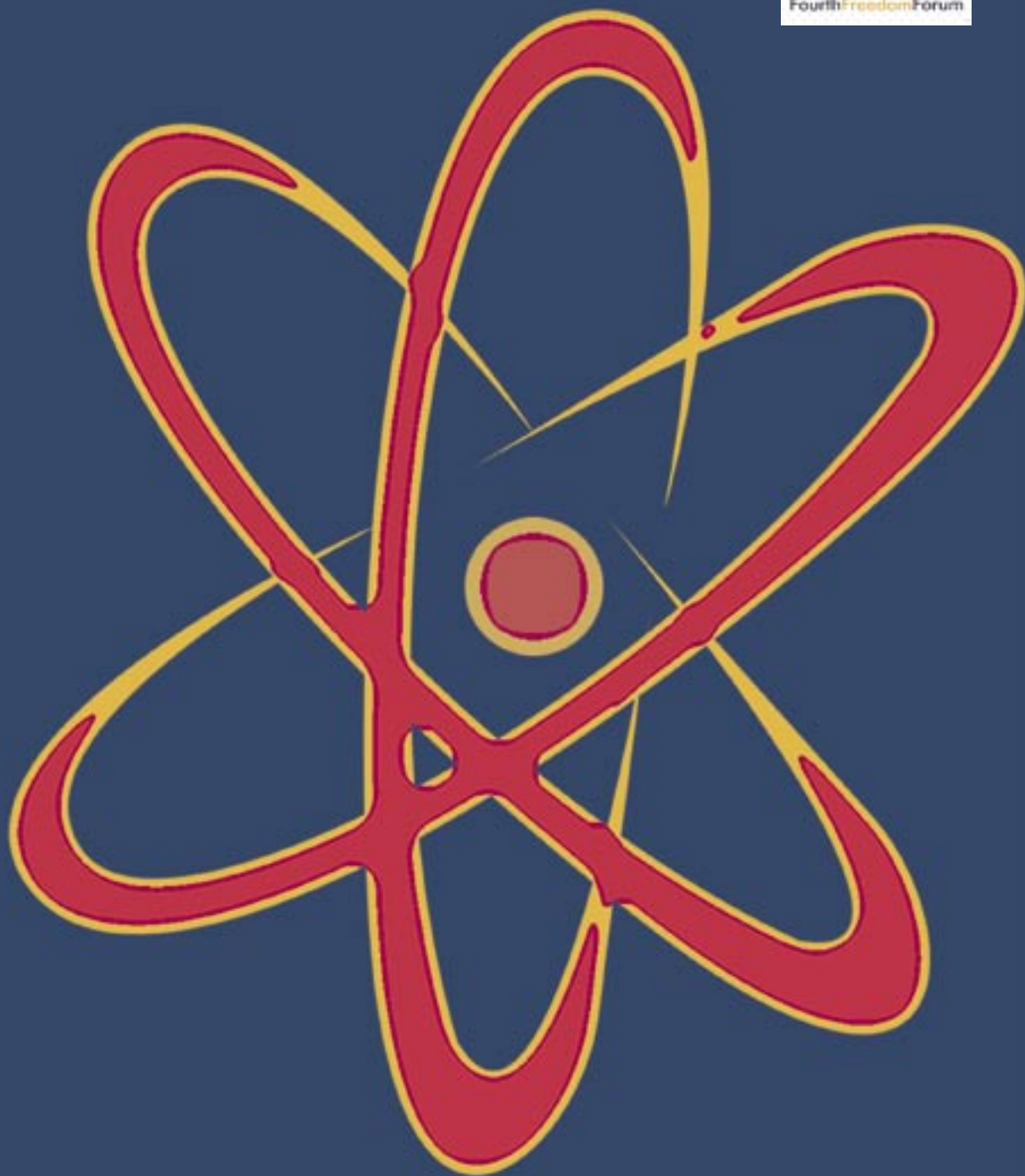


Center for American Progress



THE ROAD TO NUCLEAR SECURITY

LAWRENCE KORB

WITH PETER OGDEN

The Road to Nuclear Security

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with Peter Ogden**

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The Fourth Freedom Forum is working to create a more civilized world based on the force of law rather than the law of force. Through scholarly research, public education, dialogue with policy experts, and media communications, the Fourth Freedom Forum explores options for the nonviolent resolution of international conflict and nuclear nonproliferation, by bringing these concepts to the forefront of mainstream debate. The Forum sponsors conferences, symposia, research reports, and educational workshops involving U.S. and international policymakers, former government officials, academic scholars, and policy experts.

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Overview

During the Cold War, U.S. policymakers and the general public were acutely aware of the threat posed by nuclear weapons, but the focus shifted elsewhere after the collapse of the Soviet Union and the attacks of September 11, 2001. Nuclear weapons, however, continue to pose a clear and present danger, and we remain without a viable long-term nuclear strategy. Moreover, the Bush administration's current policies have only increased the threats posed by such weapons.

