



~~SECRET FRO NF~~

THE SECRETARY OF DEFENSE  
1000 DEFENSE PENTAGON  
WASHINGTON, DC 20301-1000

3

January 8, 2002

The Honorable Richard B. Cheney  
President of the Senate  
Washington, D.C. 20510

Dear Mr. President:

Sections 1041 of the Floyd D. Spence National Defense Authorization Act for Fiscal Year 2001 (Public Law 106-398), as amended by Section 1033 of the National Defense Authorization Act for Fiscal Year 2002 (Public Law 107-107), requires me to report on the nuclear posture of the United States. Additionally, Section 1042 of Public Law 106-398 requires me to report on sustainment and modernization of U.S. strategic nuclear forces. The attached report, prepared in consultation with the Secretary of Energy, constitutes my response to both requirements.

Sincerely,

Attachment

1. Nuclear Posture Review (~~SECRET FRO NF~~)



~~SECRET FRO NF~~

~~SECRET~~ X00070 /02  
~~SECRET FRO NF~~



~~SECRET FRD NF~~

THE SECRETARY OF DEFENSE  
1000 DEFENSE PENTAGON  
WASHINGTON, DC 20301-1000

January 8, 2002

The Honorable J. Dennis Hastert  
Speaker of the House  
U.S. House of Representatives  
H 232 The Capitol  
Washington, D.C. 20515-6501

Dear Mr. Speaker:

Sections 1041 of the Floyd D. Spence National Defense Authorization Act for Fiscal Year 2001 (Public Law 106-398), as amended by Section 1033 of the National Defense Authorization Act for Fiscal Year 2002 (Public Law 107-107), requires me to report on the nuclear posture of the United States. Additionally, Section 1042 of Public Law 106-398 requires me to report on sustainment and modernization of U.S. strategic nuclear forces. The attached report, prepared in consultation with the Secretary of Energy, constitutes my response to both requirements.

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X00070 /02





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THE SECRETARY OF DEFENSE  
1000 DEFENSE PENTAGON  
WASHINGTON, DC 20301-1000

January 8, 2002

The Honorable Robert Byrd  
Chairman  
Committee on Appropriations  
United States Senate  
S-128 The Capitol  
Washington, D.C. 20510-6025

Dear Mr. Chairman:

Sections 1041 of the Floyd D. Spence National Defense Authorization Act for Fiscal Year 2001 (Public Law 106-398), as amended by Section 1033 of the National Defense Authorization Act for Fiscal Year 2002 (Public Law 107-107), requires me to report on the nuclear posture of the United States. Additionally, Section 1042 of Public Law 106-398 requires me to report on sustainment and modernization of U.S. strategic nuclear forces. The attached report, prepared in consultation with the Secretary of Energy, constitutes my response to both requirements.

Sincerely,

Attachment

1. Nuclear Posture Review (~~SECRET FRO NF~~)

cc:

The Honorable Ted Stevens  
Ranking Member



X00070 /02  
REF ID: A61616



~~SECRET FRO NF~~





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THE SECRETARY OF DEFENSE  
1000 DEFENSE PENTAGON  
WASHINGTON, DC 20301-1000

January 8, 2002

The Honorable Tom Daschle  
Majority Leader  
United States Senate  
S-221 The Capitol  
Washington, D.C. 20510-7020

Dear Mr. Leader:

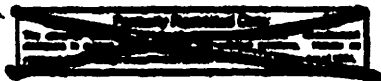
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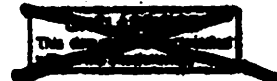
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1. Nuclear Posture Review (~~SECRET - FRO - NT~~)

X00070 /02



~~SECRET - FRO - NT~~





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THE SECRETARY OF DEFENSE  
1000 DEFENSE PENTAGON  
WASHINGTON, DC 20301-1000

January 8, 2002

The Honorable Trent Lott  
Minority Leader  
United States Senate  
S-230 The Capitol  
Washington, D.C. 20510-7010

Dear Mr. Leader:

Sections 1041 of the Floyd D. Spence National Defense Authorization Act for Fiscal Year 2001 (Public Law 106-398), as amended by Section 1033 of the National Defense Authorization Act for Fiscal Year 2002 (Public Law 107-107), requires me to report on the nuclear posture of the United States. Additionally, Section 1042 of Public Law 106-398 requires me to report on sustainment and modernization of U.S. strategic nuclear forces. The attached report, prepared in consultation with the Secretary of Energy, constitutes my response to both requirements.

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X00070 /02



~~SECRET FRD NF~~





~~SECRET - FRD - NF~~

THE SECRETARY OF DEFENSE  
1000 DEFENSE PENTAGON  
WASHINGTON, DC 20301-1000

January 8, 2002

The Honorable Richard K. Arney  
Majority Leader  
U.S. House of Representatives  
H329 The Capitol  
Washington, D.C. 20515-6502

Dear Dick:

Sections 1041 of the Floyd D. Spence National Defense Authorization Act for Fiscal Year 2001 (Public Law 106-398), as amended by Section 1033 of the National Defense Authorization Act for Fiscal Year 2002 (Public Law 107-107), requires me to report on the nuclear posture of the United States. Additionally, Section 1042 of Public Law 106-398 requires me to report on sustainment and modernization of U.S. strategic nuclear forces. The attached report, prepared in consultation with the Secretary of Energy, constitutes my response to both requirements.

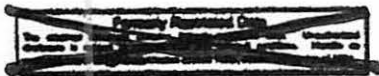
Sincerely,

Attachment

1. Nuclear Posture Review ~~(S/FRD/NF)~~

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DDP-CENTRAL



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~~SECRET FRO NF~~  
THE SECRETARY OF DEFENSE  
1000 DEFENSE PENTAGON  
WASHINGTON, DC 20301-1000

January 8, 2002

The Honorable Richard A. Gephardt  
Minority Leader  
U.S. House of Representatives  
H 204 The Capitol  
Washington, D.C. 20515-6537

Dear Mr. Leader:

Sections 1041 of the Floyd D. Spence National Defense Authorization Act for Fiscal Year 2001 (Public Law 106-398), as amended by Section 1033 of the National Defense Authorization Act for Fiscal Year 2002 (Public Law 107-107), requires me to report on the nuclear posture of the United States. Additionally, Section 1042 of Public Law 106-398 requires me to report on sustainment and modernization of U.S. strategic nuclear forces. The attached report, prepared in consultation with the Secretary of Energy, constitutes my response to both requirements.

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X00070 /02



~~SECRET FRO NF~~





~~SECRET - FRO - NF~~  
THE SECRETARY OF DEFENSE  
1000 DEFENSE PENTAGON  
WASHINGTON, DC 20301-1000

January 8, 2002

The Honorable Carl Levin  
Chairman  
Committee on Armed Services  
United States Senate  
228 Senate Russell Office Building  
Washington, D.C. 20510-6050

Dear Mr. Chairman:

Sections 1041 of the Floyd D. Spence National Defense Authorization Act for Fiscal Year 2001 (Public Law 106-398), as amended by Section 1033 of the National Defense Authorization Act for Fiscal Year 2002 (Public Law 107-107), requires me to report on the nuclear posture of the United States. Additionally, Section 1042 of Public Law 106-398 requires me to report on sustainment and modernization of U.S. strategic nuclear forces. The attached report, prepared in consultation with the Secretary of Energy, constitutes my response to both requirements.

Sincerely,

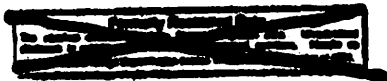
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1. Nuclear Posture Review (~~SECRET - FRO - NF~~)

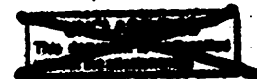
cc:

The Honorable John W. Warner  
Ranking Member

X00070 /02



~~SECRET - FRO - NF~~







~~SECRET - FRD - NF~~  
 THE SECRETARY OF DEFENSE  
 1000 DEFENSE PENTAGON  
 WASHINGTON, DC 20301-1000

January 8, 2002

The Honorable Daniel Inouye  
 Chairman  
 Subcommittee on Defense  
 Committee on Appropriations  
 United States Senate  
 119 Senate Dirksen Office Building  
 Washington, D.C. 20510-6028

Dear Mr. Chairman:

Sections 1041 of the Floyd D. Spence National Defense Authorization Act for Fiscal Year 2001 (Public Law 106-398), as amended by Section 1033 of the National Defense Authorization Act for Fiscal Year 2002 (Public Law 107-107), requires me to report on the nuclear posture of the United States. Additionally, Section 1042 of Public Law 106-398 requires me to report on sustainment and modernization of U.S. strategic nuclear forces. The attached report, prepared in consultation with the Secretary of Energy, constitutes my response to both requirements.

Sincerely,

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1. Nuclear Posture Review (~~SECRET - FRD - NF~~)

cc:  
 The Honorable Ted Stevens  
 Ranking Member

X00070 /02



~~SECRET - FRD - NF~~





~~SECRET FRO NE~~  
THE SECRETARY OF DEFENSE  
1000 DEFENSE PENTAGON  
WASHINGTON, DC 20301-1000

January 8, 2002

The Honorable Jerry Lewis  
Chairman  
Subcommittee on Defense  
Committee on Appropriations  
U.S. House of Representatives  
H-149 The Capitol  
Washington, D.C. 20515-6018

Dear Mr. Chairman:

Sections 1041 of the Floyd D. Spence National Defense Authorization Act for Fiscal Year 2001 (Public Law 106-398), as amended by Section 1033 of the National Defense Authorization Act for Fiscal Year 2002 (Public Law 107-107), requires me to report on the nuclear posture of the United States. Additionally, Section 1042 of Public Law 106-398 requires me to report on sustainment and modernization of U.S. strategic nuclear forces. The attached report, prepared in consultation with the Secretary of Energy, constitutes my response to both requirements.

Sincerely,

Attachment

1. Nuclear Posture Review (~~SECRET FRO NE~~)

cc:

The Honorable John P. Murtha  
Ranking Member

X00070 /02



~~SECRET FRO NE~~





~~SECRET FRO NF~~  
THE SECRETARY OF DEFENSE  
1000 DEFENSE PENTAGON  
WASHINGTON, DC 20301-1000

January 8, 2002

The Honorable Bob Stump  
Chairman  
Committee on Armed Services  
U.S. House of Representatives  
2120 Rayburn House Office Building  
Washington, D.C. 20515-6035

Dear Mr. Chairman:

Sections 1041 of the Floyd D. Spence National Defense Authorization Act for Fiscal Year 2001 (Public Law 106-398), as amended by Section 1033 of the National Defense Authorization Act for Fiscal Year 2002 (Public Law 107-107), requires me to report on the nuclear posture of the United States. Additionally, Section 1042 of Public Law 106-398 requires me to report on sustainment and modernization of U.S. strategic nuclear forces. The attached report, prepared in consultation with the Secretary of Energy, constitutes my response to both requirements.

Sincerely,

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1. Nuclear Posture Review (~~SECRET FRO NF~~)

cc:

The Honorable Ike Skelton  
Ranking Member

X00070 /02

~~CONFIDENTIAL~~



~~SECRET FRO NF~~



~~SECRET FRO NF~~

THE SECRETARY OF DEFENSE  
1000 DEFENSE PENTAGON  
WASHINGTON, DC 20301-1000



January 8, 2002

The Honorable Sonny Callahan  
Chairman  
Subcommittee on Energy and Water Development  
Committee on Appropriations  
U.S. House of Representatives  
2362 Rayburn House Office Building  
Washington, D.C. 20515-6020

Dear Mr. Chairman:

Sections 1041 of the Floyd D. Spence National Defense Authorization Act for Fiscal Year 2001 (Public Law 106-398), as amended by Section 1033 of the National Defense Authorization Act for Fiscal Year 2002 (Public Law 107-107), requires me to report on the nuclear posture of the United States. Additionally, Section 1042 of Public Law 106-398 requires me to report on sustainment and modernization of U.S. strategic nuclear forces. The attached report, prepared in consultation with the Secretary of Energy, constitutes my response to both requirements.

Sincerely,

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1. Nuclear Posture Review (~~SECRET FRO NF~~)

cc:

The Honorable Peter J. Visclosky  
Ranking Member

X00070 /02



~~SECRET FRO NF~~





~~SECRET FRO NF~~  
THE SECRETARY OF DEFENSE  
1000 DEFENSE PENTAGON  
WASHINGTON, DC 20301-1000

January 8, 2002

The Honorable Harry Reid  
Chairman  
Subcommittee on Energy and Water Development  
Committee on Appropriations  
United States Senate  
127 Senate Dirksen Office Building  
Washington, D.C. 20510-6030

Dear Mr. Chairman:

Sections 1041 of the Floyd D. Spence National Defense Authorization Act for Fiscal Year 2001 (Public Law 106-398), as amended by Section 1033 of the National Defense Authorization Act for Fiscal Year 2002 (Public Law 107-107), requires me to report on the nuclear posture of the United States. Additionally, Section 1042 of Public Law 106-398 requires me to report on sustainment and modernization of U.S. strategic nuclear forces. The attached report, prepared in consultation with the Secretary of Energy, constitutes my response to both requirements.

Sincerely,

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- 1. Nuclear Posture Review ~~(SECRET FRO NF)~~

cc:

The Honorable V. Pete Domenici  
Ranking Member

X00070 /02



~~SECRET FRO NF~~





~~SECRET - FRD - NF~~  
 THE SECRETARY OF DEFENSE  
 1000 DEFENSE PENTAGON  
 WASHINGTON, DC 20301-1000

January 8, 2002

The Honorable C.W. Bill Young  
 Chairman  
 Committee on Appropriations  
 U.S. House of Representatives  
 H218 The Capitol  
 Washington, D.C. 20515-6015

Dear Mr. Chairman:

Sections 1041 of the Floyd D. Spence National Defense Authorization Act for Fiscal Year 2001 (Public Law 106-398), as amended by Section 1033 of the National Defense Authorization Act for Fiscal Year 2002 (Public Law 107-107), requires me to report on the nuclear posture of the United States. Additionally, Section 1042 of Public Law 106-398 requires me to report on sustainment and modernization of U.S. strategic nuclear forces. The attached report, prepared in consultation with the Secretary of Energy, constitutes my response to both requirements.

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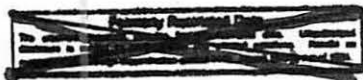
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1. Nuclear Posture Review ~~(SECRET - FRD - NF)~~

cc:

The Honorable David Obey  
 Ranking Member

X00070 /02



~~SECRET - FRD - NF~~



# TAB B

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## Nuclear Posture Review

Report to the Congress in Response to Sections 1041  
(as Amended) and 1042 of the Floyd D. Spence  
National Defense Authorization Act for Fiscal Year  
2001, PL 106-398

December 2001



~~SECRET FRD NF~~

Classified by Multiple  
Declassify On: X4



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## **Nuclear Posture Review Report**

### **Foreword**

The Congress directed the Defense Department to conduct a comprehensive Nuclear Posture Review to lay out the direction for American nuclear forces over the next five to ten years. The Department has completed that review and prepared the attached report.

Early on, we recognized that the new security environment demanded that the Department go beyond the Congressional mandate in developing a strategic posture for the 21<sup>st</sup> century. President Bush had already directed the Defense Department to transform America's military and prepare it for the new, unpredictable world in which we will be living. The result of his direction is the Quadrennial Defense Review (QDR). Building on the QDR, this Nuclear Posture Review puts in motion a major change in our approach to the role of nuclear offensive forces in our deterrent strategy and presents the blueprint for transforming our strategic posture.

This report establishes a New Triad, composed of:

- Offensive strike systems (both nuclear and non-nuclear);
- Defenses (both active and passive); and
- A revitalized defense infrastructure that will provide new capabilities in a timely fashion to meet emerging threats.

This New Triad is bound together by enhanced command and control (C2) and intelligence systems.

The establishment of this New Triad can both reduce our dependence on nuclear weapons and improve our ability to deter attack in the face of proliferating WMD capabilities in two ways:

- The addition of defenses (along with the prospects for timely adjustments to force capabilities and enhanced C2 and intelligence systems) means that the U.S. will no longer be as heavily dependent on offensive strike forces to enforce deterrence as it was during the Cold War.
- The addition of non-nuclear strike forces—including conventional strike and information operations—means that the U.S. will be less dependent than it has been in the past on nuclear forces to provide its offensive deterrent capability.

