deterrence fail.

During the Cold War, a key element of strategic doctrine was a policy of deterrence backed by an offensive strategic nuclear arsenal. Deterrence rested on the notion that these offensive nuclear weapons, if used in retaliation for an attack on the U.S., would impose such a high cost on the would-be aggressor that he would not consider attacking in the first place. Known as Mutual Assured Destruction, this policy rested on the assumption that the superpowers would avoid the risk of self-destruction which a nuclear first strike would certainly bring.

In short, deterrence policy rested on psychological assumptions. It depended on affecting the thinking of foreign leaders. The doctrine postulated that these foreign leaders were rational in terms of assessing the costs and benefits of taking certain military actions and in full control of their countries' strategic nuclear arsenals. In the bipolar world of the time, deterrence policy sought to achieve stability by ensuring that both the U.S. and the Soviet Union retained a retaliatory strategic nuclear capacity such that each could impose unacceptable damage on the other.

The question facing U.S. nuclear planners today is whether this Cold War notion of deterrence is an appropriate nuclear policy for the future. The answer is almost certainly no. The future is likely to be marked by foreign leaders who have radically different outlooks on security and who may have only tenuous control over their strategic nuclear arsenals. Should U.S. security, indeed survival, rest on the daily thought processes of Vladimir Zhirinovskiy, a potential future president of Russia? What if dictators in Iran, Libya, or North Korea obtain long-range delivery systems and nuclear weapons? How would Cold War deterrence policy address the security implications of civil strife within post-Cold War Russia?

Since Cold War deterrence policy alone is not suited to addressing security concerns in the new era, what should replace it? The answer is a policy that seeks to destroy the means of attack on the United States, combined with an effective defense against enemy nuclear attack. The ultimate goal of this new policy should be, in case of attack, to limit the damage inflicted on the U.S., its people, and institutions to the greatest extent

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1 William Clinton, "A New Covenant for American Security," Speech at Georgetown University, Washington, D.C., December 12, 1991.

2 The White House, "National Security Strategy of the United States," March 1990, p. 2.

possible. A strategic policy that seeks to protect the homeland in this manner is often referred to as a damage limitation strategy. Under this strategy, U.S. security is not as dependent on the intentions and whims of foreign leaders.

**The Role of Defense.** One of the unfortunate aspects of Cold War nuclear policy was that it sought to define deterrence in a way that was incompatible with defense. It did so by asserting that strategic defensive measures were inherently “destabilizing” because they would undermine

the balance of terror brought about by vulnerability. This was the thinking behind the 1972 Anti-Ballistic Missile Treaty, which greatly limited the superpowers’ ability to defend against ballistic missile attack. This strategic philosophy also led to widespread opposition to President Ronald Reagan’s Strategic Defense Initiative.

But in the post-Cold War world of multiple potential nuclear threats, this anti-defense philosophy no longer makes sense. The greatest nuclear threat to the U.S. is now a single or few nuclear warheads delivered in a relatively crude fashion from a Third World nuclear power or an errant launch from rogue elements in the former Soviet Union. Such potential nuclear threats cannot be deterred in the same way the Soviet Union was during the Cold War. The strict rationale behind the strategic military policies of the two superpowers during Cold War are not applicable to a multipolar world. Further, accidental or unauthorized strikes, by their nature, are undeterrable.

A clear strategy of defense has its own value as a deterrent. A foreign leader is going to have little incentive to launch an attack on the U.S. when it is likely to be blunted. Now more than ever, America needs to combine strategic nuclear defense with a robust (if much smaller by Cold War standards) offensive nuclear capability.

## SIGNS OF GLOBAL NUCLEAR DISORDER

“What price Paris? How about London? Washington? Los Angeles? How much are you [the West] willing to pay so I don't wipe them from the face of the Earth with SS-18s [missiles]. You doubt me? Want to take a chance? Let's get started.”

— Vladimir Zhirinovskiy during his 1991 presidential campaign, as reported in: “New Foe On Right May Challenge for Presidency,” *The Washington Times*, December 14, 1993, p. A-1.