The Congress, the American people, and the publics of other nations have yet to debate the implications and risks of nuclear policy. There has been no substantive examination or discussion of: the military utility of such weapons; their moral and legal implications; the high risk of inadvertent or accidental use that result from, among other things, a nuclear strategy that gives the president only 15 minutes to decide whether to retaliate to a warning of attack; or the impact of our policies on proliferation at a time when the greatest threat to global security is the possibility of terrorists acquiring nuclear weapons. According to Graham Allison, if a 10KT nuclear bomb had been used to attack the World Trade Center instead of two airplanes, up to one million people would have been killed.¹

Throughout the Nuclear Age there has been, and continues to be, a fundamental lack of understanding of what U.S. and NATO nuclear policy entails and how it will be implemented. Decision makers at the highest levels in the Pentagon and other relevant U.S. government departments and agencies have confirmed that they have never seen a piece of paper outlining a plan for initiating the use of nuclear weapon that benefits the initiator, and there is no evidence that any U.S. president since World War II was willing to order the use of nuclear weapons—even at the height of the Cold War. Furthermore, the U.S. Congress at present is being called on to authorize and appropriate spending on nuclear weapons even as its members are denied access to fundamental information about the nation's nuclear strategy as set forth in the Single Integrated Operational Plan (SIOP). As Sen. Robert Kerrey (D-NE) observed in a letter to Secretary of Defense William Cohen in October 2000, if the Congress is deprived of such information, “which is the only way of knowing if the instructions of the Presidential Directive are being followed... we are not given the information we need to decide if our current course of action is the correct one.”²

We are at a critical moment in human history with respect to both offensive and defensive nuclear forces. There is a willingness to continue the offensive strategies of the Cold War and add to them “mini-nukes” and “bunker buster” nuclear weapons and defensive deployments. These actions increase unacceptable risks to all nations across the globe and threaten nonproliferation efforts by undermining our long-standing and unequivocal treaty commitment to reduce and eventually eliminate nuclear weapons.

This report will review the current U.S. nuclear posture, analyze crucial problem areas, and propose concrete solutions to them.



The Current Nuclear Posture

The United States' nuclear forces are structured as they were during the Cold War, and their operational procedures have changed little since that time. The United States currently possesses a stockpile of more than 10,000 nuclear warheads. Of these, about 7,000 are operational (5,886 are strategic, 1,120 are tactical).³ On average, each of these warheads has twenty times the destructive power of the bomb dropped on Hiroshima, which immediately killed 140,000 people and killed approximately 240,000 people overall. While this far exceeds the number of weapons needed to achieve any possible military objective, the Bush administration nevertheless requested \$6.8 billion in its FY 2005 budget for researching, expanding and upgrading U.S. nuclear capabilities, as well as for the development of two new nuclear bombs. This is twice the amount that we spent in this area a decade ago. In addition, the administration is planning to increase the number of land-based nuclear warheads aimed at Russia from 500 to 800.⁴

This funding request is an indicator of what Stephen Schwartz, Executive Director of the Bulletin of the Atomic Scientists, has termed a “nuclear revival” in American policy, and it has met with vehement criticism from even some of the more “hawkish” Republican legislators.⁵ “I’m totally offended by this administration. I happen to think they’re out of bounds on this,” said Rep. Curt Weldon (R-PA), a former White House ally on nuclear issues and vice chairman of the House Armed Services Committee.⁶ “We have more nuclear weapons now than we know what to do with,” said Rep. David Hobson (R-OH), chairman of the House Appropriations Committee’s Energy and Water Development Subcommittee, which controls the nuclear weapons budget.⁷ “We don’t need new weapons, and in fact we cause more harm than good in our relations with other countries and in our moral position on nuclear proliferation,” argued Rep. Joel Hefley (R-CO), a senior member of the House Armed Services Committee who voted against funding some programs.⁸

This “nuclear revival” is a result of a recent shift in thinking about nuclear strategy. Historically, the function of nuclear weapons has been to deter and contain. Since the 1990s, however, a strategy of using nuclear weapons to destroy hardened targets in a “first use” strike has begun to emerge in some quarters. The Bush administration is now altering U.S. nuclear weapons policy by focusing on this new objective and coupling it with the broader doctrine of preemption. This shift in priorities has become apparent in recent budget requests. The FY 2004 budget, which Congress passed with little or no debate, included the following:

- The repeal of the Furse-Spratt amendment to the 1994 Defense Authorization Act, which banned the development of smaller, low-yield warheads of five kilotons of explosive force or less (i.e., lower than one-third of the force used at Hiroshima).
- Increased funding to prepare the Nevada Test Site for future testing.

- \$320 million for manufacturing new “pits,” the plutonium cores of warheads. This is an almost \$90 million appropriation increase over the previous year.
- Over \$135 million for a program to keep tritium (a radioactive gas used to boost the power of warheads) ready for weapons use.
- \$265 million to refurbish the facilities used to produce and maintain nuclear arsenals.⁹

The FY 2005 request by the Bush administration went further. Notably, it contained a five-year projected budget of \$485 million for a new nuclear weapon concept known as the Robust Nuclear Earth Penetrator (RNEP).¹⁰ The RNEP, which was announced in May of 2003, is a program to modify existing B61 or B83 nuclear bombs into earth penetrator configurations. Nuclear earth penetrator weapons, or “bunker busters,” are designed to destroy hardened underground targets by burrowing into the earth tens of feet before detonating.¹¹ While the Air Force is leading the program, the National Nuclear Security Administration (NNSA)¹² is in charge of studying modifications of specific warheads.¹³

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Secretary of Defense Donald Rumsfeld has argued that the RNEP is only “a study... nothing more and nothing less,” and an administration spokesman stated that spending for this program was inserted merely as a “placeholder’ to protect the option of proceeding with RNEP.”¹⁴ Nevertheless, the cost of the program has significantly increased since the last budget request. A feasibility and cost study of RNEP previously estimated the program would cost \$45 million between FY 2003 and FY 2005, but now it is projected to require \$71 million between FY 2003 and FY 2006.

