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WEAPONS OF MASS DESTRUCTION: THE BUSH ADMINISTRATION'S STRATEGY, 2001-2004

Grant Dawson
Political and Social Affairs Division

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INTRODUCTION

President George W. Bush's administration (2001-present) has changed the United States' policy on nuclear, but not chemical or biological, weapons of mass destruction (WMD).(1) The new line calls on the United States to: develop a strategy for coping with rogue regimes and non-state actors armed with WMD; preserve for the United States the option to use nuclear weapons, notwithstanding multilateral arms control agreements; and enhance U.S. nuclear capabilities by introducing "usable" sub-strategic weapons and optimizing parts of its existing stockpile while eliminating the rest. Stopping WMD proliferation remains an important concern, but the administration's attention has been drawn away from Russia, possessor of one of the world's largest and most vulnerable WMD stockpiles. This is because the United States' primary fear is no longer a superpower war; it is a WMD attack by terrorists or rogue states. This threat has provided the drive for the administration's re-articulation of U.S. nuclear weapons policy and dampened its interest in controlling and destroying state-held WMD.

This paper examines George W. Bush's policy on WMD during 2001-2004. Sections A and B discuss the biological and chemical weapons policies of previous administrations, because the current Bush administration has largely continued these policies. The paper then turns to Bush's nuclear weapons policy. Section C details his approach to nuclear strategy, disarmament and weapons research. The President's refusal to be constrained by multilateral arms control agreements, and his apparent lack of interest in counter-proliferation in Russia, are examined in Sections D and E. In Section F, the paper notes that most commentators see Bush's policy as a significant shift.

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(1) This paper does not discuss radiological weapons or the missiles that can deliver nuclear, chemical and biological weapons.

OFFENSIVE AND DEFENSIVE BIOLOGICAL WEAPONS

The United States has long been opposed to offensive biological weapons. In 1969, former president Richard Nixon (1969-1974) unilaterally and unconditionally renounced these devices, and ordered the formidable U.S. stockpile destroyed and production facilities converted to peaceful purposes.(2) The United States signed the Biological and Toxin Weapons Convention (BWC) in 1972, ratified it in 1975, and respects it to this day. Nonetheless, U.S. companies continued to sell products that states could use to make offensive biological munitions. Under former presidents Ronald Reagan (1980-1988) and George H. W. Bush (1988-1992), for example, U.S. firms sold items to Iraq with both military and civilian applications, including viruses such as anthrax and bubonic plague.(3) Concerns have been raised that U.S. assistance to help Russia control its biological weapons may be benefiting Russian bio-warfare programs. However, no one has publicly suggested that the United States has violated its BWC obligations.(4)

U.S. policy with regard to defensive biological weapons programs is even more ambiguous – a fact that helps to explain why the United States appears willing to weaken the BWC, the key counter-proliferation treaty for this type of weapon. The United States has resisted international efforts to negotiate a compulsory inspection, compliance or verification mechanism for such weapons. Instead, it mounted Biological Weapons Proliferation Prevention activities of its own design in the former Soviet Union,(5) though they were only modestly funded until 1997, when Iran apparently attempted to acquire biological warfare technology from a Russian institute.(6) These activities were broadened in 2003, when a program was initiated to

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(2) Joseph Cirincione with Jon Wolfsthal and Miriam Rajkumar, *Deadly Arsenals: Tracking Weapons of Mass Destruction*, Carnegie Endowment for International Peace, Washington, D.C., 2002, p. 48.

(3) Michael Dobbs, "U.S. Had Key Role in Iraq Build-Up: Trade in Chemical Arms Allowed Despite Their Use on Iranians, Kurds," *Washington Post*, 30 December 2002, p. A1.

(4) Sharon Squassoni, "Globalizing Cooperative Threat Reduction: A Survey of Options," Congressional Research Service Report #RL32359, Washington, D.C., 15 April 2004, p. 28.

