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Congressional Committees

Subject: *Strategic Weapons: Changes in the Nuclear Weapons Targeting Process Since 1991*

Section 1047 of the National Defense Authorization Act for Fiscal Year 2012 required us to update our September 1991 report on the nuclear weapons targeting process.[1] Since we last reported on this subject, the United States now faces a more complex security environment that potentially affects U.S. nuclear weapons employment policy and targeting. The Department of Defense's (DOD) 2010 Nuclear Posture Review concluded that the United States could reduce the role of nuclear weapons in the U.S. security strategy. Although the threat of nuclear or conventional war with Russia has been reduced, DOD's 2010 *Nuclear Posture Review Report* identified new threats and a small number of contingencies that may require the use of nuclear weapons, even as the United States has substantially reduced the size of its nuclear weapons stockpile.[2] In particular, DOD stated that the United States would only consider employing nuclear weapons against states that possess nuclear weapons or are not in compliance with their nuclear nonproliferation obligations. The United States and Russia also agreed to the New START Treaty,[3] which would reduce the number of deployed weapons by February 2018.

[1]Pub. L. No. 112-81, § 1047(b)(1) (2011). Section 1047 contains several other mandates, which will be the subject of future work. For our 1991 report, see GAO, *Strategic Weapons: Nuclear Weapons Targeting Process,* GAO/NSIAD-91-319FS (Washington, D.C.: Sept. 27, 1991).

[2]DOD, *Nuclear Posture Review Report* (Washington, D.C.: April 2010).

[3]*Treaty on Measures for the Further Reduction and Limitation of Strategic Offensive Arms,* U.S.-Russ., Apr. 8, 2010, S. Treaty Doc. No. 111-5 (2010).

Our 1991 report described DOD's process for formulating its strategic nuclear weapons targeting policy and translating it into a plan for nuclear war. The 2011 mandate required us to provide an update to the 1991 report, which addressed the relationship between the targeting process and the determination of requirements for nuclear weapons and related delivery systems; the level of civilian oversight; and the categories and types of targets. To address this mandate, we used our September 1991 report as a basis for comparison, and described changes that have occurred since that time in the following areas:

- nuclear deterrence policy;
- strategic nuclear forces, including the stockpile, force posture, and modernization;
- targeting and employment guidance from the President, Secretary of Defense, and Chairman, Joint Chiefs of Staff;
- nuclear weapons planning and targeting, including categories and types of targets;
- the level of civilian oversight; and
- the relationship between targeting and requirements.

In May 2012 we reported to congressional committees on the results of our work in a classified report. This is an unclassified version of that report. To prepare this unclassified version, we removed classified details such as references to stockpile quantities and operational requirements; examples of operational guidance; information about potential adversaries, target categories, and the number and types of targets; and specific information related to the nuclear weapons targeting process.

During our review, we relied on documentary and testimonial evidence obtained from across DOD. Although we obtained some key policy documents, stockpile data, and other documentary information, DOD did not provide us with the key guidance documents or the nuclear war plan. Instead, DOD provided us with information papers and briefings about the guidance and plan, which were prepared by the Office of the Secretary of Defense (OSD), Joint Staff, and U.S. Strategic Command in response to our inquiries. We corroborated this information with testimonial

evidence. Through this approach we were able to achieve our objectives. Our scope and methodology are described in more detail in enclosure I.

We conducted our audit work from August 2011 to May 2012 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Results in Brief

The fundamental objectives of U.S. nuclear deterrence policy have remained largely consistent since 1991, even as the threat environment and the size of the nuclear weapons stockpile have changed. The current process for developing nuclear targeting and employment guidance has remained consistent. However, the structure of the nuclear war plan, and the categories and number of targets in the plan, have changed. DOD continues to exercise civilian oversight of the targeting process. The indirect relationship between the targeting process and DOD's determination of requirements for nuclear weapons and delivery systems also continues.