While the NNSA contends that the higher price simply reflects additional expenses required for the study, the Congressional Research Service reports that such a sharp increase, particularly during the years when the weapon proceeds beyond the study phase, would suggest something more.¹⁵

Defense Intelligence Agency Director Vice Admiral Lowell E. Jacoby provides one reason for this increase. He recently told the Senate Armed Services Committee that “[u]se of underground facilities (UGFs) to protect and conceal WMD, ballistic missiles, leadership, and other activities is expanding.”¹⁶ Linton Brooks, the director of NNSA, seconded this concern. On April 1, 2004, Brooks told reporters that the RNEP is needed because “underground facilities are proliferating around the world.”¹⁷

Furthermore, unlike the Cold-War era nuclear weapons, RNEPs, or “bunker busters,” are designed to minimize collateral damage while possessing the capacity to destroy buried command centers, underground stocks of weapons of mass destruction (WMD), and terrorist bunkers.¹⁸ Rather than serving as a deterrent, bunker busters and mini-nukes are in reality “first use” weapons intended to



place muscle behind the Bush administration's policy of waging preemptive wars against terrorists and rogue regimes who either support terrorists or who acquire (or seek to acquire) weapons of mass destruction.^{19,20} Though the use of such nuclear weapons would still require special presidential approval, the new weapons and the new strategy will inevitably blur the line between conventional and nuclear weapons.²¹

Fortunately, in late November 2004, the Congress—under the leadership of David Hobson of Ohio—eliminated from the FY2005 omnibus appropriations bill all funding for research into a new generation of nuclear weapons and cut funding for a new nuclear bomb plant (the Modern Pit Facility) from \$30 million to \$7 million.²² Hobson, who has spent the past two years visiting with scientists and managers at the nuclear labs and test sites, hopes that the Bush administration will see this as a clear signal that any attempt to revive funding for these programs in the FY 2006 budget will be similarly opposed.²³

According to John Bolton, "The idea that fine theories of deterrence work against everybody, which is implicit in the negative security assurances, has just been disproved by September 11th."

Nuclear Doctrine in the United States and Russia

In order to preserve the option of retaliating against a non-nuclear WMD attack with nuclear weapons, the United States has never renounced the first use of nuclear weapons.²⁴ Our country's only formal nuclear non-use pledge—issued by President Carter in 1978—states: "The United States will not use nuclear weapons against any non-nuclear-weapon State party to the non-proliferation Treaty or any comparable internationally binding commitment not to acquire nuclear explosive devices, except in the case of an attack on the United States, its territories or armed forces, or its allies, by such a State allied to a nuclear-weapon State or associated with a nuclear-weapon State in carrying out or sustaining the attack."²⁵ This declaration has been reaffirmed by each subsequent administration up to and including the current one.

But while no administration has explicitly contradicted Carter's "negative security assurances" pledge, each has simultaneously maintained strategic ambiguity by refusing to rule out nuclear attacks in response to being attacked by a chemical or biological weapon.²⁶ For example, prior to the first Persian Gulf War, the administration of the first President Bush informed Saddam Hussein's regime that it was willing to respond with any weapon in its arsenal if chemical weapons were used against coalition forces. And when Clinton's Secretary of State Warren Christopher reaffirmed Carter's 1978 statement and made it part of a 1995 resolution that was adopted by the five permanent members of the U.N. Security Council (all of which are nuclear powers), he did so only after ensuring that this pledge retained loopholes that would allow the United States to respond with nuclear weapons to non-nuclear attacks under certain circumstances.²⁷

The current Bush administration, however, has been more direct than its predecessors in distancing itself from Carter's 1978 proclamation.²⁸ In December 2001, President Bush released his Nuclear Posture Review (NPR) to Congress. The report concluded that the United States should not only maintain its current nuclear arsenal and retain the ability to build and test new nuclear weapons (in spite of Bush's prior pledge to extend a decade-old U.S. moratorium on such testing), but should also develop the capability to simulate nuclear weapon performance. More importantly, Bush's NPR made it clear that the United States would be prepared to retaliate with nuclear weapons against non-nuclear states, including the possibility of first use in a preemptive attack.²⁹ As John Bolton, undersecretary of state for Arms Control and International Security, explained, "The idea that fine theories of deterrence work against everybody, which is implicit in the negative security assurances, has just been disproved by September 11th."³⁰ White House Chief of Staff Andrew Card refused to rule out the possibility of using nuclear weapons in the war to remove Saddam Hussein.