(5) This is part of the Co-operative Threat Reduction Program (CRT), which was created in 1992. The primary role of the CRT is to help Russia meet its obligations under the Strategic Arms Reduction Treaty (START, 1991) to cut its stockpile of strategic nuclear weapons.

(6) Jon Brook Wolfsthal, Christina-Astrid Chuen, and Emily Ewell Daughtry, eds., *Nuclear Status Report: Nuclear Weapons, Fissile Material and Export Controls in the Former Soviet Union*, 6th ed., Monterey Institute−Carnegie Endowment, Washington, D.C., 2001, p. 55.

improve the border control capabilities of non-Russian former Soviet Union states.(7) Meanwhile, the George H. W. Bush and Bill Clinton (1992-2000) administrations blocked agreement among BWC parties on an on-site inspection regime. A 10-year diplomatic effort halted abruptly in July 2001, when the current Bush administration rejected a compromise draft text and refused to negotiate on it again, even to achieve its modification.(8) Washington said it had national security concerns (the protection of military secrets), and that inspectors would jeopardize U.S. industrial secrets without detecting treaty violators.(9) This angered some Europeans, particularly those in the United Kingdom, who wanted to improve the BWC.(10)

Inspections may have been a concern because, as senior U.S. policy makers noted in 2000, U.S. research into germ weapons and delivery systems has brought its defensive biological weapons research much closer to the limits set by the BWC.(11) One writer notes that although the United States considers its biological weapons research to be strictly defensive, if something similar existed in Russia, Iraq or Iran, the current Bush administration would consider it an offensive program.(12) U.S. support for the BWC became stronger after the 11 September 2001 terrorist attacks and the 2001 anthrax mail scare. Since those events, Bush has proposed a number of initiatives to BWC parties to enhance pathogen security, including criminalizing activities prohibited under the treaty,(13) and establishing oversight of the security and genetic engineering of pathogenic organisms – something the United States is just beginning to do.(14)

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(7) United States Department of Defense, "Fiscal Year 2004 / FY 2005 Biennial Budget Estimates – Former Soviet Union Threat Reduction Appropriation (Cooperative Threat Reduction Program)," February 2003, p. 2; available at: http://www.defenselink.mil/comptroller/defbudget/fy2004/budget_justification (accessed 7 June 2004).

(8) Milton Leitenberg, "Just How Bad Can it Get? Review of *GERMS: Biological Weapons and America's Secret War*, by Judith Miller, Stephen Engelberg, and William J. Broad," *Los Angles Times*, 28 October 2001, p. 6.

(9) Cirincione *et al*. (2002), p. 53.

(10) Jessica Stern, "Modifying Non-Proliferation Policy to Meet the Terrorist Threat: Controlling Biological Weapons Agents," in *Ultimate Security: Combating Weapons of Mass Destruction*, ed. Janne E. Nolan, Bernard I. Finel and Brian D. Finlay, Century Foundation Press, New York, 2003, p. 170; and Joanna Spear, "Organizing for International Counterproliferation: NATO and U.S. Nonproliferation Policy," in Nolan *et al*. (2003), p. 213.

(11) Judith Miller, Stephen Engelberg, and William J. Broad, *GERMS: Biological Weapons and America's Secret War*, Simon & Schuster, New York, 2001, p. 288.

(12) Leitenberg (2001), p. 6.

(13) Cirincione *et al.* (2002), p. 53.

(14) Squassoni (2004), p. 16.