“If they know that you have a deterrent force capable of hitting the United States, they would not be able to hit you. If we had possessed a deterrent — missiles that could reach New York — we would have hit it at the same moment [of the 1986 U.S. raid on Libya]. Consequently, we should build this force so that they and others will no longer think about an attack.”

— Speech by Libyan dictator Muammar Qadhafi to students of the Higher Institute for Applied Social Studies at the Great al-Fatih University, April 18, 1990, as translated in: *FBIS Daily Report: Near East and South Asia* (FBIS-NES-90-078) April 23, 1990, p. 8.

### Soviet Official Questions Nuclear Arsenal's Security

— Headline in *The Washington Post*, August 28, 1991, a week after the attempted coup against Soviet President Mikhail Gorbachev during which he lost control over the Soviet nuclear arsenal.



Regarding tactical, or so-called battlefield, nuclear weapons, their role in the nuclear doctrine will be closer to the one that they played during the Cold War. They should be used to counter the advantage an enemy force might otherwise gain on the battlefield through using weapons of mass destruction. Given this central purpose, the U.S. must reserve the right to use tactical nuclear weapons if its forces are subject to attack with chemical, biological, or nuclear weapons.

**Question #2: What sort of nuclear force structure does the nation require and what missions should be assigned to nuclear forces?**

**Answer:** The central mission for strategic nuclear weapons should be to destroy the facilities an enemy would require to launch an attack against the U.S. The central mission for tactical nuclear weapons should be to destroy enemy forces on the battlefield that otherwise might use weapons of mass destruction against U.S. troops.

In designing a nuclear force capable of implementing this strategy, Pentagon planners must first establish the number of global targets to be covered by U.S. strategic and tactical nuclear weapons. This force structure should be designed to have the capability to destroy the designated targets in a timely fashion.

**Strategic Nuclear Forces.** At the end of 1993, there were 1,809 long-range (strategic) nuclear delivery systems in the world, excluding the 1,124 held by the U.S. These include 1,052 intercontinental ballistic missiles (ICBMs), 656 submarine-launched ballistic missiles (SLBMs), and 101 long-range bombers.<sup>3</sup> Taken together, these delivery systems are capable of carrying 9,585 nuclear warheads. In addition to the 1,809 delivery systems, there are some 25 strategic submarine and long-range bomber bases. Further, there are about 800 non-weapon strategic targets.<sup>4</sup> These non-weapon targets include command and control centers, nuclear storage sites, and some industrial facilities.

Since it will take time to field a damage-limitation strategic force of offensive and defensive weapons, as many as 100 urban centers should be targeted as well. Until the U.S. is confident it can defend itself against attack with this combination of offensive and defensive forces, it must be able to hold the enemy's society hostage. These urban targets are the legacy of a Cold War policy that all but barred the deployment of effective strategic defenses.

There are around 2,700 facilities and cities on the U.S. strategic target list (see chart 1). Not all these targets, however, are suitable to offensive operations. Missile submarines at sea and heavy bombers expected to be airborne prior to the commencement of hostilities, for example, cannot be targeted with offensive nuclear weapons. When these elements are removed, the strategic nuclear target list should number between 1,900 and 2,000.<sup>5</sup>

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3 These strategic weapons are either in the possession of or located on the territory of the following countries: Belarus, Britain, China, France, Kazakhstan, Russia, and Ukraine.

4 This figure is estimated. While global strategic arsenals are described in considerable detail in open literature, non-weapon targets have not been widely discussed. This estimate is derived from unclassified sources that have described U.S. nuclear targeting plans from an historical perspective, including: Desmond Ball and Jeffrey Richelson, eds., *Strategic Nuclear Targeting* (Ithaca, New York: Cornell University Press, 1986) and William C. Martel and Paul L. Savage, *Strategic Nuclear War: What the Superpowers Target and Why* (New York: Greenwood Press, 1986).

