

One Step Forward or Two Steps Back? Upcoming Cuts in the US Nuclear Arsenal

Mark Bromley

BASIC Papers – Occasional papers on international security policy,
September 2001, Number 38, ISSN 1353-0402



British American Security
Information Council

When first presented with the level of destructive firepower during his initial security briefing on the US nuclear arsenal, President George W. Bush reportedly replied, "I had no idea we had so many weapons... what do we need them for?"[1] A long history of US presidents have sought to reaffirm their human qualities by reacting with shock to the vast quantities of destructive power that have been entrusted to them. Most famously John Kennedy, upon receiving his briefing in 1960, commented, "and we call ourselves the human race." [2] ..

However, deep unilateral cuts in the US nuclear arsenal are a key component for Bush's security policy. Bush has stated he is committed to "achieving a credible deterrent with the lowest-possible number of nuclear weapons consistent with our national security needs, including our obligations to our allies." [3] The extent of these cuts is up for debate, but various luminaries of the Cold War build-up have been lining up in recent months to show how much further they are willing and able to go than the previous President Bill Clinton's administration. Prior to returning to the Pentagon as an adviser for the new Bush administration, Richard Perle, Reagan's assistant defence secretary, said, "I see no reason why we can't go well below 1,000. I want the lowest number possible, under the tightest control possible." [4]

The manner in which the United States is pursuing these cuts is an important issue that will set the agenda for arms control and disarmament debates for many years to come. Although some steps suggested by the Bush administration take a progressive view toward reducing the vast US nuclear arsenal, several measures threaten the success of the process. An abandonment of traditional forms of arms control, an increasingly unilateralist agenda, a breakdown in nuclear cooperation with Russia, the development of new roles for low-yield warheads, a possible resumption of nuclear testing, and the creation of a US missile defence system are all dangerous and destabilising concerns. The value of the reductions in the arsenal could be offset by these and other possible factors, making the Bush administration's plans less profitable for non-proliferation efforts.

The Current US Arsenal: Size Does Matter

The United States' strategic nuclear arsenal currently includes 5,400 warheads loaded on intercontinental ballistic missiles at land and sea, and an additional 1,750 nuclear bombs and cruise missiles ready to be launched from B-2 and B-52 bombers. In addition, the United States maintains around 1,600 inactive strategic warheads as both a "hedge" to permit a rapid increase in deployed weapons and to replace active warheads if any develop reliability problems. [5] Besides its strategic force, the United States also maintains an arsenal of 1,670 sub-strategic, or tactical, nuclear weapons, designed for use in limited non-global conflicts. [6]

The fact that the United States retains the ability to destroy the world several times over is largely a result of the Single Integrated Operational Plan (SIOP), the war plan that directs the employment of US nuclear forces in any conflict or scenario, thereby setting the minimum requirement for how much damage must be achieved. The SIOP emphasizes targets in Russia, but China and other nations are also viewed as potential adversaries. A recent report from the Natural Resources Defense Council (NRDC) shows that 10 years after the end of the Cold War, the SIOP still requires some 2,600 warheads to be on alert and trained on Russian targets at all times. [7]

If Bush is to push for cuts that go below the level of 2,600 warheads, it would require a major reorientation of the SIOP, which may be hard to achieve. The assistant secretary of defence for international security policy, J.D. Crouch, recently acknowledged that any cuts in the US arsenal will have to take into account the fact that Russia is "still the only country that could attack the United States in a major way." [8] Regardless of any improved relations between the two countries, the US arsenal is still configured to

deter any possible Russian attack, and is likely to remain so for the foreseeable future. However, deep cuts in the US arsenal are definitely being considered.

How Deep?

Shortly after entering office, Bush mandated that the secretary of defence conduct a Nuclear Posture Review (NPR) to clarify US nuclear policy for the next five to 10 years. Slated for completion by December 31, 2001, though elements may be finished before then, the review will consider the role of nuclear forces in US military strategy and the requirements for the United States to maintain a safe nuclear deterrent.[9] The Pentagon also submitted its defence budget for fiscal year (FY) 2002 in June and is due to complete its Quadrennial Defence Review (QDR) by September 30.[10] Taken together, these processes reveal a skeletal outline of where the Bush administration is hoping to go over the next four years to restructure US nuclear forces.