CHEMICAL WEAPONS

The Bush administration's policy on chemical weapons is slightly different, but once again reflects that of previous administrations. The United States signed and ratified the Chemical Weapons Convention (CWC) in 1993 and 1997 under former president Clinton. In total, 164 states are party to the treaty,(15) which prohibits the development, production, stockpiling, and use of chemical weapons. In contrast to the BWC, the CWC has an inspections mechanism that the United States believes is worthy of support. Although U.S. companies do not make chemical weapons, some produce dual-use chemicals that could be weaponized. The position of the U.S. Department of Commerce and Department of State is that these companies may have to provide reports or declarations, and consent to on-site inspections by the Organization for the Prohibition of Chemical Weapons, which administers the CWC.(16)

The United States is eliminating its chemical weapons arsenal. It was the first state to begin destruction efforts when operations commenced at the Johnston Atoll Chemical Agent Disposal System in 1990, and it still had the only active chemical weapons destruction program in the world in 2000.(17) The Bush administration has continued this policy. About 25% of the stockpile was gone by the end of 2002. A larger percentage might have been removed, were it not for delays imposed by the need to obtain state and local permits for new facilities and to settle lawsuits brought by opponents of the incineration process.(18) The United States had planned to eliminate its chemical weapons stockpile (over 30,000 tonnes), the second-largest in the world, by 2004. However, both the United States and Russia have asked for extensions under the CWC.

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(15) As of 20 June 2004. See Organization for the Prohibition of Chemical Weapons, "States Parties to the Chemical Weapons Convention," 20 June 2004; available at: http://www.opcw.org/html/db/members_ratifyer.html (accessed 12 August 2004).

(16) United States Department of State (Bureau of Arms Control) and Department of Commerce (Bureau of Industry and Security), "U.S. Chemical Weapons Convention Web Site – About the CWC," 4 October 2003; available at: http://www.cwc.gov/overview/about_html (accessed 3 January 2004).

(17) Center for Defense Information, "Chemical and Biological Weapons Site – the United States," 16 November 2000; available at: http://www.cdi.org/issues/cbw/unitedstates.html (accessed 4 January 2004).

(18) John Hart, Frida Kuhlau, and Jacqueline Simon, "Chemical and Biological Weapon Developments and Arms Control," *SIPRI Yearbook 2003: Armaments, Disarmament and International Security*, Oxford University Press, Oxford, 2003, p. 655.

NUCLEAR WEAPONS

While the current U.S. chemical and biological weapons policy is basically the same as under previous administrations, on nuclear weapons there has been a major shift. The Bush administration stated in 2002 that it wants to revitalize the U.S. nuclear infrastructure and will consider using nuclear weapons, even pre-emptively and against non-nuclear weapon states, in order to prevent enemy regimes and terrorists from acquiring WMD and attacking the U.S. homeland or armed forces. Simultaneously, the United States is developing low-yield nuclear weapons that would burrow deep into the earth and destroy bunker complexes. White House officials deny they are breaking with the past, but the policy raises questions about whether the United States is lowering the threshold on using types of nuclear weapons that would keep radioactive fallout to a minimum.(19) The policy seems designed to erase the stigma surrounding these devices. Conducting research on bombs expected to be half as powerful as those dropped on Hiroshima and Nagasaki, *The New York Times* has said, "means easing the taboo that has kept nuclear weapons sheathed since 1945."(20)

The U.S. approach is set out in the Nuclear Posture Review (NPR, January 2002) and National Security Presidential Directive 17 (NSPD 17, September 2002). The NPR calls for "greater flexibility" regarding nuclear forces, and observes that "nuclear attack options that vary in scale, scope, and purpose will complement other military capabilities."(21) NSPD 17 has been signed by the President and is a classified companion strategy document to his National Security Strategy. NSPD 17 states unambiguously that nuclear weapons can be used in response to a biological or chemical weapons attack. "Nuclear forces alone," it reads, "cannot ensure deterrence against WMD and missiles. Complementing nuclear force with an appropriate mix of conventional response and defense capabilities, coupled with effective intelligence, surveillance, interdiction and domestic law-enforcement capabilities, reinforces our overall deterrent posture against WMD threats."(22)

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(19) Mike Allen and Barton Gellman, "Pre-emptive Strikes and Part of U.S. Strategic Doctrine; 'All Options' Open for Countering Unconventional Arms," *Washington Post*, 11 December 2002, p. A1.

(20) Editorial, "The Wrong Proliferation Message," *The New York Times*, 8 June 2004, p. 24.