The combination of new capabilities that make up the New Triad reduces the risk to the nation as it draws its nuclear forces toward the goal of 1,700–2,200 operationally

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deployed strategic nuclear warheads announced by President Bush on November 13, 2001.

The following is a summary of the highlights in this report.

First and foremost, the Nuclear Posture Review puts the Cold War practices related to planning for strategic forces behind us. In the decade since the collapse of the Soviet Union, planning for the employment of U.S. nuclear forces has undergone only modest revision, despite the new relationship between the U.S. and Russia. Few changes had been made to the size or composition of the strategic nuclear force beyond those required by the START Treaty. At the same time, plans and funding for sustaining some critical elements of that force have been inadequate.

As a result of this review, the U.S. will no longer plan, size or sustain its forces as though Russia presented merely a smaller version of the threat posed by the former Soviet Union. Following the direction laid down for U.S. defense planning in the Quadrennial Defense Review, the Nuclear Posture Review shifts planning for America's strategic forces from the threat-based approach of the Cold War to a capabilities-based approach. This new approach should provide, over the coming decades, a credible deterrent at the lowest level of nuclear weapons consistent with U.S. and allied security.

Second, we have concluded that a strategic posture that relies solely on offensive nuclear forces is inappropriate for deterring the potential adversaries we will face in the 21<sup>st</sup> century. Terrorists or rogue states armed with weapons of mass destruction will likely test America's security commitments to its allies and friends. In response, we will need a range of capabilities to assure friend and foe alike of U.S. resolve. A broader array of capability is needed to dissuade states from undertaking political, military, or technical courses of action that would threaten U.S. and allied security. U.S. forces must pose a credible deterrent to potential adversaries who have access to modern military technology, including NBC weapons and the means to deliver them over long distances. Finally, U.S. strategic forces need to provide the President with a range of options to defeat any aggressor.

To meet the nation's defense goals in the 21<sup>st</sup> century, the first leg of the New Triad, the offensive strike leg, will go beyond the Cold War triad of intercontinental ballistic missiles (ICBMs), submarine-launched ballistic missiles (SLBMs), and long-range nuclear-armed bombers. ICBMs, SLBMs, bombers and nuclear weapons will, of course, continue to play a vital role. However, they will be just part of the first leg of the New Triad, integrated with new non-nuclear strategic capabilities that strengthen the credibility of our offensive deterrence.

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The second leg of the New Triad requires development and deployment of both active and passive defenses—a recognition that offensive capabilities alone may not deter aggression in the new security environment of the 21<sup>st</sup> century. The events of September 11, 2001 underscore this reality. Active and passive defenses will not be perfect. However, by denying or reducing the effectiveness of limited attacks, defenses can discourage attacks, provide new capabilities for managing crises, and provide insurance against the failure of traditional deterrence.

The third leg of the New Triad is a responsive defense infrastructure. Since the end of the Cold War, the U.S. defense infrastructure has contracted and our nuclear infrastructure has atrophied. New approaches to development and procurement of new capabilities are being designed so that it will not take 20 years or more to field new generations of weapon systems. With respect to the nuclear infrastructure, it needs to be repaired to increase confidence in the deployed force, eliminate unneeded weapons, and mitigate the risks of technological surprise. Maintaining our ability to respond to large strategic changes can permit us to reduce our nuclear arsenal and, at the same time, dissuade adversaries from starting a competition in nuclear armaments.

The effectiveness of this New Triad depends upon command and control, intelligence, and adaptive planning. "Exquisite" intelligence on the intentions and capabilities of adversaries can permit timely adjustments to the force and improve the precision with which it can strike and defend. The ability to plan the employment of the strike and defense forces flexibly and rapidly will provide the U.S. with a significant advantage in managing crises, deterring attack and conducting military operations.

Constructing the New Triad, reducing our deployed nuclear weapons, and increasing flexibility in our strategic posture has resource implications. It costs money to retire old weapons systems and create new capabilities. Restoring the defense infrastructure, developing and deploying strategic defenses, improving our command and control, intelligence, planning, and non-nuclear strike capabilities require new defense initiatives and investments. However, these investments can make the U.S. more secure while reducing our dependence on nuclear weapons.

The Quadrennial Defense Review established the foundation for America's post-Cold War defense strategy. Building on the Quadrennial Defense Review, the Nuclear Posture Review will transform the Cold War era offensive nuclear triad into a New Triad designed for the decades to come.



Donald H. Rumsfeld  
Secretary of Defense

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## I. Introduction (U)

### Outline of the Report (U)

- (U) This section provides the legislative requirements for this report and a short description of each of the following sections.
- (U) Section II describes a new approach to nuclear forces that strategies those forces to address the security challenges the nation will face in the coming decades. It is a major break from Cold War thinking. The report defines a New Triad of capabilities—a combination of nuclear and non-nuclear strike forces, defensive capabilities, and a robust infrastructure—supported by enhanced communications, intelligence and planning capabilities. The New Triad of strategic capabilities will enable the United States to reduce its reliance on a large number of operationally deployed strategic nuclear warheads. As the elements of the New Triad are developed and deployed, its integrated capabilities will serve multiple defense policy goals: assurance of allies and friends, dissuasion of adversaries, deterrence of aggressors, and should deterrence fail, defeat of enemies of the United States, its allies and friends.
- (U) In addition, section II summarizes the actions being initiated by the Department of Defense (DoD) to begin the drawdown in U.S. nuclear forces. The report lays out the approach to the drawdown of nuclear forces over the next decade including the readiness posture of the force. The report underscores that the drawdown is a journey toward the goal announced by the President of 1,700 - 2,300 operationally deployed strategic nuclear warheads by 2012. Achieving that objective will depend on the steps toward that goal. The Department will conduct periodic assessments to determine the number and types of forces deployed at any given time. Those assessments will consider both the evolving international security environment and progress in folding the New Triad.
- (U) Section III outlines the approach to developing the New Triad. Developing and sustaining the New Triad will require initiatives in the areas of: (1) advanced non-nuclear strike, (2) missile defense, (3) command and control, and (4) intelligence. It will also require an overhaul and modernization of existing planning systems as well as the technology base and production readiness infrastructures of DoD and the National Nuclear Security Administration (NNSA).
- (U) Section IV summarizes DoD plans to sustain and modernize the existing nuclear force structure. This topic is discussed in greater detail than other elements of the New Triad in response to Congressional interest.
- (U) Section V outlines the implications for various arms control treaty regimes within the new approach. It underscores the need to move toward a cooperative approach with Russia in establishing a new strategic framework that is more consistent with the post-Cold War relationship between the two countries. This section of the report outlines DoD plans to make reductions in operationally deployed nuclear forces over the next decade.

**Legislative Requirement (U)**

(U) Section 1041 of the Floyd D. Space National Defense Authorization Act for Fiscal Year 2001 (Public Law 106-398) requires the Secretary of Defense, in consultation with the Secretary of Energy, to "conduct a comprehensive review of the nuclear posture of the United States for the next 5 to 10 years" and to report to Congress on the results of the review. Section 1041 further specifies that the review shall include the following elements:

- (1) The role of nuclear forces in United States military strategy, planning, and programming.
- (2) The policy requirements and objectives for the United States to maintain a safe, reliable, and credible nuclear deterrence posture.
- (3) The relationship among United States nuclear deterrence policy, targeting strategy, and arms control objectives.
- (4) The levels and composition of the nuclear delivery systems that will be required for implementing the United States' national and military strategy, including any plans for replacing or modifying existing systems.
- (5) The nuclear weapons complex that will be required for implementing the United States national and military strategy, including any plans to modernize or modify the complex.
- (6) The active and inactive nuclear weapons stockpile that will be required for implementing the United States national and military strategy, including any plans for replacing or modifying warheads.

(U) In addition, section 1033 of the Fiscal Year 2002 Defense Authorization Act (Public Law 107-107) added the following additional element to be addressed in the Nuclear Posture Review:

- (7) The possibility of deactivating or declassifying nuclear warheads or delivery systems immediately, or immediately after a decision to retire any specific warhead, class of warheads, or delivery system.

(U) Section 1042 of Public Law 106-398 further requires that the Secretary of Defense, in consultation with the Secretary of Energy, "develop a long-range plan for the sustainment and modernization of United States strategic nuclear forces to counter emerging threats and satisfy the evolving requirements of deterrence" and submit the plan to Congress. Section 1042 further specifies that the plan "shall include the Secretary's plans, if any, for the sustainment and modernization of the following:

- (1) Land-based and sea-based strategic ballistic missiles, including any plans for developing replacements for the Minuteman III intercontinental ballistic missile and the Trident II sea-launched ballistic missile and plans for common ballistic missile technology development.
- (2) Strategic nuclear bombers, including any plans for a B-2 follow-on, a B-52 replacement, and any new air-launched weapon systems.
- (3) Appropriate warheads to outfit the strategic nuclear delivery systems referred to in paragraphs (1) and (2) to satisfy evolving military requirements."



(U) This report constitutes the Department of Defense response to the above requirements.

**DOD Approach to the Congressional Tasking (U)**

(U) This Nuclear Posture Review (NPR) is the first comprehensive review of nuclear forces since 1994, when the first Nuclear Posture Review was completed. The primary purpose of the 1994 review was to determine the strategic nuclear force structure to be deployed under the second Strategic Arms Reduction Treaty (START II). That review also examined the following: non-strategic nuclear forces; command, control, communications and intelligence; the supporting infrastructure for both delivery platforms and nuclear warheads; safety, security and use control of U.S. nuclear weapons; and threat reduction and proliferation.

(U) The current review of the U.S. nuclear posture differs from the 1994 review. Rather than being organized around an arms control framework that assumes the central strategic concern is managing a potentially hostile relationship between the two largest nuclear powers, the current review is built around the recognition that the United States and Russia have a new relationship, while at the same time the proliferation of nuclear weapons and ballistic missiles has created new challenges for deterrence. It defines the capabilities required of the nuclear forces in the new strategic environment. Most especially, it recognizes that Russia, unlike the Soviet Union, is not an ideological enemy. There is ground for mutual cooperation, and the United States is seeking to move beyond the outdated Cold War framework of relations to develop a new strategic framework with Russia.

(U) The review was conducted in parallel with the Quadrennial Defense Review (QDR). It reflects and reinforces the strategic premises of the QDR. Because of the critical role played by U.S. nuclear forces in the national security strategy of the United States and its allies, this report is broader in scope than required by law.

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## II. A New Triad for a New Era (U)

### Introduction (U)

(U) The Department of Defense presented a new defense strategy in its 2001 Quadrennial Defense Review (QDR). The QDR responded to President Bush's call for a strategy that addresses today's threats while preparing the Department to meet future challenges. Nuclear forces have an important role to play in that strategy. As this Nuclear Posture Review documents, their number, composition, and character ought to reflect the reality that the Cold War is over and that the role of nuclear forces has changed in important ways.

(U) The new defense strategy employs a capabilities-based approach to planning. It replaces the traditional threat-based approach that focused on specific adversaries or regions of the world. Nuclear force planning will employ the same capabilities-based approach.

(U) On the basis of the review conducted using the capabilities-based approach, President Bush announced that, over the next decade, the United States plans to reduce its operationally deployed strategic nuclear forces to a range of 1,700 - 2,200 warheads. This range of warheads will provide a credible deterrent at the lowest possible number of nuclear weapons consistent with national security requirements and alliance obligations.

(U) The strategy on which the President's decision was based and the plan for its implementation are outlined below.

### A New Era (U)

(U) Despite periods of acute crisis, for more than four decades the United States confronted an ideological opponent and military peer that behaved in a relatively familiar and predictable manner. In contrast, decisions today about the size and composition of U.S. forces must take into account an increasingly complex security environment in which surprise is a dominant strategic consideration.

(U) The United States cannot predict with confidence what nation, combination of nations or non-state actors may pose a threat to its vital interests or those of its friends and allies decades from now. In the coming decades, the United States is likely to confront unexpected crises and conflicts involving one or a combination of adversaries armed with a wide range of capabilities, including nuclear, biological, chemical, cyberattack and terrorist weapons and the means to deliver them over long ranges. Expecting and adapting to surprise—quickly and decisively—is now a condition of planning.

(U) *Hostile Non-State Actors.* The September 11<sup>th</sup> attacks demonstrated the danger now posed by non-state actors. Many terrorist groups seek weapons of mass destruction (WMD).

**(U) Potential Adversaries.** The United States, its allies and friends face adversaries and potential adversaries among a number of states. Many of these states also support terrorists. They have WMD programs and are developing ballistic missiles of increasing range in order to strike forward-deployed forces as well as the population centers of the United States and its security partners. Most of these potential adversaries are ruled by authoritarian leaders who generally are subject to few if any institutional restraints and whose decision-making processes are obscure and whose behavior is often unpredictable. As a result, the capacity of the United States to deter them is uncertain.

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**(U) The international system is no longer characterized by enduring and ideologically defined geopolitical blocs. It has become more fluid and unpredictable. The United States has to determine its nuclear force requirements at a time when a major nuclear power is neither a traditional ally nor an implacable enemy. Multiple, varied, and unanticipated contingencies are likely, and the respective stakes involved for the United States and its adversaries will be variable and often asymmetric.**

**(U) The United States is confronted by a spectrum of potential adversaries and possible combinations of hostile powers. Their strategic ambitions and military capabilities differ widely and are sometimes difficult to determine. None are peers, but all could pose significant threats to the populations and deployed military forces of the United States, its allies and friends.**

#### **Need for a New, Post-Cold War Approach to Nuclear Forces Planning (U)**

**(U) Existing U.S. nuclear forces and plans are still heavily influenced by the legacy of the Cold War. The long duration and relatively static nature of the superpower rivalry resulted in war plans that were progressively refined for a fairly limited set of contingencies, dominated by the need to deter the real and frequently imminent threat of a Soviet attack on Western Europe. The plans emphasized large nuclear response options to deter massive attacks, both nuclear and conventional. The dominant U.S. strategic nuclear planning was done largely**

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apart from planning for the deployment and employment of other elements of U.S. military power. Deterrence enforced by offensive nuclear response was the first line of defense.

(U) Nuclear weapons play a critical role in the defense capabilities of the United States, its allies and friends. They provide credible military options to deter a wide range of threats, including WMD and large-scale conventional military force. These nuclear capabilities possess unique properties that give the United States options to hold at risk classes of targets important to achieve strategic and political objectives.

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(U) Active and passive defenses have a new role in planning. Continued intentional vulnerability to ballistic missiles is no longer technologically mandated nor strategically wise. The September 11<sup>th</sup> attacks dramatically illustrated the unparalleled extremity, hostility, and unpredictability of some foes, and, correspondingly, the inadequacy of offensive capabilities alone—nuclear or non-nuclear—to deter the broad spectrum of threats the nation faces. Advances in defensive technologies will allow U.S. non-nuclear and nuclear capabilities to be coupled with active and passive defenses to help provide deterrence and protection against attack, preserve U.S. freedom of action, and strengthen the credibility of U.S. alliance commitments.

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### **A Capabilities-Based Approach (U)**

(U) The QDR shifts defense strategy to a capabilities-based approach. This approach reflects the fact that although the United States cannot know with confidence what nation, combinations of nations, or non-state actors will pose threats to U.S. interests, it is possible to anticipate the capabilities an adversary might employ to coerce its neighbors or to deter or directly attack the United States or its deployed forces. A capabilities-based approach focuses more on how an adversary might fight and the means it might use than who the adversary might be and where a war might occur. This approach will require that the United States develop and sustain a modern and diverse portfolio of military capabilities. This portfolio will serve the four key goals, defined in the QDR, that will guide the development, deployment, and use of military forces and capabilities, including nuclear forces.

### **Defense Policy Goals (U)**

(U) The four defense policy goals are developed in detail in the QDR and are briefly summarized below:

- (U) assure allies and friends by demonstrating the United States' steadiness of purpose and capability to fulfill its military commitments;
- (U) dissuade adversaries from undertaking military programs or operations that could threaten U.S. interests or those of allies and friends;
- (U) deter threats and counter coercion against the United States, its forces, allies and friends; and
- (U) defeat any adversary decisively and defend against attack if deterrence fails.

