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NRDC: Nuclear Notebook

U.S. nuclear forces, 2006

By Robert S. Norris and Hans M. Kristensen
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Fifteen years after the end of the Cold War, the United States continues to spend billions of dollars annually to maintain and upgrade its nuclear forces. It is deploying a larger and more accurate preemptive nuclear strike capability in the Asia-Pacific region, and shifting its doctrine toward targeting U.S. strategic nuclear forces against "weapons of mass destruction" complexes and command centers.

As of January 2006, the U.S. stockpile contains almost 10,000 nuclear warheads. This includes 5,735 active or operational warheads: 5,235 strategic and 500 nonstrategic warheads. Approximately 4,225 additional warheads are held in the reserve or inactive stockpiles, some of which will be dismantled. Under plans announced by the Energy Department in June 2004 (and possibly revised in spring 2005), some 4,365 warheads are scheduled to be retired for dismantlement by 2012 (see Nuclear Notebook, September/October 2004). This would leave approximately 5,945 warheads in the operational and reserve stockpiles in 2012, including the 1,700-2,200 "operationally deployed" strategic warheads specified in the 2002 Moscow Treaty or Strategic Offensive Reductions Treaty (SORT).

To understand the composition of the U.S. stockpile, it is helpful to examine the terms used to describe the different categories of warheads. *Active* warheads are maintained in a ready-for-use status, with tritium and other limited life components installed, and may be either deployed or stored. The active warhead inventory is broken down into *deployed* warheads, *responsive force* warheads, and *spares*. Deployed warheads consist of operationally deployed warheads (for example, warheads on fielded strategic forces), warheads associated with weapon systems in overhaul, and fielded nonstrategic weapons. Responsive force warheads consist of active warheads not on deployed systems. These are kept in secure storage but are available to be returned to the operationally deployed force. Depending on the particular weapon system, this task may take days, weeks, or months. Spare warheads are part of the active but not operational inventory, and support routine maintenance and operations. *Inactive* warheads do not have limited life components installed or maintained, and may not have the latest warhead modifications.

New war plans. The Defense Department is upgrading its nuclear strike plans to reflect new presidential guidance and a transition in war planning from the top-heavy Single Integrated Operational Plan of the Cold War to a family of smaller and more flexible strike plans designed to defeat today's adversaries. The new central strategic war plan is known as OPLAN (Operations Plan) 8044. Former chairman of the Joint Chiefs of Staff Gen. Richard B. Meyers described some of the planning changes in April 2005 Senate testimony: "[U.S. Strategic Command] has revised our strategic deterrence and response plan that became effective in the fall of 2004. This revised, detailed plan provides more flexible options to assure allies, and dissuade, deter, and if necessary, defeat adversaries in a wider range of contingencies."

One member of the new family is CONPLAN 8022, a concept plan for the quick use of nuclear,

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conventional, or information warfare capabilities to destroy--preemptively, if necessary--"time-urgent targets" anywhere in the world. Defense Secretary Donald Rumsfeld issued an Alert Order in early 2004 that directed the military to put CONPLAN 8022 into effect. As a result, the Bush administration's preemption policy is now operational on long-range bombers, strategic submarines on deterrent patrol, and presumably intercontinental ballistic missiles (ICBMs).

ICBMs. In 2005, the Pentagon completed the retirement of the MX Peacekeeper ICBM, after almost 20 years of service. The missile's long and controversial history stretches back to the 1970s, when officials proposed many elaborate basing schemes to try and prevent a supposed "window of vulnerability" from increasing numbers of accurate Soviet ICBMs. By 1979 the program called for the deployment of 200 missiles, hidden among 4,600 shelters (one missile in each cluster of 23 shelters), in a kind of mobile shell-game spread over approximately 40,000 square miles of Utah and Nevada. In 1983, President Ronald Reagan canceled that basing scheme and cut the number of missiles to 100, to be placed in Minuteman missile silos, tacitly conceding that the vulnerability problem could not be solved or never existed in the first place. Two years later, Congress limited deployment to 50 missiles. The first 10 missiles, located at Warren Air Force Base (AFB), Wyoming, were declared operational on December 22, 1986, with the full force of 50 on alert two years later. The Pentagon phased out the MX over a three-year period beginning in October 2002; it deactivated the last missile on September 19, 2005. In the end, billions of dollars were expended to rectify an imaginary strategic vulnerability.