(21) Christine Kucia and Daryl Kimball, "New Nuclear Policies, New Weapons, New Dangers," Arms Control Association Issue Brief, 28 April 2003, unnumbered pages, p. 2.

(22) Cited in Nicholas Kralev, "Bush Signs Paper Allowing Nuclear Response; White House Makes Option Explicit to Counter Biological, Chemical Attacks," *Washington Times*, 31 January 2003, p. A1.

To meet this threat, the nuclear arsenal no longer needs to be as large. The administration is consequently reducing the 10,565-weapon nuclear stockpile. This total includes an estimated 6,480 operationally deployed strategic weapons, but according to the NPR the latter number will fall to 3,800 by 2007 and 1,700-2,200 by 2012. The first cut mirrors the Clinton administration's plans, while the second is a slower pace of reduction than it had envisioned.(23) The NPR target for 2012 is written into the Strategic Offensive Reductions Treaty (also known as the Moscow Treaty), which the United States and Russia signed in May 2002. But in June 2004, the administration announced its intention to halve the entire arsenal by 2012. Built into this plan are the previously protected tactical, reserve and inactive weapons categories.(24) The Moscow Treaty calls for operationally deployed strategic weapons to be withdrawn from active service, but according to the plan announced in June 2004, they will be destroyed and the reserve will shrink in line with the reduced requirement for spares.(25)

Bush's principal objective is the revitalization of U.S. nuclear scientific and military capabilities. The NPR calls for new generations of intercontinental ballistic missiles, nuclear-powered ballistic missile submarines, and long-range heavy bombers, and for making this arsenal more difficult to monitor by transferring thousands of warheads accountable under START to non-accountable reserve categories.(26) The U.S. Department of Energy's fiscal year 2004 budget request sought funding to reinvigorate the science and development program for new nuclear warhead concepts.(27) In fiscal year 2004, the U.S. government spent $6.5 billion on nuclear weapons – well above the $4.2 billion yearly average during the Cold War (ca. 1948-1989). If Congress agrees to the government's 2005 budget request, $6.81 billion will be spent, which would amount to a 31% increase in annual spending on nuclear weapons over the four years of the Bush administration and double the appropriated level of a decade ago.(28) Much of the funding will be spent on extending the life of existing nuclear warheads, and on new facilities and research.

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(23) Cirincione *et al.* (2002) p. 176.

(24) Matthew L. Wald, "U.S. to Make Deep Cuts in Stockpile of A-Arms," *The New York Times*, 4 June 2004, p. 17.

(25) Andrew Koch, "Washington Cuts Nuclear Arsenal," *Jane's Defence Weekly*, 9 June 2004, p. 8.

(26) Hart, Kuhlau and Simon (2003), pp. 610, 612.

(27) Kucia and Kimball (2003), p. 2.

(28) All dollar amounts in this paper are in U.S. funds. See Christopher E. Paine, *Weaponeers of Waste*, Natural Resources Defense Council, Washington, D.C., April 2004, pp. 6, 8.

The "Robust Nuclear Earth Penetrator" (RNEP), a low-yield nuclear "bunker-buster," is the most notable new warhead project. The United States already possesses a bunker-buster, the B61-11, but it was designed to penetrate soil and cannot survive rock. If a hydrogen warhead can be developed that will break through concrete or rock and still explode, said Fred Celec, the Deputy Assistant to the Secretary of Defense for Nuclear Matters, "It will ultimately get fielded."(29) Consistent with the recommendation of the NPR, the Defense Authorization Act for fiscal year 2003 included $46 million for research into the new warhead.(30) In April 2003, a preliminary design contest was launched between Lawrence Livermore National Laboratory in California and Los Alamos National Laboratory in New Mexico.(31) The Department of Energy's fiscal years 2005-2009 budget requested $484.7 million to develop the RNEP through the beginning of production.(32)

