

# **The 520 Forgotten Bombs**

**How U.S. and British nuclear weapons in Europe  
undermine the Non-Proliferation Treaty**

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## I. Introduction

The United States and the United Kingdom, along with their NATO allies, still retain hundreds of nuclear bombs "forward deployed" in half a dozen European countries, including: Belgium, Germany, Greece, Italy, Netherlands, Turkey. The United States, moreover, bases U.S. nuclear weapons in the United Kingdom. Although NATO's North Atlantic Council<sup>1</sup> predicted in November 1991 that arms control agreements would "result in an unprecedented degree of military transparency in Europe, thus increasing stability and mutual confidence,"<sup>2</sup> the number and precise location of the nuclear bombs remain cloaked in military secrecy.

The role of these nuclear bombs is highly dubious. The Cold War has ended and the threat of a large-scale military attack on Europe has disappeared with the break-up of the Soviet Union and the demise of the Warsaw Pact. Instead, NATO is now tying the nuclear mission to vague declarations of "maintaining peace" and "preventing war," as well as to counter the alleged threat from Middle East countries and others seeking to acquire nuclear weapons.

The historic Review and Extension Conference of the Nuclear Non-Proliferation Treaty (NPT) means the commitment of states to nuclear disarmament and non-proliferation -- including the status and role of the nuclear arsenals of the nuclear weapon states -- is under increased scrutiny.

Article VI of the NPT commits the nuclear powers to eliminate their nuclear weapons,<sup>3</sup> and the Treaty's future will depend upon whether enough non-nuclear countries agree that this promise has been adequately fulfilled. The Clinton Administration believes it has taken significant steps towards implementation of Article VI, but the hundreds of forward deployed nuclear bombs in Europe symbolize the inconsistency of this policy.

Forward deployed nuclear weapons are also one of the least recognized aspects of nuclear proliferation. Article I of the NPT prohibits the transfer of nuclear weapons by a nuclear weapons state to any state, whether a party to the Treaty or not, whether a nuclear-weapons state or not and whether directly or indirectly through an alliance. Article II prohibits non-nuclear weapons states from acquiring nuclear weapons. Yet, the hundreds of nuclear bombs in Europe are deployed in **non-nuclear** countries, all of which are actively involved in NATO nuclear planning, and some of which allocate and train military personnel in peacetime to deliver the nuclear weapons in times of war.

This report provides an overview of the hundreds of U.S. and British nuclear bombs currently deployed in Europe. It also outlines the stated rationales attributed to these weapons by NATO and the United States, and it discusses their implications for the NPT.

## II. NATO and Nuclear Weapons In Europe

The period of 1991-92 saw great reductions in forward deployed land-based nuclear weapons in Europe. In September 1991, President Bush announced the withdrawal of all U.S. ground-launched nuclear weapons and naval nuclear depth bombs from overseas.<sup>4</sup> Britain and Russia also responded with similar steps, and the NATO Nuclear Planning Group meeting in Taormina, Sicily, in October 1991, endorsed an 80 percent cut in tactical nuclear weapons in Europe.<sup>5</sup>

After the reductions of the 1991-1992 period, however, little scrutiny was paid to the continued forward deployment of tactical nuclear weapons in Europe. Instead of proceeding towards a denuclearized Europe, NATO instead reiterated its commitment to maintaining forward deployed nuclear weapons. At the North Atlantic Council meeting in Rome in November 1991, the NATO heads of state announced a new Strategic Concept which concluded that, "the presence of ... US nuclear forces in Europe remain vital to the security of Europe." The meeting agreed to "maintain for the foreseeable future an appropriate mix of nuclear and conventional forces in Europe" and upgrade them as necessary.<sup>6</sup>

Two types of nuclear bombs are currently forward deployed in Europe: U.S. B61s and British WE-177A/Bs. The B61 tactical nuclear bomb is deployed by the U.S. Air Force, and has a selective yield ranging from less than one kiloton to 175 kilotons. The B61 exists in three versions: Mod -3, -4, and -10. The Mod-10 is a converted W85 nuclear warhead which was previously deployed in Europe on Pershing II missiles but withdrawn under the 1987 INF agreement.<sup>7</sup> The United Kingdom deploys the WE-177A/B nuclear free-fall bomb. The A version has a yield of up to 200 kilotons, the B version up to 400 kilotons.<sup>8</sup>

The nuclear bombs are assigned to A-7, F-15, F-16, and Tornado aircraft.<sup>9</sup> The United States has dual-capable F-16 Falcons deployed at Spangdahlem Air Base (AB), Germany, and Aviano AB in Northern Italy, and rotates F-16s from bases in the United States to Ramstein AB, Germany, and Incirlik AB in Turkey. It also deploys two squadrons of F-15E Eagles at RAF Lakenheath in the United Kingdom.<sup>10</sup> U.S. B61 bombs are also assigned to Belgian F-16s at Kleine Brogel AB, German Tornados at Buechel AB, Memmingen AB, and Norvenich AB,<sup>11</sup> Italian Tornados at Ghedi-Torre and Rimini,<sup>12</sup> Dutch F-16s at Volkel AB in the Netherlands, and Turkish F-16s at Balikesir AB and Murted AB. Greek ex-US Navy A-7 Corsairs at Araxos AB are also thought to be assigned U.S. B61 nuclear bombs. Finally, Britain deploys four squadrons of Tornado planes with WE-177A/B nuclear bombs at RAF Bruggen in Germany. The WE-177 bombs will be retired in 1998 following Britain's announcement on 4 April to scrap its nuclear free-fall bombs.<sup>13</sup> The British bombs were introduced between 1966 and 1971 with an estimated life of 25 years, so they were approaching retirement anyway.

### A. Where the Bombs Are

Seven European countries are thought to host foreign nuclear weapons. They include Belgium, Germany, Greece, Italy, Netherlands, Turkey, and United Kingdom. Six of these nations are participants in secret programs (called "Programs of Cooperation") where their equipment is certified to deliver nuclear bombs (the exception is the United Kingdom, which has its own nuclear bombs).<sup>14</sup> An Allied Command Europe Nuclear Operations Plan is published by SHAPE (Supreme Headquarters Allied Powers Europe).<sup>15</sup>

There have been rumors that nuclear bombs may have been removed from Belgian, German, Greek, and Dutch air bases. However, the governments of these countries have provided no clarity to these speculations, and the bases in question continue to be nuclear certified and staffed by nuclear weapons personnel. Furthermore, the U.S. Nuclear Posture Review's (NPR) decision to retain the "current strength" of nuclear bombs in Europe,<sup>16</sup> and President Clinton's recent acknowledgement in the National Security Strategy of the "current posture and deployment of non-strategic nuclear forces"<sup>17</sup> indicate that **all** seven NATO countries continue to store nuclear bombs on their territory.<sup>18</sup>

A total of 16 European bases store forward deployed nuclear bombs (see table 2). The U.S. nuclear bombs are stored at 15 bases. Five of these are U.S. Air Force bases, while ten are operated by the host country's armed forces. Britain has four nuclear-capable Tornado squadrons based at RAF Brüggen, Germany, that are thought to carry the WE-177A/B nuclear bomb.

