Endnotes

1 Throughout the report it is assumed that there are still some 480 nuclear weapons remaining in Europe. This force level assumes that 20 bombs removed from Araxos, Greece, in 2001, and 20 bombs at Ramstein, Germany, for use by the German wing at Memmingen until 2002 remain at Ramstein. Some or all of these 40 weapons could have been returned to the United States. The nuclear weapons deployment authorization signed by the President on November 29, 2000, permits a deviation from the total 480 deployed in NATO by no more than 10 percent (i.e. 48 weapons). The number of weapons stored within a specific NATO country may vary in the short-term due to maintenance, but if the variance lasts for over one year, the Secretary of Defense must consult the President about the need to update the Directive. It is not known whether President George W. Bush has signed a Presidential Decision Directive regarding nuclear weapons deployment authorization in Europe.

2 In addition to the air-delivered bombs, an unknown number of nuclear-tipped Tomahawk Land-Attack Missiles (TLAM/N) also support NATO nuclear planning. The TLAMNs can be delivered by selected Los Angeles, Improved Los Angeles, and (in the future) Virginia class attack submarines. The missiles are not deployed at sea under normal circumstances but are stored on land at the Strategic Weapons Facility Atlantic (SWFLANT) at Kings Bay, Georgia, on the U.S. east coast. Each TLAM/N carries a W80-0 warhead with a yield of 5-150 kilotons. There are 304 W80-0 warheads in the U.S. stockpile, half of which are at Kings Bay.


5 Prior to this structure, the MUNSS at Büchel AB, Kleine Brogel AB, and Volkel AB were assigned to the 52nd Fighter Wing at Spangdahlem AB. “New Group,” Eifel Times, Spangdahlem Air Base, June 4, 2004, p. 4. The MUNSS at Ghedi Torre AB was previously assigned to the 31st Fighter Wing at Aviano AB.


I am indebted to Otfried Nassauer and Dan Charles for this photo.


E-mail, w/attach, Cole Marcus, MSGt USAFE/LGW, to Paul Sparaco, USAF/Hanscom AFB, et al., “WS3 PMR Minutes (Draft),” March 23, 2000, 4:39 PM. Released under FOIA to Joshua Handler.


Both images from http://www.nvmygtz.netfirms.com/wmt.htm


Ibid., p. 263. Partially declassified and released under FOIA. This document is available on the Internet at URL <http://www.nautius.org/library/security/foia/japan/CINCPAC74lp262.pdf>.
U.S. Nuclear Weapons in Europe • Hans M. Kristensen/Natural Resources Defense Council, 2005

38 Ibid., p. 262. Partially declassified and released under FOIA. This document is available on the Internet at URL <http://www.nautilus.org/library/security/foia/japan/CINCPAC74lp262.pdf>.
43 NATO Nuclear Planning Group, “Final Communiqué,” June 17, 1975, paragraph 7.
44 The withdrawal of 1,000 warheads was announced at the December 1979 special meeting where NATO also announced its decision to deploy 572 new medium-range missiles. The timeline for the 1,000 warheads was “as soon as feasible.” By November 1980, the withdrawal of the 1,000 warheads was “well underway,” and by December 12, 1980, the withdrawal had been completed. See: NATO, “Special Meeting of Foreign and Defence Ministers,” December 12, 1979, paragraph 7; NATO, Nuclear Planning Group, “Final Communiqué,” November 14, 1980, paragraph 6; NATO, North Atlantic Council, “Final Communiqué,” December 12, 1980, paragraph 14.
50 Some W84 warheads from the Pershing II were later converted to the B61-10 bomb and returned to Europe where they remain in storage.
52 NATO Nuclear Planning Group, “Final Communiqué,” May 9-10, 1989 [sic], updated October 27, 2000, paragraph 5.
57 Ibid.
At the beginning of Operation Desert Storm, according to one unclassified estimate, the U.S. had some 1,000 nuclear warheads with its military forces in the region. This included 700 bombs and cruise missiles on aircraft carriers, surface ships and attack submarines, and 300 bombs in Turkey. William M. Arkin, et al., "U.S. Nuclear Weapons in the Persian Gulf Crisis," Greenpeace, January 1991, p. 1.


In 2004, NATO stated that air delivered gravity bombs were reduced by "well over 50 percent." NATO, "NATO’s Nuclear Forces in the New Security Environment," NATO Issues, June 3, 2004, p. 3.