MULTILATERALISM: CONTINUING CAUTION

Multilateral prohibitions against the spread of nuclear, chemical and biological weapons are being encouraged. During the June 2002 Kananaskis Heads of State Summit, G8 leaders announced a program under which $20 billion will be committed over 10 years to dismantle WMD, initially in Russia. The U.S. administration pledged $10 billion. The United States co-sponsored the United Nations Security Council's first resolution on WMD counter-proliferation in 2004. It obligates governments to prevent non-state actors from acquiring WMD, to criminalize WMD possession by non-state actors, and to establish domestic controls that curb proliferation of the weapons and related materials, including delivery systems.(33) President Bush has urged acceptance of the Additional Protocol to the International Atomic Energy Agency's safeguards agreements, which would close the loophole that prevented the Agency from being able to inspect all (i.e., not just military) nuclear installations. The United States has ratified the new protocol, but as a nuclear state it retains the right to exclude sites or

(29) Dan Stober, "Nuclear 'Bunker-Busters' Sought – Move Signals Big Shift in U.S. Weapon Strategy," *San Jose Mercury News*, 23 April 2003, p. M1.

(30) Kucia and Kimball (2003), p. 2.

(31) Stober (2003), p. M1.

(32) Koch (2004), p. 8.

(33) United Nations, S/RES/1540, 28 April 2004, operative paras. 1-3.

activities it declares of "direct national security significance."[34] A Proliferation Security Initiative has been launched, under which the United States and its partners (including 11 core countries) will track the shipments of "dangerous and secretive regimes" and for-profit "black-market operatives" dealing in equipment and expertise in order to "find the middlemen, the suppliers and the buyers."[35]

But the administration's policy is not held together by multilateralism. Bush's case for the UN resolution, some journalists note, appears inconsistent in light of U.S. nuclear rearmament plans. Daryl Kimball, the executive director of the Arms Control Association, commented that the resolution can be interpreted as a "Do as I say, not as I do" diktat.[36] Pointing to the G8 program, which has gotten off to a slow start, *The New York Times* and *Washington Post* have questioned the administration's seriousness about counter-proliferation.[37] Madeleine Albright and Robin Cook have written that world leaders are not matching rhetoric with enough concrete action, and that the G8 program must be fully pledged and more aggressive – with a timeline half as long.[38]

In fact, the United States is suspicious of multilateral regimes that could constrain its freedom of action in the future. It wants an approach to nuclear weapons reduction that provides maximum flexibility. A key example is the Moscow Treaty, which has been strongly criticized by arms control advocates because the cut to 2,200 operationally deployed strategic weapons is not required until midnight on 31 December 2012 – and that limit is legally binding for only a moment before expiring. The Treaty also lacks an inspection and verification mechanism and is easy to withdraw from for any reason.[39] In June 2002, the United States

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(34) Carl E. Behrens, *Nuclear Proliferation Issues*, Congressional Research Service Issue Brief #IB10091, Washington, D.C., 26 April 2004, p. 7.

(35) George W. Bush, "Address Announcing New Measures to Counter the Threat of WMD," 11 February 2004; available at: http://www.whitehouse.gov/news (accessed 28 May 2004).

(36) Colum Lynch, "U.S. Effort on Arms Opposed: Security Council Members Seek to Limit Resolution," *Washington Post*, 20 April 2004, p. A16.

(37) Editorial, "Destroy Russia's Weapons," *Washington Post*, 11 July 2003, p. A20; and Editorial, "A Real Nuclear Danger," *The New York Times*, 28 May 2004, p. 20.

(38) Albright was secretary of state under former president Clinton, and Cook was former foreign secretary of the United Kingdom. See Madeleine Albright and Robin Cook, "We need a Global Attack on Nuclear Proliferation," *Los Angles Times*, 7 June 2004, p. B9.