Over the last 10 years, the number of nuclear air bases in Europe has been reduced by almost a third, from 23 in 1985 to 16 in 1995 (see table 1). The reduction has been most dramatic in Britain, Germany, and Turkey. Italian nuclear air bases, however, have not been reduced.

The focus of NATO nuclear planning has shifted from the former "central front" and Eastern Europe to the Middle East and beyond, requiring a southern European posture.<sup>19</sup> Since 1992, U.S. nuclear bombs have been removed from one British base (RAF Upper Heyford)<sup>20</sup> and the total number of U.S. bombs in Britain and Germany has been reduced from 625 to about 220. Moreover, two F-16 squadrons previously based at Ramstein Air Base in Germany have been moved<sup>21</sup> -- along with their designated nuclear bombs -- to Aviano in northern Italy, which now serves as the main nuclear support facility for this new southern focus.<sup>22</sup>

**Table 1:  
Nuclear Air Bases In Western Europe**

<u>Year</u>	<u>Number of Bases</u>	<u>Number of Bombs</u>
1985	23	1840
1990	18	1070
1995	16	~520

Sources: William M. Arkin and Richard W. Fieldhouse, *Nuclear Battlefields* (Cambridge, MA: Ballinger, 1985); William M. Arkin and Robert S. Norris, "Taking Stock," *Greenpeace/NRDC*, August 1992 (Revision 1).

The United States signed a memorandum of understanding with Italy on 30 November 1993, permitting the basing of two squadrons F-16s of the 401st Tactical Fighter Wing (renamed the 31st Fighter Wing as of 1 April 1994) at the Aviano Air Base. The first F-16s moved from

Ramstein Air Base in Germany in April 1994, and discussions are continuing to ensure the successful conclusion of an Aviano technical agreement.<sup>23</sup>

## B. The Number of Nuclear Weapons

The precise number of forward deployed nuclear bombs in Europe remains classified, but estimates indicate that it involves about 520 nuclear bombs.

Approximately two or three dozen are British WE-177A/B bombs while the remaining 480 or so are U.S. B61 nuclear bombs.

U.S. Deputy Secretary of Defense John Deutch told the U.S. Congress in 1994 that the NPR would maintain the "current strength" of non-strategic nuclear weapons in Europe.<sup>24</sup> The arsenal peaked in 1967 at 7,200 warheads and declined to approximately 4,300 in 1987.<sup>25</sup> Shortly after the U.S. announced the removal of all ground-launched nuclear weapons from Europe in September 1991, the number of nuclear bombs was reported to be some 1,400. A senior NATO official predicted "significant reductions" below that level,<sup>26</sup> and at the NATO Nuclear Planning Group (NPG) meeting in Taormina, Sicily, in October 1991, the NATO defense ministers decided to reduce the number to about 700 in the next two to three years.<sup>27</sup> By August 1992, the reduction had brought it down to approximately 970,<sup>28</sup> and the number had further declined to about 700 as of Spring 1994.<sup>29</sup>

When the NPR was announced in September 1994, the U.S. stockpile in Europe had been cut by 91 percent, leaving nine percent of the Cold War level,<sup>30</sup> corresponding to some 630 warheads compared with the 1967 peak level.<sup>31</sup> *The Washington Post* and *The Times* of London

**Table 2:  
U.S. and British Nuclear Bombs Deployed Overseas**

<u>Country</u>	<u>Air Base Aircraft</u>	<u>Associated Warheads*</u>	<u>Estimated</u>
<b>United States</b>			
Belgium	Kleine Brogel**	Belgian F-16s	10 or less
Germany	Buechel**	German Tornados	10
	Memmingen**	German Tornados	10
	Norvenich**	German Tornados	10
	Ramstein	U.S. F-16s***	50
	Spangdahlem	U.S. F-16s	30
Greece	Araxos**	Greek A-7s	10 or less
Italy	Aviano	U.S. F-16s	100
	Ghedi-Torre	Italian Tornados	10
	Rimini	Italian Tornados	10
Netherlands	Volkel**	Dutch F-16s	10 or less
Turkey	Balikesir	Turkish F-16s	10
	Incirlık	U.S. F-16s***	90
	Murted	Turkish F-16s	10
United Kingdom	RAF Lakenheath	U.S. F-15Es***	110
Total:	15 bases ~480		
<b>United Kingdom</b>			
Germany	RAF Brüggen	U.K. Tornados	24-36
<b>Subtotal</b>	<b>16 bases</b>		<b>~520</b>

\* Allied aircraft are supplied with U.S. nuclear bombs kept in custody by U.S. personnel.  
 \*\* Rumors that nuclear weapons may have been removed have not been confirmed, and the base continues to be nuclear certified and staffed by nuclear weapons personnel.  
 \*\*\* Rotation aircraft coming from bases in the United States. Also, some F-111s based in the United States are presumed to be assigned nuclear missions in Europe.

reported the NPR left roughly 480 nuclear bombs in Europe,<sup>32</sup> while other reports ranged from approximately 300<sup>33</sup> to "several hundred" bombs.<sup>34</sup>

As of the end of 1994, most nuclear bombs were estimated to be stored in Germany, a total of approximately 140 (110 U.S. B61s and about 30 British WE-177A/Bs). Italy stores 120 bombs, while Turkey and Britain both store about 110 U.S. nuclear bombs. The three smaller European "nuclear" countries, Belgium, Greece, and the Netherlands, each are estimated to store 10 or less B61 nuclear bombs (see table 2).

The combined explosive power of all the forward deployed nuclear bombs in Europe is estimated to be about 98 megatons at its maximum yield, corresponding to over 7,500 times the explosive power of the bomb that destroyed Hiroshima. The combined yield is equivalent to 16 times the explosive power of all the bombs that were dropped in the Second World War.<sup>35</sup> The largest megatonnage is thought to be stored in Germany (26.5 megatons), while Italy stores 21 megatons. Turkey and Britain each store some 19.3 megatons, while Belgium, Greece, and the Netherlands each host 1.8 megatons of explosive power.

