

NUCLEAR POSTURE REVIEW

INTRODUCTION

The Nuclear Posture Review (NPR) represents the nuclear analog to the Bottom-Up Review of conventional forces, undertaken in 1993 to address the significant changes in the security environment which face the United States, and the military consequences of those changes. The NPR was the first review of nuclear policy in the post-Cold War world, the first such review in 15 years, and the first review ever to include policy, doctrine, force structure, command and control, operations, supporting infrastructure, safety, security, and arms control. The decisions made in the NPR process allow DoD to put its nuclear programs on a stable footing after several years of rapid change in the international environment and in DoD's forces and programs, and at the threshold of a decade of further reductions called for by the START I and START II agreements.

Five basic themes of U.S. nuclear strategy emerged from the Nuclear Posture Review:

- First, nuclear weapons are playing a smaller role in U.S. security than at any other time in the nuclear age. This fact served as a point of departure for the rest of the review. The Bottom-Up Review and the Counterproliferation Initiative (CPI) are designed to achieve and protect U.S. conventional superiority wherever American defense commitments require it.
- The second principal finding is that the United States requires a much smaller nuclear arsenal under present circumstances. Dramatic reductions in U.S. (and, when implemented, former Soviet) forces from Cold War levels are underway.
- Third, although the security environment has changed dramatically since the end of the Cold War, there is still great uncertainty about the future, particularly in the New Independent States where the process of denuclearization and reduction is underway but by no means completed. The United States must provide a hedge against this uncertainty. Therefore, the NPR stresses prudence in the face of potential risks while also identifying some new policy departures that reflect changes in the security environment.
- Fourth, the United States does not have a purely national deterrent posture; it extends the deterrent protection of its nuclear arsenal to its allies. A very progressive aspect of U.S. nuclear posture is that it is, in part, an international nuclear posture. The NPR strongly supports continued commitment to NATO and Pacific allies.
- Finally, the United States will continue to set the highest international standards of stewardship for nuclear safety and security, command and control, use control, and civilian control.

PROCESS

The Nuclear Posture Review was chartered in October 1993 to determine what the role of nuclear weapons in U.S. security strategy should be. A 10-month DoD collaborative effort, the NPR was co-chaired by the Office of the Secretary of Defense (OSD) and the Joint Staff. Working groups were comprised of representatives from OSD, the Joint Staff, the Services, and the unified

commands. The Deputy Secretary of Defense and the Vice Chairman of the Joint Chiefs of Staff reviewed and directed the progress of the NPR through issue briefs and the development of a final report, which was presented to the Secretary of Defense and the Chairman of the Joint Chiefs of Staff. Some decisions relating to the NPR were raised through the interagency process, including all relevant agencies of the U.S. government, which had the opportunity to review a wide range of options. The President approved the recommendations of the NPR on September 18, 1994.

ROLE OF NUCLEAR WEAPONS IN U.S. SECURITY

The U.S. National Security Strategy states: "We will retain strategic nuclear forces sufficient to deter any future hostile foreign leadership with access to strategic nuclear forces from acting against our vital interests and to convince it that seeking a nuclear advantage would be futile. Therefore we will continue to maintain nuclear forces of sufficient size and capability to hold at risk a broad range of assets valued by such political and military leaders." Recent international upheavals have not changed the calculation that nuclear weapons remain an essential part of American military power. Concepts of deterrence and survivability must adapt to the new international environment, yet continue to be central to the U.S. nuclear posture. Thus, the United States will continue to threaten retaliation, including nuclear retaliation, and to deter aggression against the United States, U.S. forces, and U.S. allies.