### **The New Triad (U)**

(U) The application of the capabilities-based approach to U.S. nuclear forces has resulted in a decision to transform the existing triad of U.S. strategic nuclear forces—intercontinental ballistic missiles (ICBMs), heavy bombers, and submarine-launched ballistic missiles (SLBMs)—into a New Triad composed of a diverse portfolio of systems. The New Triad is designed to give the National Command Authorities a broad array of options to address a wide range of possible contingencies.

(U) The elements of the New Triad are depicted in Figure 1 and summarized below:

- (U) Strike capabilities, both non-nuclear and nuclear, and their associated command and control;

- (U) Active and passive defenses, including the command and control for air and missile defenses; and
- (U) Research and development (R&D) and industrial infrastructure for developing, building, and maintaining offensive forces and defensive systems.

The efficiency and military potential of the individual elements of the New Triad are maximized by timely and accurate intelligence and adaptive planning. Enhancing these capabilities is critical to realizing the potential inherent in the New Triad concept.

(U) With respect to nuclear forces, once the planned warhead reductions are completed, the New Triad will comprise about one-third of the operationally deployed warheads of the current strategic nuclear force. It will retain a vital role in deterring WMD threats, assuring allies of U.S. security commitments, holding at risk an adversary's assets and capabilities that cannot be countered through non-nuclear means and dissuading potential adversaries from developing large-scale nuclear or conventional threats.

(U) Beyond 2012, as other elements of the New Triad are developed and integrated, they could assume tasks now assigned exclusively to nuclear forces.

- (U) Non-nuclear strike capabilities may substitute for nuclear weapons in holding at risk a portion of enemy targets.

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- (U) A nuclear infrastructure better able to respond to adverse changes in the security environment and to take advantage of technological innovation can support reductions in the non-deployed nuclear stockpile.

Under combinations of circumstances such as these, the required number of operationally deployed nuclear weapons might be further reduced.

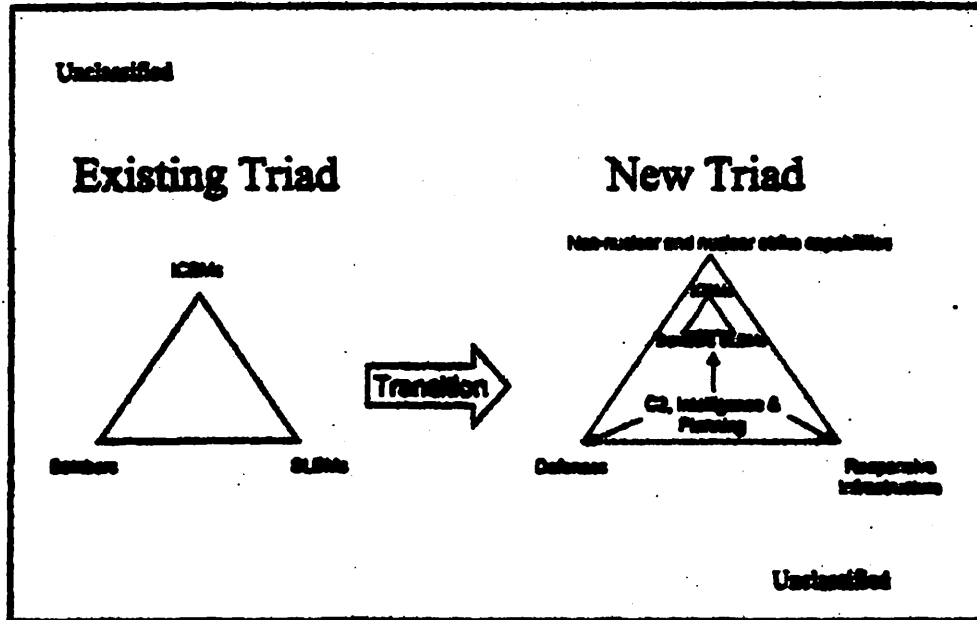


Figure 1. The New Triad (U)

#### Elements of the New Triad (U)

(U) **Strike Capabilities.** Non-nuclear strike capabilities include advanced conventional weapons systems (long-range, precision-guided weapons and associated delivery means), offensive information operations, and special operations forces (the latter can be used to hunt for mobile missiles or operate against WMD facilities). Deployed nuclear strike capabilities include the three legs of the existing strategic triad and theater-based, nuclear-capable dual-role aircraft. Nuclear-armed sea-launched cruise missiles, removed from ships and submarines under the 1991 Presidential Nuclear Initiative, are maintained in a reserve status.

(U) **Defenses.** Active defenses include ballistic missile defense and air defense. Passive defenses include measures that reduce vulnerability through mobility, dispersal, redundancy, deception, concealment, and hardening; warn of imminent attack and support consequence management activities that mitigate the damage caused by WMD use; and protect against attacks on critical information systems. This element of the New Triad comprises defenses for the U.S. homeland, forces abroad, allies and friends.

(U) **Infrastructure.** The R&D and industrial infrastructure includes the research facilities, manufacturing capacity, and skilled personnel needed to produce, sustain, and modernize the elements of the New Triad as well as the supporting intelligence and command and control capabilities. A responsive infrastructure that can augment U.S. military capabilities through development of new systems or accelerated production of existing capabilities in a timely manner provides strategic depth to the New Triad. In particular, a modern, responsive



nuclear weapons sector of the infrastructure is indispensable, especially as the size of the operationally deployed nuclear arsenal is reduced.

(U) *Planning.* Careful planning will be critical in integrating and balancing the three elements of the New Triad. Planning for the New Triad must consider multiple goals, a spectrum of adversaries and contingencies, and the many uncertainties of the security environment. The planning process not only must produce a variety of flexible, pre-planned non-nuclear and nuclear options, but also incorporate sufficient adaptability to support the timely construction of additional options in a crisis or unexpected conflict.

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(U) The Department will develop an integrated plan for all three elements of the New Triad and the supporting intelligence, planning and command and control that takes into account:

- (U) the overall security environment;
- (U) capabilities and intentions of potential adversaries;
- (U) emerging threats;
- (U) technological feasibility;
- (U) international commitments; and
- (U) U.S. defense policy goals.

(U) The New Triad will take time to develop as its elements are adjusted and adapted to each other. Nuclear forces assigned to the New Triad and their command and control systems are mature, but are in need of refurbishment. Advanced non-nuclear strike capabilities are comparatively new, their operational effectiveness is still developing and planning for their employment is still evolving. Missile defenses are beginning to emerge as systems that can have an effect on the strategic and operational calculations of potential adversaries. They are now capable of providing active defenses against short to medium-range threats. The defense and nuclear infrastructure is well-established, but in many respects neither is sufficiently flexible to respond quickly to new requirements. Programs to support the collection, analysis

and distribution of exquisite intelligence are defined but still some years away from full implementation.

(U) The President will have options over time to adjust the capabilities of the New Triad to changes in the security environment. This may require:

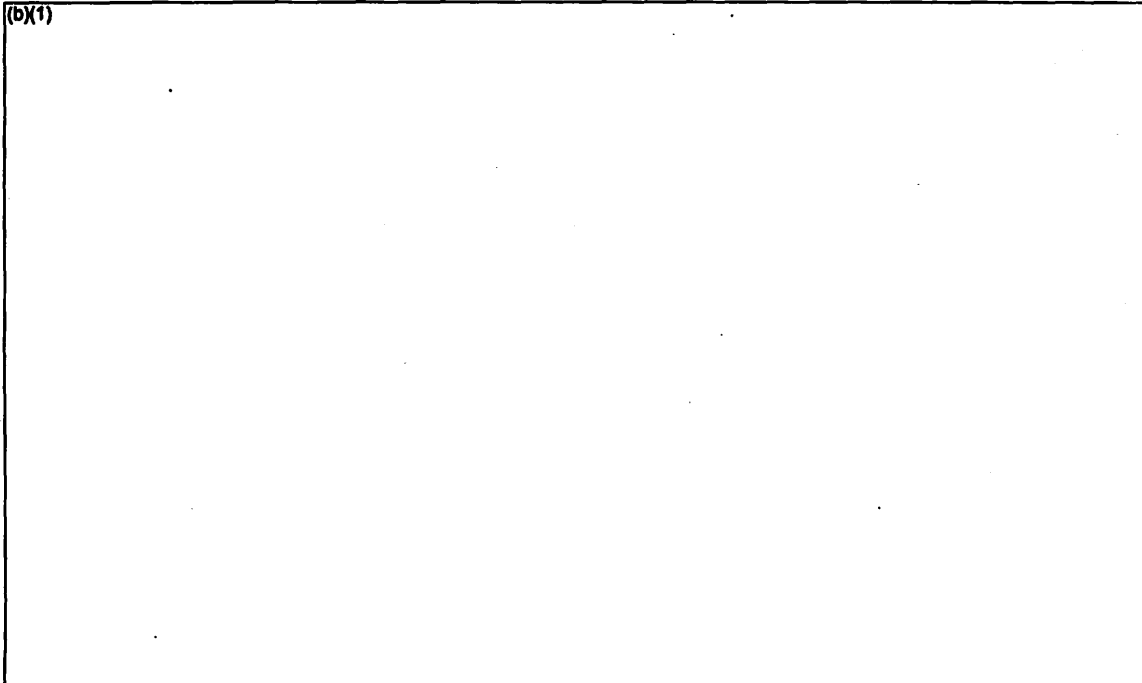
- (U) rapid deployment of new technologies;
- (U) adjustment in the relative number or mix of deployed capabilities;
- (U) demonstration of a new capability; or
- (U) adjustment in the level of operationally deployed forces, including nuclear forces.

#### **Contributions of the New Triad to Defense Policy Goals (U)**

##### ***Non-nuclear and Nuclear Strike Capabilities (U)***

(U) **Assure.** Strike capabilities can hold at risk the assets of adversaries who threaten the United States, its allies and friends. For many contingencies, non-nuclear strike capabilities meet all known requirements. For some contingencies, U.S. nuclear forces will continue to provide assurance to security partners, particularly in the presence of known or suspected threats of nuclear, biological or chemical attacks or in the event of surprising military developments. This assurance can serve to reduce the incentives for friendly countries to acquire nuclear weapons of their own to deter such threats and circumstances. Nuclear capabilities also assure the U.S. public that the United States will not be subject to coercion based on a false perception of U.S. weakness among potential adversaries.

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*Active and Passive Defenses (U)*

**(U) Assure.** Defense of the U.S. homeland and protection of forward bases increases the ability of the United States to counteract WMD-backed coercive threats and to use its power projection forces in the defense of allies and friends. Active defenses extended to and operated in cooperation with that of allies and friends should enhance the strength of alliance commitments to withstand the prospective costs of resisting aggression. Passive defenses permit U.S. forces to operate effectively in contaminated environments.

**(U) Deter.** Defenses can make it more arduous and costly for an adversary to compete militarily with or wage war against the United States. The demonstration of a range of technologies and systems for missile defense can have a deterrent effect on potential adversaries. The problem of countering missile defenses, especially defensive systems with multiple layers, presents a potential adversary with the prospect of a difficult, time-consuming, and expensive undertaking. If the combination of U.S. technologies and systems would in its estimation negate the value of an adversary's missile buildup, the adversary may choose not to pursue such a course. A similar deterrent effect has been created by U.S. ground, air and naval power, few potentially hostile states seek to contest the United States in the field, in the air or at sea.

**(U) Deter.** By complicating enemy attack planning, making it more difficult for him to anticipate the effectiveness of a strike and by blunting the effects of an attack, active and passive defenses can help deter an opponent from pursuing an aggressive course. Defense of U.S. territory and power projection forces, including U.S. forces abroad, combined with the certainty of U.S. ability to strike in response, can bring into better balance U.S. stakes and risks in a regional confrontation and thus reinforce the credibility of U.S. guarantees designed to deter attacks on allies and friends.

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*Defense R&D and Industrial Infrastructure (U)*

**(U) Assure.** By producing and sustaining effective strike capabilities and defensive systems, a responsive infrastructure will lead strength to the New Triad, and a strong New Triad can increase the confidence that allies and friends place in U.S. security commitments. Important in this regard will be the ability of the infrastructure to support a demonstration of technical capabilities and rapid fielding of limited quantities of new systems in response to unexpected threats, particularly those of primary concern to allies. The nuclear portion of the infrastructure, by ensuring the reliability of nuclear arms, will continue to play a critical role in maintaining the credibility of the U.S. nuclear deterrent as the nuclear weapon stockpile is reduced.

**(U) Deter.** The capacity of the infrastructure to upgrade existing weapons systems, surge production of weapons, or develop and field entirely new systems for the New Triad can discourage other countries from competing militarily with the United States. New or improved capabilities could limit or negate advantages an adversary hoped to achieve through a military buildup or development of an asymmetric capability. To have this deterrent effect, the infrastructure must be able to augment the capabilities of the New Triad in a manner suited to the type, scale and urgency of prospective challenges. An infrastructure designed to demonstrate technical capacity and quickly field a limited number of systems has two advantages. First a force that is highly adaptive is less subject to surprise, or if surprised better able to recover quickly. Second, it provides the United States with the opportunity to economize on deployed systems. That is, not every technology demonstrated will need to be deployed, and a limited deployment may be all that is necessary to counter a specific threat.

**(U) Deter.** The infrastructure must provide confidence in the reliability of the nuclear stockpile and the ability of command and control structures to withstand attack. More broadly, the defense R&D and industrial infrastructure helps to enhance deterrence of aggression by supporting improved U.S. capabilities to hold at risk high-value targets in the face of an adversary's efforts to conceal, harden and disperse them.

**(U) Defeat.** The strike forces used in any future war will be the products of the defense R&D and industrial infrastructure. As evidenced in the campaign against terrorism, that infrastructure is necessary for replenishing weapon stockpiles, repairing damaged systems, and replacing systems lost to wartime attrition.

### **Command and Control, Planning and Intelligence (U)**

(U) As forces are incrementally changed to meet the New Triad force requirements, command and control (C2) becomes more critical to ensure the effectiveness of the elements of the residual force structure. In particular, as forces are reduced significantly, C2 must be robust, reliable, secure, survivable, timely, unambiguous, and sustainable to insure the resultant forces can be planned and executed as intended. Strike options will require intrinsic planning, flexibility and interface with decision makers throughout the engagement process. Command and control will become more complex and the supporting systems and platforms will require augmentation, modernization and replacement.

(U) Improved command and control, planning and intelligence can increase the effectiveness of the elements of the New Triad, both separately and in combination. More detailed intelligence on hostile regimes can support the design of deterrent strategies tailored to each of the adversaries the United States might confront. Strategic warning that the United States might face a new or greater threat of aggression in a matter of months or years can allow the infrastructure to produce more or better offensive and defensive capabilities. Accurate and timely targeting information can increase both the lethality of strike capabilities and the possibilities for non-nuclear strike capabilities to substitute for nuclear weapons or provide for the timely positioning of missile defense assets.

### **Role of Nuclear Weapons in the New Triad (U)**

(U) Nuclear weapons have a vital role in U.S. and allied security. They deter attack and dissuade competition from potential adversaries. The United States must retain sufficient strategic nuclear forces to deter any hostile foreign leadership from using weapons of mass destruction against U.S. vital interests.

### **Defense Policy Goals and Related Nuclear Weapons Requirements (U)**

(U) The defense policy goals articulated in the QDR and discussed above are taken into account in defining nuclear weapon requirements. In a fluid security environment, the precise nuclear force level necessary for the future cannot be predicted with certainty. The goal of reducing, over the next decade, the U.S. operationally deployed strategic nuclear force to the range of between 1,700 and 2,200 warheads provides a degree of flexibility necessary to accommodate changes in the security environment that could affect U.S. nuclear requirements. The requirements imposed on the force to assure, dissuade, deter, and defeat adversaries are not additive. The nuclear forces required to support these goals are affected by the interaction of a number of factors:

- (U) an assurance-related requirement for U.S. nuclear forces that they be judged second to none;
- (U) the force structure needed to provide options to halt the drawdown or re-deployment of warheads to enforce the goals of deterrence and dissuasion;

- (U) the number and types of targets to be held at risk for deterrence; and
- (U) the forces needed to defeat adversaries across a spectrum of conflicts and scenarios.