### **C. The Rationales for Keeping Nuclear Weapons in Europe**

Only a few years ago the purpose of tactical nuclear weapons in Europe was to deter a Soviet conventional attack on Europe and provide nuclear warfighting capabilities. But with the break-up of the Soviet Union and the demise of the Warsaw Pact this rationale has disappeared. Throughout the early 1990s, NATO formulated new rationales for keeping U.S. and British tactical nuclear bombs in Europe. The rationales are more general and unprecise in nature and not tied to one specific enemy, and include such reasons as providing "the ultimate security," concern over proliferation of weapons of mass destruction, prevention of wars, and "burden sharing" within NATO. Most recently, as part of the NPR, the United States has announced its plans to maintain the "current strength" of nuclear bombs in Europe at least until 2003.

#### **1. NATO Justifications**

The question of air-delivered nuclear bombs in the European theater was taken up at the NATO Nuclear Planning Group (NPG) in Taormina, Italy, in October 1991.<sup>36</sup> The meeting decided that 700 nuclear bombs would remain in Europe, and the final communique specifically pointed to "the proliferation of nuclear weapons, which remains a matter of great concern."<sup>37</sup> The conference communique concluded:

"Nuclear weapons will continue for an indefinite future to cover their essential role in the general strategy of the alliance, since conventional forces alone cannot ensure the prevention of war."<sup>38</sup>

At a press conference after the meeting, NATO General-Secretary General Manfred Woerner added that, despite the changes in Eastern Europe, the danger of nuclear proliferation,

and Iraq specifically, meant that "it would not be reasonable to renounce all nuclear weapons and to denuclearize Europe."<sup>39</sup> Woerner added:

"Nuclear weapons will never be disinvented. That is why I do not foresee a situation where we will denuclearize Europe. These weapons provide the ultimate guarantee of our security."<sup>40</sup>

The recommendations from the NPG meeting were endorsed by the NATO heads of state and governments at their subsequent meeting in Rome in November 1991. The NATO leaders approved a new Strategic Concept which also pointed to the threat from proliferation, specifically in the Southern Mediterranean and Middle East.<sup>41</sup>

The NATO leaders, however, also added another and much more general justification for the nuclear weapons: "to preserve peace, and prevent war or any kind of coercion."<sup>42</sup> The threat of a large-scale military attack on European territory had disappeared, the leaders concluded. Instead, economic, social, and political difficulties, including ethnic rivalries and territorial disputes, were likely to be the new risks to NATO security. Since "conventional forces alone cannot ensure the prevention of war," the new Strategic Concept expanded the potential role of nuclear weapons to all sorts of conflict scenarios: "Nuclear weapons make a unique contribution in rendering the risk of any aggression incalculable and unacceptable. Thus, they remain essential to preserve peace."<sup>43</sup>

The NATO state leaders therefore agreed to "maintain for the foreseeable future an appropriate mix of nuclear and conventional forces in Europe," and keep them up to date where necessary. The numbers would be significantly reduced compared with Cold War levels, but the Strategic Concept concluded that nuclear and conventional forces "are essential to Alliance security and cannot substitute one for the other."<sup>44</sup>

In late 1991, NATO also approved a 30-page document, known as MC-400, detailing NATO strategy for conventional and nuclear forces in the post-Cold War era. The document concluded that the NATO alliance now faces risks from instability in a variety of areas, including the former Soviet Union and the Middle East, and provided military guidance for implementing the new strategy. The alliance's nuclear arsenal was mainly a political weapon, MC-400 reiterated, but added that they could be used selectively to end a conflict, by convincing an attacker to end a conflict by confronting him with overwhelming costs if continuing the war. Nuclear weapons would be used especially on an initial strike, in a way that is "constrained, discriminate and measured," the document says. Targets would include high-priority military targets, especially on an enemy's home territory, using either air-delivered nuclear bombs or missiles launched from ships and/or submarines.<sup>45</sup>

Following the Rome meeting, articles written by NATO officials began to appear in a variety of papers and magazines explaining the new direction. In an outline of NATO's nuclear strategy, entitled "Nuclear Forces -- The Ultimate Umbrella," British Air Chief Marshal Sir



Brendan Jackson wrote that Third World nuclear proliferation was even "more chimerical" than the threat from Russian nuclear weapons.<sup>46</sup>

The communiqué from the NPG meeting in Brussels in November 1994 also expressed concern over proliferation, pointing to "the growing risks to Alliance security interests" posed by the spread of weapons of mass destruction, ballistic missiles, and related technologies to more countries.<sup>47</sup> The reference to proliferation as a justification for keeping nuclear weapons matches a trend in the nuclear weapons states towards increasingly linking the role of nuclear weapons to countering the acquisition and use of weapons of mass destruction by more countries.<sup>48</sup>

Other rationales for retaining nuclear weapons in Europe relate to maintaining Alliance solidarity. One relates to the principle of burden sharing within NATO. Deploying nuclear weapons in a number of European countries gives these nations both the declared benefits and risks associated with having nuclear weapons on their territory.<sup>49</sup> Another suggestion is that European NATO allies traditionally have welcomed nuclear deployment cooperation programs because of the access it grants to U.S. nuclear planning. Without this admittance, future nuclear planning in the Alliance might take place on a more restricted basis.<sup>50</sup>

## 2. U.S. Justifications

When the U.S. pulled its ground-launched tactical nuclear weapons out of Europe in 1991-92 and left several hundred air-delivered nuclear bombs behind, Soviet President Mikhail Gorbachev suggested that the bombs should be removed from forwardly located airfields.<sup>51</sup> At first, U.S. Defense Secretary Dick Cheney seemed intrigued by the proposal, and a senior defense official told *The Washington Post* that NATO would study where the new storage sites might be located.<sup>52</sup>

But in a speech to the NATO North Atlantic Council a few days later, the U.S. chairman of the Joint Chiefs of Staff, General Colin Powell, rejected the proposal, saying he wanted to be "hedging against our having guessed wrong and the world's not turning out to be quite as nice a place as we prayed." One way of hedging was to keep nuclear bombs in Europe. "The essential nuclear linkage remains in the form of our dual capable aircraft,"<sup>53</sup> Powell said.