(39) David Ruppe, "U.S.-Russia: Nuclear Treaty Is Weak, Short-Lived, Officials Say," Global Security Newswire, 30 May 2002. Cited from Nuclear Threat Initiative Web site; available at: www.nti.org (accessed 9 August 2004).

withdrew from the Anti-Ballistic Missile Treaty. According to President Bush, this was done because the treaty hindered his ability to protect the country from terrorist and rogue-state missile attacks.(40) The United States does not plan to conduct nuclear tests at the moment, but it is not prepared to tie its hands by ratifying the Comprehensive Test Ban Treaty (CTBT).(41) In May 2004, a preparatory meeting of the parties to the Nuclear Non-proliferation Treaty collapsed over the seemingly procedural matter of how to refer to consensus decisions made in 2000. This was because the decisions included undertakings – such as signing the CTBT and reducing numbers of tactical nuclear weapons – that the United States now opposes.(42)

Multilateral agreements are looked upon as constraints, rather than as safeguards, largely because of the terrorist threat. In a key counter-proliferation address in February 2004, the President called the possibility of terrorists obtaining a WMD the "greatest threat before humanity today." This statement reflects the administration's belief that terrorists are irrational. Unlike state leaders, who are deterrable and who would use WMD only as a last resort, terrorists are believed to see these weapons as "the preferred means to further their ideology of suicide and mass murder."(43) The Bush administration's new understanding of the WMD problem puts the focus not on eliminating the weapons, but on eliminating the outlaw regimes and non-state actors possessing them.(44) The United States has gravitated to a conventional and nuclear response because of its stated opposition to biological and chemical weapons.

LACK OF INTEREST IN COUNTER-PROLIFERATION

Given the U.S. preoccupation with Iraq and new terrorist threats, counter-proliferation activities in Russia are being pushed down the list of priorities unless they can be linked to the war on terror. For example, the administration has been lukewarm in its support for the Co-operative Threat Reduction Program, which was created to reduce nuclear weapons,

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(40) British Broadcasting Corporation, "America Withdraws From ABM Treaty," 13 December 2001; available at: http://news.bbc.co.uk/1/hi/world/americas/1707812.stm (accessed 9 August 2004).

(41) Linton Brooks, "Interview," conducted by Leonard S. Spector, *Non-Proliferation Review*, Fall-Winter 2002, p. 3.

(42) Jim Wurst, "NPT Meeting Collapses," Global Security Newswire, 10 May 2004. Cited from Nuclear Threat Initiative Web site; available at: www.nti.org (accessed 11 May 2004).

(43) Bush (2004).

(44) Joseph Cirincione, "Transcript of Forum with Carnegie Endowment for International Peace, Century Foundation, and Georgetown University," Carnegie Endowment for International Peace, Washington, D.C., 5 February 2004. Transcript prepared by Federal News Service.

materials and technologies in the former Soviet Union.(45) The Program was expanded in 2003, at which time it was assigned responsibility for keeping Russian WMD out of the hands of terrorists.(46) Bush launched the more widely focussed Global Threat Reduction Initiative in May 2004 in order to secure, remove or dispose of nuclear and radiological materials distributed by Russia and the United States to assist non-military research anywhere in the world. The $450-million initiative was established because Washington is concerned that the materials are vulnerable to theft by terrorists and rogue states.(47)

Russia also has a large stockpile of weapons-grade plutonium that is poorly protected. Nonetheless, there has been no progress on the Russia-U.S. plan to destroy 68 tons of plutonium stripped from Russian bombs and warheads (announced by former president Clinton with great fanfare in 1998), because of a dispute over liability in the event of a catastrophe. Some commentators, however, such as nuclear disarmament advocate and former U.S. Senator Sam Nunn, believe that the "big problem is there's a leadership gap. These are not big problems. They can be handled by leaders who are determined …"(48)

In summary, Washington has neglected counter-proliferation efforts not just in Russia, but around the world. A 2004 Harvard University report notes, for example, that less nuclear material was secured in the two years after 11 September 2001 than in the two years before.(49)

COMMENTATORS SEE POLICY SHIFT

Some analysts argue that Bush is continuing, rather than breaking from, past U.S. nuclear weapons policy. One notes that Bush's policy "should be seen as the latest iteration of a counter-proliferation doctrine that has since become a central component of post-Cold War U.S.