The number of operationally deployed nuclear forces necessary to support these defense policy goals cannot be predicted precisely. Viewed from today, however, the range established by the President provides the flexibility and responsiveness necessary to meet the nation's defense policy goals.

#### **Shaping the Nuclear Force (U)**

##### **Immediate, Potential, and Unexpected Contingencies (U)**

(U) In setting requirements for nuclear strike capabilities, distinctions can be made among the contingencies for which the United States must be prepared. Contingencies can be categorized as immediate, potential, or unexpected.

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(U) The establishment of a new strategic framework with Russia has significant consequences for the required size and character of U.S. nuclear forces. The United States can prudently reduce the size of these forces. To address Russia today as if it were the Soviet Union would preclude the more cooperative relationship sought by the United States. Adjusting U.S. immediate nuclear force requirements in recognition of the changed relationship with Russia is a critical step away from the Cold War policy of mutual vulnerability and toward more cooperative relations.

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**Operationally Deployed and Responsive Nuclear Forces (U)**

(U) The categories of immediate, potential, and unexpected threats have been employed to size the nuclear forces. Nuclear forces, in turn, have been divided into two groups:

- (U) Operationally deployed forces; and
- (U) Responsive forces.

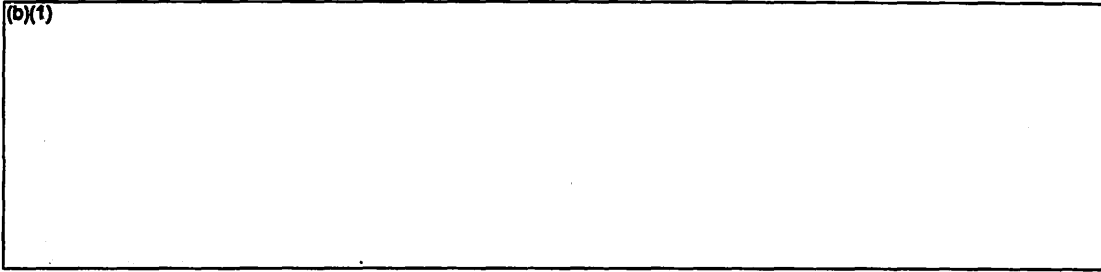
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(U) The operationally deployed forces are sized to provide the capabilities required to meet U.S. defense goals in the context of immediate and unexpected contingencies. That is, a sufficient number of forces must be available on short notice to counter known threats while maintaining a small, additional margin in the event of a surprise development. The [redacted] the United States is scheduled to deploy in 2012 would constitute the operationally deployed force.

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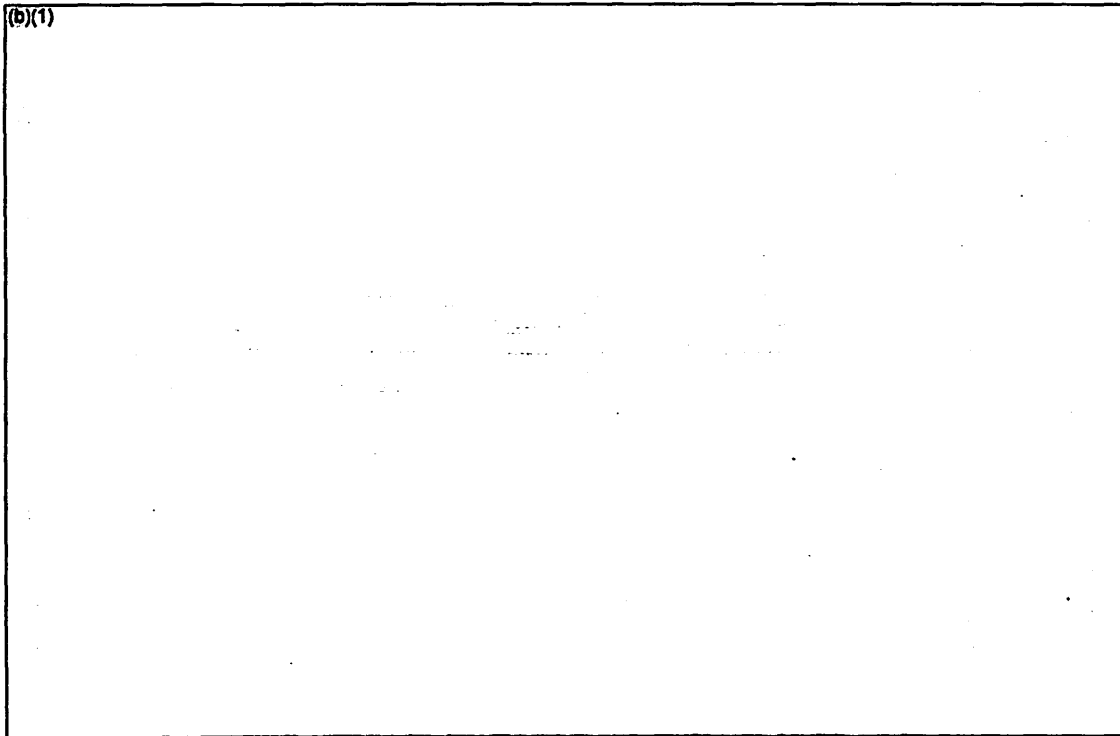
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**(U) The operationally deployed force is intended to address immediate and unexpected contingencies. The responsive force is intended to address potential contingencies. The ability to reinforce in a timely and efficient manner the operationally deployed force with warheads from the responsive force will contribute to the deterrence of challenges and the discussion of arms competition.**

**(U) Figure 2 illustrates the relationship between the operationally deployed and responsive forces, and immediate, potential, and unexpected contingencies.**

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**Figure 2. Operationally deployed and responsive forces (U)**



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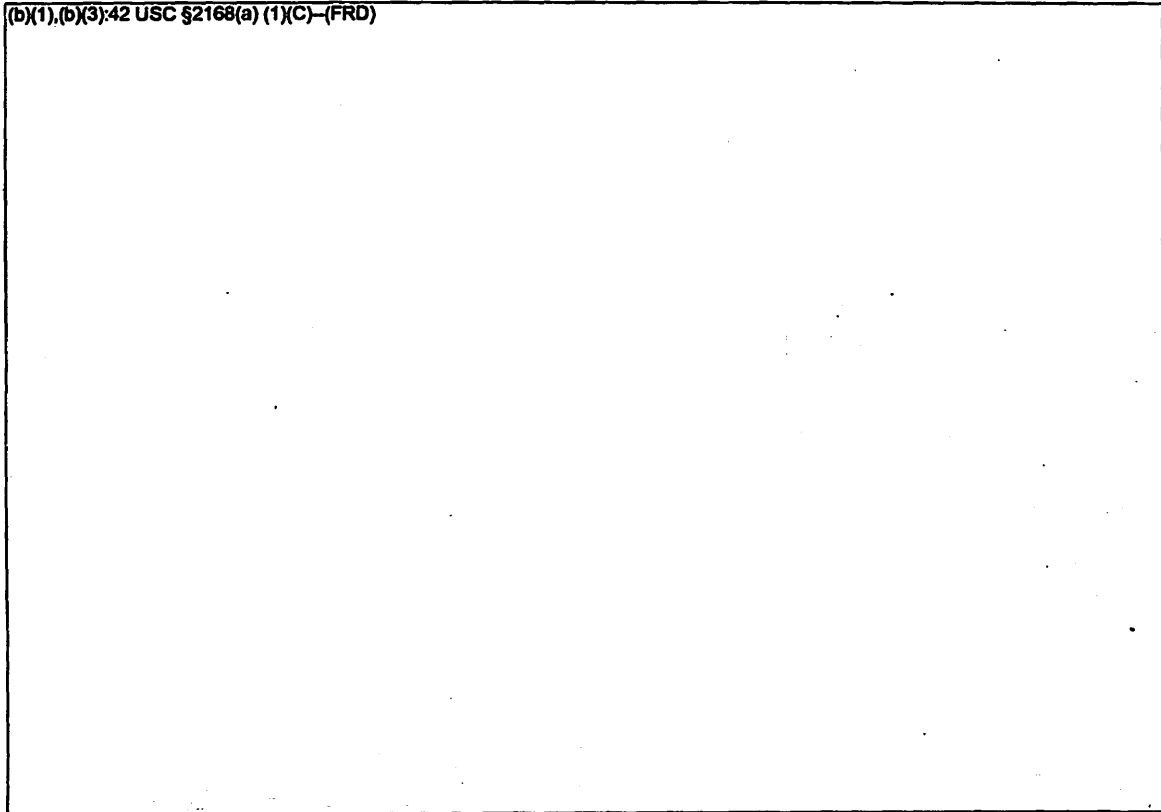
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**Figure J. Path for Nuclear Reductions (U)**

**(U)** As the President's announced reductions are implemented, the existing verification regime established by the first Strategic Arms Reduction Treaty (START I) will remain in effect. President Putin has announced that the Russian Federation also will reduce nuclear forces in line with its requirements. The United States will continue consultations with the Russian Federation on how to achieve increased transparency and predictability regarding reductions in offensive nuclear forces.

**Summary (U)**

**(U)** U.S. defense planning is no longer country-specific or limited to a small number of contingencies. In response to a fluid and unpredictable security environment, the Department has adopted a new and more flexible capabilities-based approach to defense planning. That approach applies to all U.S. military capabilities, including its nuclear forces. The Department has developed the concept of a New Triad as part of its capabilities-based approach. It is designed to provide the flexibility and broad mix of capabilities necessary to

meet U.S. defense policy goals and deterrence requirements in a dynamic security environment.

(U) The New Triad consists of non-nuclear and nuclear strike capabilities, a responsive infrastructure, active and passive defenses, and the related command, control, planning, and intelligence systems. When fully fielded, it will provide the diverse and complementary capabilities necessary to address the potential spectrum of opponents and contingencies that may arise in the coming decades. It will provide a flexible, survivable and adaptable force to assure others of our capabilities and intentions to dissuade and deter potential adversaries and defeat aggression against the U.S., its friends and allies.

(U) Russia is not the Soviet Union. Recognizing this, prudent nuclear reductions are now possible, as is the development of a new strategic framework with Russia. The overall capabilities of the New Triad, as they evolve, will support this process.

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(U) The deliberate steps taken by the U.S. to reduce its nuclear forces underscore the opportunities that exist outside the strictures of the Cold War style of strategic arms control. That old process is incompatible with the flexibility U.S. planning and forces now require.

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### III. Creating the New Triad (U)

(U) Development and deployment of elements of the New Triad, described in the preceding section, will require several initiatives.

- (U) Major Initiatives. Developing and sustaining the New Triad will require investment in the areas of: (1) advanced non-nuclear strike, (2) missile defense, (3) command and control, and (4) intelligence. These investments will reinforce the nation's strategic deterrent capabilities and contribute significantly to the improvement of the military's operational capabilities.

- (U) Overhaul of Existing Nuclear-Related Capabilities. To meet the demands of the New Triad, an overhaul of existing capabilities is needed. This includes improving the tools used to build and execute strike plans so that the national leadership can adopt pre-planned options, or construct new options, during highly dynamic crisis situations. In addition, the technology base and production readiness infrastructures of both DoD and NNSA must be modernized so that the United States will be able to adjust to rapidly changing situations.

- (U) Nuclear Force Reductions and System Modernizations. As elements of the New Triad are deployed and the number of operationally deployed nuclear warheads is reduced, adjustments may be needed to match the capabilities of the remaining nuclear forces to new missions. The large size of the Cold War nuclear arsenal allowed planners to develop weapons optimized for specific tasks. The large number of warhead types in the arsenal served to reduce the risk that technical problems with one type of warhead would substantially reduce the capability of the force overall. For the New Triad, the reduced size of the force will require more reliable and flexible systems. In addition to the efforts needed to refurbish aging weapons in the stockpile, a need may arise to modify, upgrade or replace portions of the current nuclear force or develop concepts for follow-on nuclear weapon systems better suited to the nation's needs. It is unlikely that a reduced version of the Cold War nuclear arsenal will be precisely the nuclear force the United States will require in 2012 and beyond.

(U) This section outlines the steps to develop the elements of the New Triad.

**Major Initiatives (U)**

**Strike (U)**

**(U) DoD has identified deficiencies in its strike capability. These include:**

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- **(U) Lack of targeting flexibility and countermeasure resistance for non-nuclear strike weapons.**

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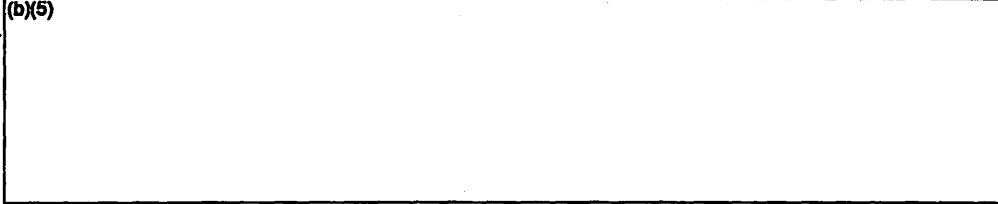
- **(U) Needed improvements to sensors, timely intelligence collection and dissemination, planning flexibility, battle management and command and control to exploit the capabilities of advanced non-nuclear strike systems.**

**(U) DoD has a wide variety of development activities underway to address these deficiencies. The DoD has established specific objectives for strike in the Defense Planning Guidance (DPG) for FY03. The FY04 DPG will provide guidance to coordinate and deconflict requirements for nuclear and non-nuclear systems.**

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- (U) **Precision Strike.** DoD has programmed into the FY03 budget funds to transform precision strike capabilities to increase the number of targets that can be attacked in a single mission. Key programs include the Multifunction Information Distribution

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#### **Ballistic Missile Defense (U)**

(U) Active and passive defenses are a key element of the New Triad. Within this element, development and deployment of missile defenses are important requirements.

(U) **Ballistic Missile Defense Options.** The President has stated that the mission for missile defenses is to protect all 50 states, our deployed forces and our friends and allies against ballistic missile attacks. The Department has reorganized its ballistic missile defense program. The program is pursuing missile defense based on the following guidance:

- (U) Missile defense is most effective if it is layered; that is, able to intercept ballistic missiles of any range in all phases of their flight.
- (U) The United States seeks effective defenses against attacks by small numbers of longer-range missiles as well as defenses against attacks by larger numbers of short and medium-range missiles.
- (U) Missile defense systems, like all military systems, can be less than 100-percent effective and still make a significant contribution to security by enhancing deterrence and saving lives if deterrence fails.
- (U) Instead of committing to a single architecture, the United States will deploy sensors and interceptors in combinations that are best calculated to support U.S. strategic objectives.
- (U) The President has stated that missile defenses must be designed to protect our friends and allies. The United States, therefore, is committed to broad cooperation with our friends and allies across the spectrum of missile defense systems.

(U) Other than PAC-3, the United States has not yet chosen systems for deployment; that decision will depend on the evolution of both technology and the threat. The Department is exploring a wide range of alternative approaches. There are two dimensions to the missile defense program: near-term emergency capabilities; and improved variants of these capabilities leading to more robust, operational systems. Several near-term and mid-term options (2003-2008) that could provide an emergency missile defense capability are under consideration, including:

- (U) A single Airborne Laser for boost-phase intercepts may be available for limited operations against ballistic missiles of all ranges;
- (U) A rudimentary ground-based midcourse system, consisting of a small number of interceptors taken from the test program and (b)(3);42 USC §2168(a)(1)(C)-(FRD) could be available against longer-range threats to the United States; and
- (U) A sea-based Aegis system could be available to provide a rudimentary midcourse capability against short to medium-range threats.

(U) Based on the technical progress of these systems, the United States could deploy operational capabilities beginning in the 2006-2008 period including:

- (U) 2-3 Airborne Laser aircraft
- (U) Additional ground-based midcourse sites
- (U) 4 sea-based midcourse ships
- (U) Terminal systems, able to defend against shorter-range threats: PAC-3, which began deployment in 2001, and THAAD, which could be available by 2008.