Chart 1

**Estimated U.S. Strategic Target List: 1993**

Targeted by	ICBMs	SLBMs	Bombers	Bases	Non-Weapons	Cities	Total
Offensive/ Nuclear	1,052*			25	800	100	1,977
Defensive/ Non-Nuclear		656	101				757
<b>Total</b>							<b>2,734</b>

\* ICBMs may be targeted by defensive systems in the future.  
Source: *Bulletin of the Atomic Scientists*.

U.S. nuclear weapons should be targeted on these weapons, facilities, and urban centers and not, as the Clinton Administration intends, on either nothing or open ocean.<sup>6</sup> The Clinton Administration's "de-targeting" policy implies that there are no targets against which strategic nuclear weapons can be directed. By this line of reasoning, there is scant justification for maintaining a strategic nuclear arsenal at all.

**Maintaining the Triad.** The force structure needed to cover these targets should continue to be based on the triad of air, land, and sea-based strategic weapons. Not only is a triad the most survivable posture against preemptive strikes and a hedge against new technological developments, but it also offers the greatest flexibility in striking military targets. ICBMs and SLBMs can be delivered rapidly and with great accuracy. Long-range bombers can be called back if there is uncertainty during a crisis. Penetrating bombers can destroy mobile strategic targets such as the SS-25 *Sickle* ICBM over enemy territory.

The strategic nuclear force structure required to hold these 1,900 to 2,000 targets at risk resembles the existing U.S. strategic nuclear arsenal.<sup>7</sup> At the end of 1993, the U.S. fielded 550 *Minuteman III* and *MX* ICBMs, 440 *Trident I* and *Trident II* SLBMs, and 190 B-1B *Lancer* and B-52 *Stratofortress* long-range bombers. This force is capable of delivering 7,900 warheads.<sup>8</sup> Since three warheads per target should be sufficient to cover the necessary number of targets, the U.S. should at a minimum maintain an arsenal of around 6,000 deliverable warheads, not counting the roughly 1,700 warheads deployed on submarines in port.

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- 5 Removing ballistic missile submarines at sea from the strategic nuclear target list means that no British or French forces are on the list. British and French strategic weapons, however, should remain on the strategic target list for the purpose of addressing accidental or unauthorized launches. On this basis, they may be targeted by U.S. strategic defenses in the future.
- 6 During a meeting with Russian President Boris Yeltsin in Moscow on January 14, President Clinton signed a joint declaration that commits the U.S. to remove targeting information from the *Trident I*, *Trident II*, and *MX* strategic missiles. The remaining *Minuteman III* missiles are to be targeted on open ocean. This "de-targeting" is to be implemented no later than May 30, 1994.
- 7 All recommended forces in this paper are deployed forces. Therefore they exclude those additional weapons kept in storage for replacement and testing purposes.
- 8 "U.S. Strategic Nuclear Forces, End of 1993," *Bulletin of the Atomic Scientists*, January/February 1994, p. 65.

Chart 2

## Recommended Interim U.S. Strategic Nuclear Force Structure: 1994-2010

Delivery System	System Number	Warhead Number
Minuteman III	500	1,500
MX	50	500
Trident II	432	3,456
B-52H	50	1,000
B-1B	95	1,520
B-2	20	320
<b>Total</b>	<b>1,147</b>	<b>8,296</b>

This establishes a three-to-one ratio of deployed warheads to targets. Doing this is necessary because some hardened targets—ICBM silos, for example—will require more than one warhead to ensure destruction. Moreover, this ratio assures that all targets can be covered even after an initial enemy strike has destroyed a portion of the U.S. retaliatory arsenal. Finally, the three-to-one ratio allows redundancy in case some U.S. strategic weapons do not perform as designed.

This strategic nuclear force presumes the existing ICBM force of 500 *Minuteman III* and 50 *MX* missiles will continue to be deployed. Between them they carry 2,000 warheads. This will require that the *Minuteman III* force undergo a service life extension program (SLEP) later this decade. The submarine force should move toward deploying 18 *Trident II* submarines, although all should be fitted with the modern and more accurate *Trident II* missile. This submarine force will be capable of delivering 3,456 warheads. But because only half of these boats are likely to be at sea at any one time, only 1,728 warheads can be counted against the target set. The bomber force should be maintained at its current level, capable of delivering 2,800 warheads. This means that B-52 bombers should be taken out of the strategic arsenal only as B-2 bombers are deployed and that the B-1 bombers retain their strategic nuclear role (see chart 2).