The 2001 Nuclear Posture Review (NPR) calls for MX silos to be retained, rather than destroyed as was required in the now-abandoned Strategic Arms Reduction Treaty (START) II. The United States will keep MX missiles for possible use as space-launch vehicles, as target vehicles, or for redeployment. The missiles' 550 W87 warheads will be temporarily stored, and a portion will eventually replace W62 warheads on Minuteman III ICBMs under the Safety Enhanced Reentry Vehicle (SERV) program beginning this year. All W62s are scheduled to be retired in 2009. A Minuteman missile can carry one or two SERVs with W87 warheads, but apparently not three. In total, we estimate that 200 W87 warheads will be used to complement the W78 warheads assigned to Minuteman IIIs, with the balance placed in the responsive force of reserve warheads. Full operational capability of the SERV is scheduled for autumn 2010.

The 500-strong Minuteman III force remains basically unchanged from last year. Under START I, the air force downloaded the 150 missiles located at Warren AFB to single-warhead configuration in 2001. With START II's ban on multiple independently targetable reentry vehicles (MIRVs) now a dead letter, U.S. officials revised earlier plans to download all Minuteman missiles to a single-warhead configuration. Although the air force plans to reduce the operational warhead loading on Minuteman IIIs to 500, it is considering keeping as many as 800 warheads for the Minuteman force.

Minuteman modernization continues under an ambitious $7 billion-$8 billion, six-part program intended to improve the missile's accuracy and reliability and extend its service life beyond 2020. The United States test-launched four Minuteman IIIs from Vandenberg AFB, California, between July 14 and September 14, 2005. Three tests flew a single unarmed reentry vehicle, while the fourth missile carried two vehicles. An August 25 test used a Minuteman III from the 564th Missile Squadron at Malmstrom AFB, Montana, with a single vehicle. The air force stated that the test aimed to "demonstrate the ability to integrate a safety enhanced reentry vehicle" for W87 warheads onto the Minuteman III weapons system. Military officials executed the September 14 launch through the 20th Air Force's airborne launch control system using a U.S. Navy E-6B Mercury (TACAMO) aircraft.

The air force issued a Mission Need Statement in 2002 for a new ICBM to be introduced in 2018. The air force has earmarked more than $10 million for 2006-2007 for studies to define the required capabilities and set milestones for missile development. Some defense strategists have suggested equipping a portion of the ICBM force with conventional warheads. There are rumors that the forthcoming Quadrennial Defense Review may recommend converting 50 of the 500 Minuteman missiles to conventional missions.

Submarines. The navy decommissioned the Trident I C4 missile, after 26 years of service, in late October 2005, when the *Alabama* off-loaded the last 24 operational C4 missiles. The entire force of submarine-launched ballistic missiles (SLBMs) is now comprised of Trident II D5 missiles. When missile conversion is completed in 2008, the United States will have 336 Trident II D5 SLBMs on 14 nuclear-powered ballistic missile submarines (SSBNs), which is the force level decided on in the 1994 NPR; the missiles will be armed with approximately 2,000 warheads. The navy has extended the service life of the subs from 30 to 44 years. The oldest sub is scheduled to retire in 2029, when a new SSBN class will be introduced.

The navy completed the first phase of downloading the warheads from all Trident II missiles in 2005 to keep pace with SORT goals. The navy has opted for a gradual decrease in the number of warheads on its SLBMs over several years, rather than a sudden drop just before the end of 2012, the treaty deadline. Under START, each Trident II D5 missile is counted as carrying eight warheads, though the actual number varies depending upon mission. We estimate that each missile now carries an average of six warheads. They will be further downloaded as 2012 approaches.

During the past few years, the navy has significantly changed the homeporting of SSBNs to meet new planning requirements. It transferred two SSBNs from the Atlantic to the Pacific Ocean in 2002 and another in 2003. On August 17, 2005, the *Louisiana* left Naval Submarine Base Kings Bay, Georgia, on patrol. Rather than roaming the Atlantic during its 58-day patrol, the sub sailed around Cape Horn and ended up at its new homeport, Naval Submarine Base Bangor, Washington. On September 27, 2005, the *Maine* left Kings Bay on a similar journey, bringing to nine the number of SSBNs in the Pacific. Five subs remain in the Atlantic.

The primary goal of the shift is to increase coverage of targets in China, according to navy officials. (Pacific-based SSBNs also target Russia and North Korea.) The buildup of the more capable Trident II D5s in the Pacific additionally "enhances system accuracy, payload, and hard-target capability, thus improving [U.S.] available responses to existing and emerging Pacific theater threats," Rear Adm. Charles B. Young, director of the navy's Strategic Systems Program, said in an August 2002 speech at the Strategic Weapons Facility Pacific.