Moreover, President Bush's 2002 National Security Strategy (NSS) explicitly advocates the preventive use of force: in the president's words, "We cannot wait for terrorists to attack and then respond."³¹ Bush also signed a top-secret directive that authorized the use of preventive strikes with nuclear weapons by the CIA and the Pentagon against nations that were close to acquiring nuclear weapons.³² Asked about this development, Daryl Kimball, executive director of the Arms Control Association, remarked, "They've crossed the line, or they're at the line by implying the possible [first] use [of nuclear weapons]."³³

Similarly, Russia has never foresworn the first-use of nuclear weapons and, given the present condition of its conventional forces, is very unlikely to do so in the near future.³⁴ However, whether or not Russia still poses a serious threat is unclear. During the 1990s, Russia's nuclear arsenal was significantly reduced and its entire military has since gone into decline, including its satellite and radar sites that are supposed to provide early warning of a nuclear attack.³⁵ Signs of this decline were very visible in February 2004 when, in what was supposed to be an impressive display of military muscle, three missiles launched from a nuclear submarine went badly awry.³⁶ Thomas G. Mahnken, acting Director of Strategic Studies at the Johns Hopkins University's School of Advanced International Studies, sees this as "a concrete example of how far the Russian military has fallen," and believes that Russia's nuclear arsenal will gradually shrink even without a formal arms-control agreement.³⁷

However, as David E. Mosher and Lowell H. Schwartz of the Rand Corporation have observed, in spite of the dramatically reduced likelihood of a deliberate nuclear strike by Russia against the United States, the "risk of an accidental or unauthorized use of Russian nuclear weapons remains unacceptably high." First, there is the possibility of an "intentional unauthorized launch brought about by terrorists or a rogue military commander." Second, a "mistake launch" could occur through a malfunction or training accident. Third, a deliberate launch could occur because of misinformation (e.g., a Russian radar malfunction falsely indicates that the United States has launched a first strike).³⁸



According to Bruce Blair, president of the Center for Defense Information and a former Air Force Missile Control officer, the response procedures in the United States only compound the risks of an accidental or unauthorized Russian nuclear strike leading to a full scale nuclear war. U.S. strategy demands that the president be prepared to launch a retaliatory strike within 15 minutes of receiving warning of an attack, and thus “the bias in favor of a launch on electronic warning is so powerful that it would take enormously more presidential will to withhold an attack than to authorize it. The option to ‘ride out’ the onslaught and then take stock of the proper course of action exists only on paper.”³⁹

U.S. strategy demands that the president be prepared to launch a retaliatory strike within 15 minutes of receiving warning of an attack.

As a result, the United States and Russia are putting both themselves and the whole world at risk by continuing the Cold War practice of maintaining their nuclear arsenals on high alert. While during the Cold War the ability to launch a massive retaliatory strike within as few as three minutes may have served as an effective deterrent to a deliberate first

strike attack, such a rapid response to an unauthorized or accidental attack would be disastrous. In order to decrease the chances of this, the United States and Russia should lower the alert status of the 5,000 nuclear weapons they have on hair-trigger alert and ensure that all early warning systems are fully functioning and up to date. In addition, the United States must drastically reduce the number of sites in Russia that it targets with nuclear weapons. At present, it targets 2,000 such sites, including population centers.⁴⁰

The United States and Russia should lower the alert status of the 5,000 nuclear weapons they have on hair-trigger alert.

The nuclear relationship between the U.S. and Russia could become even more unstable with the deployment of the National Missile Defense (NMD) system by the U.S. In order to reassure Russians that the U.S. shield—the first part of which was put in place on October 1, 2004—can

be defeated, Russia is trying to perfect land and sea based missiles that can evade the system that the Bush administration is constructing. President Vladimir Putin has announced that Russia has taken or will take three specific actions. First, it will extend the life of the multi-warheaded SS-18 and SS-19 Intercontinental Ballistic Missiles (ICBMs). Second, it purchased 30 comparatively new SS-19s from Ukraine. Third, and most ominously, Russia has developed a new weapon, a space cruise missile, which will be placed on the relatively new three-stage SS-27, or TOPOL-M, missile.⁴¹

Ongoing Nuclear Proliferation in Asia and the Middle East

Despite efforts by the U.S. and the international community, the quest for nuclear weapons has not subsided.

In January of 2003, North Korea quit the 1970 Non-Proliferation Treaty, threw out U.N. inspectors, and accelerated its plutonium production. North Korea is now thought to have at least one bomb and enough fuel to make up to nine more. Though the United States has said it will not bargain with North Korea until its nuclear weapons program is terminated, this rhetoric has been scaled back in recent months due to pressure from China and South Korea.⁴² Unfortunately, in a move that will only make negotiations more difficult, the Bush administration plans to deploy a new set of missiles to South Korea next year that are designed to destroy the underground installations where the North Koreans are storing their WMD.⁴³

Nuclear proliferation in South Asia is a concern as well. Pakistan's top nuclear scientist, Abdul Qadeer Khan, along with at least six of his fellow scientists at A.Q. Khan Research Laboratories, has recently confessed to selling plans to terrorist states (including Iran and Libya) and to participating in an international nuclear procurement network.⁴⁴

The full extent of Khan's crimes is still unknown.