**Strategic Defenses Still Needed.** But strategic nuclear weapons alone are not enough to execute a damage-limitation strategy. They are not suited for countering ballistic missile submarines at sea. The same is true of countering long-range bombers already in flight. Most important, they cannot counter ballistic missiles, whether ground-based or submarine-based, once they are in flight. This is why strategic defenses will play an indispensable, and eventually dominant, role in the U.S. strategic force posture.

Since strategic defenses and related weapons are not nuclear-armed, they fall outside the scope of the Pentagon review. But their impact on the strategic nuclear posture should still be considered. For example, if the U.S. deploys the Global Protection Against Limited Strikes (GPALS) anti-missile system proposed by the Bush Administration, the U.S. strategic offensive arsenal could be reduced by as many as 600 warheads.<sup>9</sup> This is because the GPALS system is designed to destroy up to 200 warheads delivered by missiles. If these 200 warheads were deployed on the Russian single-war-

head SS-25 *Sickle* ICBM, then 200 weapons on the U.S. nuclear target list could be removed.

Reducing the targeting list by 200 means that 600 U.S. nuclear warheads could be removed from the arsenal. The same logic applies to air defense systems, which can counter bombers and cruise missiles, and attack submarines, which can counter SLBMs before they are launched. Likewise, to the extent arms control reduces the number of targets in the set, even fewer nuclear weapons may be required.

Unfortunately, America's current strategic defense posture, with the exception of the attack submarine force, is so feeble that it can make only a limited contribution toward a damage-limitation force. But as satellite technology and communications continue to improve, the refusal to develop missile defense systems becomes less and less sensible. Missile defenses will lead to a reduction of nuclear forces needed to maintain a credible deterrent.

If America were to adopt a damage-limitation strategy, what might its strategic nuclear force look like at the end of the first decade of the next millennium? For the sake of comparison, assume that the global threat remains at today's level. That means starting with a strategic nuclear target list of 1,977 targets. First, all 100 urban targets can be re-

moved from the list, thereby reducing the target list to 1,877. Of the remaining 1,877 targets, approximately 1,000 are weapons targets. Further, assume strategic defenses can cover roughly half, or 500, of these weapons targets. This leaves 500 weapons targets on the U.S. list. If the non-weapon targets are added back, the total number of U.S. nuclear targets would be 1,300.

Because strategic defenses will improve dramatically the survivability of the offensive force, the weapon-to-target ratio can safely be reduced from three weapons per target to two. Thus, instead of some 4,000 warheads to destroy the 1,300 targets on the nuclear list, the U.S. strategic nuclear force will require only 2,600 warheads. When the roughly 1,300 warheads mounted on submarines in port are added, the total force numbers are around 4,000. This would reduce the U.S. strategic nuclear arsenal by 3,700 from the current force of 7,900. These warheads would be distributed as follows: 1) 500 warheads on 50 MX missiles; 2) 500 warheads on a new single-warhead ICBM; 3) 2,592 warheads on 432 *Trident II* SLBMs (18 *Trident* submarines); and, 4) 640 warheads on 40 B-2 bombers (see chart 3). This smaller nuclear force would serve to complement defensive forces in protecting U.S. territory.