At the time, U.S. Air Force officials stated off the record that they would have preferred to remove all the nuclear bombs from Europe, but that they were forced to leave some behind for political reasons to help maintain U.S. influence in NATO in the future. Furthermore, a complete U.S. nuclear pull-out would have meant that the only nuclear weapons in Western Europe were British and French, leaving those countries exposed to demands for further nuclear disarmament.<sup>54</sup>

Since then, nuclear weapons proliferation concern has become a prominent U.S. rationale for retaining nuclear bombs in Europe. The U.S. Joint Chiefs of Staff (JCS) suggested in March

1991 that tactical nuclear weapons "could assume a broader role globally in response to the proliferation of nuclear capability among Third World nations."<sup>55</sup> At the NATO summit in Rome in November 1991, the United States signed on to the Alliance's new Strategic Concept linking the presence of tactical nuclear weapons in Europe to the proliferation of nuclear weapons.

The NPR, which was completed in September 1994, examined the role of U.S. forward deployed nuclear forces and concluded that nuclear bombs would continue to be stored in Europe "as part of our commitment to the Alliance."<sup>56</sup> Deputy Secretary of Defense John Deutch told Congress that the "non-strategic nuclear forces we maintain [in Europe] have both military purposes and very important political purposes with respect to the NATO alliance."<sup>57</sup>

In his briefing, Deutch provided a chart entitled the "Adjusted Nuclear Posture." The chart listed three or four Alliance commitments served by nuclear weapons in Europe, including "deter attack on allies" and "maintain [non-strategic nuclear forces] capabilities." One or two other roles were deleted from the public record.<sup>58</sup> Deutch outlined the change that has taken place:

"There was a time when the military purpose of the non-strategic nuclear forces in Europe was to assure that we could blunt a conventional Russian Soviet attack, if it were to break through into Europe. That was the purpose of the tactical nuclear weapons in Europe. That need, that military requirement, has disappeared because the Soviets do not exist and the Russian no longer have the military capability to mount that kind of conventional attack.

So the military purpose of the non-strategic nuclear forces is changing. On the other hand, the political purpose of those weapons to maintain within the alliance shared responsibility for nuclear forces and make sure the Europeans know that they can rely in a serious way on our nuclear forces as well as our conventional forces is an important element in understanding what changes are possible and that pace of changes with respect to non-strategic nuclear forces."<sup>59</sup>

Russian non-strategic nuclear forces were not presented by the NPR as a rationale for keeping tactical nuclear weapons in Europe. But Deutch did express "great concern" about the disparity between Russian and U.S. non-strategic nuclear forces, and pointed out that "most of the non-strategic nuclear weapons in Russia are located at distances which can easily be delivered against European targets."<sup>60</sup>

During the congressional hearings on the NPR, Deutch insisted that the political value of tactical nuclear weapons as a commitment to NATO remains high, but he admitted considerable uncertainty over the role of U.S. nuclear weapons in Europe:

"I believe we still have a very long diplomatic road to travel to understand better with NATO what the role is of nuclear weapons in NATO. Indeed, one of the

most important outcomes of the Nuclear Posture Review was this notion about how we're going to address non-strategic nuclear weapons, of which the NATO question is one. ... we have to, over time, re-look at this question, with respect to NATO."<sup>61</sup>

The NPR emphasized the international nature of U.S. nuclear forces. In his annual report to the President and the Congress from February 1995, Defense Secretary William Perry stated that, the United States extends the deterrent protection of its nuclear arsenal to its allies. "A very progressive aspect of US nuclear posture, is that it is, in part, an international nuclear posture. The NPR strongly supports continued commitment to NATO and Pacific allies.... Nowhere is this more evident than in the area of [air-delivered tactical nuclear bombs], which are not covered by START I and START II."<sup>62</sup> Specifically, Perry explained:

"... maintaining U.S. nuclear commitments with NATO, and retaining the ability to deploy nuclear capabilities to meet various regional contingencies, continues to be an important means for deterring aggression, protecting and promoting U.S. interests, reassuring allies and friends, and preventing proliferation."<sup>63</sup>

The reference to "preventing proliferation" is thought to relate to the concept of so-called extended deterrence. By extending nuclear forces to other countries, the United States believes it helps dampen any incentives these nations may otherwise have to acquire nuclear weapons for their own security.<sup>64</sup>

European allies helped shape the future U.S. nuclear arsenal by providing justifications to the NPR to retain nuclear weapons in Europe. "With input from allied countries," Deputy Secretary of Defense John Deutch stated in 1994, "we concluded that there continues to be a nuclear element to NATO's defense posture and that the US will sustain its commitment to both NATO and Pacific allies."<sup>65</sup> According to Defense Secretary Perry:

"Alliance commitments and the unique characteristics of nonstrategic nuclear forces were primary considerations in the NPR's consideration of what the [non-strategic nuclear weapons] force structure should be."<sup>66</sup>

In early 1995, the Joint Chiefs of Staff reiterated the role of tactical nuclear bombs in Europe. The Chairman of the Joint Chiefs of Staff, General John Shalikashvili, stated before Congress in February, that the bombs will be maintained in Europe, "to protect our allies."<sup>67</sup> The newest JCS National Military Strategy stipulates:

"We still need to maintain a mix of forward deployed and deployable nonstrategic nuclear weapons, both to provide deterrent coverage over our allies, and because extended deterrence, in many cases, is a decisive factor in our nonproliferation effort."<sup>68</sup>

Finally, the most recent National Security Strategy issued by President Clinton in February 1995, acknowledges that the NPR "reaffirmed the current posture and deployment of non-strategic nuclear forces."<sup>69</sup>

### **III. Upgrading the Nuclear Weapons Infrastructure**

Upgrades to support the deployment of nuclear bombs in Europe continue to be made. The Joint Chiefs of Staff reported in March 1991 that, "the proliferation of nuclear weapons means that US nuclear forces will require C<sup>3</sup> [command, control, and communication] systems with increased capabilities." One system being fielded is the MILSTAR/SCOTT satellite system which reportedly will improve the command, control, and communication in relation to non-strategic nuclear forces.<sup>70</sup>

Following the U.S. decision in September 1991 to reduce tactical nuclear weapons in Europe, NATO officials told *The Washington Post* that a NATO program for installing new bunkers for the remaining air-delivered bombs at air bases in Europe was underway.<sup>71</sup>

General George A. Joulwan, the Commander-in-Chief of the U.S. European Command, told Congress in March 1994, that part of changing the U.S.-NATO Infrastructure Program from Cold War priorities to "meeting emerging readiness requirements in the theater" included funding "Command and Control Systems for the security of residual nuclear weapons."<sup>72</sup>

This nuclear modernization was reflected in the U.S. Department of Defense military construction budget request for FY 1995 for the NATO Infrastructure Program, which included the language, "Upgrade and maintenance of nuclear weapons safety, security, and survivability systems (WS3)."<sup>73</sup>

The NATO Nuclear Planning Group meeting in Brussels in November 1994 "reviewed the process of adoption of NATO's nuclear posture to the new security environment." This included restructuring tactical nuclear forces and updating and adjusting consultation and planning procedures in support of the nuclear posture required by the Strategic Concept.<sup>74</sup>

### **IV. The Non-Proliferation Treaty and Forward Deployed Nuclear Weapons**

NATO's routine integration of non-nuclear countries in nuclear planning, and the presence of hundreds of forward deployed nuclear bombs in non-nuclear NATO countries, has serious implications for the integrity of the international nuclear non-proliferation regime.