The full extent of Khan's crimes is still unknown. Among the most serious accusations is that from 1997 to 2002 Khan was behind the exchange of Pakistani nuclear materials for North Korean missiles. IAEA investigators have also uncovered a connection with Iran, whose centrifuge technology and parts were found to be uncannily similar to the ones in Khan's Pakistani lab. Libya, too, may have been a beneficiary,⁴⁵ funding Pakistan's nuclear developments in return for Pakistan's centrifuge designs and secret supplies of nuclear fuel components.⁴⁶

Paradoxically, concerns about China's use of nuclear weapons have diminished. Despite occasional saber-rattling throughout the years, when China conducted its first nuclear test in 1964, it issued a declaration of "no first use." This unconditional declaration has yet to be retracted.⁴⁷ Nor has China increased the number of strategic weapons in its arsenal. Despite the recent increase in defense spending, China still maintains only 20 ICBMs. But that number is likely to increase when the NMD system becomes operational. This could lead to a nuclear arms race in Asia if India responds to the Chinese actions and Pakistan in turn responds to India.

Challenges to the NPT and Other Arms Control Agreements

In the 1970 NPT, the five major powers that possessed nuclear weapons (the United States, the Soviet Union, China, Britain and France) guaranteed non-nuclear states access to peaceful nuclear technology on the condition that they not pursue nuclear weapons. Since the NPT was implemented, three additional states have officially acquired nuclear weapons (Israel, India and Pakistan), but none of them had signed the treaty.⁴⁸ The current problem facing the NPT is that a state can become a potential nuclear power without violating safeguards by acquiring nuclear materials under the guise of a civilian program, and then placing these materials under IAEA safeguards. The state could then withdraw from the NPT and quickly go on to develop nuclear weapons.⁴⁹ According to the head of the International Atomic



Energy Association, more than 40 countries with peaceful nuclear programs could retool them to make weapons.⁵⁰

To date, no consensus has been reached on how to prevent countries from exploiting this “closed fuel cycle loophole.” In a speech at the National Defense University on February 11, 2004, President Bush proposed revoking the NPT on the grounds that it was easily manipulated by countries such as North Korea and Iran.

As an alternative, Bush suggested that nuclear fuel be provided only to countries that renounce nuclear enrichment and reprocessing. Critics of this proposal argue that rogue and non-nuclear nations have little incentive to comply with such stringent restrictions, particularly when the United States is not offering to stop developing new nuclear weapons or reduce its own arsenal.⁵¹

The Bush administration has also demonstrated only tepid support for the bipartisan Nunn-Lugar Cooperative Threat Reduction program that was begun 1991.⁵² This program—with its focus on vulnerable nuclear material and weapons in the former Soviet states—has been extremely successful, deactivating more than 6,000 nuclear warheads, along with hundreds of bombers, missiles, missile silos, launchers and submarines. It has employed and re-educated over 20,000 scientists formerly employed in weapons of mass destruction programs, and accomplished all of this for less than the United States spent on missile defense alone in 2002.⁵³ Yet the Bush administration has twice attempted to decrease the level of funding for this program since taking office. For example, in FY 2005 the administration actually requested a seven percent decrease in funding from FY 2004 levels for the three major threat reduction programs at the State, Defense and Energy departments. In FY 2004, these programs received \$991 million, while in FY 2005 the Bush administration requested only \$919 million.⁵⁴ As a result of the administration’s policies, in the two years after 9/11 we secured less nuclear bomb material in the former Soviet Union than we did in the two years prior to it. At the present rate, it will take 13 years to secure Russian fissile material.⁵⁵

Furthermore, the administration opposes the ratification of the Comprehensive Test Ban Treaty (though the rest of the UN General Assembly voted to bring it into force in December 2003) and has withdrawn from the Anti-Ballistic Missile Treaty (ABM).

President Bush did sign the Strategic Offensive Reductions Treaty (SORT, or the Moscow Treaty), which limits the United States and Russia to between 1,700 and 2,200 operationally deployed nuclear weapons by 2012. However, SORT places no limits on the number of weapons each country can maintain in storage. In 2012, the U.S. will still have at least 5,000 nuclear weapons in its inventory.⁵⁶ And while it sets a deadline of December 31, 2012, it does not demand any compliance beyond that date. Nor does SORT cover the 1,670 tactical weapons in the U.S. arsenal, approximately 500 of which are deployed in six NATO countries. In short, little significant action has been taken to reduce the United States’ own nuclear

arsenal, even though the United States is the only nation that deploys nuclear weapons outside of its own borders.⁵⁷

Most recently, on July 29, 2004, the Bush administration announced its opposition to inspections and verification as part of the Fissile Materials Cut-Off Treaty (FMCT). The FMCT is designed to ban the production of enriched uranium and plutonium—the two ingredients used for setting off a chain reaction nuclear explosion—for use in weapons. The treaty would reinforce the Nuclear Nonproliferation Treaty (NPT) and impose restraints on three nuclear powers that are not party to the NPT (Pakistan, India, and Israel). By refusing to establish an inspection regime for the FMCT, the Bush administration has in effect killed a decade long effort by the international community to lure Pakistan, India, and Israel into accepting some oversight of their nuclear production programs.