Deterrence Objectives Have Evolved to Cover a Wider Spectrum of Scenarios

U.S. deterrence objectives have remained largely consistent, although the policy has evolved to cover a wider spectrum of scenarios and potential adversaries. According to DOD, this evolution has occurred because successive administrations since 1991 have viewed the threat environment as being more complex than the bipolar nuclear standoff during the Cold War. DOD officials added that through deterrence, potential adversaries view the gains of attacking the United States, its allies, and partners as outweighed and unacceptable in comparison to the costs of a U.S. response. DOD's January 2012 strategic guidance stated that DOD will field nuclear forces that can,

under any circumstances, confront an adversary with the prospect of unacceptable damage.[4]

The United States Has Reduced Its Nuclear Weapons Stockpile since 1991 and Additional Reductions are Planned

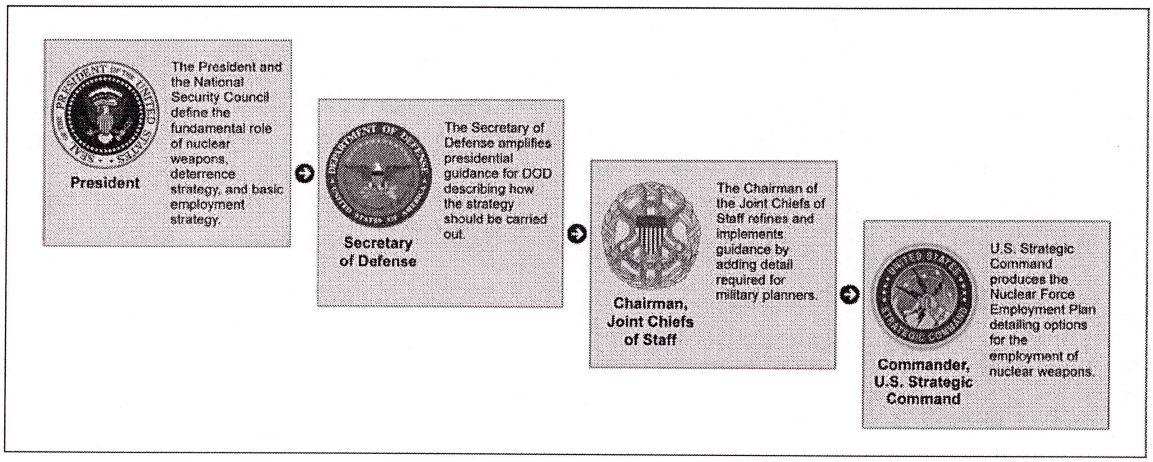
The U.S. stockpile of strategic nuclear weapons has been significantly reduced since 1991. According to DOD, the U.S. nuclear weapons stockpile has been reduced from 19,008 weapons in 1991, to 5,113 as of September 30, 2009, with a portion of these weapons deployed. As of April 2010, the United States had approximately 2,200 deployed strategic nuclear weapons, according to the *Nuclear Posture Review Report*. The Commander of U.S. Strategic Command determines how many of these deployed weapons are on alert on a day-to-day basis. Additionally, since the 1994 Nuclear Posture Review the United States has retained a "hedge" stockpile of nondeployed weapons in order to mitigate risks posed by unforeseen technical problems with deployed weapons, or posed by changes in the international security environment. DOD determines the readiness levels of the weapons in the hedge by balancing U.S. Strategic Command's preference to maximize operational flexibility against the resources available. Moving forward, the United States and Russia have agreed under the New START Treaty to further reduce the number of deployed weapons to 1,550 accountable warheads by February 2018. However, because of the treaty's counting rules, which count bombers as one warhead, the United States projects to actually deploy more than 1,550 warheads when the treaty comes into effect. DOD has reported that it plans to modernize all three legs of the Triad—the intercontinental ballistic missiles (ICBM), submarine-launched ballistic missiles (SLBM), and bombers that would deliver strategic nuclear bombs and warheads to their intended targets—but has not prepared complete cost estimates of these modernization efforts.

[4]DOD, *Sustaining U.S. Global Leadership: Priorities for 21st Century Defense* (Washington, D.C.: January 2012).

Nuclear Weapons Guidance and Targeting Process Has Remained Virtually Unchanged

The process for developing nuclear targeting and employment guidance, illustrated in figure 1, has remained virtually unchanged since 1991, according to OSD officials.