This force structure carries several important implications for strategic nuclear modernization. The damage limitation strategy requires that rapid delivery and accuracy be

Chart 3

**Hypothetical U.S. Strategic Nuclear Force Posture  
To Support a Damage Limitation Strategy: 2010**

Delivery System	System Number	Warhead Number
Minuteman III	0 *	0
MX	50	500
New ICBM	500	500
Trident II	432	2,592
B-52H	0	0
B-1B	0	0
B-2	40	640
<b>Total</b>	<b>1,022</b>	<b>4,232</b>

\* Minuteman III force of 500 missiles with one warhead each would be retained if new ICBM is not deployed.



paramount. Therefore, the accurate and fast MX missile force should be retained. In addition, a new ICBM is needed that is not only accurate, but has the capability of targeting mobile missiles. The entire *Trident* submarine force should be deployed with the more accurate *Trident II* missile, although the number of warheads mounted on each missile can be reduced from eight to six. This means retrofitting those *Trident* submarines currently equipped with the *Trident I* missile. Finally, it means making sure that the B-2 bomber force has the guidance and targeting systems required to destroy mobile missiles. It also suggests that 20 B-2 bombers be added to the plan fleet of 20 in order to maintain the airborne element of the triad. This B-2 force will be capable of searching out and destroying mobile targets in significant numbers.

**Tactical Nuclear Forces.** The tactical nuclear force structure needs to include adequate numbers of low-yield weapons to counter the most potent army fielded by any regional adversary the U.S. may face. The central mission of the tactical nuclear force is to counter any battlefield advantage an adversary may gain from striking U.S. and allied forces with weapons of mass destruction. To meet this objective, the U.S. must be able to target large concentrations of conventional forces with tactical nuclear weapons.

The most potent regional army the U.S. could face is Russia's. Russian forces retain as many as 3,800 operational tactical nuclear weapons.<sup>9</sup> It is also certain that Russia possesses chemical and biological weapons. Russia may possess 50,000 tons of chemical agents.<sup>10</sup> While there is scant public information about the size of the Russian biological weapons program, the Bush Administration described it as "massive."<sup>11</sup>

Using a Russian standard for measuring U.S. tactical nuclear force requirements does not mean that a U.S.-Russian conflict is likely. Nevertheless, U.S. force structure should continue to be based upon capabilities rather than intent, as the latter can change rapidly. Indeed, with extremists like Vladimir Zhirinovskiy waiting in the wings, the possibility of Russian aggression in either Asia or Europe cannot be discounted entirely.

The U.S. tactical nuclear force should include: 1,000 Air Force air-to-surface missiles (both air-launched cruise missiles and short-range attack missiles), 500 Navy sea-launched nuclear-armed cruise missiles, and 1,000 bombs deployed on both Air Force and Navy aircraft (see chart 4). This number should deter not only Russian use of tacti-

Weapon	Number
Air-Launched Cruise Missile	750
Short-Range Attack Missile	250
Sea-Launched Cruise Missile	500
Gravity Bombs	1,000
<b>Total</b>	<b>2,500</b>

9 "Estimated Russian (CIS) Nuclear Stockpile," *Bulletin of the Atomic Scientists*, July/August 1993, p. 57.

10 Ronald F. Lehman, "Concluding the Chemical Weapons Convention," in *Chemical Disarmament and U.S. Security* (Boulder, Colorado: Westview Press, 1992), p. 4.

11 U.S. Arms Control and Disarmament Agency, "Adherence To and Compliance With Arms Control Agreements and the President's Report To Congress on Soviet Noncompliance With Arms Control Agreements," January 14, 1993, p. 14.

cal nuclear weapons and other weapons of mass destruction, but also those of any other potential enemy in a regional conflict. In the latter cases, this tactical nuclear force will prove adequate by a considerable margin.<sup>12</sup>

As with strategic forces, defenses against aircraft, missiles, chemical weapons, and biological weapons will play an essential role in the U.S. force posture. This is because these defensive systems will bolster allies in opposing regional aggressors possessing such weapons and provide protection to U.S. and allied forces on the battlefield. Thus, the U.S. will have to deploy systems like the Theater High Altitude Area Defense (THAAD) weapon and the *CorpsSAM* system. THAAD is being designed to down short- and intermediate-range ballistic missiles, while *CorpsSAM* will destroy cruise missiles and strike aircraft. Further, the U.S. will have to improve not only the garments and masks used to protect its troops against chemical agents, but the system for inoculating troops against biological agents.