**Command and Control, Intelligence (U)**

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**Command and Control (U)**

(U) The Secretary of Defense established a Federal Advisory Committee (FAC) to conduct an independent, end-to-end review of all activities involved in maintaining the highest standards of nuclear weapons safety, security, control, and reliability. The End-to-End Review has been conducted concurrently with the NPR and was not completed before the deadline for decisions to be resolved in the NPR. While the study is not yet final, the FAC presented an urgent preliminary finding to the Secretary subsequent to the events of September 11<sup>th</sup> identifying the need to expand the current nuclear command and control (C2) architecture to a true national command and control conferencing system.



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**Intelligence (U)**

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**(U) Launch detection and tracking will be improved by the Space-Based Infrared System-High (SBIRS-High) satellites. Designed to detect the launch of enemy ballistic missiles, these systems will provide greater sensitivity and precision relative to those satellites currently in place. DoD will develop the low-orbit constellation of SBIRS-Low satellites to support missile defense. This system will provide capabilities to track enemy ballistic missiles and to assist in the discrimination of reentry vehicles and other objects in flight.**

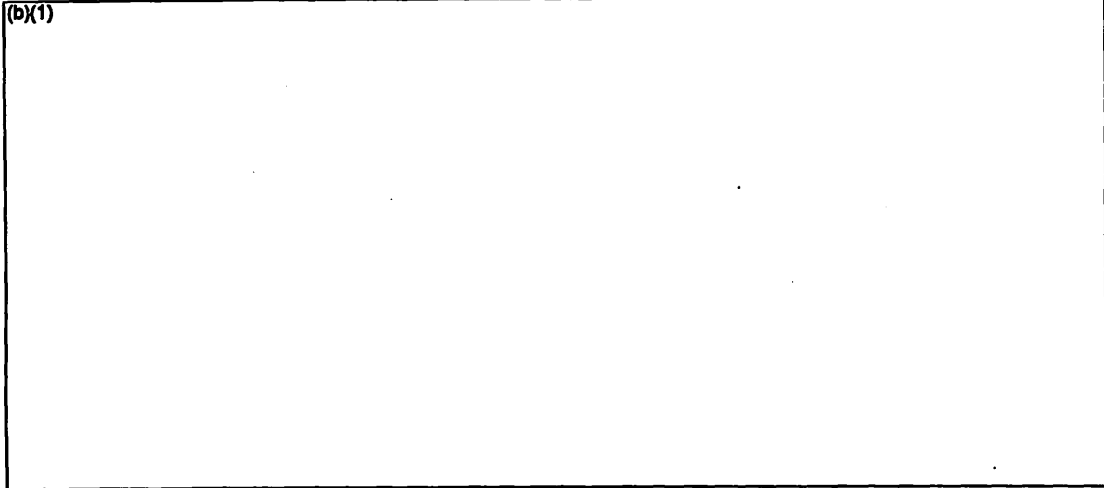
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**Overview of Existing Systems (U)**

**Adaptive Planning (U)**

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**Planning Issues (U)**

(U) To make the Strategic Warfare Planning System (SWPS) more responsive to adaptive planning scenarios, a comprehensive SWPS Transformation Study has been initiated and is being conducted by U.S. Strategic Command. Results will be available in late spring 2002. To meet the requirements of adaptive planning, an upgrade of the existing nuclear C<sub>2</sub> architecture is needed.

**DoD Nuclear Infrastructure (U)**

(U) DoD has a comprehensive approach to ensuring the viability of the infrastructure to support U.S. nuclear forces. This approach includes:

- (U) *Sustainment of current systems* to take advantage of previous investments;
- (U) *Modernization of the force* or portions of the force by developing and deploying replacement systems and/or enhanced and new capabilities to ensure the force meets emerging and future needs;
- (U) *Revitalization of the infrastructure* so that it can support in a timely manner the full range of future capability and modernization requirements.

(U) Section IV of the report discusses the nuclear weapon sustainment and modernization programs now underway as well as those planned for the future. This section outlines the DoD approach to the infrastructure for these systems in the context of the New Triad.

**DoD Infrastructure Issues (U)**

(b)(1)

(U) In support of this effort, the Defense Science Board Task Force on System Technology for the Future U.S. Strategic Posture is considering strategies for enhancing the ability of the U.S. technology base to deal with or hedge against uncertainties in the nature and timing of potential strategic threats, the capability of the technology and industrial base to respond in a timely manner, and the adequacy and responsiveness of science and technology programs related to possible future strategic capabilities. In addition, the U.S. Strategic Command Advisory Group on Strategic Platforms is addressing weapon system viability and nuclear force readiness.

**NNSA Warhead Research, Development and Production Infrastructure (U)**

**The Current U.S. Nuclear Warhead Infrastructure (U)**

(U) The U.S. nuclear weapons complex has two principal missions: first, to ensure high confidence in the safety and reliability of the enduring stockpile; second, to develop and maintain the capability to respond to changes in the strategic environment that call for adjustments in the number of deployed weapons or, if directed, to modify existing, or develop new, weapons to meet new or emerging military requirements.

(U) Over the past decade, the focus of the NNSA Stockpile Stewardship Program has been to develop means to certify the safety and reliability of the aging stockpile absent underground nuclear testing. The size of the production infrastructure was reduced with the goal of modernizing that smaller infrastructure to assure that the nation has the capabilities it will need in the future.

(b)(1),(b)(3);42 USC §2168(a) (1)(C)-(FRD)

(b)(1)



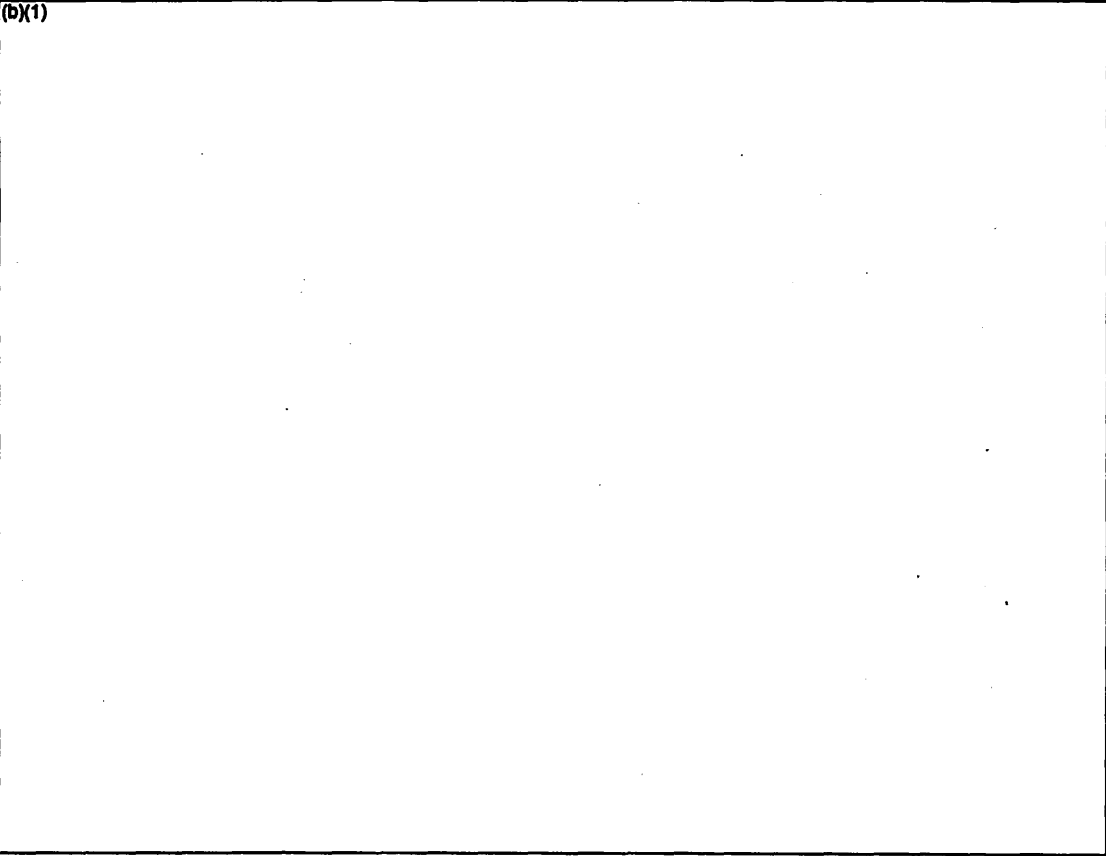
**(U) The need is clear for a revitalized nuclear weapons complex that will:**

- **(U) continue to assure stockpile safety and reliability;**
- **(U) conduct surveillance to predict and find problems so that we can refurbish weapons well before aging degradation;**
- **(U) be able, if directed, to design, develop, manufacture, and certify new warheads in response to new national requirements; and**
- **(U) maintain readiness to resume underground nuclear testing if required.**

**To achieve this, a multi-year plan is needed, both to reinstate stability within the program and to redress past underfunding.**

**Stockpile Maintenance (U)**

(b)(1)



(b)(1),(b)(3):42 USC §2168(a)(1)(C)-(FRD)



**(U) The size of the active and inactive stockpile will be reviewed as part of the periodic assessments in light of the requirements for the operationally deployed and responsive forces. The resulting estimates of stockpile requirements will be refined by DoD and NNSA. The**

Joint Nuclear Weapons Council (DoD and NNSA) will oversee the management of the stockpile on a routine basis. Additionally, DoD and NNSA will work together to develop a system for categorizing weapons in the stockpile that is more reflective of the approach taken in the New Triad.

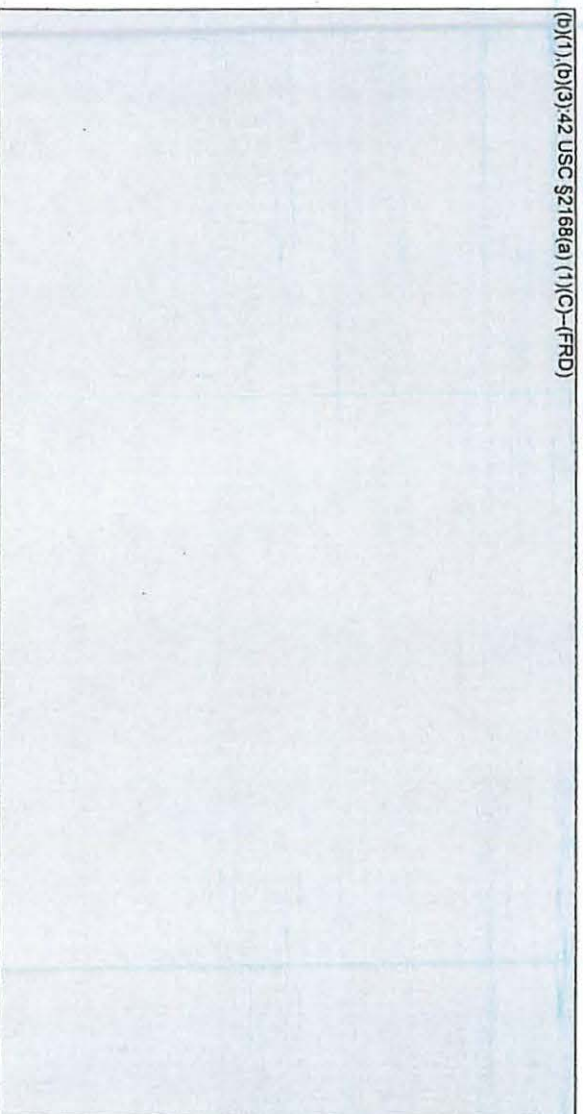
**Restoring Production Infrastructure (U)**

(U) A major challenge for nuclear weapons programs over the next two decades will be to refurbish, and thereby extend the life of, at least seven types of nuclear warheads. Figure 4 illustrates the refurbishment plan that has been jointly agreed by NNSA and the DoD, and which is reaffirmed by this NPR. This plan includes the "block upgrade" approach in which NNSA would commit resources to refurbish a portion of the warheads of a specific type in five-year increments. Requirements for additional warhead refurbishment will be reviewed and refined later as the total requirements for the operationally-deployed force and the responsive force are better defined.

(U) In order to carry out this plan, NNSA has initiated efforts to recapitalize deteriorating facilities (or build entirely new facilities), restore lost production capabilities and modernize others, sustain and modernize the R&D base for nuclear weapons, and develop new tools, as required, to assure continued safety and reliability of the nuclear stockpile. Initiatives to restore the production infrastructure will represent a sustained long-term effort and will be critical to ensuring an effective, balanced stewardship program for the nation's nuclear deterrent and for the New Triad. Key production activities and associated facility needs are highlighted below:

(U) **Warhead Assembly and Disassembly:** The Pantex Plant in Texas is the only facility capable of the complete assembly and disassembly of warheads. Plans are underway to expand the capacity and capability of the Pantex Plant to meet the planned workload for disassembly and remanufacturing of existing weapons.

(b)(1), (b)(3)42 USC §2168(a) (1)(C)-(FRD)







(b)(1)

(U) To further assess these and other nuclear weapons options in connection with meeting new or emerging military requirements, the NNSA will reestablish advanced warhead concepts teams at each of the national laboratories and at headquarters in Washington. This will provide unique opportunities to train our next generation of weapon designers and engineers. DoD and NNSA will also jointly review potential programs to provide nuclear capabilities, and identify opportunities for further study including assessments of whether nuclear testing would be required to field such warheads.

(U) **Nuclear Test Readiness.** The U.S. moratorium on nuclear testing remains in place. Based on a 1993 Presidential directive, NNSA currently maintains a capability to conduct an underground nuclear test within 24 to 36 months of a President's directive to do so. In February 2001, the Panel to Assess the Reliability, Safety, and Security of the United States Nuclear Stockpile, the Foster Panel, commissioned by Congress in FY99 to evaluate the process for Annual Stockpile Certification and the adequacy of criteria provided by DOE for evaluating the Stockpile Stewardship Program, found that a 2-3 year lead time to resume underground testing is "unacceptable." The Panel recommendation that DOE/NNSA assess the feasibility and cost of reducing the time to "well below the Congressionally-mandated one year" (sense of the Congress as expressed in the 1996 Resolution of Ratification for the START II Treaty) was addressed as part of the NPR.

(U) Since the end of underground testing in September 1992, the U.S. has re-certified several warheads with components that have been modified, replaced, or in some cases rebuilt. A number of problems uncovered by the surveillance program have been solved. However, because of the continued reliance on nuclear weapons in the New Triad, the aging of the stockpile and the minimal capability of the nuclear weapon complex, the United States should take those steps necessary to ensure the continued safety, reliability and performance of the nuclear stockpile.

(U) Test readiness is maintained principally by the participation of nuclear test program personnel in an active program of stockpile stewardship experiments, especially the subcritical experiments carried out underground at the Nevada Test Site (NTS). There are two concerns about the current test readiness program.

(U) First, many experienced testing personnel are retiring or have already retired. The current 2-3 year test readiness posture will not be sustainable as more and more experienced test personnel retire. Not all of the techniques and processes required to carry out underground nuclear tests—including nuclear diagnostic instrumentation, containment, design and emplacement of diagnostic equipment in a vertical shaft, drillback and radiochemical

analysis—are exercised with the subcritical experimentation work carried out at the NTS. As experienced personnel retire, it will become more difficult to train new people in these techniques, further degrading test readiness. This argues for an approach in which all key capabilities required to conduct underground nuclear tests are identified and exercised regularly on projects making use of a variety of nuclear testing-related skills.

(b)(1)



(U) To address these concerns, and to respond to similar concerns expressed by USCINSTRAT, the Foster Panel, DoD and others, NNSA proposes over the next three years to enhance test readiness by: augmenting key personnel and increasing their operational proficiency; beginning the mentoring of the next generation of testing personnel; conducting additional field experiments including additional subcritical experiments and test-related exercises of appropriate fidelity; replacing key underground-test-unique components (e.g., Field Test Neutron Generators); modernizing certain test diagnostic capabilities; and decreasing the time required to show regulatory and safety compliance. The Secretary of Defense endorses the NNSA initiative to enhance test readiness by reducing the lead-time to carry out an underground nuclear test to ensure that the United States has the necessary options at its disposal. DoD and NNSA will work to refine test scenarios and evaluate cost/benefit tradeoffs in order to determine, implement and sustain the optimum test readiness time that best supports the New Triad.