Figure 1: Strategic Nuclear Weapons Targeting Process



Source: GAO analysis of DOD information.

Through this process, the president develops guidance that defines the fundamental role of nuclear weapons, deterrence strategy, and basic employment strategy, which typically includes a list of potential adversaries and target categories to hold at risk.

According to DOD officials, the current presidential guidance was issued as National Security Presidential Directive-14 (NSPD-14) in 2002. According to OSD and Joint Staff officials, NSPD-14:

- identifies potential adversaries, target categories, and scenarios requiring preplanned nuclear options;
- emphasizes the need for survivable and flexible nuclear forces;
- describes the type of nuclear options available to the President;
- outlines a plan structure designed to avoid an "all-or-nothing" response to a nuclear attack; and
- directs nuclear forces to hold at risk those critical assets and capabilities which a potential enemy leadership values most.

OSD officials told us that President Obama instructed DOD to complete a review of the U.S. deterrence strategy, which may lead to the issuance of new presidential guidance later in 2012.

The Secretary of Defense amplifies the president's guidance. The Secretary of Defense typically updates the guidance in response to new Presidential guidance. However, DOD officials told us that the Secretary of Defense has discretion to update the guidance based on changes in the national security environment.

According to OSD and Joint Staff officials, the Secretary of Defense's May 2008 *Guidance for the Employment of the Force, Annex B*:

- reiterates presidential guidance on potential adversaries, and provides general and country-specific planning scenarios and objectives;
- describes why the capability to rapidly develop new options is important;
- provides high-level policy guidance for target selection and for the development of different types of attack options; and
- describes the required readiness levels for intercontinental ballistic missiles, submarine-launched ballistic missiles, and bombers, and defines in general terms, the "operationally deployed" and "responsive" portions of the U.S. nuclear force.

Using the Secretary of Defense's guidance, the Chairman, Joint Chiefs of Staff, adds detail for military planners. According to Joint Staff and OSD officials, the Chairman's guidance, the *Nuclear Supplement to the Joint Strategic Capabilities Plan:*

- provides details on targeting constraints and restraints;[5]
- specifies damage criteria describing the extent to which a nuclear blast is required to render a target inoperable; and
- identifies the "force generation timelines" for activating forces that are not on day-to-day alert.

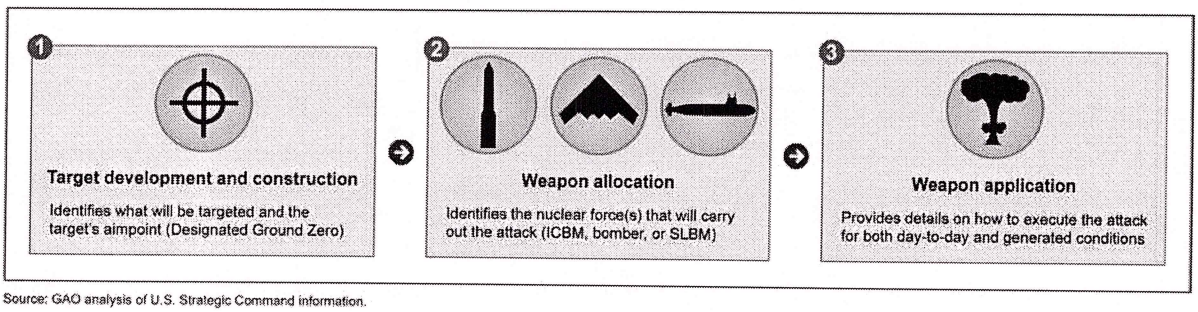
[5]A "constraint" is an operational limitation placed on a command by a higher commander that *dictates* an action, whereas a "restraint" is an operational limitation that *prohibits* an action.

Joint Staff officials told us the chairman's guidance, last issued in 2004, should have been updated following the Secretary of Defense's issuance of the May 2008 *Guidance for the Employment of the Force, Annex B*. However, Joint Staff officials stated the revision was delayed pending the completion of the 2010 Nuclear Posture Review. The revision is now on hold pending the release of updated presidential guidance.