Alliance relationships are an important element of U.S. security. Through forward basing and power projection capabilities, overseas U.S. military presence — including nuclear capabilities — helped promote regional stability, avert crises, and deter war. In recent years, there has been a dramatic reduction in both the overall size of the U.S. military presence abroad and in the nuclear capabilities deployed overseas. Yet maintaining U.S. nuclear commitments with NATO, and retaining the ability to deploy nuclear capabilities to meet various regional contingencies, continues to be an important means for deterring aggression, protecting and promoting U.S. interests, reassuring allies and friends, and preventing proliferation. Although nuclear capabilities are now a far smaller part of the routine U.S. international presence, they remain an important element in the array of military capabilities that the United States can bring to bear, either independently or in concert with allies to deter war, or should deterrence fail, to defeat aggression. Thus, the United States continues to extend deterrence to U.S. allies and friends.

CONTEXT: LEAD BUT HEDGE

The Nuclear Posture Review considered the size and role of U.S. nuclear forces in a world in which the proliferation of nuclear weapons and other weapons of mass destruction, rather than the nuclear arsenal of a hostile superpower, poses the greatest security risk. One goal for the NPR was to demonstrate U.S. leadership in responding to that risk. Major reductions in U.S. nuclear weapons are already underway, confirming the U.S. commitment to a smaller international role for nuclear weapons. Since 1988, the United States has reduced its nuclear arsenal by 59 percent, and either eliminated, truncated, or never fielded over 15 nuclear weapons systems. The United States has no new nuclear weapons programs, and has committed to achieving a Comprehensive Test Ban Treaty, extending its testing moratorium in the interim. Program changes of this magnitude help set an example of decreasing dependence on nuclear weapons for military purposes.

U.S. nuclear weapons were for years justified by the potential for a massive conventional attack by the Warsaw Pact through the Fulda Gap which would overwhelm NATO conventional forces. The decisions of the members of the Warsaw Pact to dissolve their alliance and the subsequent transformation of the Soviet Union into independent states removed this potential threat. No equivalent threat to American vital interests can be identified in the post-Cold War era, and for very

few of the existing threats are nuclear weapons appropriate responses. The NPR sought to adjust and reduce strategic programs to reflect actual U.S. needs, thereby setting an example for other nuclear powers to consider post-Cold War adjustments of their own.

Moreover, the CPI has as its central tenet the creation and furtherance of conventional responses to the threat or use of weapons of mass destruction. Far from inventing new roles for nuclear weapons in countering WMD, the NPR supports the CPI, because in a potential case of WMD threat or use, senior political and military leaders must have a wide range of responses — especially non-nuclear — from which to choose. Having the conventional capability to respond to WMD threat or use further reduces U.S. dependence on nuclear weapons.

These realities make the indefinite extension of the Nuclear Non-Proliferation Treaty (NPT) all the more important. A failure to codify the reduced role of nuclear weapons in nations' security could result in the creation of additional nuclear powers — a clear reduction in the security of all nations. The Posture Review sought to demonstrate American leadership by reducing the role of nuclear weapons in U.S. security. The combination of the large negotiated reductions embodied in the START I and START II treaties and the further unilateral reductions recommended by the NPR makes tangible the U.S. commitment to Article 6 of the NPT, which calls for the nuclear powers to take steps to reduce their arsenals. Once START II has been ratified, further negotiated reductions can be considered. The notion, however, that nations are motivated by U.S. nuclear forces in making decisions about acquiring nuclear weapons themselves is simply not valid. Potential proliferators are more likely to be driven by concerns about neighbors' capabilities or the desire for prestige or regional hegemony than by decisions America makes about its nuclear arsenal. Extending the NPT indefinitely will therefore do far more to improve individual nations' security than would further declines in superpower weapons stocks.

A major focus of the Nuclear Posture Review was nonstrategic nuclear forces (NSNF) and safety, security, and use control. The United States decided in the NPR to completely eliminate two out of its five types of NSNF, and to augment several aspects of nuclear safety and security. These efforts were discussed with Russian civilian and military leaders in the hope that they would take similar measures to reduce NSNF and improve nuclear safety, security, and use control. The United States is prepared, under the Cooperative Threat Reduction program, to cooperate with and support Russia in these endeavors.