The first stage of the process will involve the retirement of 50 MX "Peacekeeper" missiles with 500 warheads, and cutting the Trident nuclear submarine fleet from 18 to 14, thereby reducing the number of sea-based warheads from roughly 1,680 warheads to around 1,300. This reduction would require no change to the 1997 Presidential Directive specifying what US nuclear forces must be prepared to do in crisis and war.[11] This first step toward restructuring US nuclear forces is already underway. The FY 2002 budget requested an initial \$17 million to begin retiring the 50 MX missiles, and on August 1 the House Armed Services Committee approved this step, though it has still to be passed by the Senate.[12] Also included in the Pentagon's budget request was \$100 million to begin converting two Trident submarines to carry conventional cruise missiles.[13]

The other two steps in reshaping the US arsenal will render dramatic reductions, with possible cuts of up to 6,000 warheads, and give new uses for systems presently in nuclear roles. In the second stage, Washington would likely cut the arsenal unilaterally to some 2,000 warheads, further reduce the number of warheads on submarines, and scale back the day-to-day committed nuclear force, including its level of alert. The third phase, seen as possible by the end of the decade, could involve reducing deployed forces to around 1,000-1,500 warheads and transforming bombers into "dual capable" airplanes like fighters, releasing them from most of the day-to-day requirement to prepare for nuclear war.

If the proposed cuts do indeed take the US arsenal to around the level of 1,000 warheads, the Bush administration will have made a major contribution to global security, achieving more in this field than any other US president. In addition, deep cuts in the US arsenal would play well with European allies. After heavy criticism over missile defence, climate change and arms control, an announcement of a move away from the "balance of terror" that has thrown such a long shadow over the world would no doubt bring the Bush administration some rare praise.

A Pinch of Salt

Several factors need to be taken into account when judging the Bush administration's proposals. Firstly, an examination needs to be made of the manner in which the cuts are carried out. The approaches currently being considered will be unilateral, directly opposing the mutually verified, irreversible steps that were made under the Strategic Arms Limitation Treaty (SALT) and Strategic Arms Reduction Treaty (START) processes. The implications are troubling. It is likely that many of the retired warheads will be placed in storage rather than dismantled. The Bush administration has made clear that the cuts will not impinge on the military's ability to rapidly return to prior warhead numbers should the security situation alter. In addition, the transparency and trust engendered by the arms

control process between Russia and the United States will suffer. This loss will make it harder to keep track of Russia's hemorrhaging nuclear arsenal, and increase the possibility of misunderstandings, which could lead to accidental launch.

The fact that cuts are being made reflects a growing realization that many of the systems in the US nuclear arsenal are obsolete. The MX missile, the B-1 bomber, and large parts of the Trident based arsenal are seen by certain US military planners as having outlived their usefulness in the current strategic environment. Though this is to be welcomed, it also should be noted that resources are being reallocated to the military's conventional forces, in particular its ability to wage standoff warfare, a move that could itself spark a new arms race.

The wider context within which the Bush administration is pursuing its cuts in the US arsenal may wreak havoc with global security as well. The United States is developing a missile defence system that has potentially detrimental implications for the global non-proliferation and arms control system, and especially for relations with Russia and China. Deploying a missile defence could engender a belief in those countries that the United States seeks to improve its ability to launch a disarming first-strike against hostile nuclear arsenals.

Additionally, military planners are trying to meet the requirement to defeat hardened and deeply buried targets with the development of a new nuclear weapon: a low-yield "mini-nuke". While the debate on how to successfully fulfil this requirement increasingly focuses on conventional systems, Bush's failure to support ratification of the Comprehensive Test Ban Treaty (CTBT), and increased activism from the US nuclear weapons establishment, give cause for concern.