As non-nuclear members of the NATO Alliance, Belgium, Canada, Denmark, Germany, Greece, Iceland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, and Turkey take part in widespread collective nuclear defense planning, in approving deployment and

modernization of nuclear arsenals, in peacetime basing of nuclear forces, and in command, control, and communication arrangements.<sup>75</sup>

All of the non-nuclear NATO countries which host nuclear weapons on their territory (Belgium, Germany, Greece, Italy, the Netherlands, Turkey) have signed the 1970 nuclear Non-Proliferation Treaty (NPT). Under the Treaty they pledge:

"... not to receive the transfer ... of nuclear weapons or other nuclear explosive devices or of control over such weapons or explosive devices directly, or indirectly...."<sup>76</sup>

Likewise, as nuclear weapons states party to the NPT, the United States and Britain have committed themselves:

"... not to transfer to any recipient whatsoever nuclear weapons or other nuclear explosive devices or control over such weapons or explosive devices directly, or indirectly...."<sup>77</sup>

U.S. forward deployed nuclear weapons in Europe are extensively integrated into the military infrastructure of the countries that host these weapons. Nuclear cooperation agreements exist with Belgium, Germany, Greece, Italy, the Netherlands, and Turkey to allow national pilots to deliver U.S. nuclear bombs with their own planes in times of war. No transfer of nuclear bombs or control over them are intended "unless and until a decision were made to go to war, at which the [NPT] treaty would no longer be controlling."<sup>78</sup> In peacetime, however, these "non-nuclear" nations train and prepare for their assigned nuclear mission.

The United States and the nuclear host countries argue that because direct "transfer" of control of the nuclear weapons would only take place in wartime, there is no breach of the Non-Proliferation Treaty as such. But while it may not represent a strictly legal violation, it certainly contravenes both the objective and the spirit of the Treaty. It endorses the concept that non-nuclear countries may adopt "surrogate" nuclear roles on behalf of nuclear powers.

Criticism of such a narrow legalistic reading of the treaty has been raised at NPT review conferences in the past. During the second review conference in 1980, for example, non-nuclear weapons states complained that the deployment of nuclear weapons in non-nuclear countries and in international waters was contrary to the nuclear non-proliferation objective of the Treaty.<sup>79</sup> Delegations also expressed the view informally that further sophistication of tactical nuclear weapons in Europe and concomitant doctrines for their use, might require transfer of control over such weapons to members of the military alliance. The Second Review Conference failed to adopt a consensus declaration, partly attributable to the threat of US and Soviet weapons deployed in Europe.

## V. Conclusion

The continued forward deployment of hundreds of U.S. and British nuclear weapons in Europe contravenes both the spirit and the objectives of the Non-Proliferation Treaty (NPT), and specifically raises questions about compliance with Articles I, II, VI, VII of the Treaty. Furthermore, it is out of step with international efforts to stem the spread of nuclear weapons capabilities to more countries.

A paramount objective of the international non-proliferation effort under the NPT is to prevent the creation of more nuclear weapons states. Yet, clearly, the forward deployment of nuclear weapons in Europe blurs the distinction between nuclear and non-nuclear countries, and raises questions about the transfer of nuclear weapons to non-nuclear states. The nuclear bombs of nuclear weapons states are based on the territory of "non-nuclear" European countries, and these "non-nuclear" host countries assign and train national military personnel in peacetime to use the nuclear weapons in times of war, and the "non-nuclear" countries are actively involved in nuclear war planning as part of their membership of NATO.

Ironically, the non-nuclear European states which permit nuclear weapons on their soil are also among the most prominent calling for indefinite and unconditional extension of the NPT. Yet, pledging to retain "foreign" nuclear bombs for the "foreseeable future" and refusing to commit to their elimination will not contribute to a successful outcome at April's NPT Review and Extension Conference. The NPT's failure in the last 25 years to bring about the elimination of nuclear weapons is a key reason for many non-nuclear states to argue for only limited extension of the NPT tied to a program for nuclear disarmament, including elements such as forward deployed nuclear bombs.

For NATO to claim the "benefits" of a "nuclear umbrella" of foreign deployed nuclear weapons in Europe, while insisting that other nations cannot seek the same security, is hypocritical and impedes the development of a universal and non-discriminatory non-proliferation regime.

Furthermore, forward deployed nuclear weapons in Europe are an obstacle to wider application of Article VII of the NPT, which promotes nuclear weapons free zones.<sup>80</sup> For the United States to base nuclear weapons in countries like Italy, Turkey, and probably also in Greece and at the same time to actively promote a nuclear weapons free zone in the Middle East, clearly reveals the contradictions within such a policy.

Finally, in terms of military application, the forward deployed nuclear weapons in Europe have lost all credibility. The threat that these weapons were initially designed and deployed to counter has vanished, and NATO has been unable to present new credible missions other than dubious rationales, such as countering proliferation, preventing wars, and providing the ultimate security for the Alliance.<sup>81</sup> Moreover, continued deployment of U.S. nuclear weapons in Europe is becoming a major issue in NATO expansion, working contrary to creating more positive

trends in U.S./European-Russian relations. In short, nuclear weapons are a burden to the new security challenges facing Europe today.

As a means toward further reducing the role of nuclear weapons, as a refutation of the importance of nuclear weapons for national status and prestige, and as a measure of their commitment to non-proliferation and disarmament during the April-May Review and Extension Conference of the NPT, NATO members currently accepting foreign nuclear weapons on their territory should request that all such weapons be removed and dismantled as a matter of urgency. The British government's announcement on 4 April 1995 to withdraw its nuclear free-fall bombs from service by the end of 1998 is a positive development, if late in coming.<sup>82</sup> It would be logical and timely to adopt the same timeline -- if not an earlier date -- for removing all U.S. bombs. Moreover, non-nuclear states whose armed forces are involved in nuclear weapons missions should discontinue such programs.