Both the United States and the states of the former Soviet Union have acted quickly and responsibly to ease Cold War tensions. Both sides have decreased their nuclear stockpiles and are eliminating the weapons which most undermine stability. U.S. and Russian weapons have been de-targeted so that they are no longer aimed at any country. With U.S. help and financial aid, Russia is moving in the direction of economic reform and working to consolidate the nuclear arsenal that belonged to the Soviet Union.

These policies have not eliminated the threat posed by the weapons of the former Soviet Union, however. START I has just entered into force; START II has not been ratified by either the United States or Russia. Even after achieving the full reductions called for by both treaties, each side will retain up to 3,500 warheads on strategic offensive systems. While political relations with Russia have changed dramatically in recent years, the United States must retain a nuclear capability adequate to respond to any challenge. Further, most of the strategic nuclear weapons remaining in the former Soviet Union still are deployed and capable of attacking targets in the United States. Russia remains the focus of the Posture Review not because its intentions are hostile, but because it controls the only nuclear arsenal that can physically threaten the survivability of U.S. nuclear forces.

A significant shift in the Russian government into the hands of arch-conservatives could restore the strategic nuclear threat to the United States literally overnight. The removal of weapons located on the territory of Ukraine, Kazakhstan, and Belarus is still incomplete. Other nations not allied with the United States either have declared nuclear arsenals or are capable of developing them. With this kind of instability and uncertainty, the United States must maintain nuclear weapons necessary to deter any possible threat or to respond to aggression, should deterrence fail.

The NPR called for an affordable hedge in which the approved force structure could support weapons levels greater than those called for under START II should major geostrategic changes demand it. This lead and hedge theme reflects the pragmatic partnership between the United States and Russia, in which the United States seeks both to cooperate with Russia wherever such cooperation is possible, and to prepare realistically for possible tensions or disruptions of that relationship.

REDUCTIONS IN U.S. NUCLEAR POSTURE

The deep reductions in nonstrategic and strategic nuclear weapons that have been underway for several years and will continue under START I and START II are clear evidence that the United States is reducing the role that nuclear weapons play in its military posture. Throughout the last several years, nuclear targeting and war planning have undergone several reviews and adjustments to account for the decline of the Warsaw Pact and the Soviet breakup, and will continue to change in response to further developments in international affairs. In fact, there have been significant changes in the U.S. nuclear posture since the end of the Cold War:

- There are no nuclear weapons in the custody of U.S. ground forces.
- Naval NSNF are no longer deployed at sea.
- Strategic bombers have been taken off day-to-day alert.
- The total U.S. active warhead stockpile has been reduced by 59 percent (79 percent by 2003). Deployed strategic warheads have been reduced by 47 percent (71 percent by 2003, when START I and II are implemented).
- NSNF weapons have been cut by 90 percent, and the NATO stockpile has been cut by 91 percent.
- Nuclear weapons storage locations have been reduced by over 75 percent.
- The number of personnel with access to nuclear weapons has been cut by 70 percent.

The Department also is reducing substantially the worldwide airborne command post fleet — reflecting the decline in the likelihood of a superpower confrontation.

Since 1989, the programmatic implications of START I and II, and the two earlier Presidential Nuclear Initiatives on U.S. nuclear programs, also have been quite substantial. Program terminations, or systems that were developed but never became operational, include the small intercontinental ballistic missile (ICBM), Peacekeeper rail garrison, Lance follow-on, New Artillery Fired Atomic Projectile, Tactical Air to Surface Missile and Short Range Attack Missile II. Other programs were truncated, that is systems were either fielded in fewer numbers than originally envisioned or, in the case of the B-1, will be converted to conventional-only usage. These truncations include Peacekeeper, B-2, B-1 (which will drop its nuclear role), Advanced Cruise

Missile, and the W-88 warhead. There are also a number of nuclear systems that were retired from service and never replaced; these include the Artillery Fired Atomic Projectile, FB-111, Minuteman II, Lance, Short Range Attack Missile-A, Nuclear Depth Bomb, and C-3/C-4 Backfit nuclear-powered ballistic missile submarines (SSBN). In all, spending on strategic nuclear forces, in constant 1994 dollars, dropped from \$47.8 billion in 1984 to \$13.5 billion in 1994, or 14.0 percent and 5.3 percent, respectively.