Nuclear Weapons Employment Plan's Structure and Content Have Changed since 1991

U.S. Strategic Command continues to follow a multistage process in developing the *Nuclear Force Employment Plan*, which is similar to the process followed in 1991, but the structure of the nuclear war plan, and the categories and number of targets, have changed significantly, according to DOD officials. As illustrated in figure 2, U.S. Strategic Command's nuclear planning process includes: (1) identifying and designating targets, (2) allocating nuclear forces to carry out an attack on those targets, and (3) developing an intricate execution plan for each attack option.

Figure 2: Nuclear Planning Process



Source: GAO analysis of U.S. Strategic Command information.

According to U.S. Strategic Command officials:

- U.S. Strategic Command identifies targets by reviewing records from a Defense Intelligence Agency database, and for each selected record determines the critical installations that are to be held at risk in accordance with the attack objectives established in national guidance.

- Command planners then select weapon systems to achieve the best balance among national-level guidance, weapons planning factors, target characteristics, and the planner's own analysis.
- Once weapons allocation is complete, planners then apply sortie-specific warheads to the intended targets. The resulting planning and execution data are then sent to the Joint Staff and military services for review.

DOD and the President Exercise Civilian Oversight of the Planning Process

According to DOD officials, civilian oversight is exercised through several layers of review and approval during national guidance and *Nuclear Force Employment Plan* development. For example, according to DOD officials, the Secretary of Defense's guidance is formed in conjunction with the Joint Staff and the National Security Staff. OSD, Joint Staff, and U.S. Strategic Command officials told us that the president is made aware of significant changes to DOD guidance or the *Nuclear Force Employment Plan*. For example, according to a 2008 OSD memorandum, the U.S. Strategic Command, Joint Staff, and Office of the Under Secretary of Defense for Policy were directed to prepare a briefing for White House officials following a revision to the plan.

An Indirect Relationship Exists between Targeting and Requirements

DOD officials stated that an indirect relationship exists between the targeting process and the determination of requirements for weapons and delivery systems, as we reported in 1991. DOD officials told us that DOD set requirements for strategic weapon systems in the 2010 Nuclear Posture Review, including an appropriate limit on nuclear weapons and on the size and structure of the Triad. U.S. Strategic Command has mechanisms to present its operational requirements for implementing the *Nuclear Force Employment Plan*, including making recommendations on the size and composition of the nuclear weapons stockpile and force structure, requirements for nuclear weapons life-extension programs, and capability and force structure requirements within integrated priorities lists. U.S. Strategic Command also was a

key participant in the 2010 Nuclear Posture Review and in the negotiations for the New START Treaty.

Agency Comments

We provided DOD with a copy of our draft classified report for review and comment. DOD did not provide written comments, but provided technical comments, which we incorporated as appropriate. We also provided DOD a copy of our draft unclassified report for a security review. DOD has confirmed that the report is unclassified.

We are sending copies of this report to the appropriate congressional committees and to the Secretary of Defense, the Chairman of the Joint Chiefs of Staff, and the Commander, U.S. Strategic Command. This report is also available at no charge on the GAO website at http://www.gao.gov.

If you or your staff have any questions about this report, please contact me at (202) 512-3489 or pendletonj@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in enclosure II.

John H. Pendleton

John H. Pendleton
Director, Defense Capabilities and Management

Enclosures - 2

List of Committees

The Honorable Carl Levin
Chairman
The Honorable John McCain
Ranking Member
Committee on Armed Services
United States Senate

The Honorable Daniel K. Inouye
Chairman
The Honorable Thad Cochran
Ranking Member
Subcommittee on Defense
Committee on Appropriations
United States Senate

The Honorable Howard P. McKeon
Chairman
The Honorable Adam Smith
Ranking Member
Committee on Armed Services
House of Representatives

The Honorable C.W. Bill Young
Chairman
The Honorable Norman D. Dicks
Ranking Member
Subcommittee on Defense
Committee on Appropriations
House of Representatives

Enclosure I

Scope and Methodology

To address this mandate we used classified and unclassified versions of our 1991 report as a basis for comparison in order to describe changes in:

- nuclear deterrence policy;
- strategic nuclear forces, including the stockpile, force posture, and modernization plans;
- targeting and employment guidance from the President, Secretary of Defense, and Chairman, Joint Chiefs of Staff;
- nuclear weapons planning and targeting, including categories and types of targets;
- the level of civilian oversight; and
- the relationship between the strategic nuclear targeting process and the determination of strategic nuclear force requirements.