## Abbreviations

C <sup>3</sup>	Command, Control and Communication
JCS	U.S. Joint Chiefs of Staff.
NATO North Atlantic Treaty Organization	
NPG	Nuclear Planning Group
NPR	Nuclear Posture Review; a 1994 review of U.S. nuclear forces
NPT	Non-Proliferation Treaty
NSNF	Non-Strategic Nuclear Forces
RAF	Royal Air Forces
WEU	Western European Union

## Endnotes:

1. The purpose of the North Atlantic Council (NAC) is to "consider matters concerning the implementation of" the North Atlantic Treaty. NAC has effective political authority and powers of decision, and all NATO countries have permanent representation in the Council. NAC is the only body within the Alliance which derives its authority explicitly from the Treaty itself. See: *NATO Handbook* (Brussels, Belgium: NATO Office of Information and Press, 1992), pp. 23, 145.

2. "The Alliance's New Strategic Concept; Agreed by the Heads of State and Governments participating in the meeting of the North Atlantic Council in Rome on 7-8 November 1991," *NATO Review*, Vol. 39, No. 6, December 1991, p. 25 (hereafter referred to as NATO Review 1991, op. cit.,...).

3. See: John D. Holum, Director, U.S. Arms Control and Disarmament Agency, "Statement before the Senate Foreign Relations Committee on the Second Strategic Arms Reduction Treaty," 31 January 1995, p. 8.

4. During this period, the U.S. also withdrew all ground and air-launched nuclear weapons from South Korea.

5. "NATO Nuclear Planning Group Communique," *NATO Review*, Vol. 39, No. 6, December 1991, p. 33.

6. NATO Review 1991, op. cit., pp. 26, 29.

7. William M. Arkin and Robert S. Norris, "Operational U.S. Nuclear Weapons Stockpile, July 1994," *Bulletin of the Atomic Scientists*, July/August 1994, p. 63 (hereafter referred to as Arkin 1994, op. cit.,...).

8. Robert S. Norris, et al., *Nuclear Weapons Databook Volume V: British, French, and Chinese Nuclear Weapons* (Boulder, CO., Westview Press, 1994), p. 129.

The source estimates that the yield is probably kept on the low side, certainly below 200 kilotons, while based on German territory. Ibid., footnote 341.

9. In addition, some F-111s based in the United States are presumed to be committed to nuclear roles in Europe.

10. U.S. Air Force, "Fact Sheet: 48th Fighter Wing," 48th Fighter Wing Public Affairs, 22 March 1995 fax to Greenpeace, pp. 1, 2.

11. Rumors that nuclear weapons may have been removed from German air bases have not been confirmed. The bases continue to be nuclear certified and staffed by nuclear weapons personnel.

12. There are rumors that the nuclear bombs may have been moved to a site at Cervia near the Air Base.





13. United Kingdom Ministry of Defence, "Nuclear Free-Fall Bomb To Be Withdrawn From Service By 1998," Press Release No. 47/95, 4 April 1995.

14. William M. Arkin and Robert S. Norris, "Taking Stock: U.S. Nuclear Deployments at the End of the Cold War," Greenpeace/NRDC, August 1992 (Revision 1), p. 6 (hereafter Arkin 1992, op. cit.,...).

15. U.S. Department of the Navy, "Curriculum Outline For Allied Command Europe (AEC) Nuclear Weapons Release Procedures," Nuclear Weapons Training Group, Atlantic, Nuclear Warfare Department, J-2G-0937, 9 November 1990, Annex B, p. B:1. Released under the Freedom of Information Act.

16. John Deutch, Deputy Secretary of Defense, in U.S. Congress, Senate, Armed Services Committee, "Briefing On Results Of The Nuclear Posture Review," 103rd Cong., 2nd sess., 22 September 1994, p. 17 (chart) (hereafter referred to as Deutch 1994, op. cit.,...).

The Nuclear Posture Review reportedly prevented the removal of U.S. nuclear weapons from Europe. William M. Arkin, "A Tale of Two Franks," *Bulletin of the Atomic Scientists*, March/April 1995, p. 80.

17. President William Clinton, "A National Security Strategy of Engagement and Enlargement," The White House, Washington, D.C., February 1995, p. 15.

18. Moreover, in the case of Araxos Air Base in Greece, continued U.S. Air Force presence at the base is confirmed by the inclusion in the U.S. Air Force military construction budget request for FY 1996 of nearly \$2 million for the construction of dormitories for U.S. personnel. U.S. Department of Defense, "Department of Defense Budget for Fiscal Years 1996 and 1997: Construction Programs (C-1)," Washington, D.C., February 1995, p. 121.

19. Arkin 1994, op. cit., pp. 62, 65.

20. The base at Upper Heyford was turned over to the United Kingdom as of September 1994, removing U.S. military presence from that site. Phone conversation with U.S. Air Force Public Affairs, Washington, D.C., 7 March 1995.

21. See: U.S. Air Force, "31st Fighter Wing Combat Operations," 31st Fighter Wing Public Affairs, Aviano Air Base, Italy, 22 March 1995 fax to Greenpeace, pp. 1, 2.

22. Arkin 1994, op. cit., pp. 62, 65.

23. General George A. Joulwan, Commander-in-Chief, U.S. European Command, in U.S. Congress, House, Committee on Appropriations, Subcommittee on Military Construction Appropriations, Hearings on Military Construction Appropriations for 1995, Part 5, 103rd Cong., 2nd sess., 24 March 1994, p. 310.

According to General Joulwan:

"On the 9th of February when the North Atlantic Council made the decision [to move the F-16 planes to Italy], I sat through 12 hours of a meeting; it ended at 2300. I immediately flew to Aviano, Italy to meet with the theater commander. We moved forces from the north, from England, from Ramstein, right down to the south. They don't have to be based in the south in order to have mobility and agility.... We wanted a fighter base in Italy so we are going to do it at Aviano. We need to have that fighter base, and we are trying to do some repositioning work in the south." Ibid., p. 294.

24. Deutch 1994, op. cit., p. 17 (chart).

25. Thomas B. Cochran, et al., "The Bomb Book: The Nuclear Arms Race In Facts And Figures," Washington, D.C., Natural Resources Defense Council, December 1987, pp. 25, 39.

26. "NATO to Cut Stockpile of Nuclear Aircraft Bombs in Europe," *Reuter* (Brussels), 8 October 1991.