STRATEGIC NUCLEAR FORCES

Two basic requirements necessarily guide U.S. planning for strategic nuclear forces: the need to provide an effective deterrent while remaining within START I/II limits, and the need to allow for additional forces to be reconstituted in the event of a reversal of currently positive trends. The Department must hedge against uncertainties while recognizing that no new nuclear systems are under development.

The NPR examined a wide variety of options for strategic nuclear force structures, ranging from ones which increased platforms over those previously planned, to a minimal force that eliminated ICBMs and reduced the number of SSBNs to 10. The Review examined what force levels were needed to handle the most stressing case that could develop — deterring a hostile Russia. The President approved the NPR's recommended strategic nuclear force posture as the U.S. START II force. This force will maintain flexibility to reconstitute or reduce further and assumes that Russia ratifies and implements START II. At this level, the United States would have adequate weapons to:

- Deter a hostile Russian government by holding at risk a range of assets valued by its political and military leaders.
- Maintain a strategic reserve force to ensure continued deterrence of other nuclear powers.
- Account for weapons on systems which are not available due to maintenance and overhaul.

The NPR did not change the total number of warheads the United States planned to retain under START II. However, the Review did identify ways to streamline forces by reducing the number of platforms carrying these warheads. As a result of the NPR, U.S. strategic nuclear force structure will be adjusted to comprise:

- 14 Trident submarines — four fewer than previously planned — carrying 24 D-5 missiles, each with five warheads, per submarine. This will require backfitting four Trident SSBNs, currently carrying the Trident I (C-4) missile, with the more modern and capable D-5 missile system.
- 66 B-52 bombers — down from 94 planned in 1993 — carrying air-launched cruise missiles (AGM-86B) and advanced cruise missiles (AGM-129).
- 20 B-2 bombers — the same number previously envisioned — carrying gravity bombs.
- 450/500 Minuteman III missiles, each carrying a single warhead.

In addition, no new strategic nuclear systems are either under development or planned.

The NPR re-examined the concept of a triad of ICBMs, submarine-launched ballistic missiles (SLBMs), and bombers as the basis for a strategic deterrent and determined it remains valid for a START II-size force. Today, the United States relies on fewer types of nuclear weapon systems than in the past. Hedging against system failure of a leg of a triad — either because of technical failure of a delivery platform or warhead, or technological breakthroughs by potential adversaries — is a primary reason to retain a triad. Each leg also has unique characteristics and specific advantages.

SLBMs

Under START II, the SLBM force will provide about half of the 3,000 to 3,500 accountable warheads that the United States will be permitted to deploy. Because of this increased reliance on the SLBM force and the continued need for survivable weapons to enhance stability, the NPR determined that the conversion of four submarines to carry the more modern D-5 missile was appropriate. Conversion of these four submarines from the older C-4 missile ensures that the U.S. force can remain intact without danger of age-related problems crippling missiles that would carry 40 percent of SLBM warheads.

The SLBM force, which is virtually undetectable when on patrol, is the most survivable and enduring element of the strategic nuclear triad. A significant portion of the SSBN force is at sea at any given time, and all submarines that are not in the shipyard for long-term maintenance can be generated during a crisis. Moreover, the Trident II (D-5) missile — with its improved accuracy, range, and payload relative to previous SLBMs — allows the SLBM force to hold at risk almost the entire range of strategic targets. In order to have adequate, survivable, at-sea weapons to support deterrence, accountable SLBM warhead levels need to be maintained close to the START II limit of 1,750. With the 14 SSBN option selected by the NPR, the United States will retain a significant capability to hedge against a failure of the START II Treaty or unforeseen changes in the world, because the D-5 missile loaded on the Tridents will carry fewer warheads than the maximum allowed by START Treaty limits. The 14 boat force also maintains the security of two-ocean basing, further enhancing operational effectiveness and stability.