"À la Carte Multilateralism"

An unwillingness to commit to international treaties has been a hallmark of US foreign policy for much of recent history. Senator Jesse Helms used his tenure as chair of the Senate Foreign Relations Committee to ensure that the United States ratified remarkably few treaties in recent decades. For example, only two countries have failed to ratify the UN Convention on the Rights of the Child: Somalia – a country without a government – and the United States. Passage of the Land Mines Convention and the Rome Statute for an International Criminal Court were both hindered by Helms' essential veto over foreign policy.[14]

Helms' deep-seated opposition to international treaties is indicative of a belief, prevalent among the Republican right, that has strengthened considerably since the end of the Cold War: that other countries cannot be trusted to uphold their commitments, and that Washington is better off guaranteeing its own best interests without recourse to mutually binding agreements. With Bush's capture of the presidency, this ideology has taken hold in the White House. Richard Haass, the State Department's director of policy planning, recently coined the phrase "à la carte multilateralism" to describe this approach to international affairs.[15] In practice, this policy involves either refusing to join treaties or watering them down to fit Washington's purpose, as evident from the administration's handling of the Kyoto Protocol and the UN Conference on Small Arms, to give but two examples.

A good indication of the precise nature of "Washington's purpose", as defined by the current administration, is given by the Project for a New American Century (PNAC). Founded in 1997, PNAC seeks to make "the case for American global leadership", arguing that the United States must do all it can to retain its position as the sole global superpower, and guard against the possible emergence of a future great power rival.[16] As a recent report by the PNAC stated: "At present the United States faces no global rival. America's grand strategy should aim to preserve and extend this advantageous position

as far into the future as possible.”[17] Vice-President Dick Cheney and Defence Secretary Donald Rumsfeld are both signatories of the PNAC’s Statement of Principles.[18]

As the undisputed leader of an essentially unipolar world, the United States finds itself able to conduct its foreign policy through decree rather than agreement. The Bush administration is strongly inclined to pursue this path as it seeks to preserve the country’s position and guard against the emergence of future rivals. When it comes to the question of deep cuts in the US arsenal this policy translates into a determination on the part of the Bush administration to undertake any cuts unilaterally, without recourse to complex bilateral agreements.

“Trust, But Don’t Bother to Verify”

Successive US administrations have insisted that cuts in the US nuclear arsenal could not be undertaken unless reciprocal steps were guaranteed with Moscow. Washington’s oft repeated mantra of Cold War disarmament talks was “trust but verify”. The Bush administration, however, has made clear that while efforts will be made to keep Russia on board and involve them in the process, formal, protracted treaty negotiations will have no role to play in what it has labelled the “new strategic framework” with Russia. The under secretary of defence for policy, Douglas Feith, noted recently, “we’re not interested in protracted negotiations aiming at a Cold War-style arms control agreement.”[19]

START I set in place systems of mutual verification whereby the United States and Russia could check that the other side was fully and completely placing its weapons beyond use. Bush’s attempt to develop a “new strategic” framework with Moscow is partly based on a desire to ensure that any cuts in the US arsenal are reversible. In recent testimony, Strategic Command chief Admiral Richard W. Mies made the link explicit, stating, “Our force structure needs to be robust, flexible, and credible enough to meet the worst threats we can reasonably postulate. These principles weigh heavily against continuing the traditional, bilateral, Cold War approach to arms control.”[20]

In making his recommendations, Mies paid tribute to the findings of the January 2001 National Institute for Public Policy (NIPP) report, “Rationale and Requirements for U.S. Nuclear Forces and Arms Control”, calling it “a good blueprint to adopt”.[21] With three of its contributors now holding senior positions in the Bush administration, the NIPP report is believed to strongly influence the Pentagon’s ongoing defence reviews. Its key recommendations include abandoning legally constraining arms control agreements, stating: “Further adjustment to the U.S. strategic forces must not be rendered practically or legally ‘irreversible’ via codification in the traditional arms control process.”