After the NPG meeting in Gleneagles, Scotland in October 1992, NATO declared: "All nuclear warheads from NATO's ground-launched and naval tactical nuclear weapons have now been removed, much earlier than originally envisaged, and....The reductions in the number of air-delivered nuclear weapons, the only remaining sub-strategic systems to be held by the Alliance in Europe, are underway." NATO Nuclear Planning Group, "Final Communiqué," October 21, 1992, paragraph 5.


Different news reports vary somewhat in their reporting of Mr. Woerner’s statement. Reuters reported: “Nuclear weapons will never be disintegrated. That is why I do not foresee a situation where we will denuclearize Europe.” “NATO Says No Nuclear-Free Europe Despite Major Cuts,” Reuters (Taormina), October 18, 1991.

81 Department of the Air Force, HQ USAFE, Special Order GB-54, September 30, 1993. Released under FOIA.


84 Ibid.

85 Ibid., pp. lii, 270.

86 Ibid., p. 258.

87 Ibid.

88 Ibid., pp. 258-259.


93 The SIOP was officially renamed OPLAN (Operational Plan) 8044 in 2003. The last plan to use the previous name was SIOP-03 Revision 3 from March 2003.


95 Ibid.


103 Ibid., p. 1.

104 U.S. Strategic Command/J513, Memorandum for the Record, “NSNF Working Group Meeting Minutes


Ibid., pp. 1, 2. Partially declassified and released under FOIA.


Chairman of the Joint Chiefs of Staff, “CICS Counterproliferation Missions and Functions Study Final Report,” n.d. [March 1995], p. B-3-1. Partially declassified and released under FOIA.

Ibid., p. B-3-10.


In 1996, two years after the addition of the Tunisian range, the African Nuclear-Weapon-Free Zone Treaty (Treaty of Pelindaba) was signed. The treaty bans the use, threat of use, testing or stationing of any nuclear explosive device. This does not appear to prohibit testing of B61 training weapons, however, since these do not contain a nuclear device. Tunisia has signed but not ratified the treaty, which has not entered into force due to lack of sufficient ratifications.

The U.S. Navy also used the range (although Navy aircraft were denuclearized after the 1994 Nuclear Posture Review) and described in 1997 how exercises with the Tunisian Air Force “provide out forces an opportunity for bombing practices on Tunisian ranges, replicating the conditions under which they may have to fly actual strike missions against a desert target.” Vice Admiral Steve Abbot, U.S. Navy, Commander Sixth Fleet, Statement Before the Joint Hearing by the Committee on Readiness and Subcommittee Military Personnel of the House of Representatives on Unit Readiness, People, and Quality of Life,” March 4, 1997.


The decision suggests that the U.S. force level in Europe at the time the NPR was completed already had dropped to 480 weapons.


Ibid., p. 16.


Deutch apparently got this information from an NPR briefing slide that stated that the “NATO stockpile [was] cut by 91%” since 1988. U.S. Department of Defense, Briefing, "Nuclear Posture Review," September 22, 1994, slide 29.


Ibid.


Seven years later, in December 2001, the subsequent Nuclear Posture Review conducted by Bush administration would also claim to have abolished MAD.

Mission termination for the 7401 MUNSS at Rimini AF was March 1, 1993. HQ USAFE/XP, “Rimini AB PROTAF I, 15-20 Feb 93,” September 14, 1998, p. 4. Released under FOIA.


Both the 604 MUNSS at Nörvenich AB and the 605 MUNSS at Memmingen AB were scheduled for closure by September 30, 1996. HQ USAFE, Organizational Charts, n.d. [1995], slide 30. Released under FOIA.


The MUNSS were tasked by the USAFE commander through the HQ USAFE staff or numbered air forces for support of contingencies or war. The operational chain of command did not run through Regional Support Groups (RSGs) commander for purposes of contingency and wartime tasking. Ibid., p. 73.


The deactivation of the WS3 vaults is mentioned in: Paul Sparaco, WS3 Program Manager, Electronic...
The reorganization in Europe also led to the rumor in 1996 that U.S. nuclear weapons had been withdrawn from RAF Lakenheath. This was not the case, with 110 weapons remaining at the base. For a report of this rumor, see: Christopher Bellamy, “Wing of Change as US Removes Last Nuclear Bombs From Britain,” Independent, October 28, 1996, p. 3.


The wording of the paragraph addressing Russian non-strategic nuclear weapons was: “Russia still retains a large number of tactical nuclear weapons of all types. We renew our call upon Russia to bring to completion the reductions in its tactical nuclear weapons announced in 1991 and 1992, and to further review its tactical nuclear weapons stockpile with a view towards making additional significant reductions.”