The four oldest Ohio-class SSBNs have been removed from the nuclear mission and are being converted into cruise missile submarines (SSGN) at a cost of $4.1 billion. Electric Boat Corporation, a division of General Dynamics, is the main contractor and built the original submarines. Work on the *Ohio* and *Michigan* is being done at Puget Sound Naval Shipyard, Washington, after which the subs will be homeported at Bangor. Work on the *Florida* and *Georgia* is being done at Norfolk Naval Shipyard, Virginia, after which they will be homeported at Kings Bay. We estimate that the Defense Department transferred the nearly 1,000 W76 warheads from these four older SSBNs to inactive/responsive status and will eventually send them to the Pantex Plant in Texas for dismantlement.

At least four important upgrades are under way involving the Trident II D5. The first is a life-extension program (LEP) for the W76 warhead that will significantly enhance the weapon's capability. Outfitting the W76/Mk-4 reentry vehicle with a new arming and fuzing subsystem (MC4700) will give the 100-kiloton W76 a ground-burst capability for the first time and will increase the types of targets that it can destroy. The modified W76 warhead, which may have its yield reduced by about 40 percent to 60 kilotons, according to a July report in Sante Fe's *New Mexican* newspaper, is designated the W76 Mod 1 (or W76-1), and the reentry vehicle is known as Mk-4A.

The navy is working on a second warhead upgrade to equip the reentry vehicles with Global Positioning Satellite (GPS) receivers for increased accuracy. In 2004, Congress refused to fund the Enhanced Effectiveness (E2) Reentry Body program, which would have provided this capability, because of a concern that equipping SLBM reentry vehicles with GPS accuracy could lead to mini-nukes on the submarines.

Using other funds, the navy supports programs to improve the missile's accuracy. One program aims to equip reentry vehicles with a three-axis flap system that steers the reentry vehicle during its descent toward its target, essentially creating a maneuverable reentry vehicle. In March 2005, the *Tennessee* launched a Trident II D5 missile equipped with an unarmed reentry vehicle fitted with the three-axis flap system and GPS. One navy admiral who participated in the test told us: "I had GPS signal all the way down and could steer it." The test was also significant because the D5's 2,200-kilometer (1,367-mile) trajectory was the shortest ever flown by a U.S. SLBM, according to the admiral, with the warhead impacting just 12-13 minutes after launch.

The third modernization program involves upgrading the current Mk-6 guidance system and extending its service life. The Mk-6LE (life extension) is scheduled to be operational in 2013 and would last through 2042. The fourth upgrade involves refurbishing the solid propulsion motors of the Trident II D5. Defense awarded a $71.5 million contract to Alliant Techsystems for production of new solid propulsion systems for all three stages of the D5 through 2007.

The navy continues to buy Trident II D5 missiles. It has bought 408 so far and requested an additional five missiles in 2005. Officials extended D5 production through 2013 and increased the total number to be procured from 453 to 561, at an additional cost of $12.2 billion. The total cost of the program is now $37 billion, or $66 million per missile. To make the D5 operational through

2042 (to the end of the extended service life of the Ohio-class SSBN), the navy will upgrade existing missiles to a new variant, the D5LE. In 2003, Congress budgeted $416 million to modernize the D5. At any given time, 336 Trident II D5s will arm the 14 U.S. SSBNs (including two sets for two SSBNs that will be in overhaul), 58 D5s will be allocated to Britain for their SSBNs, and the balance will be available for flight tests.

The navy appears to have dropped plans to equip its new submarine-launched intermediate-range ballistic missile (SLIRBM) with dual nuclear-conventional capability in favor of developing only conventional warheads for the weapon. Defense awarded a $9.2 million, 16-month contract to Lockheed Martin in July 2005 to demonstrate and validate solid rocket motor technologies for a two-stage SLIRBM design. The program envisions fitting multiple SLIRBMs inside each missile tube on SSGNs, adding a second conventional strike weapon to the boats' Tomahawk sea-launched cruise missiles. The SLIRBM is intended to precisely deliver a conventional payload at ranges in excess of 1,770 kilometers (1,099 miles) within 10-15 minutes of launch.

After a more than 11-year hiatus, the navy has resumed SLBM flight-testing in the Pacific. In November 2004, the *Nevada* launched two Trident II D5s down the Pacific Missile Range. In March 2005, the *Tennessee* test-fired a missile in the Atlantic, and in October the Royal Navy's *Vanguard* test-fired a D5 missile, also in the Atlantic. In anticipation of flight-testing in both oceans, the navy, with the help of the Johns Hopkins Applied Physics Laboratory, converted two 8-foot by 40-foot containers into vans for data processing and analysis during test-launches.