Backpedalling on making irreversible cuts is best seen in the US decision to decommission its 50 MX missiles. Funding requests to begin retiring the missiles have been given preliminary approval, but it is still unclear whether the warheads will be retired, dismantled or remounted on other missiles. Rumsfeld recently indicated that the latter option was a distinct possibility, stating: “It’s a system that is no longer needed, and the warheads will be needed.”[22] Meanwhile, press reports indicate that plans are afoot to place single MX warheads on Minuteman III missiles.[23]

In its attempts to abandon mutually verifiable arms control agreements, the Bush administration still faces a major hurdle. In 1997, Congress mandated that there could be no unilateral reductions in US strategic nuclear weapons until START II enters into force. The Pentagon’s FY 2002 defence budget included a section repealing the statute, but on August 1 the House Armed Services Committee voted to defeat the effort.[24] Despite this setback, the Bush administration is determined that any cuts in the US arsenal will allow for reserve postures and hedges to permit timely and substantial rearmament. This shift in policy is deeply couched in a need to pursue US best interests, unhindered by the constraints of international treaties. In the short term, this approach might bring impressive

results, with the United States able to substantially reduce the size of its deployed nuclear arsenal. However, failure to involve Russia, or to provide clear evidence that warheads are being verifiably put beyond use, can only increase suspicion and misunderstanding between the two powers, and lead others to question Washington's commitment to the disarmament process.

Nuclear vs. Conventional Strength

The second factor to take into account when assessing proposed reductions in the US nuclear arsenal is the fact that many of the systems being cut are essentially obsolete. The systems being cut are seen by certain US military planners as having outlived their usefulness. Many of the roles they were slated to perform either no longer exist, or can be carried out through the United States' vastly superior conventional forces. Where there is still a consensus on retaining a nuclear capability, such as the need for strategic Intercontinental Ballistic Missiles (ICBMs), Washington is ensuring that it retains a substantial force well into the future.

Armed services chiefs, who believe that unusable nuclear weapons divert resources away from employable conventional weaponry, have generally supported cuts in the US nuclear arsenal. The Air Force in particular is becoming increasingly resentful of its nuclear role, arguing that B-1, B-2, and B-52 heavy bombers, which have shown their conventional military relevance in the Gulf War and Yugoslavia, should be divorced from their current responsibilities as the airborne wing of the strategic nuclear triad.[25] A recent Air Force Academy research paper even suggested scrapping the entire ICBM force, calling the missiles "aging relics of the Cold War." [26]

Weighing heavily in any assessment of these issues is the fact that the United States is currently unmatched in the field of conventional weaponry. Its unrivalled ability to deliver conventional payloads to within three feet of a target anywhere on the globe at a moment's notice is seen by many as making its vast nuclear capabilities all but obsolete. Some military planners argue that it would therefore be more profitable for Washington to invest resources to maintaining this edge, instead of wasting them on maintaining its nuclear arsenal. This vast superiority even led Paul H. Nitze, former special advisor to President Reagan, to argue that the United States should contemplate complete, unilateral nuclear disarmament.[27]

The decision to begin converting two Trident submarines to conventional use reflects a realisation that the submarine system can be more profitably employed to respond with conventional capability to regional threats, rather than going to sea with nuclear warheads.[28] This conversion idea is not new for US weapons systems: during the late 1980s, the air force converted some of its B-52 mounted air launched cruise missiles, replacing their 200 kiloton nuclear warheads with half ton blast fragmentation warheads. By undertaking a similar shift from nuclear to conventional capability, the US Navy will be gaining a standoff strike capability of similar invulnerability to that of the B-52 bombers.

An Ongoing Role for Strategic Missiles

The Bush administration's decision to retire the MX missiles and to shift two Trident submarines away from their nuclear role should be welcomed. However, the Pentagon is also taking steps to ensure that its ICBM and Submarine Launched Ballistic Missile (SLBM) capabilities are maintained and improved long into the future.

Testifying before the House Armed Services Committee on June 28, 2001, Rumsfeld stated that both Pentagon planners and Air Force officials had concluded that the MX missile was "not needed". The MX missile is widely seen as a system whose function can be fulfilled via existing and new systems, in particular the US's other ICBM system,

the Minuteman missile. The United States is currently engaged in a four-part program to upgrade Minuteman III missiles. This program, scheduled for completion by 2008, will cost \$1.3 billion.[29] In addition, Air Force Major General Franklin J. Blaisdell revealed at a Capitol Hill seminar on April 6 that exploration of a new "Minuteman IV" ICBM has already begun.[30]