ICBMs

ICBMs provide the United States a prompt-response capability. START II requires the downloading of ICBMs to one warhead, but does not place a sublimit on the total number of single-warhead ICBMs. Approximately 500 Minuteman IIIs will be retained and downloaded to one warhead apiece. ICBMs also increase the cost ratio to an adversary of attempting a first strike. Retaining approximately 500 single-warhead Minuteman IIIs provides for a reduced but prudent ICBM force.

Bombers

There is no START II sublimit on the number of bombers. Because bombers are dual-capable, they fulfill two important functions: they serve as an integral part of the U.S. nuclear deterrent, providing a hedge against a catastrophic failure of either the SSBN or ICBM leg of the triad, and they provide an important conventional capability in MRCs; 100 bombers in a conventional role are tasked for MRCs. Retaining 66 B-52s and 20 B-2s will allow the bombers to serve these functions.

NONSTRATEGIC NUCLEAR FORCES

The Nuclear Posture Review affirms that the United States has not only a national deterrent posture, but an international nuclear posture. Indeed, the United States extends the deterrent protection of

its nuclear arsenal to its allies. Nowhere is this more evident than in the area of NSNF, which are not covered by START I and START II. For nearly 50 years, the United States has maintained a sizable military presence in regions deemed vital to American national interests.

Alliance commitments and the unique characteristics of nonstrategic nuclear forces were primary considerations in the NPR's consideration of what the NSNF force structure should be. The Nuclear Posture Review considered numerous options, ranging from one more robust than today's structure to elimination of NSNF entirely. As a result of the NPR, the following decisions were made regarding U.S. nonstrategic nuclear force structure:

- Eliminate the option to deploy nuclear weapons on carrier-based, dual-capable aircraft.
- Eliminate the option to carry nuclear Tomahawk cruise missiles (TLAM/N) on surface ships.
- Retain the option to deploy TLAM/N on attack submarines (although none are currently deployed, they could be deployed if needed).
- Retain the current commitment to NATO of dual-capable aircraft based in Europe and CONUS and the deployment of nuclear weapons (gravity bombs) in Europe.

These NSNF decisions have the effect of permanently eliminating the capability to deploy nuclear weapons on naval surface ships — a step that could encourage the Russians to reciprocate — while maintaining a nonstrategic nuclear force capable of fulfilling U.S. commitments to allies.

COMMAND, CONTROL, COMMUNICATIONS, AND INTELLIGENCE

Nuclear-related command, control, communications, and intelligence (C³I) and operations have undergone dramatic changes since the end of the Cold War. For example:

- Strategic bombers are off alert.
- ICBMs and SLBMs have been de-targeted.
- U.S. command post structure has been reduced.
- The operating tempo of the worldwide airborne command post structure has been reduced. The National Emergency Command Post, formerly used only for a nuclear role, is now the National Airborne Operation Center and is available to the Federal Emergency Management Agency for civil emergencies.
- Systems durability requirements have been reduced by two-thirds.
- The C³I portion of the DoD strategic nuclear budget has been reduced from \$3.4 billion to \$2.1 billion.

Nevertheless, to maintain viability, the C³I structure must maintain capability to carry out key missions: early warning; threat assessment; connectivity of the National Command Authority; dissemination of emergency action messages for the launch of nuclear forces, if necessary; and safe, secure force management. With these considerations in mind, the NPR made the following decisions regarding strategic C³I:

- Continue adequate funding of critical programs.
- Correct existing/projected communication system and tactical warning/attack assessment deficiencies.
- Support intelligence systems which provide timely information and threat characterization and warning indicators.