(U) *Meeting Warhead Production Commitments to DoD.* As discussed earlier, a high priority is the modernization and revitalization of the production complex with a focus on recovering lost manufacturing capabilities and developing new capabilities and capacities as needed both to meet the planned workload and to respond to possible stockpile "surprise." A key capability that must be recovered is manufacture of plutonium pits. In addition to our efforts to establish a limited production capability at Los Alamos, NNSA will accelerate preliminary design work on a modern pit manufacturing facility so that new production capacity can be brought on-line when it is needed.

(U) *NNSA Multi-Year Plan.* In order to have confidence that the NNSA proposed schedules and programs will result in the capabilities needed for the New Triad, NNSA requires a multi-

year plus, that is adequately funded to reintroduce program stability into the nuclear weapons enterprise.

**People with Critical Nuclear Skills (U)**

(U) Skilled personnel will be required to perform critical tasks to safety and reliably operate, handle, and maintain nuclear weapons and the nuclear deterrent. As a result of weapons availability, the number of personnel within DoD and DOE possessing these critical skills has eroded. The shortages are well documented in a number of reports including: the Defense Studies Board Task Force Report on Nuclear Deterrence (October 1995); the Report to the Congress on Maintaining United States Nuclear Weapons Expertise (Charles Commission, March 1999); Reports of the Panel to Assess the Reliability, Safety, and Security of the U.S. Nuclear Stockpile (November 1999 and February 2001); and Nuclear Skills Retention Measures within the Department of Defense and Department of Energy (December 2000). These studies, along with the NPR review of key personnel, highlight several key areas of concern:

- (U) Perception of diminished stature of the nuclear community, underscored by continuing and planned reductions in the nuclear posture;
- (U) Aging of people, hardware, infrastructure and the technology base;
- (U) Loss of community of personnel who understand the complexities of nuclear hardening and the nuclear environment criteria on which the existing weapon systems were developed; and
- (U) Continuing shortage of exceptional quality personnel to operate and maintain nuclear weapons.

(U) As a result of these studies, and the NPR review of nuclear skills and personnel within DoD and NSA, the following actions are being initiated:

- (U) The Secretary of Defense will direct the Defense Science Board to forecast the future needs of DoD for nuclear-drafted personnel and to evaluate the ability of the DoD to recruit and train the nuclear-drafted personnel it will need for the future. This review will include the Services, supporting staff, and agencies; and
- (U) The DoD and NSA will jointly support opportunities that provide an end-to-end demonstration of integrated capabilities involved with warhead design, development, manufacturing, and warhead/weapon integration. A key objective is to exercise critical skills for adapting warheads to DoD weapon delivery systems;
- (U) The DoD and NSA will enter into a partnership to utilize the NSA Advanced Concepts Initiative in order to investigate options to meet future capability needs and

to exercise the DoD/NNSA weapon development interface. NNSA will include the following as goals for the new Advanced Concepts Initiative:

- (U) Transfer of warhead design knowledge from the current generation of designers to the next generation.
- (U) Exercise of DoD/NNSA program integration skills.

#### IV. U.S. Nuclear Platforms and Capabilities (U)

(U) This section directly responds to Congressional interest in efforts to sustain U.S. nuclear forces, and plans for their modernization or replacement. It will also identify shortfalls in capabilities of the current forces, and actions initiated to address those shortfalls in order to provide the nuclear offense capabilities required for the New Triad.

##### Nuclear Force Sustainment and Modernization (U)

(U) DoD has a comprehensive approach to ensuring the visibility and effectiveness of the U.S. nuclear deterrent. This includes:

- (U) *Sustainment of current systems* to take advantage of previous investments;
- (U) *Modernization of the force* or portions of the force by developing and deploying replacement systems and/or enhanced and new capabilities to ensure the force meets emerging and future needs;
- (U) *Revitalization of the DoD and NNSA infrastructures* so that they can support in a timely manner the full range of future capability and modernization requirements.

(U) Figure 3 displays the plans for sustaining the current force of nuclear delivery platforms.

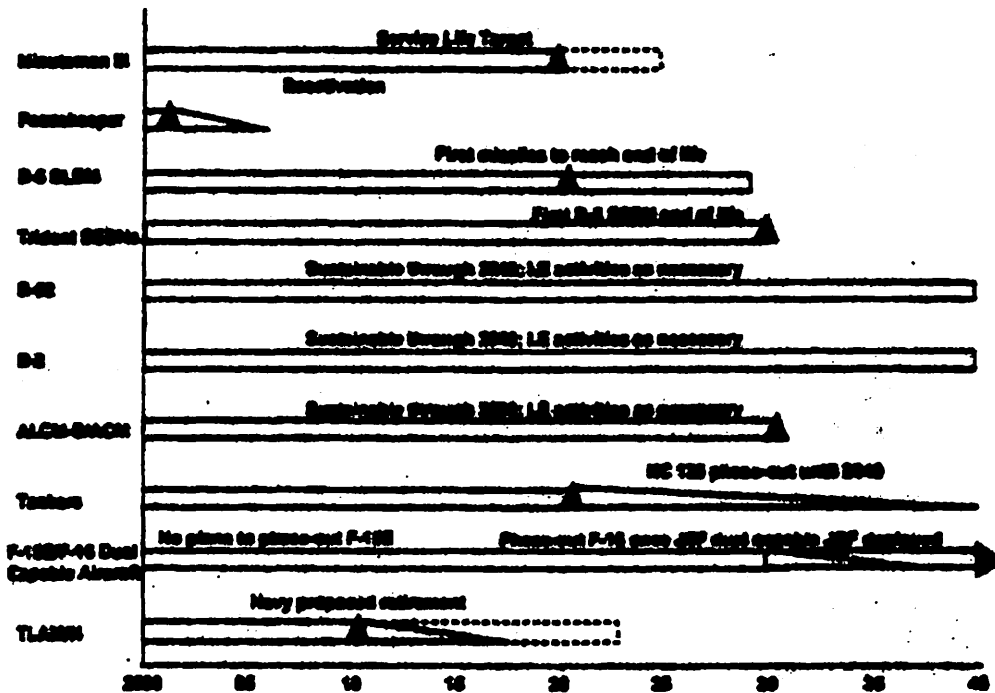


Figure 3. Current Platform Sustainment Plans (U)

(U) Figure 6 displays the decision dates required to develop replacements for the current platforms.

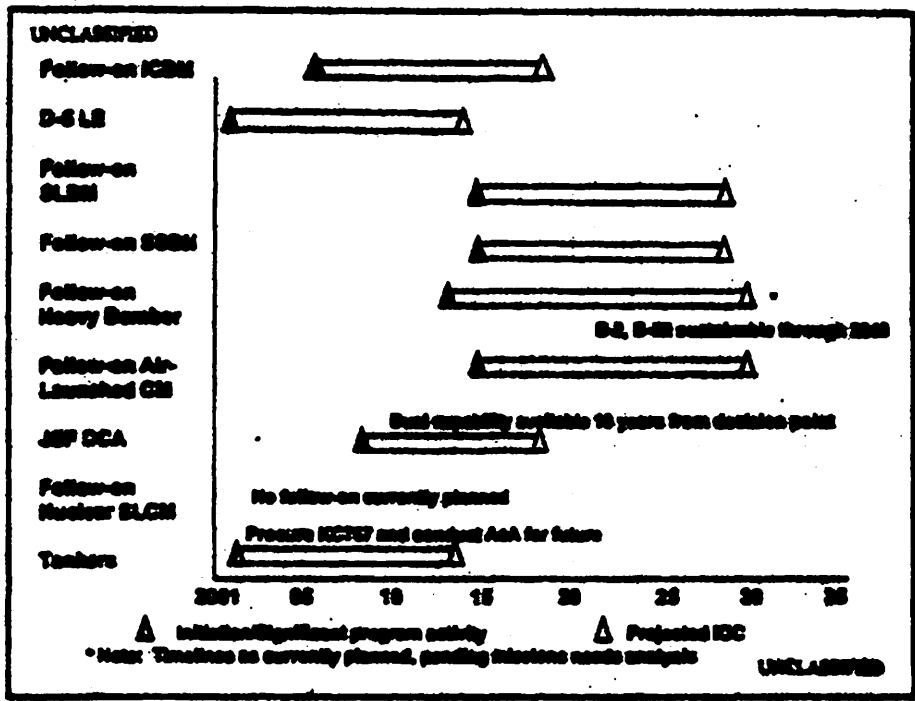


Figure 6. Decision Dates Required for Replacement Systems (U)

**Intercontinental Ballistic Missiles (ICBMs) (U)**

(U) ICBMs are a critical component of the New Triad. The focus of the Department's efforts are to extend the life of the Minuteman III weapon system until 2020 while beginning the requirements process for the next-generation ICBM. A set of comprehensive sustainment programs are planned or underway to meet these objectives. These programs include the Guidance Replacement Program (GRP), Propulsion Replacement Program (PRP), Propulsion System Rocket Engine (PSRE) life extension program, Rapid Execution and Combat Targeting (REACT) service life extension program, Environmental Control System (ECS) program, and the Safety Enhanced Reentry Vehicle (SERV) program. Successful fielding of these programs by the end of the decade will be an important consideration as the Department examines progress in making the New Triad a reality.

(U) The ongoing efforts, listed above, provide for a capable, reliable, and fully supportable Minuteman III missile over the next two decades. The linchpin of Minuteman sustainment is the GRP. It replaces missile guidance set components, restores ground and flight reliability, and ensures future supportability. The GRP guidance set must be fielded prior to, or in

conjunction with, the Propulsion Replacement and Safety Enhanced Reentry Vehicle programs. The PRP program will re-pour stages 1 and 2, and will remanufacture stage 3 of the Minuteman III solid rocket motors to address age related degradations and ensure that motors, ordnance, and integrating hardware remain reliable and capable of required system performance. The PSRE Life Extension Program replaces aging components in the Minuteman III post-boost vehicle and ensures future availability of replacement parts. These programs are sequenced and their fielding is dependent on each other. More importantly, they are essential to the reliability of the ICBMs in the New Triad.

(b)(1)



(U) Steps are underway to sustain Minuteman launch control centers commensurate with the extended life of the Minuteman III missile. The REACT Service Life Extension Program addresses sustainment issues of the launch control center crew station that provides command and control and launch execution capability. The ECS program modifies existing ECS systems to extend ECS life through 2020.

(b)(1)



(U) *Follow-on ICBM.* Today's ICBM force is undergoing major life extension programs designed to sustain it through the 2020 time frame. The Air Force Space Command (AFSPC) led the Ballistic Missile Requirements (BMR) study (1998 to 2000) which documented a

(b)(5)



**Ballistic Missile Submarines and Missiles (U)**

**(U) Trident Ballistic Missile Submarines (SSBN).** The Trident Ohio-class SSBNs with their significant survivability capabilities will serve as the mainstay of the sea-based nuclear force

(b)(5)

**(U) Trident II SLBM.** DoD will fund the D-5 Life Extension Program, which continues the production of D-5 missiles and upgrades the guidance and missile electronics systems on existing missiles. The continued production of additional D-5 missiles is needed in order to prevent a shortage of missiles in the next decade. As a result of continued production, reliability and accuracy of the D-5 missile and its subsystems will be sustained, along with the D-5 supplier base and critical nuclear skills necessary to ensure the high reliability of D-5 performance.

(b)(5)

**(L) Follow-on SLBM.** A new SLBM would be needed in about 2029 to match the schedule for a follow-on SSBN. The Navy has begun studies to examine range/payload requirements and missile size, but has no specific plans for a follow-on SLBM at this point other than extending the service life of the Trident D-5.

**(U) Common Missile.** The Department of Defense does not plan to pursue a common ICBM/SLBM ballistic missile at this time. However, the Air Force and Navy are currently cooperating in research and development on common technologies related to current and future ballistic missiles - the Guidance Applications Program (GAP), Reentry Systems



Applications Program (RSAP), Propulsion Applications Program (PAP), and Technology for the Sustainment of Strategic Systems (TSSS) programs.

**Heavy Bombers/Air-Launched Cruise Missiles (U)**

**(U) Strategic Bombers.** The Air Force plans to keep the current B-2 and B-52 fleet operational for another 35 to 40 years. An aggressive sustainment and modernization effort for both platforms is required to support this plan. In particular, upgrades to communications, avionics, processors, radar systems, displays, and navigation equipment are essential to keep the fleet affordable and operationally relevant throughout this period.

(b)(1)

**(U) Several upgrades are currently underway on the B-2.** These upgrades include AHFM (Alternate High Frequency Material) which improves the ability to maintain the low observable materials of the aircraft; UNF/SATCOM upgrade; JASSM upgrade; Mk-32 Smart Bomb Rack Assembly upgrade; and Link-16 upgrade.

**(U) Air-Launched Weapon Systems.** The Air Force recently determined that its current force of cruise missiles can be sustained until 2030. Service life extension feasibility studies have been conducted for both the Air-Launched Cruise Missile (ALCM) and Advanced Cruise Missile (ACM). Additional resources will be required to implement life extension programs for these missiles unless replacements are developed and deployed later this decade.

**(U) Follow-on Strategic Bombers.** If current estimates of the service lives for bombers are approximately correct, and there continues to be a requirement for a bomber force in excess

of the current B-2 fleet, a new bomber will need to be operational by approximately 2040. A need for additional or improved bomber capabilities could, however, move the "need date" closer to the present. Replacement lead times, from program initiation to initial operating capability, could be 20 years or more. Potential concepts for a new strategic bomber range from subsonic stealth and non-stealth aircraft to supersonic, hypersonic, sub-orbital, and orbital vehicles. Both manned and unmanned vehicles are under consideration. The Air Force recently funded a science and technology effort for the Long-Range Strike Aerospace Platform-X to further explore options.

(U) **Follow-on Air-Launched Weapon Systems:** There are no plans at this time for a follow-on nuclear ALCM, as current six-manifest cruise missiles are projected to be sustainable through 2030. A next-generation cruise missile program would need to start around FY 2014 to ensure an IOC in the 2030 timeframe. However, conventional cruise missile programs (such as the Extended Range Cruise Missile) are planned that could support an accelerated timetable if necessary, but would have to be modified to carry nuclear warheads.

(U) **Dual-Capable Aircraft:** DoD is considering options and their associated costs to either extend the life of the dual-capable F-16 C/Ds and F-15Es or make a block upgrade to the Joint Strike Fighter (JSF) aircraft. In addition, there are a number of policy implications, including several that must be considered in consultation with our NATO allies. The Operational Requirements Document for the JSF requires that initial design permit nuclear capability to be incorporated at a later date (after IOC, currently scheduled for 2012) at an affordable price.

(S)(X)

(U) **Tankers:** The current fleet of KC-135s will be operational for the next 35-40 years. The aging fleet will begin a long phased retirement starting in 2013 and continuing to approximately 2040. The Air Force anticipates constant upgrades to avionics, displays, and navigation equipment over the coming years. However, the current KC-135 fleet is not equipped with a survivable communications capability limiting its effectiveness in a stressed environment. The Air Force is evaluating a follow-on tanker in conjunction with a follow-on common airframe skills and special missions platform. The service is also considering the lease or purchase of 100 off-the-shelf 767 tankers as an interim measure prior to the need to produce the KC-X fleet replacement platform. In developing alternatives, consideration

needs to be given to the possibility that aircraft will operate in a nuclear, biological and chemical weapon environment.