**Question #3: What operating procedures should govern the nation's nuclear forces?**

**Answer #3:** U.S. nuclear forces should be able to wipe out enemy strategic forces rapidly enough to limit damage to U.S. territory. This requires the ability to destroy enemy strategic forces held in reserve after a first strike.

The temptation has been for the U.S. to lower the alert status of its strategic nuclear force as the Cold War winds down. This trend should be stopped. There should be a limit on the numbers of strategic nuclear forces that can be taken off alert. The President's Nuclear Initiative (PNI) announced by George Bush on September 27, 1991, took off alert all strategic nuclear weapons scheduled for deactivation under the Strategic Arms Reduction Treaty (START). Further, the entire bomber force was taken off alert. While these steps were appropriate, further steps in this direction would not be. The bulk of U.S. strategic nuclear forces, specifically the *Minuteman III* ICBMs, the MX ICBMs and the *Trident* SLBM force must remain at high states of readiness. This level of readiness must be backed by a robust, redundant, and survivable strategic command and control system. Under these circumstances, U.S. strategic forces will be prepared to make a valuable contribution toward limiting damage to the U.S. in the event of conflict.

Tactical nuclear weapons should never be treated like conventional munitions. Navy and Air Force tactical nuclear weapons should, as has been the practice, be managed under a stricter command and control structure than that applied to conventional weapons. For example, launch procedures for tactical nuclear weapons must continue to include two-person validation of launch orders, which can come only from the commanders at higher echelons than unit commanding officers. The decision to use nuclear weapons will have political ramifications. Authority to use them should never be delegated to ship or aircraft commanders. The Bush Administration went so far as to withdraw all ground-based tactical nuclear weapons from forward-deployed units in

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**12** In the future the U.S. may want to alter design of its tactical nuclear arsenal. For example, a new low-yield, nuclear-armed cruise missile may be better suited for use in regional conflicts than the existing cruise missiles. The U.S. should not hesitate to develop and deploy new generations of tactical nuclear weapons, as necessary.

Europe and Asia. This is appropriate. There is no reason for either the Army or the Marine Corps to retain a nuclear function. The chaotic environment of close combat is no place for nuclear weapons.

But Bush also decided to withdraw tactical nuclear weapons from U.S. ships and store these weapons in the U.S. This was a mistake. These weapons should remain on board ships and normal training cycles resumed. The Navy has a decades-old record of zero nuclear accidents, which was the result of constant training and readiness. Moreover, the Navy's traditional role of rapid response would be restricted in the event of a short-notice crisis if ships first had to be sent to ammunition depots to be re-armed with tactical nuclear weapons.

Given proper concerns about the control and use of tactical nuclear weapons, deployments should favor "stand-off" platforms such as Navy ships and Air Force bombers. This means that strikes behind enemy lines should, to the extent possible, be conducted with tactical nuclear weapons launched from considerable distances. These include nuclear air- and sea-launched cruise missiles with low-yield warheads, such as the *Tomahawk*. Such a policy would limit, although not eliminate, the use of nuclear munitions on strike aircraft. This will minimize the chances that nuclear weapons will fall into enemy hands.

**Question #4: What safety requirements should be established for nuclear forces?**

**Answer #4:** Maintaining the safety and reliability of nuclear weapons will require continued weapons tests. Former Secretary of Defense James Schlesinger complained in a July 12, 1993, *Wall Street Journal* column: "People who would not let their lawnmowers go untested for more than a year argue with apparent seriousness that nuclear weapons can go untested and stay reliable."<sup>13</sup>

Unfortunately, the Clinton Administration is already committed to negotiating a comprehensive ban on nuclear tests. This comes at a time when Congress has imposed a moratorium on testing. Although the law contained a procedure for allowing the moratorium to lapse if another country conducted a test, the Administration chose to make the moratorium a unilateral measure when it ignored an October 5, 1993, nuclear test by the Chinese.