Another source at the time estimated the number to be between 900 and 1,300. "Defense Ministers Say NATO Must Maintain Limited Nuclear Arms," *United Press International* (Taormina), 18 October 1991.

27.R. Jeffrey Smith, "NATO Approves 50% Cut in Tactical A-Bombs," *The Washington Post*, 18 October 1991; Alan Riding, "NATO to Cut Aircraft A-Bombs by 50%," *The New York Times*, 18 October 1991, p. A3.

According to unidentified NATO officials, the cuts were intended not only to mark the ending of the Cold War, but also to renew public support for an alliance force that includes just a single type of nuclear armament instead of the 11 types deployed in Europe a few years ago. Jeffrey Smith, "NATO Approves 50% Cut in Tactical A-Bombs," *The Washington Post*, 18 October 1991.

28.Arkin 1992, op. cit., p. 6.

29.Mr. De Decker, et al., "The role and future of nuclear weapons," Assembly of Western European Union, Defense Committee, 40th Ordinary Session, Document 1420, Paris, 19 May 1994, p. 14.

30.Deutch 1994, op. cit., pp. 22 (chart), 27.

31.The nine percent is derived only from approximately 7,000 bombs, which would be under U.S. command, not some 200 nuclear depths bombs that were under Allied command.

32.Jeffrey Smith, "Clinton Favors Status Quo Nuclear Policy, Balks at Talks With Russia," *The Washington Post*, 22 September 1994, p. A26; Ian Brodie, "US Offering More Aid For Russian to Disarm," *The Times*, 24 September 1994.

33.This source estimates "a third" of 950 U.S. non-strategic nuclear bombs to be deployed in Europe. Arkin 1994, op. cit., p. 62.

34.Robert Burns, "Nuclear Forces," *Associated Press* (Washington), 22 September 1994.

35.Ruth Leger Sivard, ed., *World Military and Social Expenditures 1993*, 15th ed. (Washington, D.C.: World Priorities, 1993), p. 11.

36.Don Oberdorfer, "Airborne U.S. A-Arms To Stay in South Korea," *The Washington Post*, 12 October 1991, p. A20.

37."NATO Nuclear Planning Group Communique," *NATO Review*, Vol. 39, No. 6, December 1991, p. 33.

38."Defense Ministers Say NATO Must Maintain Limited Nuclear Arms," *United Press International* (Taormina), 18 October 1991.

39.Sally Jacobsen, "NATO plans deep cuts in nuclear weapons," *Associated Press*, 3 October 1991; R. Jeffrey Smith, "NATO's Outlook Clouded by French-German Plan," *The Washington Post*, 20 October 1991, p. A20.

40.Nicholas Doughty, "NATO Says No Nuclear-Free Europe Despite Major Cuts," *Reuter* (Taormina), 18 October 1991; "Defense Ministers Say NATO Must Maintain Limited Nuclear Arms," *United Press International* (Taormina), 18 October 1991.

41.NATO Review 1991, op. cit., pp. 26, 29.

According to *NATO's Sixteen Nations*, the Strategic Concept has a classified counterpart, as a guide to national force planning, which deals with the details of the force structure and dispositions, readiness measures, and nuclear plans. "Rome Summit," *NATO's Sixteen Nations*, December 1991, p. 58.

42."Rome Declaration On Peace And Cooperation," issued by the Heads of State and Governments participating in the meeting of the North Atlantic Council in Rome on 7-8 November 1991, *NATO Review*, Vol. 39, No. 6,



December 1991, p. 19.

43.Nato Review 1991, op. cit., pp. 26, 29.

According to *NATO's Sixteen Nations*: "Nuclear forces, no longer even defined as 'weapons of last resort', [sic] are not considered relevant to immediate crisis management, but will be kept, much reduced, as the ultimate insurance against existing and possible new nuclear arsenals of other countries. Similar to conventional forces, the emphasis there is also on common involvement, by maintaining common allied planning and an allied potential, mainly in the form of dual-capable aircraft, with a strategic back-up from three allied nuclear powers (United States, Britain, and France). "Rome Summit," *NATO's Sixteen Nations*, December 1991, p. 58.

44.NATO Review 1991, op. cit., p. 29.

45.Nicholas Doughty, "NATO Strategy Allows Use of Nuclear Weapons to End War," *Reuter* (Brussels), 26 May 1992.

46.Air Chief Marshal Sir Brendan Jackson, ""Nuclear Forces -- The Ultimate Umbrella?," *NATO's Sixteen Nations*, December 1991, p. 18.

47."DPC and NPG Communiqué," *Nato Review*, February 1994, p. 35.

48.See: Hans M. Kristensen and Joshua Handler, "Changing Targets: Nuclear Doctrine from the Cold War to the Third World," Greenpeace International, Washington, D.C., 1 March 1995 (Revised Version).

49.Following NATO's decision in 1991 to retain 700 bombs in Europe, German leaders insisted on not solely bearing the political and economical costs of continuing to host U.S. nuclear weapons. U.S. Secretary of Defense Dick Cheney acknowledged this in October 1991, when he told the press that, "You do not want to singularize any nation" by placing all remaining bombs in its territory. R. Jeffrey Smith, "Cheney Open to Soviet Bomb Storage Proposal," *The Washington Post*, 16 October 1991.

50.Martin Butcher, et al., "NATO and Nuclear Proliferation," *Centre for European Security and Disarmament/British American Security Information Council*, n.d. (1994), p. 6.

51."Text of Gorbachev's Statement on Nuclear Weapons," *United Press International* (Moscow), 5 October 1991.

52.Eric Schmitt, "NATO to Cut Its Nuclear Bombs by Half," *The New York Times*, 12 October 1991, p. 3; R. Jeffrey Smith, "Cheney Open to Soviet Bomb Storage Proposal," *The Washington Post*, 16 October 1991; Charles Aldinger, "Cheney Says NATO May Move Nuclear Bombs Off European Air Bases," *Reuter* (Naples), 16 October 1991.

53.Rowan Scarborough, "U.S. to Keep Nukes in Europe," *The Washington Times*, 10 October 1991, p. A1.

54.Hans M. Kristensen, "Atomforvirring Efter Den Kolde Krig [Nuclear Confusion After the Cold War]," *Information* (Copenhagen), 10 August 1992, p. 2.

55.Joint Chiefs of Staff, "Joint Military Net Assessment," Washington, D.C., March 1991, p. 7-1 (box).