While the United States is moving to convert two or more of its nuclear-armed Trident submarines to conventional use, steps are also being taken to ensure that their nuclear capability is maintained and improved. Funding for an upgraded version of Trident's D5 missile, which will be designated the "D5A", is expected to begin in 2005, with production commencing in 2015. Approximately 300 missiles are planned, enough to arm ten submarines.[31] The warhead used on the Trident system, the W76, is also undergoing development work, involving the "refurbishment of the nuclear package and the AF&F [arming, firing and fusing]."[32] This upgrade will give the W76 warhead a "near-ground-burst capability", making them extremely lethal against hardened targets.[33]

The fact that US military planners are realizing that much of the nuclear arsenal is obsolete is itself a significant step. However, it should also be recognized that the United States is taking steps to ensure that its nuclear capabilities remain robust and usable for the foreseeable future.

Mini-nukes

While planners in some areas of the US military are pushing to shed their nuclear responsibilities, scientists at Los Alamos and Sandia National Laboratories have been lobbying hard with plans for new low-yield nuclear devices, also called "mini-nukes". The initial belief was that the incoming Bush administration would be highly receptive to these efforts, but this idea seems to have been somewhat unfounded. However, the idea continues since the development of a US missile defence system could allow a disarming first-strike capability against another nuclear weapon state, or first-use, such as with a mini-nuke.

Development of new low-yield nuclear warheads is prompted by the desire to counter the spread of biological and chemical weapons. Proponents argue that warheads with a yield of less than five kilotons could destroy a deeply buried, hardened underground facility with less danger of "collateral damage" than an attack by a conventional weapon.[34] However, this argument is hard to sustain. A study by Princeton physicist Robert Nelson on "Low-Yield Earth Penetrating Nuclear Weapons" concludes "it is simply not possible for a kinetic energy weapon to penetrate deeply enough into the earth to contain a nuclear explosion." [35] However, this has not stopped advocates from within the nuclear weapons industry, and their supporters in Congress and elsewhere, from putting forward a forceful case.

Stephen Younger, former deputy director of Los Alamos National Laboratory is a strong advocate of developing new types of nuclear weapons. His paper, "Nuclear Weapons in the 21st Century" published in June 2000, argues that nuclear warheads provide the only reliable means of tackling hardened missile silos and deeply buried command bunkers. Younger goes on to argue that precision targeting could greatly reduce the nuclear yield required to destroy such targets whilst only relatively few targets require high nuclear yields.[36] Similarly, Paul Robinson, director of the Sandia National Laboratories and long-term chair of the Strategic Advisory Committee to Admiral Mies, suggested in a white paper that the United States should build special low-yield warheads for use against hardened underground targets. Such weapons would be an essential component for "deterrence in the non-Russian world." Robinson asserted that such weapons could be acquired quickly, and without the need for testing, by using "dummy secondaries" to replace the active thermonuclear component in weapons, leaving the weapons' primary,

or fission, component as the sole explosive yield.[37]

Both suggestions and those of others have one goal in common: to overturn the 1994 legislation prohibiting research and development that could lead to a precision nuclear weapon of less than five kilotons and open the way for research into a future generation of weapons. Two Republican senators inserted a provision into last year's Defence Authorization Bill requiring the Defence and Energy Departments to work together to determine what kind of weapon should be developed to deal with hardened and deeply buried targets. The report will be submitted to Congress later this year.[38]

Whether the administration decides to pursue the problem of tackling hardened and deeply buried targets via conventional or nuclear weapons remains to be seen. What is clear is that Washington is determined that renewed nuclear testing should remain a possibility for the foreseeable future. The Bush administration had proposed in its FY 2002 budget request that the readiness period for the Nevada test site be shortened to six months. However, the House Appropriations Committee barred any funds "to increase the readiness for underground nuclear testing" in its energy and water appropriations bill. Currently the Energy Department needs two to three years to prepare for a nuclear test at the Nevada Test Site.