Bombers and bomber weapons. The United States has two types of long-range bombers for nuclear missions: the B-2A Spirit and the B-52H Stratofortress. The B-52Hs are based at Barksdale AFB, Louisiana, and at Minot AFB, North Dakota; the B-2As are based at Whiteman AFB, Missouri.

The B-52s can deliver cruise missiles, gravity bombs, or a combination of both; B-2s carry only bombs. Both have conventional missions as well.

Neither bomber is maintained on day-to-day alert as during the Cold War, yet the alert level has increased with the recent tasking of bomber wings in Global Strike missions. In October 2004, for example, the air force launched 13 B-52s near-simultaneously from Barksdale AFB in a minimum--interval takeoff, with each bomber taking off within a minute or less of one another. The commander of the 8th Air Force at Barksdale AFB told the *Times* of Shreveport in October 2005 that the 8th Air Force is now "essentially on alert . . . to plan and execute global strikes" on behalf of Strategic Command.

A five-year modernization effort completed in 2003 enables the B-2 to carry a mix of B61 and B83 nuclear bombs as well as various conventional weapons. B-2s are already capable of making some targeting changes en route, but the air force is replacing the onboard UHF and VHF radios, and satellite communications systems, with a new system that will allow crews to receive beyond-line-of-sight (BLOS) voice and data communications, and review full mission plans en route to their targets. An extremely high frequency (EHF) satellite communication will be added to ensure the bombers have secure BLOS communications in their nuclear mission. The air force is also equipping all B-2s with a new external coating known as alternate high-frequency material, which will increase the bomber's stealthiness and ease its maintenance. The program will be completed by 2011.

The air force began installing the Avionics Midlife Improvement (AMI) on the B-52H in 2005, to improve the aircraft's navigation and nuclear weapons delivery. Installation on all bombers will be completed by September 2008. Technicians will also replace the bomber's existing satellite communication system with an EHF radio to improve connectivity in nuclear-strike scenarios.

The weapons deployed on U.S. strategic bombers have a variety of capabilities. B61-7 bombs have multiple yield options, sometimes referred to as "dial-a-yield," ranging from 10 to 350 kilotons. The bomb, which is almost 12 feet long and weighs approximately 760 pounds, has five fuzing options: free-fall airburst, parachute-retarded airburst, free-fall contact burst, parachute--retarded contact burst, and parachute--retarded lay down delayed-surface burst (with 31-second and 81-second delays available). The B61-11 "bunker buster" is a B61-7 with a one-piece hardened--steel center case and a new nosepiece and rear subassembly, which provide for ground penetration and add approximately 450 pounds of weight. The 400-kiloton weapon is also equipped with a special ground-impact time-delay feature to allow it to penetrate 3-6 meters (10-20 feet) underground before detonation. The Pentagon and Los Alamos National Laboratory developed the Mod 11 to replace the 9-megaton B53 bomb, whose purpose was to hold selected deeply buried targets at risk.

The B83 is a high-yield strategic bomb with variable yield options up to 1.2 megatons. It is designed for high-speed external carriage and low-altitude delivery against hard targets. The

weapon is built for relatively hard impacts on irregular, reinforced concrete surfaces, such as ICBM silos. The bomb weighs 2,400 pounds and has four sections behind its hollow shock-absorbing nose. The first compartment houses the warhead; the mid-case contains the firing set and fuzing controls; the aft-case contains the arming system and thermal batteries; and the last compartment holds the parachute system, which contains a 46-foot Kevlar-nylon ribbon parachute that is held by 60 Kevlar suspension lines and deployed by three 4-foot diameter pilot chutes. The 180-pound parachute system can reduce the bomb's velocity from about 700 miles per hour to 44 miles per hour within a few seconds.

The advanced cruise missile (ACM) and air-launched cruise missile (ALCM) carried on the B-52H are undergoing service life-extension programs to prolong their lifetimes through 2030. The ACM's forward-swept wings and tailplanes, flush air-intake, and flat, shielded jet exhaust make it difficult for radar to observe the missile. The ACM has a range of 3,000 kilometers (1,864 miles) and for guidance uses an inertial navigation system, together with a terrain contour matching (TERCOM) system to provide accuracies of 100-300 feet circular error probable. TERCOM uses a downward-pointing radar altimeter to determine the missile's altitude as it flies toward a target and compares the ground elevation profiles with maps stored in memory to determine if it is on course. The ALCM has the same navigation and guidance system but has a slightly shorter range of approximately 2,400 kilometers (1,491 miles). Both missiles are equipped with a W80-1 warhead, which has variable yield options up to 150 kilotons. The air force moved all remaining reserve ALCMs at Fairchild AFB, Washington, to Barksdale AFB in November 2005.