56.OASD(PA), "Press Conference with Secretary of Defense William J. Perry, General Shalikashvili, Chairman, JCS, Deputy Secretary of Defense John Deutch, Mr. Kenneth H. Bacon, ATSD-PA," News Release No. 546-94, 22 September 1994, p. 8.

57.Deutch 1994, op. cit., p. 16.

58.Ibid., pp. 9 (chart), 16.

In addition to air-delivered bombs, nuclear Tomahawk missiles are also thought to be linked to



contingencies in Europe. The Chief of U.S. Naval Operations, Admiral Carlisle Trost, told Congress in May 1989 that the NATO Ministers of Defense recently had "approved a Memorandum of Agreement (MOA) that implements the planning process for TLAM/N in support of the alliance. Admiral Carlisle Trost, Chief of Naval Operations, in Congress, Senate, Armed Services Committee, "Department of Defense Authorization for Appropriations for Fiscal Years 1990 and 1991," Part 1, 101st Cong., 1st sess., 4 May 1989, p. 225; Christopher Bellamy, "NATO in Secret Pact on Naval Cruise Missiles," *The Independent*, 4 June 1990, p. 1; Peter Almond, "NATO Adds Sea-Launched Missiles to Arsenal," *The Washington Times*, 5 June 1990, p. 10.

When asked about the purpose of nuclear Tomahawks at the Nuclear Posture Review press conference, Deputy Secretary of Defense John Deutch stated:

"Because in a hypothetical situation where you have an exchange or reach of nuclear weapons that do not involve the homeland of either the United States or of Russia, or which involve ... the security of NATO. The way you deter that from happening is to have an ability to respond on a regional basis."

DOD News Release No. 546-94, OASD(PA), "Press Conference with Secretary of Defense William J. Perry, General Shalikashvili, Chairman, JCS, Deputy Secretary of Defense John Deutch, Mr. Kenneth H. Bacon, ATSD-PA," 22 September 1994, p. 16.

59.Deutch 1994, op. cit., p. 16.

60.Ibid., pp. 15, 16.

61.John Deutch, Deputy Secretary of Defense, Statement before the House Foreign Affairs Committee, 5 October 1994, Federal News Service Transcript, pp. 30, 31.

62.William J. Perry, U.S. Secretary of Defense, "Annual Report to the President and the Congress," Washington, D.C., February 1995, pp. 83, 89 (hereafter referred to as Perry 1995, op. cit.....).

63.Ibid., p. 84.

64.For a description of this rationale, see: Thomas C. Reed and Michael O. Wheeler, "The Role of Nuclear Weapons in the New World Order," 13 January 1992.

65.John Deutch, Deputy Secretary of Defense, written answer in response to question submitted by Senator Strom Thurmond, in U.S. Congress, Senate, Committee on Armed Services, Briefing on Results of the Nuclear Posture Review, 103rd Cong., 2nd sess., 22 September 1994, p. 57. The answer was submitted too late for inclusion in the printed hearing, but is retained in Committee files.

66.Perry 1995, op. cit., p. 84.

67.General John M. Shalikashvili, Chairman of the Joints Chiefs of Staff, Posture Statement before the Senate Armed Services Committee, 9 February 1995, p. 12.

68."National Military Strategy of the United States of America," Joint Chiefs of Staff, Washington, D.C., February 1995, p. 10.

69.President William Clinton, "A National Security Strategy of Engagement and Enlargement," The White House, Washington, D.C., February 1995, p. 15.

70.Joint Chiefs of Staff, "Joint Military Net Assessment," Washington, D.C., March 1991, p. 11-12.

71.R. Jeffrey Smith, "Cheney Open to Soviet Bomb Storage Proposal," *The Washington Post*, 16 October 1991.

72.General George A. Joulwan, Command-In-Chief, U.S. European Command, in U.S. Congress, House, Committee on Appropriations, Subcommittee on Military Construction Appropriations, Hearings on Military

Construction Appropriations For 1995, Part 5, 103rd Cong., 2nd sess., 24 March 1994, p. 268.

73. Department of Defense, "Military Construction Program: FY 1995 Budget North Atlantic Treaty Organization Infrastructure Program," February 1994, in U.S. Congress, House, Committee on Appropriations, Subcommittee on Military Construction Appropriations, "Military Construction Appropriations for 1995," Part 2, 103rd Cong., 2nd sess., 1994, p. 405.

74. "DPC and NPG Communiqué," *Nato Review*, February 1994, p. 35.

75. The U.S. Defense Department's FY 1995 budget request for the North Atlantic Treaty Organization Infrastructure Program, for example, explains how the "maintenance of the nuclear deterrent also demands continuation of dedicated NATO communication systems to effect allied consultation and control of weapons." Department of Defense, "Military Construction Program: FY 1995 Budget North Atlantic Treaty Organization Infrastructure Program," February 1994, in U.S. Congress, House, Committee on Appropriations, Subcommittee on Military Construction Appropriations, "Military Construction Appropriations for 1995," Part 2, 103rd Cong., 2nd sess., 1994, p. 404.

76. *Arms Control and Disarmament Agreements* (Washington, D.C.: ACDA, 1990), p. 99.

77. *Ibid.*

78. 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 and 20 February 1969; as cited in Martin Butcher, et al., "NATO and Nuclear Proliferation," Centre for European Security and Disarmament/British American Society Information Council, n.d. (1994), p. 5.

79. *SIPRI Yearbook 1981* (London: Taylor & Francis Ltd., 1981), pp. 299, 346.

80. Article VII reads: "Nothing in this Treaty affects the right of any group of States to conclude regional treaties in order to assure the total absence of nuclear weapons in their respective territories." U.S. Arms Controls and Disarmament Agency, *Arms Control and Disarmament Agreements* (Washington, D.C.: ACDA, 1990), p. 101.

81. Even the Defense Committee of the Parliamentary Assembly of the Western European Union, to which Belgium, Germany, Italy, the Netherlands, and the United Kingdom are members, concluded in 1994, that the forward deployed nuclear bombs in Europe play a "purely political and symbolic role," and that their role in extended deterrence or deterring nuclear proliferation is losing credibility. Mr. De Decker, et al., "The Role and Future of Nuclear Weapons," Assembly of Western European Union, Defense Committee, Document 1420, 19 May 1994, pp. 4, 5.

82. These bombs were reaching the end of their service life in any event, and their "sub-strategic" missions will be taken over by the new U.K. Trident submarines and missiles. Nonetheless, this is an important symbolic development and should cast doubts on the rationales for keeping U.S. nuclear weapons in Europe.