In testimony to Congress, the deputy defense secretary, Paul Wolfowitz, also raised the possibility of circumstances "where you would have to contemplate" nuclear testing, and an administration official told Agence France-Presse that the CTBT "has no support within the administration." [39] Meanwhile, General John Gordon, head of the National Nuclear Security Administration, recently informed Congress that he is looking hard at "improving test site readiness." [40] The upshot of this is a "Recapitalization Initiative", a 10-year programme to modernize nuclear weapons development capabilities. A request for \$800 million was inserted into next year's budget to start the process, while the complete programme is estimated to cost \$5 billion.[41]

Missile Defence and First-Strike

Missile defence development is having the largest negative impact on the US arms control posture, by far. The Bush administration is extremely determined in moving forward with missile defence which, coupled with arsenal reductions and low-yield nuclear weapons development, could provide the US arsenal extensive, flexible defensive and offensive capabilities.

The continuing US offensive capability, coupled with a robust missile defence system, would be seen from outside Washington as an attempt to gain a first-strike capability. This interpretation is clearly weighing heavily on the minds of military planners in both China and Russia as they assess how to respond to missile defence deployment. In addition, countries like Iran and North Korea are likely to take all steps open to them to respond to a perceived plan to launch a pre-emptive strike against them, including increased reliance on chemical and biological weapons capabilities. Missile defence is being proposed as a means of lessening the threat posed by these so-called "rogue states". If they do indeed respond in this way, it could in fact decrease the overall security of the United States and the rest of the world.

New roles for lower-yield nuclear warheads, the resumption of nuclear testing and the deployment of a US missile defence system combine to create dangers that could outweigh the obvious gains of deep cuts in the US nuclear arsenal. The use of low-yield nuclear warheads in an attack against deeply buried targets, or even the knowledge that this was an accepted element of US military strategy, would sound the death-knell for global non-proliferation and disarmament agreements. Specifically, it would directly contradict promises made by the United States, most recently at the May 2000 Non-Proliferation Treaty Review Conference.

A resumption of nuclear testing would destroy the CTBT, which was signed by Clinton, and open the floodgates to a new wave of aspirant nuclear capable countries. Meanwhile a US missile defence would be perceived by many would be enemies of the US to gain a first-strike capability, leading to fresh arms races and increased instability.

Conclusion

Cutting the US nuclear arsenal to around 1,000 warheads would be a monumental step that would earn Bush much praise. It is important that numbers alone are not used to judge the worth of the Bush administration's decision to substantially cut the US nuclear arsenal. The manner in which the cuts are being planned, outside the traditional system of verifiable arms control agreements, raises serious questions about reversibility and the long-term viability of the global disarmament process. A failure to adequately engage Russia in the process, and to undertake cuts in a completely unilateral manner, can only increase instability and lead to a breakdown of the multilateral network of arms control agreements currently in place.

These anticipated reductions indicate that military planners are realizing that much of the nuclear arsenal is obsolete. However, diverting resources into more usable systems for waging standoff warfare is a development that can only increase the likelihood of future conflict. Lastly, a future resumption of nuclear testing, possibly to develop low-yield "bunker busting" war-heads, would raise the spectre of a lower threshold for nuclear use, while the deployment of a missile defence shield could easily be construed as an attempt by the United States to gain a first-strike, or first-use, capability.

These parallel trends point to an increasingly unilateral administration, willing to consider nuclear use in an increasing variety of situations and unconcerned as to the effect their actions will have on global security and proliferation. Pressure must be brought to bear on the administration to undertake the cuts they are contemplating, but to do them right.

Endnotes

[1] "Dropping the Bomb" by John Barry and Evan Thomas, Newsweek, 25 June 2001

[2] *ibid*

[3] "Remarks by the President to Students and Faculty at National Defense University", 1 May 2001

[4] "Dropping the Bomb" by John Barry and Evan Thomas, Newsweek, 25 June 2001

[5] "NRDC Nuclear Notebook; US nuclear forces, 2001", Bulletin of the Atomic Scientists, March/April 2001

[6] *ibid*

[7] "The U.S. Nuclear War Plan: A Time for Change", The Natural Resources Defense Council, June 2001

[8] "Pentagon Official Discusses Arms Control, Missile Defense", Inside Defense, 28 August 2001.