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(45) Editorial, "Destroy Russia's Weapons," *Washington Post* (2003).

(46) United States Department of Defense (2003).

(47) Marina Malenic, "U.S. Outlines Plan for Securing Nuclear Materials," Global Security Newswire, 26 May 2004. Cited from Nuclear Threat Initiative Web site; available at: www.nti.org (accessed 14 August 2004).

(48) Peter Slevin, "U.S.-Russia Plutonium Disposal Project Languishing," *Washington Post*, 10 May 2004, p. A17.

(49) Editorial, "A Real Nuclear Danger," *The New York Times* (2004).

military policy."[50] Two others claim that Bush's nuclear policy should be taken with a grain of salt because constraints imposed by the international system and international law make pre-emption and preventative nuclear war implausible. His initiatives can be cast in a different light, "in which they no longer appear to be either so diabolical or groundbreaking."[51]

But most see a major policy departure. Ambassador Japp Ramaker, the former Permanent Representative of The Netherlands to the UN, made this point in 2002. Referring to the RNEP, he said that "using nuclear weapons in that way would be a total departure from the way that nuclear weapons were used before. Nuclear weapons were a deterrent. The bunker buster weapon would leave deterrence behind. It would be a usable weapon like any other weapon you could use in an offensive way."[52] The Arms Control Association perceives an "ambitious policy shift … toward increased reliance on nuclear weapons,"[53] and Theresa Hitchens of the Center for Defense Information believes the policy is "significantly different from the past." She has called attention to the renewed emphasis on nuclear war fighting, willingness to use nuclear weapons first, and "clear assertion (as opposed to the Clinton administration's policy of ambiguity) that the United States would be justified in using nuclear weapons against a non-nuclear threat."[54]

CONCLUSION

In short, current U.S. policy on chemical and biological WMD is generally similar to previous policy. With regard to biological weapons, the United States still wants to protect U.S. defensive biological research and biotechnical industries from the prying eyes of BWC inspectors. After September 2001, however, Washington became more interested in

(50) David S. McDonough, "Fear of Small Shadows: Counter-Proliferation in U.S. Nuclear Strategy," Canadian Institute of Strategic Studies, Strategic Datalink #116, December 2003, p. 3.

(51) James J. Wirtz and James A. Russell, "U.S. Policy on Preventative War and Pre-emption," *The Non-Proliferation Review*, Spring 2003, pp. 118-119.

(52) Japp Ramaker, "Address to Carnegie International Non-Proliferation Conference," Washington, D.C., 14 November 2002. Cited from Carnegie Non-Proliferation Project, *The Proliferation Threat*, DVD, September 2003.

(53) Kucia and Kimball (2003), p. 1.

(54) Theresa Hitchens, "Slipping Down the Nuclear Slope: Bush Administration Nuclear Policy Lowers Bar Against Usage," conference presentation, 26 February 2003; available at: http://www.cdi.org/whatsnew/index.cfm (accessed 1 December 2003).

strengthening the multilateral arrangement. The United States does not produce chemical weapons, and the Bush administration has seen no reason to change the policy of gradually eradicating the national stockpile of these weapons.

But with respect to nuclear weapons, the United States has become more willing to consider the unthinkable – the pre-emptive use of these devices. The Bush administration supports multilateral instruments only when they do not infringe on U.S. freedom of action, and appears less concerned with preventing proliferation of WMD materials and technologies in Russia. The United States is reducing its nuclear arsenal, but at the same time investment in weapons refurbishment and research has been pushed above Cold War levels. A nuclear bunker-buster is being developed and "usable" low-yield designs are being explored. Driving this policy is Washington's determination to prevent terrorists and rogue states from using WMD against the United States. The current administration's assessment of this threat is changing the U.S. approach to nuclear strategy, weapons production, and disarmament.