USCINCEUR’s claim about the accuracy of DCA is in stark conflict with internal assessments made by DOD personnel as part of the current updating of the Doctrine for Joint Nuclear Operations (Joint Pub 3-12). According to the Joint Staff, “[n]uclear capable aircraft may have many advantages. Accuracy (as compared to other systems) is not one of them.” European Command (EUCOM) added that, “there is no current precision nuclear strike capability in the inventory.” Department of Defense, “Joint Staff Input to JP 3-12, Doctrine for Joint Nuclear Operations (Second Draft),” April 28, 2003, p. 43. Italics in original.

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Ibid.

Ibid.


99

156 Ibid., pp. 1, 2.
157 Ibid., pp. 39-40.
158 Ibid., p. 41.
163 1998 was a busy year for the 4th Fighter Wing in support of regional nuclear war planning. In June of that year, the wing’s F-15Es simulated a similar nuclear strike against North Korea. See: Hans M. Kristensen, “Preemptive Posturing,” The Bulletin of the Atomic Scientists, September/October 2002, pp. 54-59, URL <http://www.thebulletin.org/issues/2002/so02/so02kristensen.html>.
164 Memo/1 Atch (U), ACC/DONP to ACC/AD), Question on Gen Marcottes Note, 3 Jul 97. Released under FOIA.
167 The Strategic Concept ended with the statement that, “sub-strategic nuclear weapons will…not be deployed in normal circumstances on surface vessels and attack submarines.” Tactical nuclear weapons were removed from U.S. Navy and Royal Navy warships in 1991-1992 and both countries later denuclearized their surface vessels. France is the only NATO nuclear power that has retained a nuclear capability for surface vessels (aircraft carriers), so the statement suggests that the current French aircraft carrier (Charles de Gaulle) does not carry nuclear weapons under normal circumstances.
172 Department of the Air Force, HQ USAFE, Special Order GD-17, April 6, 2001. Released under FOIA.
177 Department of the Air Force, Headquarters United States Air Forces in Europe, Special Order GD-17, April 6, 2001. Released under FOIA.
A contract awarded by the U.S. Air Force in July 2004 for upgrade of the WS3 system involves work at 12 sites, which suggest that the vaults at Araxos Air Base may be maintained, at least for now, in a caretaker status.

Incirlik AB is the only base in Turkey that stores nuclear weapons. Most of these are for U.S. fighters, but the base also stores the 40 bombs that moved from Akinci and Balikesir in 1995.

The 20 weapons from Memmingen AB may have been returned to the United States following the closure of the base in 2003.

The 604 MUNSS at Nörvenich AB and the 605 MUNSS at Memmingen AB closed on September 30, 1996. HQ USAFE, Organizational Charts, n.d. [1995], slide 16. Released under FOIA.


Between 1985, when the JaboG 33 Tornados first assumed the NATO nuclear strike mission, and 2000, the squadron has undergone at least 19 nuclear related inspections for certification for its nuclear strike mission.


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An unofficial translation provided by Karel Koster from the Project on European Nuclear Non-Proliferation (PENN) network gives a slightly different wording: “….in the first place, there was a meeting concerning NATO. In the second I can confirm that the USA is withdrawing part of its nuclear weapons arsenal from Europe. In the third place defence policy planning does not assume any changes for the air force base in Kleine Brogel.” NATO sources later claimed that General Jones did not mention nuclear weapons at the Belgian Senate meeting. See: Karel Koster, “NATO Nuclear Doctrine and the NPT,” June 29, 2004, URL <http://www.basicint.org/pubs/20040629NATO-nuclear-Koster.htm>.


During the 1990s, the 492nd and 494th continually rotated to Incirlik and Aviano for participation in Operations Deny Flight and Provide Promise, supporting operations in the Balkans.


Questions on the Draft NPT asked by the US Allies together with answers given by the United States, Appendix 1, Senate Foreign Relations Committee Hearings on the Non-Proliferation Treaty, Part 2, 18


A satellite image of Büchel Air Base was not available. The map used is from the German website Military Airfield Directory (http://www.mil-airfields.de/) and is reprinted with permission.

A satellite image of Volkel Air Base was not available. The map used is an excerpt from a detailed base map provided online by the Dutch organization Onkruit (http://www.contrast.org/onkruit/axies/volkelmap.html).

Commander in Chief (CINC) has formally been changed to Combatant Commander (CC).