In addition to ensuring the reliability of the existing stockpile, testing has other important and practical uses. Nuclear tests will be required to field new systems as previous generations of weapons become old and obsolete. No testing means no modernization, which means, ultimately, no nuclear stockpile. Moreover, testing is used to "harden" conventional weapons and non-nuclear defenses by exposing them to the effects of nuclear explosions. If these systems are not hardened, a regional adversary will be tempted to explode a nuclear weapon in the air in order to knock out these non-nuclear systems.<sup>14</sup>

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<sup>13</sup> James Schlesinger, "Clinton Defers a Necessity—Nuclear Testing," *The Wall Street Journal*, July 12, 1993.

<sup>14</sup> The U.S. ability to produce semiconductors that are hardened against the radiation emitted by nuclear weapons is weakening. For a discussion of this alarming problem, see: Lt. Col. Bill Swiderek, "Evaluating the Viability of Rad-Hard

Since the safety, reliability, modernization, and hardening are all dependent upon testing, the Administration's test ban policy effectively commits the nation to a policy of no nuclear weapons over the long term. This is because nuclear weapons that can no longer be certified as safe or reliable—which can be assured only through testing—will have to be withdrawn from the stockpile. Eventually, even the most modern weapons will be withdrawn and the U.S. will have no deployable nuclear weapons. Indeed, to the extent that the Clinton Administration's policy toward a comprehensive nuclear test ban will require withdrawing large numbers of weapons from the stockpile, the policy preempts the findings of the nuclear posture review. If over the long term the U.S. will have no nuclear weapons, they will thus have no role in maintaining the nation's security and Aspin's six questions are moot.

Another question related to safety is how to prevent or counter the unauthorized or accidental launch of nuclear-armed weapons. Unfortunately, this legitimate concern is leading to some short-sighted proposals. One strategic theorist at the Brookings Institution, for example, has proposed separating all warheads from their delivery systems.<sup>15</sup> This concern also prompted the Clinton Administration to adopt its ill-advised "de-targeting" policy. Proposals such as these would render the U.S. strategic nuclear force unable to meet its most important strategic objective: to limit the damage to the U.S. caused by a nuclear attack on it. If nuclear weapons cannot be relied upon quickly in a period of rising tension, they have little deterrent value and perhaps no military value.

**Question #5: What is the relationship between U.S. nuclear policy and counterproliferation policy?**

**Answer #5:** The only proper answer is that U.S. nuclear weapons are needed to counter nuclear proliferation.

The popular wisdom is that the very existence of nuclear forces encourages proliferation as other nations try to obtain such weapons. Contrary to popular wisdom, though, the U.S. nuclear force makes a valuable contribution to the global counterproliferation effort; this is why the U.S. is designated as a nuclear power in the NPT. In the absence of a U.S. nuclear force, Germany, Japan, and other non-nuclear allies would feel compelled to obtain nuclear weapons if the U.S. nuclear umbrella were removed. One anonymous Japanese official told reporters last year that Japan might consider building a nuclear arsenal if there were a rupture in the U.S.-Japanese security relationship, which is bolstered by the U.S. nuclear guarantee.<sup>16</sup>

There are other contributions the U.S. nuclear arsenal makes to countering proliferation. Hostile countries wishing to obtain nuclear weapons and other weapons of mass destruction will be emboldened to do so if the U.S. nuclear presence is reduced or removed. Regional bullies would be able to alter the balance of power by obtaining nuclear weapons. In short, the removal of U.S. nuclear forces would increase the value of nuclear weapons to would-be proliferators.

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Fab Lines," *Military & Aerospace Electronics*, September 20, 1993, pp. 4, 14-15.

<sup>15</sup> Bruce G. Blair, "Russia's Doomsday Machine," *The New York Times*, October 8, 1993, p. A35.

<sup>16</sup> Jacob M. Schlesinger, "Nuclear Arms: Tokyo Hesitates To Say Never," *The Wall Street Journal*, July 12, 1993, p. A8.



**Question #6: What is the relationship between U.S. nuclear policy and arms control policy, particularly regarding the states of the former Soviet Union?**

**Answer #6:** A damage-limitation nuclear strategy links the number of enemy targets to the size of the U.S. force. Therefore, as arms control reduces the numbers of these targets, so, too, can the size of the U.S. nuclear force be reduced. Further, the more arms control restraints on strategic defenses are lifted, the less central a role offensive nuclear weapons will play in limiting damage to U.S. territory. This is because strategic defenses will cover the targets that would otherwise be left to offensive weapons.