INFRASTRUCTURE

In order to maintain a streamlined and adjusted nuclear posture, DoD must sustain the infrastructure to support U.S. nuclear forces. The Nuclear Posture Review focused its examination of the nuclear infrastructure on two key areas: the industrial base for strategic missiles, reentry systems, and guidance, as well as for bombers; and support by the Department of Energy (DOE), which is responsible for producing and maintaining nuclear weapons for the Department's systems. The NPR made the following infrastructure recommendations:

- Replace the guidance system and re-motor those Minuteman IIIs which are retained.
- Continue D-5 production past 1995 to maintain the strategic ballistic missile industrial base (this is a secondary advantage of backfitting the 14 SSBNs to be retained with the D-5 missile).
- Fund the sustainment of the guidance and reentry vehicle industrial base.
- With regard to bomber infrastructure, no specific funding was found to be necessary, since Stealth and commercial aircraft should keep the industrial base healthy.
- Provide the Department of Energy — the supplier of nuclear weapons — with DoD's requirements:
 - Maintain nuclear weapon capability (without underground nuclear testing).
 - Develop a stockpile surveillance engineering base.
 - Demonstrate the capability to refabricate and certify weapon types in the enduring stockpile.
 - Maintain the capability to design, fabricate, and certify new warheads.
 - Maintain a science and technology base needed to support nuclear weapons.
 - With regard to the tritium supply to support weapons (as specified annually by the Department of Defense in its Nuclear Weapons Stockpile Memorandum), DoD and DOE must decide on a source and a production program. In order to have an upload hedge in case events require it, an accelerated decision will be needed.
 - No new-design nuclear warhead production is required.

SAFETY, SECURITY, AND USE CONTROL

The safety, security, and use controls of nuclear weapons are the solemn responsibility of those nations which possess them. The United States sets the highest international standards for the safety,

security, and responsible custodianship of its nuclear arsenal. The dramatic force reductions which already have taken place since the end of the Cold War — U.S. strategic warheads have been cut by 59 percent since 1988; nonstrategic nuclear forces have been cut by 90 percent — have contributed greatly to the increased safety and security of U.S. nuclear weapons. As a result of these reductions, nuclear storage sites have been reduced by 75 percent. The Nuclear Posture Review concerned itself with maintaining the U.S. lead role in nuclear safety and security issues.

The NPR thoroughly reviewed the recommendations of the Fail-Safe and Risk Reduction (FARR) Commission of 1992 and determined that the vast majority of them had been implemented or were well underway. Among the FARR recommendations the NPR singled out for continued implementation were:

- Completing the Trident Coded Control Device (CCD) in 1997, providing for system-level CCDs or permissive action links (PALs) on all U.S. nuclear weapons by 1997.
- Seeking alternatives to those recommendations that a test moratorium may preclude (for example, protection equivalent to Category F PAL on all new weapons).

The Department of Defense also will re-institute a regular and realistic nuclear procedures exercise program, with participation by senior DoD civilian and military leadership, to ensure thorough understanding of nuclear procedures by this nation's nuclear stewards.

THREAT REDUCTION AND COUNTERPROLIFERATION INITIATIVES

The Nuclear Posture Review made adjustments to the U.S. nuclear posture unilaterally. They are consistent with, but are not required by, any new arms control agreements. There remains hope for Russia to undertake a comparable review, and to make similar adjustments in its strategic force plans, nonstrategic force plans, and ways of ensuring safety, security, and use control. When President Yeltsin came to Washington to meet with President Clinton in September 1994, they had the opportunity to discuss these adjustments, which were made possible in great measure by the new security relationship with Russia — pragmatic partnership.

At the Summit, the Presidents made important progress on a number of arms control issues and, in fact, took steps down the road of further reductions and increased cooperation on nuclear issues. The Presidents confirmed their intention to seek early ratification of the START II Treaty, once the START I Treaty enters into force, and expressed their desire to exchange START II instruments of ratification at the next U.S.-Russia Summit meeting. Once START II is ratified, the Presidents agreed to begin immediately to deactivate all strategic delivery systems to be eliminated under START II. The Presidents also instructed their experts to intensify their dialogue to compare conceptual approaches and to develop concrete steps to adapt the nuclear forces and practices on both sides to the changed international security environment, including the possibility, after ratification of START II, of further reductions and limitations on remaining nuclear forces.