We obtained information about nuclear weapons policy and key employment guidance, stockpile data, other key documentation, and testimonial evidence from across the Department of Defense (DOD) for evidence to compare against our 1991 reports, specifically, the following:

- To address changes in U.S. deterrence policy and in strategic nuclear forces since 1991, we obtained, reviewed, and assessed the reports from the 1994, 2001, and 2010 Nuclear Posture Reviews, key reports to Congress from 2003, 2004, 2010, and 2011 describing DOD's plans for the nuclear weapons stockpile and force structure, stockpile data from the 2011 *Requirements and Planning Document*, and other key DOD documents and reports. We also obtained and reviewed congressional testimonies from current and former commanders of U.S. Strategic Command and senior officials from the Office of the Secretary of Defense (OSD). We reviewed the 2010 *Nuclear Posture Review Report,* New START Treaty, New START Treaty hearing transcripts, DOD reports to Congress, and other documentation to describe planned reductions to the

stockpile and plans for modernizing strategic delivery systems as the New START Treaty takes effect.

- To address the changes in the content and process for establishing nuclear weapons targeting and employment guidance, including DOD's plan for nuclear war and the categories and types of targets, we requested from DOD key guidance from the President, Secretary of Defense, and Chairman, Joint Chiefs of Staff. This guidance included *National Security Presidential Directive-14*, published in 2002;[6] Annex B to the Secretary of Defense's *Guidance for Employment of the Force*, published in 2008;[7] and *Nuclear Supplement to the Joint Strategic Capabilities Plan*, published in 2004.[8] DOD did not provide these documents but did provide us with information papers and briefings prepared by OSD and Joint Staff officials in response to our inquiries, and we corroborated this information with testimonial evidence. We also obtained briefings on U.S. Strategic Command's nuclear planning process and on the structure and content of the *Nuclear Force Employment Plan*, which we used to corroborate testimonial information about the plan. We interviewed officials from those organizations and the Defense Intelligence Agency to corroborate their contents. Through this approach we were able to achieve our objectives.
- To address the changes in DOD's process for civilian oversight of the strategic targeting process, we reviewed memoranda from OSD that approved changes to the guidance or plan. We also reviewed materials prepared for us in response to our inquiries, and interviewed officials from OSD, Joint Staff, and U.S. Strategic Command.
- To address the relationship between the strategic nuclear targeting process and DOD's requirements for nuclear weapons and related delivery systems, we obtained and reviewed U.S. Strategic Command documentation identifying requirements for the size and composition of the nuclear weapons stockpile, and

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[6]White House, *Nuclear Weapons Planning Guidance,* NSPD-14 (Washington, D.C.: June 2002).

[7]OSD, *Policy Guidance for the Employment of Nuclear Weapons,* Annex B to the *Guidance for Employment of the Force, 2008-2010* (Washington, D.C.: May 2008).

[8]Chairman, Joint Chiefs of Staff, *Nuclear Supplement to the Joint Strategic Capabilities Plan,* CJCSI 3110.04B (Washington, D.C.: Dec. 31, 2004).

assessments of the safety, security, and effectiveness of the stockpile. We corroborated this information by interviewing officials from OSD, Joint Staff, and U.S. Strategic Command.

We conducted our audit work from August 2011 to May 2012 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Enclosure II

GAO Contact and Staff Acknowledgments

GAO Contact

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Staff Acknowledgments

In addition to the contact named above, key contributors to this report included Penney Harwell Caramia, Assistant Director; David M. Adams; Colin L. Chambers; Grace A. Coleman; Robert Scott Fletcher; Kevin L. O'Neill; Michael C. Shaughnessy; and Amie Steele.

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