The Bush administration is now at a crossroads on the issue of non-proliferation. There are many people—including the previous ten U.S. presidents—who believe that nuclear weapons are so inherently dangerous that restrictions on their use must be applied to everyone. In other words, the weapons themselves are the threat. On the other hand, the Bush administration believes that nuclear weapons are only hazardous if they fall into the wrong hands. That is, the nation possessing the weapons is a more serious danger than the weapons themselves. Therefore, rather than eliminating the weapons, the U.S. is seeking to eliminate the regimes that it believes either possess or seek to possess them (as it did in Iraq).⁵⁸

For example, Brazil, though a member of the NPT, insists it has the right to enrich uranium for commercial reactors, and even export it. But because the country is not deemed a threat, the United States has raised no objection to Brazil building an active fuel cycle, nor has it pushed Brazil to grant free access to IAEA inspectors. The IAEA has not expressed concern about the possibility of leaks of materials from Brazil.⁵⁹

The administration has yet to articulate a coherent policy statement on the issue. In September of 2003, Bush spoke to the United Nations General Assembly and called on the UN to criminalize the proliferation of WMD. However, this was subsequently undermined by the United States' effort to expand its own nuclear arsenal. As a stop-gap measure, the administration has proposed the Proliferation Security Initiative (PSI). Under this program, the U.S. and 15 other countries will work together to board ships believed to be transporting nuclear, chemical, and biological weapons to terrorist groups or to rogue nations. However the Bush administration has undermined the legitimacy of the PSI by refusing to ratify the United Nations Convention on the Law of the Sea. The treaty, negotiated 22 years ago and in effect since the 1990s, has been ratified by 145 nations, including the other 15 members of the PSI, who contend that it provides a legitimate international framework for the PSI.⁶⁰

The Bush administration has undermined the legitimacy of the PSI by refusing to ratify the United Nations Convention on the Law of the Sea.



The Threat of Terrorists Acquiring Nuclear Materials

The dangers posed by nuclear weapons have not disappeared since the end of the Cold War. Rather, they have shifted in form and become more diverse: instead of having to contend primarily with a single rival superpower, the United States now has to prevent nuclear proliferation among a number of regional powers and non-state actors. According to nonproliferation experts, at present there are approximately 350 sites in 58 countries that possess highly enriched uranium.⁶¹ Of these sites, possibly two dozen have enough uranium to build a nuclear bomb. The majority of these sites are in the former Soviet Union. Russia alone possesses approximately 8,400 strategic nuclear warheads, 4,000 tactical nuclear weapons, and 565 tons of uranium (enough to make 50,000 Hiroshima-size bombs) in storage facilities with poor security and inadequate employee monitoring systems. Though the United States has spent hundreds of millions of dollars improving the security of Russia's nuclear storage sites, there is evidence that still more funding is needed. For example, security has been upgraded and improved at only 41 percent of Russia's nuclear storage facilities, and it was a senior manager at one of these "upgraded" facilities that was

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convicted in November 2003 of possessing and attempting to sell radioactive material.⁶² Moreover, since the fall of the Soviet Union, there have been at least 18 reports of stolen plutonium or highly enriched uranium, most notably in the former Soviet republic of Abkhazia where pounds of highly enriched uranium have simply vanished.⁶³

In addition to the threat posed by the former Soviet Union, it is estimated that North Korea possesses at least eight nuclear weapons⁶⁴ and that Iran has either built or is seeking to build such weapons. There is even the possibility that Pakistan's Khan may have already sold bomb-grade nuclear fuel to al Qaeda or other such terrorist organizations.⁶⁵ Andrew F. Krepinevich Jr., a military expert and director of the Center for Strategic and Budgetary Assessments, echoes the sentiments of many in his field with his blunt assessment: "We're losing the war on proliferation."⁶⁶

Given the potentially disastrous consequences of a terrorist organization obtaining nuclear weapons, more must be done. According to a recent report sponsored by Harvard University, it remains quite possible that a terrorist could obtain nuclear weapons. Mohammed ElBaradei, the head of the UN's nuclear watchdog agency, has warned of a race against time to stop terrorists from acquiring nuclear weapons. The CIA informed the 9/11 Commission that "[a]l-Qaida continues to pursue its strategic objective of obtaining a nuclear capability," and that "more than two dozen other terrorist groups are pursuing chemical, biological, radiological and nuclear materials."⁶⁷ The 9/11 Commission Final Report documented al Qaeda's purchase, for \$1.5 million, of what it believed to be a cylinder of weapons-grade plutonium.⁶⁸ Meanwhile, terrorists carried out reconnaissance on Russian nuclear warheads at least four times from 2001 to 2002.⁶⁹ As former Sen. Sam Nunn put it, "We are in a race between cooperation and catastrophe."⁷⁰

In 1998, the United States and Russia agreed that they would destroy 68 tons of plutonium stripped from bombs and warheads, but six years later the plutonium is intact, no construction has begun on either of the planned processing factories, and the Bush administration has not laid out a timetable for the implementation of the accord.⁷¹

In February of 2000, in response to the coinciding threat of nuclear proliferation in the former Soviet Union and the emergence of terrorist organizations like al Qaeda (spurred in part by the recent attack on the U.S.S. Cole), Secretary of Energy Bill Richardson asked former Senate Majority Leader Howard Baker and former White House Counsel Lloyd Cutler to co-chair a bipartisan task force to review and assess the Department of Energy's nonproliferation programs in Russia and to make recommendations for their improvement.⁷²

This report found that the “most urgent unmet national security threat to the United States today is the danger that weapons of mass destruction or weapons-usable material in Russia could be stolen and sold to terrorists or hostile nation states and used against American troops abroad or citizens at home.”⁷³ Though current nonproliferation programs have achieved impressive results thus far, the task force found that they needed a stronger mandate and more funding to address this growing threat effectively.