[9] "Toward True Security: A US Nuclear Posture for the Next Decade, Executive Summary", Federation of American Scientists, Natural Resources Defense Council, Union of Concerned Scientists, June 2001

[10] "Briefing on QDR", DefenseNews.com,

[11] "The Emerging Nuclear Posture" by William M. Arkin, Washingtonpost.com, 30 July 2001

[12] "U.S. House Committee Agrees to Reduce Peacekeeper Missiles; Committee blocks efforts to trim B-1B bomber force", by Merle D. Kellerhals Jr., The Washington File, 1 August 2001

- [13] "Bush Moves To Convert Trident Subs - Reworking vessels a boon to Kings Bay" by Bruce I. Friedland, Florida Times-Union, 28 June 2001
- [14] "Back to the Cold War?" by Michael Byers, London Review of Books, Vol 22, No 12, 22 June 2000
- [15] "White House Says the U.S. is Not a Loner, Just Choosy", New York Times, 31 July 2001
- [16] <http://www.geocities.com/newamericancentury/>
- [17] "Rebuilding America's Defenses: Strategy, Forces and Resources for a New Century", Project for a New American Century, September 2000
- [18] <http://www.geocities.com/newamericancentury/StatementofPrinciples.pdf>
- [19] "Media Roundtable with USD (P) Feith", United States Department of Defense News Transcript, 4 September 2001
- [20] Statement of Admiral Richard W. Mies, USN, Commander in Chief United States Strategic Command, before the Senate Armed Services Committee Strategic Subcommittee on Command Posture, 11 July 2001
- [21] Statement of Admiral Richard W. Mies, USN, Commander in Chief United States Strategic Command Before the Senate Armed Services Committee Strategic on Command Posture, 11 July 2001
- [22] Testimony before the House Appropriations Committee: Fiscal Year 2002 Defense Budget Request, 16 July 2001
- [23] "The Emerging Nuclear Posture" by William M. Arkin, Washingtonpost.com, 30 July 2001
- [24] "U.S. House Committee Agrees to Reduce Peacekeeper Missiles; Committee blocks efforts to trim B-1B bomber force" By Merle D. Kellerhals Jr., The Washington File, 1 August 2001
- [25] "New Nukes" by William M. Arkin, Washington Post, 23 April 2001
- [26] "The New-Nuke Chorus Tunes Up" by Stephen I. Schwartz, Bulletin of the Atomic Scientists, July/August 2001
- [27] "A Threat Mostly To Ourselves" by Paul H. Nitze, New York Times, October 28, 1999
- [28] "Conventionally Armed-UK Trident?" by Robert Green, Disarmament Diplomacy, April 2001
- [29] "NRDC Nuclear Notebook; US nuclear forces, 2001", Bulletin of the Atomic Scientists, March/April 2001
- [30] "New Nukes" by William Arkin, Washington Post, 23 April 2001
- [31] "NRDC Nuclear Notebook; US nuclear forces, 2001", Bulletin of the Atomic Scientists, March/April 2001
- [32] DOE FY02 Congressional Budget Request, NNSA, 25 April 2001 p. 43
- [33] "That Old Designing Fever" by Greg Mello, Bulletin of the Atomic Scientists, January/February 2000
- [34] "The New-Nuke Chorus Tunes Up" by Stephen I. Schwartz, Bulletin of the Atomic Scientists, July/August 2001
- [35] "Low-Yield Earth Penetrating Nuclear Weapons" by Robert W. Nelson, FAS Publications Interest Report, January/February 2001
- [36] "Nuclear Weapons in the Twenty-First Century" by Stephen M. Younger, Los Alamos National Laboratory, 27 June 2000 lib-www.lanl.gov/la-pubs/00393603.pdf
- [37] "A White Paper: Pursuing a New Nuclear Weapons Policy for the 21st Century" by C. Paul Robinson, March 2001
- [38] "The New-Nuke Chorus Tunes Up" by Stephen I. Schwartz, Bulletin of the Atomic Scientists, July/August 2001
- [39] "Nuclear Testing And National Honor" by Richard Butler, New York Times, 13 July 2001

[40] *ibid*

[41] "Fuelling and Explosive Situation" by John Barry, *Newsweek*, 20 August 2001