#### **Cross-Cutting Issues (U)**

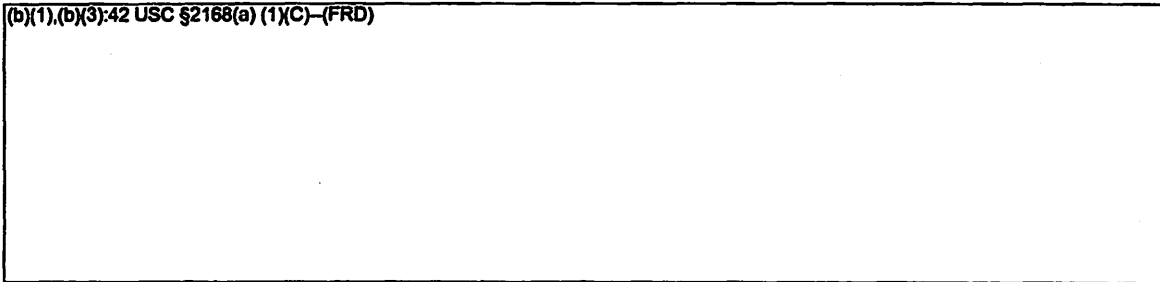
**(U) Science and Technology and Continued Support of the Strategic Industrial Base.** The Department has identified a number of critical areas where industrial base and related skills are not preserved by either defense programs or the commercial sector. To retain this expertise, which is required to maintain existing deployed systems beyond their original life and to design, develop and produce new systems, the Air Force and the Navy have initiated technology sustainment programs. These sustainment programs fund research and production technology for reentry systems, solid rocket motors, guidance systems, and radiation hardened electronic parts. These focus areas are coordinated between the Air Force and Navy to prevent duplication of effort and to assess areas for common technologies and components in future systems. Additionally, a number of defense technology objectives have been included under the Technology for Sustainment of Strategic Systems (TSSS) to examine emerging technologies.

**(U) Robust Flight-Testing, Aging and Surveillance.** Air Force and Navy nuclear systems require robust flight-testing programs to provide operationally representative data on weapon system performance and to predict weapon system reliability and accuracy. As existing systems age, especially in the context of reduced force levels, it is imperative that DoD have the ability to predict significant changes in the performance of nuclear systems. Currently, only the D-5 missile system fulfills the required annual flight tests. A comprehensive aging and surveillance program is essential to anticipate and predict component failure in time to avoid degraded weapon system reliability and maintain weapon availability. The Department may be required to increase flight tests and to implement a predictive surveillance program to ensure that these weapons will remain reliable over the extended lifetimes. As part of the surveillance and life extension programs, ballistic missiles will be flight tested in the full range of potentially deployable configurations.

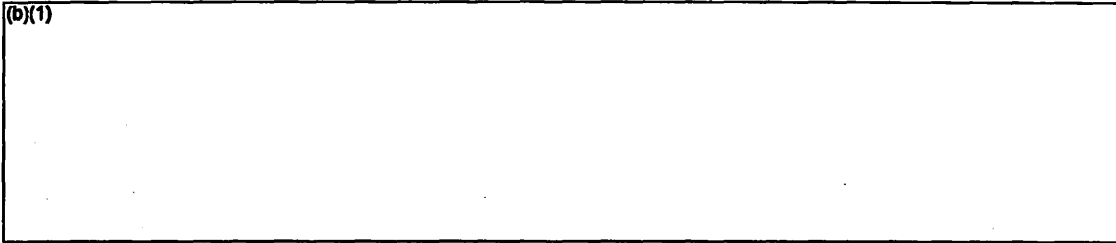
#### **Nuclear Warhead Sustainment (U)**

**(U) DoD will continue to work closely with NNSA.** Both DoD and NNSA have a critical responsibility to maintain a comprehensive infrastructure that supports the U.S. nuclear weapons program and its personnel.

(b)(1),(b)(3):42 USC §2168(a) (1)(C)-(FRD)

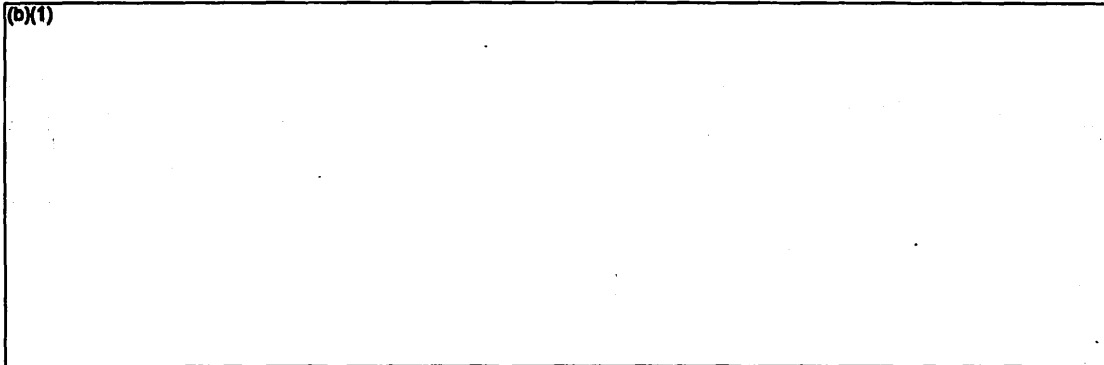


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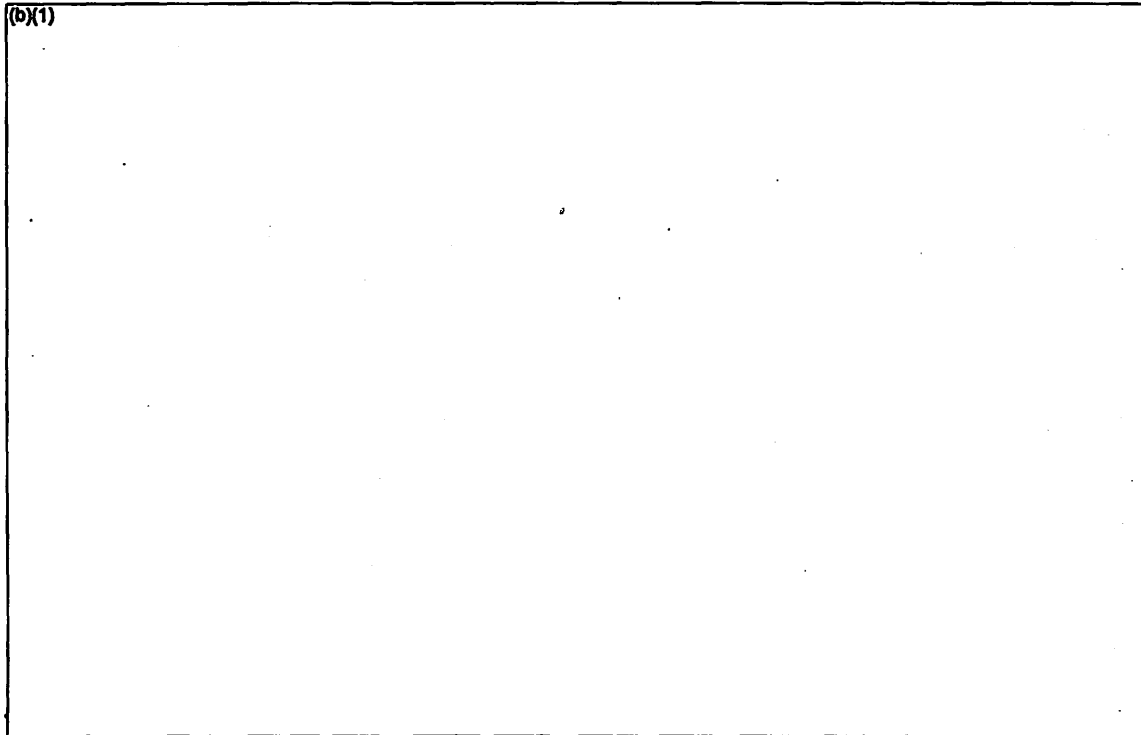
**Limitations in the Present Nuclear Forces (U)**

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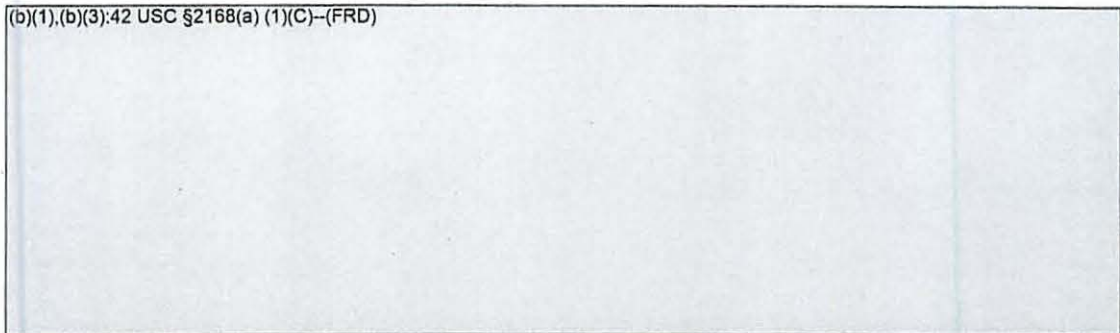


**Defeating Hard and Deeply Buried Targets (U)**

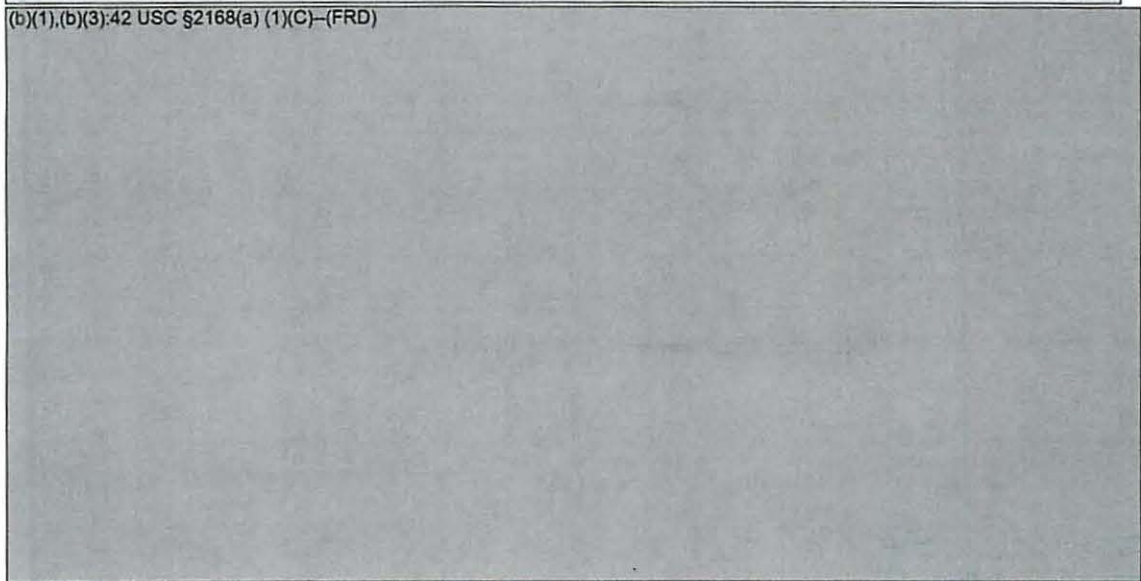
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(b)(1),(b)(3):42 USC §2168(a)(1)(C)-(FRD)



(b)(1),(b)(3):42 USC §2168(a)(1)(C)-(FRD)



**Mobile and Relocatable Targets (U)**

(b)(1)



(b)(1)

**Defeat of Chemical and Biological Agents (U)**

(b)(1)

**Improved Accuracy for Effectiveness and Reduced Collateral Damage (U)**

(b)(1)

**Nuclear Force Modernization (U)**

**(U) DoD is addressing long-lead planning in the following ways:**

- **(U) The Chairman of the Joint Chiefs of Staff has initiated a Strategic Deterrent Joint Warfighting Capability Assessment to characterize the requirements for nuclear weapon systems in the 2020 timeframe. The assessment is to be complete in early FY03.**
- **(U) DoD will conduct a study in FY02 to identify potential problems with the current replacement of nuclear weapon systems at end-of-life plan and to recommend alternatives. Waiting to replace each current weapon system until that weapon can no longer be maintained through life extension modifications is not likely to be an effective long-term strategy. Two concerns with this approach are: (1) the time-phasing of the replacements may result in a funding bow wave for which it would be difficult for the Department to program funds; and (2) the supporting infrastructure would likely undergo periodic shutdowns followed by periods of intense activity.**
- **(U) DoD, in consultation with NNSA, will develop an investment strategy for sustainment, modernization and replacement of nuclear weapon systems. The investment strategy is to include a mix of near-term modifications of existing systems to provide enhanced capabilities during the force drawdown as well as long-term**

replacements in an affordable, time-phased plan. The investment strategy also will address the requirement to sustain key industrial capabilities for the nation during periods when acquisition-related demands would be insufficient to sustain the infrastructure.

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## V. Nuclear Reductions and Implications for Arms Control (U)

### Approach to Reductions (U)

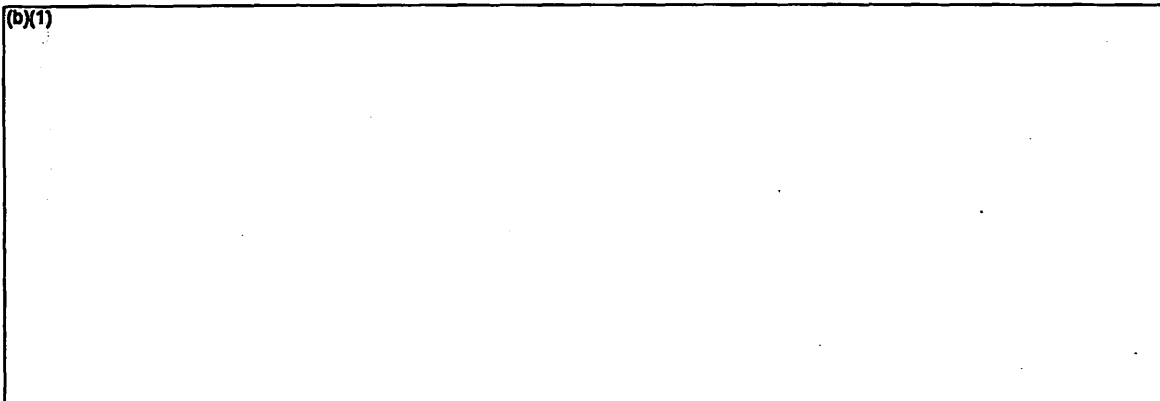
(U) Recognizing that the dangers facing the United States have been fundamentally altered, the reductions projected by the Nuclear Posture Review assume four main principles: 1) the forces will be reduced to the lowest possible level consistent with U.S. and allied national security needs; 2) the capability and flexibility to adapt to a rapidly changing threat environment will be preserved; 3) progress will be made toward the development and fielding of the New Triad, including a strengthened nuclear infrastructure; and 4) the ability of nuclear-capable bombers to deliver conventional weapons will be preserved. To achieve these reductions, DoD will conduct periodic reviews to assess progress towards the President's goal of 1,700 to 2,200 operationally deployed strategic warheads in 2012.

(U) Because of the dynamic, unpredictable nature of the coming decades, the Department will maintain a responsive capability to augment the operationally deployed force should world events make such action necessary. These nuclear force reductions will not be accomplished within the Cold War arms control framework. The new approach facilitates reductions while preserving the U.S. ability to respond expeditiously to changing situations. The United States will continue to comply with the first Strategic Arms Reduction Treaty (START I).

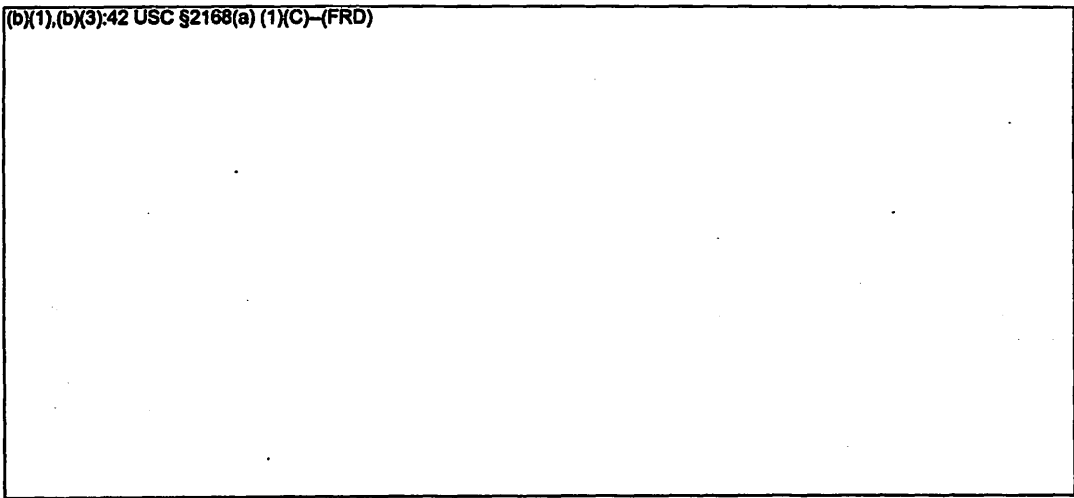
### Initial Reductions (U)

(U) Strategic nuclear reductions will be completed in phases. As the first step in the process, the United States has decided to retire its 50 Poseidon ICBMs, to remove four Trident submarines from strategic service, and to no longer maintain the ability to return the B-1 bomber force to nuclear service. When these reductions are complete in FY06, the number of U.S. operationally deployed strategic nuclear warheads will be reduced by about 1,300 warheads accountable under the START I Treaty (based on attribution rules at the time these decisions were made). The four Trident submarines that will be removed from strategic service will remain accountable under the START I Treaty.