“We are in a race between cooperation and catastrophe,” according to former Sen. Sam Nunn.

The report also urged the president to “quickly formulate a strategic plan, in cooperation with the Russian Federation, to secure and/or neutralize in the next eight to ten years all nuclear weapons-usable material located in Russia and to prevent the outflow from Russia of scientific expertise that could be used for nuclear or other weapons of mass destruction.”⁷⁴

The United States has been slow to devote sufficient funds to this undertaking. From FY 1992 to FY 2003, the U.S. government appropriated approximately \$7.9 billion for programs in the State, Defense, and Energy departments to dismantle and control the former Soviet Union's WMD programs.⁷⁵ Of this total, less than \$4.7 billion was aimed at controlling nuclear warheads, materials and expertise.⁷⁶ This is a meager amount compared to Bush's FY 2003 budget for missile defense, which was approved at \$7.4 billion—only \$500 million fewer than the spending for all cooperative threat reductions over the past twelve years combined.⁷⁷

Also severely underfunded is the Global Partnership Against the Spread of Weapons and Materials of Mass Destruction, which was launched in June of 2002. The G-8 member nations pledged to give a combined \$20 billion (of which the United States was to provide \$10 billion) over ten years to this Global Partnership. But the agreement does not obligate the United States to spend any funds beyond what it has already been spending annually since the end of the Cold War. And the other G-8 nations are allowed to count the funds previously allocated for clean up in the former Soviet Union as part of their \$10 billion



contribution. More importantly, the pledged funds have not been allocated, and more funds are required just to meet today's threats.⁷⁸ Securing the nuclear legacy of Russia alone will cost \$30 billion.⁷⁹

There are a few bright spots, however, and it is important that we learn from our successes as well as our mistakes. For instance, U.S. authorities have increased the number of joint operations with the Russians. Under the terms of a new uranium-repatriation agreement signed in Washington on November 7, 2003, Russia will recover all Soviet-originated highly enriched uranium from research reactors in 17 countries within the next five to ten years. Once recovered, Russia will be in charge of its conversion and safekeeping.⁸⁰

Other positive developments include:

- The removal of all nuclear weapons from the Ukraine, Kazakhstan and Belarus. (This is more than the combined nuclear inventories of China, France and Great Britain.)
- The deactivation of more than 6,000 Soviet nuclear warheads, and the destruction of thousands of Soviet nuclear missiles, launchers, submarines, silos, and bombers.
- Improved security for more than 200 tons of highly enriched uranium and plutonium in Russia.
- The removal of nuclear materials from Georgia, Yugoslavia and Romania.⁸¹
- The voluntary dismantling of Libya's WMD programs, with the assistance of Britain and the United States.

Flaws in Bush's Nuclear Posture and Strategy

The Bush administration and its supporters (such as retired Vice Admiral Roger R. Monroe, former director of the Defense Nuclear Agency) assert that a new doctrine of preemption, coupled with an expanded and updated nuclear arsenal, is needed to combat post-Cold War national security threats.⁸² They argue that small terrorist cells believe that the United States is self-deterred from using its large-scale nuclear weapons against them because of the extensive collateral damage.⁸³ Further, they contend that the United States' current supply of weapons cannot burrow underground to destroy the bunkers where nations like Iran and North Korea—as well as terrorist organizations like al Qaeda—are likely to hide their base of operations or store their WMD.

While the administration is correct that stateless terrorist networks and rogue nations pose a fundamentally new type of security threat, expanding our nuclear arsenal is not an effective response to this development. Indeed, a classified study conducted last summer by the Pentagon's Defense Science Board found that the "current [Department of Defense] structure provides neither clear requirements nor persuasive rationale for changing the nuclear stockpile."⁸⁴

There are five reasons why Bush's nuclear arms policy is not beneficial to the United States.

First, the Bush administration has paid insufficient attention to non-nuclear weapon alternatives, which in most cases are as tactically effective as their nuclear counterparts. Such conventional weapons, like the Enhanced Guided Bomb Unit-28 (EGBU-28), have proven highly successful in both Gulf Wars.⁸⁷ The EGBU-28 can penetrate over 20 feet of concrete and 100 feet of earth.⁸⁵

According to Robert Nelson, senior fellow in Science and Technology at the Council on Foreign Relations, the scenarios used to justify the deployment of bunker busters and other new nuclear weapons “are either ineffective, or marginally more effective, than conventional alternatives.”⁸⁶ And a recent Rand study on future roles for the U.S. nuclear forces concludes that “for most foreseeable actual combat situations, advanced conventional weapons are probably sufficiently effective if the United States buys enough of them and uses them properly.”⁸⁷

Retired Air Force General Charles Horner, who ran the air war in the first Persian Gulf War, agrees: “During the Gulf War, I said to myself, ‘What would I use these weapons for? How would I use them?’ We weren’t gonna do it, but I had to say to myself, ‘If I was to do it, what would I do?’ So I sat down with a nuclear planner.... The only thing nuclear weapons were good for, really, was busting cities. And if we go around killing women and children in cities, we’ve lost the war.”⁸⁸

In spite of their demonstrated effectiveness, however, conventional precision guidance missiles are only acknowledged in a single sentence of a 166-page report that was recently issued by the Defense Science Board Summer Study Task Force. Instead, this study urged the Pentagon to develop smaller, more specialized nuclear weapons.