The air force is studying options for a next-generation nuclear cruise missile. One possibility is a joint enhanced cruise missile with a nuclear payload and longer range to support Global Strike missions against "targets deep within future high-threat anti-access environments," according to air force documents. The new missile could be delivered by bombers or from various ground or sea platforms.

Nuclear Surety Inspections. Air Combat Command's inspector general periodically conducts Nuclear Surety Inspections (NSI) to assess if rules, regulations, and procedures are being maintained to the highest standards. The inspections evaluate many areas, including weapon loading and mating procedures; storage, maintenance, and security practices; accident ("Broken Arrow") response; exercises to recapture and recover a nuclear weapon; processing and relaying emergency action messages; and permissive action link/use control operations that ensure that authorization orders are authentic.

Inspectors conducted an NSI of the 5th Bomb Wing at Minot AFB from December 12 to 19, 2004 and rated the base satisfactory. An NSI conducted from July 9 to 16, 2005 of the 2nd Bomb Wing at Barksdale AFB was rated unsatisfactory. Inspectors visited Whiteman AFB in December 2003 for an NSI, and a follow-up was expected in mid-2005. From February 18 to 24, 2004, inspectors conducted an NSI of the 896th Munitions Squadron (MUNS) at Nellis AFB, Nevada. The 896th MUNS receives, ships, stores, and maintains a huge stockpile of nuclear weapons. The Weapon Storage Area consists of 790 acres, crisscrossed by 36 miles of roadway, and houses 75 specialized storage igloos. The inspectors graded 18 areas, and the MUNS received 17 excellent or satisfactory ratings and one outstanding.

Nonstrategic nuclear weapons. The United States retains approximately 500 nonstrategic operational nuclear weapons and keeps another 790 in reserve. These include the B61-3,-4, and-10 gravity bombs and the W80-0 warhead for the nuclear Tomahawk land-attack cruise missile (TLAM/N). The B61-10 is no longer in the active stockpile, according to Energy documents. The 2001 NPR did not address nonstrategic nuclear weapons.

The United States deploys B61 nonstrategic nuclear bombs at eight bases in six European countries for delivery by various U.S. and NATO aircraft. Additional tactical bombs are in reserve status stored at Kirtland AFB, New Mexico, and Nellis AFB. The air force deploys approximately 50 bombs with the 4th Fighter Wing at Seymour Johnson AFB, North Carolina. The 27th Fighter Wing at Cannon AFB, New Mexico, no longer has a nuclear mission, and the base is expected to be phased out under the 2005 Base Realignment and Closure process.

U.S. delivery aircraft include the F-16C/D Fighting Falcon and F-15E Strike Eagle. NATO aircraft assigned nuclear missions include U.S.-supplied F-16s and German and Italian Tornado bombers. Under current air force planning, a portion of the F-35 Joint Strike Fighter (JSF) force will have nuclear capability starting in 2012. The JSF program completed an initial nuclear certification requirements plan in 2004, and more detailed procedures to make it nuclear capable began in 2005.

Selected Los Angeles-class, improved Los Angeles-class, and some Virginia-class attack submarines can deploy with TLAM/Ns. The navy plans to refurbish the missiles, and Energy their

W80-0 warheads, to extend their service life to around 2040. An estimated 320 TLAM/Ns are currently stored at the Strategic Weapons Facilities at Bangor, Washington, and King's Bay, Georgia, alongside strategic weapons for the SSBNs.

While most U.S. nuclear-powered attack submarines (SSNs) were credited with some nuclear capability during the Cold War, today most SSNs do not have nuclear missions. In the Pacific Fleet, for example, less than half of the attack submarines regularly undergo nuclear certification. But if the order were given, Tomahawks could be redeployed in 30 days. We estimate that no more than 12 out of around 50 SSNs have nuclear capability. The navy has test-launched unarmed Tomahawks 92 times since 1978. Two of these were conducted in 2005, one from the *Greenville* and another from the *Minneapolis-St. Paul*.