(b)(1)



(b)(1),(b)(3);42 USC §2168(a) (1)(C)-(FRD)



**Longer-Term Reductions (U)**

**(U)** With regard to additional reductions beyond FY07, the United States plans to decrease the number of warheads on its ballistic missile force by "downloading." Regarding bombers, reductions will be made by lowering the number of operationally deployed weapons, i.e., those available for loading at operational bomber bases.

**(U)** Long-range bombers are no longer on day-to-day nuclear alert, are rarely armed with nuclear weapons and are used primarily for conventional roles. These bombers played a major role in air campaigns conducted in the 1990s and are continuing to do so today in the war against terrorism. In making reductions in the number of deployed nuclear weapons associated with the bomber force, there will not be any reductions in the capability of U.S. bombers to deliver conventional weapons.

(b)(3);42  
USC §2168  
(a) (1)(C)-  
(FRD)

**(U)** U.S. forces will have no more [redacted] operationally deployed strategic nuclear warheads when the goal is achieved in 2012. U.S. operationally deployed warheads counted in this total are those that are on alert or can be placed on alert in a matter of days. SLBM warheads for SSBNs in overhaul will not be counted as operationally deployed because these submarines are unavailable for alert patrols. Warheads that will count as operationally deployed are:

- **(U)** For ballistic missiles, the actual number of nuclear weapons loaded on the ICBMs or SLBMs.
- **(U)** For bombers, those nuclear weapons located in weapon storage areas at bomber bases (except for a small number of spares).

**(U)** The possibility cannot be ruled out that there will be differences in the number of warheads deployed on specific missile types. The United States reserves the right to change the specific composition of its nuclear forces and the allocation of warheads among the components of the strategic nuclear force. Specific force composition and warhead allocation

among the components of the nuclear force will be a function of operational requirements. Legal constraints of the START I Treaty will continue to be observed.

#### **START I Treaty (U)**

(U) The START I Treaty contains many features relevant to these reductions. It contains an extensive verification regime, including provisions for the exchange of data, a telemetry regime, and an extensive inspection regime. The START I Treaty provisions will continue to provide a valuable measure of transparency for both the United States and Russia.

(U) In addition, there are many START I provisions that will continue to constrain U.S. and Russian options for strategic nuclear forces, even at reduced levels. START I limits the number of warheads that can be deployed on any specific type of ballistic missile. It prohibits any increase in the number of warheads from the number declared. It limits the number of nuclear air-launched cruise missiles (ALCMs) that can be carried by heavy bombers and effectively prohibits carrying these missiles on other types of aircraft (which would become treaty-accountable heavy bombers if they carried ALCMs). In addition, it prohibits air-launched and surface ship-launched ballistic missiles of over 600-km range, including conventional, air-launched ballistic missiles.

(U) As long as the START I Treaty remains in effect, U.S. missiles will be limited legally to the number of warheads for which each missile type is accountable in the START Treaty Memorandum of Understanding. Similarly, U.S. long-range bombers will continue to be constrained in the number of nuclear weapons allowed under the treaty. Under the current plans, most U.S. bombers and missiles would be operated with substantially fewer weapons than are allowed under the START I Treaty.

#### **The START II Treaty (U)**

(U) The START II Treaty has never entered into force. Changes to the treaty were negotiated with Russia in 1997, but never submitted to the Senate for advice and consent. In addition, the Russian resolution of ratification, adopted in 2000, contains unacceptable provisions contrary to the new strategic framework and establishment of the New Triad.

(U) Nevertheless, it is clear that both the United States and Russia have set as a goal force levels below the START II limit of 3,000 - 3,500 accountable strategic nuclear warheads, independent of any additional arms control treaties.

**De-Alerting (U)**

(U) "De-alerting" is a term used to describe various proposals intended to reduce the launch readiness of nuclear forces in the context of lessening the risk of a nuclear weapon being launched accidentally or without authorization. These measures have been discussed as a means of reducing the danger of accidental or unauthorized missile launches by countries with deficient command and control systems, "hair trigger" forces, or political instability.

(b)(1)

(U) The New Triad addresses concerns about the accidental or unauthorized launch of certain foreign forces. For example, it provides missile defenses to protect the United States, its allies and friends against limited accidental or unauthorized launches. It also will provide a spectrum of defensive and non-nuclear response options to an accidental or unauthorized launch, allowing the United States to tailor an appropriate response to the specific event and to limit the danger of escalation.

(b)(1)

(U) Following the initial phase of U.S. nuclear reductions, subsequent reductions will be achieved by downloading warheads from missiles and bombers. Force structure will be retained as the basis for reconstituting the responsive force. Delivery systems will not be retired following initial reductions and downloaded warheads will be retained as needed for the responsive force.

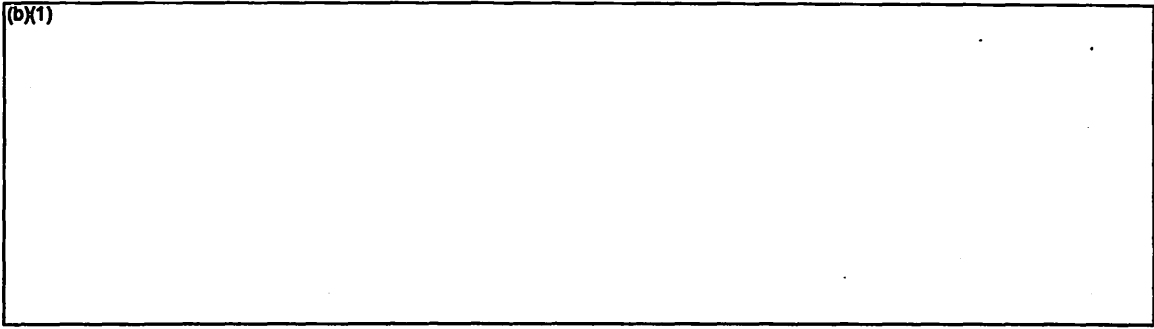
**The Anti-Ballistic Missile Treaty (U)**

(U) On December 13, 2001, President Bush gave formal notice, in accordance with Article XV of the ABM Treaty, that the United States is withdrawing from the Treaty. That withdrawal will be effective six months from the date of notification.

**The Comprehensive Test Ban (U)**

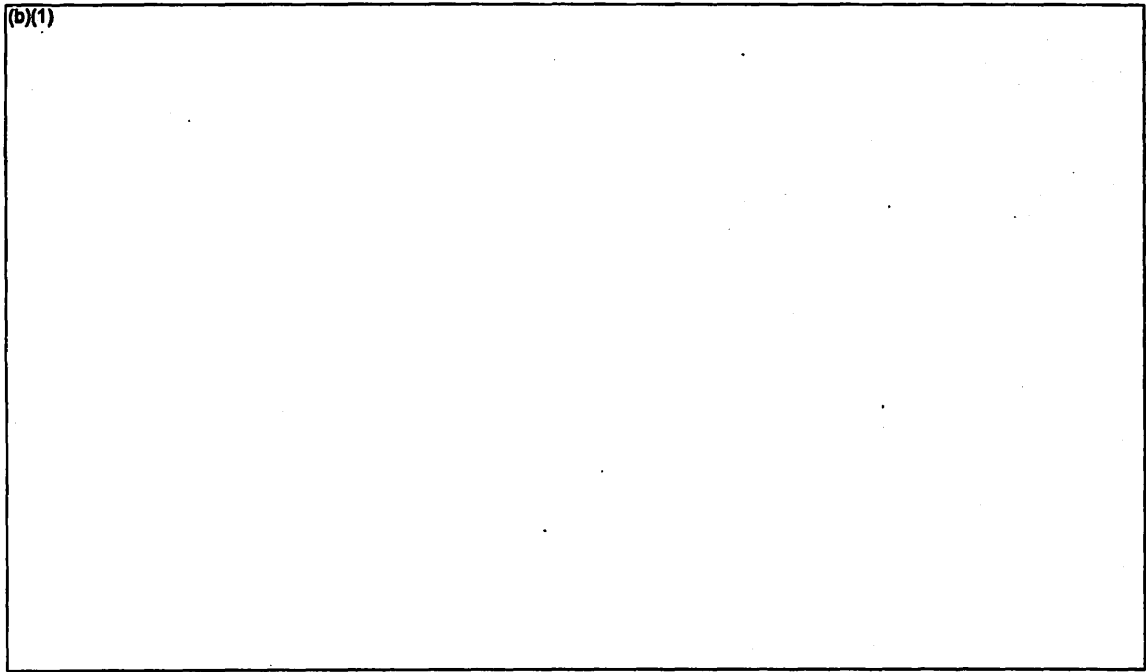
(U) The U.S. Senate did not provide its advice and consent to the Comprehensive Test Ban Treaty (CTBT) and the Administration does not support its ratification.

(b)(1)



**Transparency (U)**

(b)(1)



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## V. Nuclear Reductions and Implications for Arms Control (U)

### Approach to Reductions (U)

(U) Recognizing that the dangers facing the United States have been fundamentally altered, the reductions projected by the Nuclear Posture Review assume four main principles: 1) the forces will be reduced to the lowest possible level consistent with U.S. and allied national security needs; 2) the capability and flexibility to adapt to a rapidly changing threat environment will be preserved; 3) progress will be made toward the development and fielding of the New Triad, including a strengthened nuclear infrastructure; and 4) the ability of nuclear-capable bombers to deliver conventional weapons will be preserved. To achieve these reductions, DoD will conduct periodic reviews to assess progress towards the President's goal of 1,700 to 2,200 operationally deployed strategic warheads in 2012.

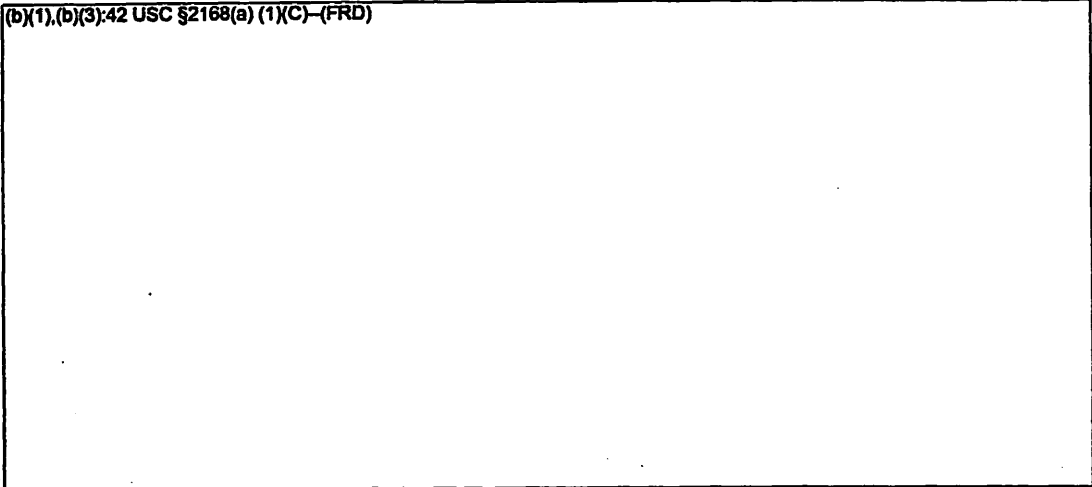
(U) Because of the dynamic, unpredictable nature of the coming decades, the Department will maintain a responsive capability to augment the operationally deployed force should world events make such action necessary. These nuclear force reductions will not be accomplished within the Cold War arms control framework. The new approach facilitates reductions while preserving the U.S. ability to respond expeditiously to changing situations. The United States will continue to comply with the first Strategic Arms Reduction Treaty (START I).

### Initial Reductions (U)

(U) Strategic nuclear reductions will be completed in phases. As the first step in the process, the United States has decided to retire its 50 Peacekeeper ICBMs, to remove four Trident submarines from strategic service, and to no longer maintain the ability to return the B-1 bomber force to nuclear service. When these reductions are complete in FY06, the number of U.S. operationally deployed strategic nuclear warheads will be reduced by about 1,300 warheads accountable under the START I Treaty (based on attribution rules at the time these decisions were made). The four Trident submarines that will be removed from strategic service will remain accountable under the START I Treaty.

(b)(1)

(b)(1),(b)(3):42 USC §2168(a) (1)(C)-(FRD)



**Longer-Term Reductions (U)**

(U) With regard to additional reductions beyond FY07, the United States plans to decrease the number of warheads on its ballistic missile force by "downloading." Regarding bombers, reductions will be made by lowering the number of operationally deployed weapons, i.e., those available for loading at operational bomber bases.

(U) Long-range bombers are no longer on day-to-day nuclear alert, are rarely armed with nuclear weapons and are used primarily for conventional roles. These bombers played a major role in air campaigns conducted in the 1990s and are continuing to do so today in the war against terrorism. In making reductions in the number of deployed nuclear weapons associated with the bomber force, there will not be any reductions in the capability of U.S. bombers to deliver conventional weapons.

(b)(3):42 USC §2168(a) (1)(C)-(FRD)

(U) U.S. forces will have no more [redacted] operationally deployed strategic nuclear warheads when the goal is achieved in 2012. U.S. operationally deployed warheads counted in this total are those that are on alert or can be placed on alert in a matter of days. SLBM warheads for SSBNs in overhaul will not be counted as operationally deployed because these submarines are unavailable for alert patrols. Warheads that will count as operationally deployed are:

- (U) For ballistic missiles, the actual number of nuclear weapons loaded on the ICBMs or SLBMs.
- (U) For bombers, those nuclear weapons located in weapon storage areas at bomber bases (except for a small number of spares).

(U) The possibility cannot be ruled out that there will be differences in the number of warheads deployed on specific missile types. The United States reserves the right to change the specific composition of its nuclear forces and the allocation of warheads among the components of the strategic nuclear force. Specific force composition and warhead allocation



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ASSISTANT SECRETARY OF DEFENSE  
2900 DEFENSE PENTAGON  
WASHINGTON, DC 20301-2900

JAN -7 2002

ACTION MEMO

I-01/015793-SFO

INTERNATIONAL SECURITY POLICY SECRETARY OF DEFENSE

FOR: SECRETARY OF DEFENSE

DepSec Action \_\_\_\_\_

FROM: J. D. CROUCH II, ASSISTANT SECRETARY OF DEFENSE FOR  
INTERNATIONAL SECURITY POLICY

JAN 7 2002

SUBJECT: Transmittal of the Report on the Nuclear Posture Review to Congress

- (U) The National Defense Authorization Act for Fiscal Year 2001 required you, in consultation with the Secretary of Energy, "to conduct a comprehensive review of the nuclear posture of the United States for the next five to ten years."
- (U) The report at Tab B constitutes the Department of Defense response to the above requirements; coordination for the report is at Tab C.

RECOMMENDATION: (U) Sign the memoranda (14) at Tab A to the congressional leadership and key Defense and Energy committees of the Senate and House of Representatives.

COORDINATION: (See Tab D)

Attachments:

- Tab A: Letters (14) to Congress Transmitting the Report (U)
- Tab B: The Report to Congress ~~(SECRET - PRD - NF)~~
- Tab C: Coordination Page for the NPR Report (U)
- Tab D: Coordination Page for the transmittal letter (U)

Prepared by: (b)(6) [Redacted]

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