Second, the United States’ current nuclear posture and National Security Strategy encourages proliferation and covert development. When leaders of enemy nations are threatened with the possibility of preemptive attack, they perceive that their only means of deterrence is to develop a nuclear arsenal of their own. A case in point is North Korea: when confronted by U.S. hostility, North Korea accelerated—not curtailed—its efforts to develop nuclear weapons.⁸⁹ As General Lee Butler, commander-in-chief of U.S. Strategic Command from 1991 to 1994, noted, “Whatever the utility of First Use policy during the Cold War, it is entirely inappropriate to the new global security environment.”⁹⁰

Third, the administration suffers from a crisis of credibility when it seeks to prevent the proliferation of nuclear weapons in other countries while simultaneously working to increase its own nuclear stockpile and refusing to ratify the CTBT. As John Holdren, a former nuclear scientist and director for the Belfer Center for Science and International Affairs at Harvard’s Kennedy School of Government, observes, “As long as the Bush Administration policy is ‘Do what we say, not what we do,’ you are going to have problems getting others to follow us.”⁹¹



Fourth, while advocates of low-yield weapons and bunker busters argue that the collateral damage they cause would be far less than that of traditional nuclear weapons, this damage is still far from circumscribed.⁹² Radiation, in particular, is a cause of deep concern. Though bunker busters penetrate deep into the ground, experts worry that they do not travel deep enough to contain all of the radiation that they will emit upon detonation. If detonated in an urban area, the resulting radioactive fallout would cause a very large number of civilian casualties, while if detonated in a non-urban area the resulting radioactive fallout would substantially interfere with the movements of U.S. forces.⁹³ Moreover, even if the radiation were somehow contained, there is no guarantee that the nuclear blast would successfully destroy WMD. In fact, many experts believe that using a nuclear weapon to destroy chemical or biological weapons would only disperse the hazardous agents into the environment.⁹⁴

Many experts believe that using a nuclear weapon to destroy chemical or biological weapons would only disperse the hazardous agents into the environment.

Fifth, a policy of preemption sends the wrong message to countries already in possession of nuclear arsenals, such as Russia, India, Pakistan, and China. The focus on developing nuclear weapons designed for tactical deployment rather than deterrence will encourage these nations to develop such weapons for use in regional wars. Clearly, such an outcome would not be beneficial to the United States. As

Henry Kissinger argued before the Senate Foreign Relations

Committee, “It cannot be either the American national interest or the world’s interest to develop principles that grant every nation an unfettered right of preemption against its own definition of threats to its security.”⁹⁵

Steps to Substantially Reduce or Eliminate the Threat of Nuclear Destruction

Given the imperative of preventing nuclear weapons from being used by or against the United States, the following measures must be undertaken on an urgent basis. Though some of these steps can be taken unilaterally, most will require that the United States assume its proper leadership role in the international system.⁹⁶

- Initiate a National Security Council review of the SIOP. Findings should be reported to the Foreign Relations, Armed Services, and Intelligence committees.
- Expand and accelerate the Nunn-Lugar Cooperative Threat Reduction Program.⁹⁷
- Improve inspections and monitoring for all nuclear weapons and materials worldwide.⁹⁸
- Account for, secure, and destroy all excess weapons-grade nuclear materials.⁹⁹

- Engage in discussions with states of proliferation concern in order to “clarify the benefits” of forswearing the pursuit of nuclear weapons and to determine how they may be brought into compliance with international regulations.¹⁰⁰
- Allow non-nuclear weapons states to continue to possess civilian nuclear programs, but not a closed nuclear fuel cycle.¹⁰¹
- Build the G-8 Global Partnership so that it becomes an effective working partnership capable of taking rapid action to prevent nuclear weapons and material from being misappropriated by hostile parties and states.¹⁰²
- Enact the Fissile Material Cut Off Treaty (FMCT) to halt the international production of fissile material for nuclear weapons or other nuclear devices.^{103,104}
- Work with Russia to establish a timetable for de-alerting our nuclear forces, reducing the number of targeted sites, and beginning a more rapid implementation of the SORT treaty.
- Delegitimize the spread of uranium enrichment and plutonium reprocessing facilities to any country.¹⁰⁵
- Submit the CTBT for ratification.
- Stop research on the development of the mini-nuke and bunker buster, and redirect these resources to the Nunn-Lugar program and G-8 Global Partnership Against the Spread of Weapons and Materials of Mass Destruction.
- Halt further deployment of the National Missile Defense.
- Require all nuclear states to submit to the United Nations Security Council an accounting of fissile materials for a UN register.
- In return for forswearing nuclear weapons, non-nuclear weapons states should receive a renewed commitment from the nuclear powers to seek eventual disarmament. Though this is unlikely to occur in the near future, the United States and other nuclear weapons states must at least begin to reduce their reliance on nuclear weapons and lead by example.¹⁰⁶
- Take the lead in negotiating a “Grand Bargain” with North Korea and Iran in which they will stop developing nuclear weapons in return for economic and trade benefits.



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