Nuclear warheads. To ensure the reliability of nuclear weapons beyond their original design lives, most of the warheads in the "enduring" stockpile are scheduled to undergo life-extension programs over the next decade. The first of these programs began in 1999 and was for the W87; it was completed in 2001.

The B61-7/-11, W76, W78, W80, B83, and W88 warheads will also undergo life-extension programs. Some life-extension programs are substantial enough to change a warhead's modification designation. Accordingly, the W76 will become the W76-1, and the W80-0 and W80-1 will become the W80-2 and W80-3, respectively. The first production units of the W80-2 and B61-7/-11 are scheduled for delivery later this year, the W76-1 in 2007-2008, and the W80-3 around 2008. The B61-7/-11 LEP involves refurbishing the secondary.

Strong congressional opposition to the Robust Nuclear Earth Penetrator (RNEP) warhead program induced Energy to withdraw its 2006 funding request for the program, but hardened--case penetration tests applicable to RNEP will likely continue with Defense funding at Sandia National Laboratories.

After spending almost $2 billion during more than a decade, Energy is still "reestablishing" small-scale plutonium pit production at Los Alamos. Lab scientists produced two certifiable W88 pits in 2003, four more in 2004, and six in 2005. Energy plans to test these pits in support of achieving W88 pit certification (for quantity production and stockpiling in the "war reserve") in 2007. Los Alamos aims to manufacture 10 W88 pits per year from 2008 to 2014. As part of its "pit campaign," Energy also hopes to "establish manufacturing process capability for all pit types" by 2009 and to "manufacture initial pit EDUs [engineering demonstration units] for Reliable Replacement [Warhead] pits" by 2012, according to its 2006 budget request.

In total, Los Alamos could be making plutonium pits for as many as 30-40 new warheads per year after 2010, according to an October 2005 *Albuquerque Journal* interview with Linton Brooks, the administrator of the National Nuclear Security Administration. Energy's plans for constructing a larger Modern Pit Facility at a new site are on hold.

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The U.S. arsenal

Type / Designation	No.	Year deployed	Warheads x yield (kilotons)	Active / Spares

ICBMs				
LGM-30G Minuteman III				
Mk-12	150	1970	1 W62 x 170	150
Mk-12	50	1970	3 W62 x 170 (MIRV)	150/30
Mk-12A	300	1979	2–3 W78 x 335 (MIRV)	750/35
Total	**500**			**1,050/65**
SLBMs				
UGM-133A Trident II D5*				
Mk-4	n/a	1992	6 W76 x 100 (MIRV)	1,632/80
Mk-5	n/a	1990	6 W88 x 455 (MIRV)	384/20
Total	**336**			**2,016/100**
Bombers				
B-52H Stratofortress	94/56**	1961	ALCM/W80-1 x 5–150 ACM/W80-1 x 5–150	1,000/30 400/20
B-2A Spirit	21/16	1994	B61-7, -11, B83-1	555
Total	**115/72**			**1,955/50*** **
Nonstrategic forces				
Tomahawk SLCM	325	1984	1 W80-0 x 5–150	100
B61-3, -4 bombs	n/a	1979	0.3–170	400
Total	**325**			**500**
Grand total				**~5,521/215**

ACM: advanced cruise missile; ALCM: air-launched cruise missile; ICBM: intercontinental ballistic missile; MIRV: multiple independently targetable reentry vehicle; SLCM: sea-launched cruise missile; SLBM: submarine-launched ballistic missile.

* Conversion of the *Henry Jackson* and the *Alabama* to Trident II D5 SLBMs will be completed in 2007 and 2008, respectively, bringing to 14 the number of SSBNs capable of carrying D5s.
** The first figure is the aircraft inventory, including those used for training, testing, and backup. The second figure is the primary mission aircraft inventory, the number of operational aircraft assigned for nuclear and/or conventional missions.
*** The large pool of bombs and cruise missiles allows for multiple loading possibilities, depending upon the mission.

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U.S. stockpile

Type	Active	Inactive / Responsive	Total
W62*	330	250	580
W78**	785	20	805
W76**	1,712	1,318	3,030
W88	404	0	404
W80-1**	1,450	361	1,811
B61-7	215	224	439
B61-11	20	21	41
B83-1/-0	320	306	626
W80-0	100	194	294
B61-3**	200	186	386
B61-4**	200	204	404
B61-10	0	206	206
W84*	0	383	383
W87	0	553	553
Total	**5,736**	**4,226**	**9,962**

*Warhead type to be fully dismantled.
**Warhead type to be partially dismantled.

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