Nuclear policy and arms control policy are mutually reinforcing. The more arms control succeeds in shrinking the target list, the fewer strategic nuclear weapons the U.S. will need. Therefore, lifting of the virtual ban imposed by the Anti-Ballistic Missile Treaty on defenses against long-range missiles would be an incentive for greater reductions of offensive nuclear arms.

By way of example, U.S. targeting requirements could be reduced by some 20 percent through the implementation of START I, as long as countries other than Russia did not deploy additional strategic weapons.<sup>17</sup> The impact of START II would be even more dramatic. If the Russians ultimately deployed 500 single-warhead ICBMs under START II, which they are allowed to do, U.S. weapons targets could be cut from 1,077 to 685, and non-weapons targets from 900 to 650. Thus, as a result of START II, the strategic nuclear target list could be reduced by 642 targets (see chart 5).

A note of caution about strategic nuclear arms control is warranted. The U.S. should proceed down the road of eliminating its offensive arsenal only as it becomes clear that the targets—the strategic weapons of the former Soviet Union and the infrastructure to support them—are actually being eliminated. Otherwise, the U.S. will find it impossible to meet its targeting requirements. START I has not even come into full force, yet the U.S. is rapidly approaching START I force levels. Secretary of Defense William Perry has announced that the U.S. will delay reductions to the START II level until Russia “undertakes comparable reductions.”<sup>18</sup> This is wise because it is far from clear that the Russian parliament will agree to the ratification of START II.

Chart 5

**START I and START II  
Can Reduce U.S. Strategic Nuclear  
Targeting Requirements**

Regime	Targets
Current	1,977
START I	1,601
START II	1,335

Sources: *Bulletin of the Atomic Scientists*, START I and II Treaties.

<sup>17</sup> This conclusion assumes that the Russians deployed 726 ICBMs under START I, which they would be allowed to do. This would be a reduction in the weapons target list of 266 and the non-weapons target list by perhaps 110.

<sup>18</sup> Secretary of Defense William Perry, Address at George Washington University, March 14, 1994.

An important arms control consideration, of course, involves the fate of the ABM Treaty. This treaty prohibits the deployment of a missile defense system for the full-scale protection of U.S. territory. Further, it restricts the development and deployment of defenses against short-range missiles even though it was never intended to do so. The ABM Treaty stands as a barrier to the implementation of this damage-limitation strategy. Comprehensive anti-missile defenses are essential to the strategy. Moreover, it bans the deployment of the most effective theater defenses technological advances would otherwise allow.

Under these circumstances, the Clinton Administration needs to press the Russians and other countries to participate in negotiations to replace the ABM Treaty. The object of these negotiations should be to establish a cooperative arrangement for the deployment of anti-missile defenses. Thus far, the Administration has chosen to support continued application of the ABM Treaty. This will mean a future with more rather than fewer nuclear weapons worldwide.

## CONCLUSION

During the Cold War, nuclear weapons served as the central pillar of U.S. security policy. As the world moves beyond the Cold War, an opportunity has arisen to make these destructive weapons less important to U.S. security. Doing so will require a shift in U.S. nuclear strategy and policy. Instead of striving to destroy an adversary with a nuclear attack, which was the purpose of U.S. Cold War strategy, the U.S. should develop a strategy that focuses on ensuring its own survival. This shift in policy will require the deployment of extensive strategic defenses to counter strategic nuclear weapons. Regarding battlefield contingencies, it means using tactical nuclear weapons only in response to the use of weapons of mass destruction by the enemy and only for specific military purposes. Extensive battlefield missile defenses will be required as well.

While this policy will not result in the complete elimination of nuclear weapons, the world will still be able to issue a collective sigh of relief. As Ronald Reagan noted, Mutual Assured Destruction is just "mad," and the future U.S. nuclear doctrine should say so.

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