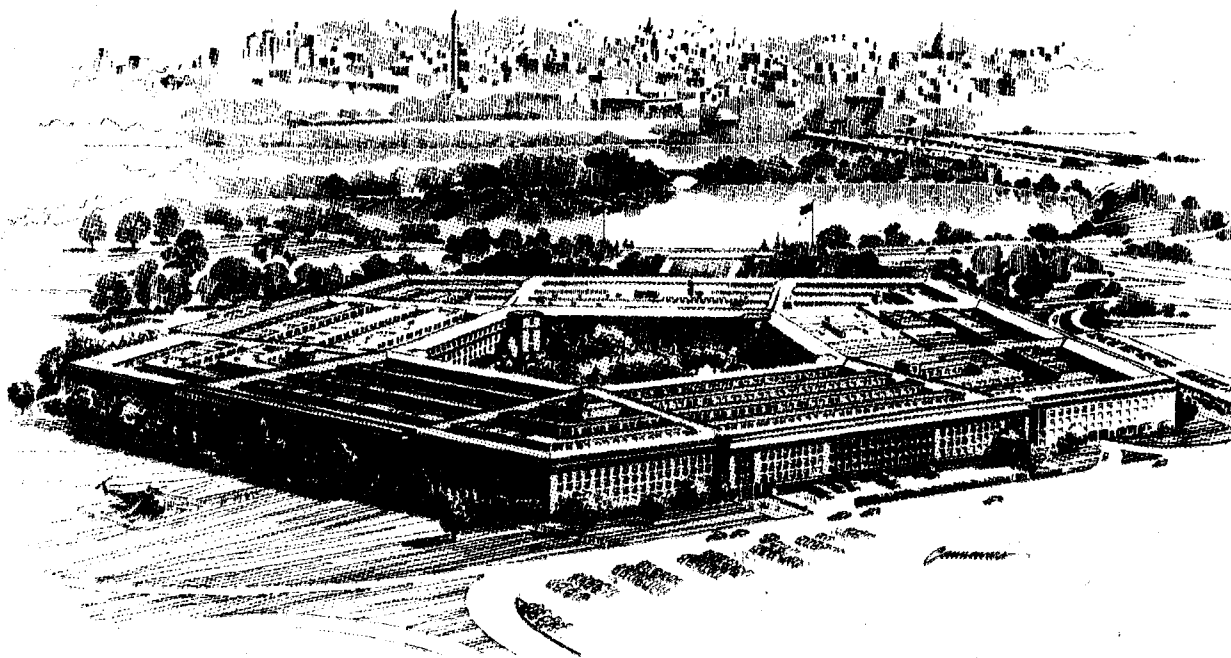
In this uncertain environment, traditional arms control concerns of the past are augmented by the more urgent issues of security and control of key elements of the nuclear complex, particularly the warhead, warhead component, and weapon fissile material stockpiles. The potential for loss or theft of fissile material or nondeployed nuclear warheads is a real risk to U.S. security. As such, there is merit in exploring, together with the Russians and others, initiatives that would reduce this risk.

CONCLUSION

In the Nuclear Posture Review, the Department of Defense has struck a prudent balance between leading the way to a safer world and hedging against the unexpected. In the post-Cold War environment, the United States continues to require a nuclear deterrent. The strategic triad has been streamlined and adjusted, as have nonstrategic nuclear forces, to account for the reduced role nuclear weapons play in U.S. national security. Major force reductions and cost savings are already underway, leading to a smaller, safer, and more secure U.S. nuclear force.

Annual Report

to the
President
and the
Congress



William J. Perry
Secretary of Defense



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