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Implications of the INF Treaty

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Introduction

The United States and the Soviet Union have agreed to sign a treaty to eliminate all ground-launched missiles with a range of 500-5,500 kilometers (300-3,400 miles)[1] over a three-year period.

Under the agreement, both sides will dismantle or destroy all deployed and non-deployed weapon systems. The U.S. will destroy 108 currently operational Pershing IIs and 256 currently operational Ground-launched cruise missiles (GLCMs),[2] and the Soviets will destroy 441 operational SS-20 Sabers (each with three warheads), 112 single warhead SS-4 Sandals, and approximately 160 short-range SS-12M Scaleboard B and SS-23 Spider missiles. At least 1,595 Soviet and 396 U.S. nuclear warheads will be removed.[3]

The INF Treaty will have important implications for the character and pace of the nuclear arms race and the future of the North Atlantic Treaty Organization (NATO). European NATO allies have endorsed the U.S.-Soviet agreement, though some fear that

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[1] The weapon systems included in this agreement are: long-range intermediate nuclear forces (LRINF) with a range of 1,800-5,500 kilometers (600-3,400 miles) and short-range intermediate nuclear forces with a range of 500-1,800 kilometers (300-600 miles). Together they are referred to as Intermediate-range Nuclear Forces (INF). There are three categories of land-based nuclear forces: 1) Strategic forces (5,500 km and greater); 2) Intermediate-range forces (500-5,500 km); and 3) Short-range forces (below 500 km range).

[2] There are a total of 288 GLCMs. 256 are operational in Europe, and 32 are non-operational and awaiting arming with nuclear warheads and missiles.

[3] In addition to operational missiles and warheads, both sides are committed to destroy spare missiles and launchers, whether in military units in the field or in storage depots.

withdrawal of U.S. long-range nuclear weapons could cause "decoupling" of U.S. and European defenses. Others have raised questions about the need create a balance in conventional forces to compensate for nuclear reductions. Still more questions have been raised about the credibility of NATO's "flexible response" nuclear strategy after the significant cuts in intermediate-range nuclear forces.

For the Soviet Union, the withdrawal of Pershing II missiles from Western Europe alleviates its concern about Soviet territory being targeted with a short flight time ballistic missile. The Soviet government states it would like to eliminate other categories of nuclear weapons in Europe as well. The U.S. government, however, has made it clear that "the agreement is not the first step toward the denuclearization of Europe or of the alliance."[4] As President Reagan stated at West Point on October 28th: "[I]n consultation with our NATO allies, we have agreed that further nuclear reductions can take place only in the context of a substantial improvement in the balance of chemical and conventional forces."[5]

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[4] Secretary of Defense Caspar Weinberger at a NATO meeting in Monterey, California quoted in Vernon A. Guidry, Jr., "European Allies back U.S.-Soviet missile accord," Baltimore Sun, November 5, 1987, p. 23. See an almost identical statement by NATO Secretary-General Lord Carrington quoted in Peter Almond, "NATO endorse INF treaty, but keeps `flexible response,' Washington Times, November 5, 1987, p. A12.

[5] "Excerpts From President's Speech at West Point," The New York Times, October 29, 1987, p. A6.

This study analyzes the INF Treaty and its implications for future nuclear forces. Some its major conclusions are:

* By the end of 1992, after the U.S. warheads included in the INF Treaty are withdrawn from Europe, approximately 3,250 nuclear warheads will remain, the lowest level since the early 1960s and 1,150 warheads below the NATO numerical objective of 4,600 warheads set in 1983 and 1985.

* Withdrawal of the INF missiles is a significant step in the continuing denuclearization of Europe; a steady, if little recognized process that has been underway since 1979.

* Though the number of INF nuclear warheads to be destroyed is only about four percent of the U.S.-Soviet arsenals, the INF Treaty has important political, psychological and symbolic implications.

* The major military impact of the INF Treaty will be on the coherence and consistency of NATO nuclear strategy and doctrine. Eliminating the newest, most visible nuclear weapons - weapons that have caused such political and social turbulence in Europe - undermines the currently articulated logic of NATO nuclear deterrence theory.

* NATO will no doubt search for rationales to deploy new nuclear weapons to forestall the "denuclearization" of Europe. The options for European nuclear modernization -- either increasing the numbers and/or kinds of nuclear weapons -- are extremely limited. For political reasons, no new large land-based nuclear missiles can be introduced and no increase in nuclear artillery or other short-range weapons can take place.

* NATO nuclear strategy and modernization will have to accommodate the new NATO nuclear weapons employment policy adopted in 1986 (see Appendix C), which puts greater emphasis on nuclear warfighting and nuclear strikes deep inside Warsaw Pact territory.

* Increasing the number of nuclear capable fighter aircraft in Europe, and upgrading their capabilities by introducing new air-launched nuclear weapons, will be NATO's top priority in the post-INF period. Large numbers of aircraft for nuclear or conventional missions are already stationed in Europe. Increasing their nuclear capability will be an attractive option to policy makers who want to minimize the public debate surrounding NATO's nuclear capability.

Numbers and Deployment of INF Weapons

The destruction and elimination of the six INF weapon systems must take into consideration three separate and militarily significant components: launchers, missiles, and nuclear warheads. The number of launchers is generally known with some precision by intelligence establishments, but the number of missiles and warheads associated with these weapons systems has been the subject of numerous disagreements within the intelligence agencies. With three of the seven INF weapons (GLCM, SS-12M, and SS-23) still in full scale production (with SS-20 missiles/reentry vehicles and modified warheads possibly in production as well), the number of systems varies daily.

U.S. INF Weapons to be Withdrawn

U.S. INF weapons include U.S. Army Pershing II missiles and U.S. Air Force Ground-launched cruise missiles (GLCMs). The missiles, first deployed to Europe in December 1983, are mobile, carry one variable yield nuclear warhead each (they are not "dual capable"), and are highly accurate. From their bases in Belgium, Italy, the United Kingdom, and West Germany, they are able to attack targets in Eastern Europe and the western Soviet Union.

As of December 1987, the U.S. has 172 launchers and 364 missiles in Western Europe (108 Pershing II launchers, each

carrying one missile, and 64 GLCM launchers, each carrying four missiles for a total of 256).[6] The completed modernization program includes 108 Pershing IIs and 464 GLCMs (to be deployed by the end of 1988).[7]

All of the 108 Pershing IIs are stationed in West Germany. As of December 1987, the GLCMs are thought to be distributed as follows: Belgium (16), Italy (80), the United Kingdom (96), and West Germany (64). None of the intended deployment countries have their full complement of missiles yet. Belgium was to have received 48 GLCMs, Italy 112, and West Germany 96.[8] A second base in the United Kingdom at Molesworth reportedly received four GLCM launchers but they were not made operational.[9] The Netherlands was scheduled to start deployment of its 48 GLCMs in the second

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[6] An additional 8 GLCM launchers and 32 missiles are thought to be awaiting deployment to Europe. Since the announcement of the INF Treaty agreement in principle, there has been a slow-down in deployment activity, at least in Belgium, and possibly in the U.K. and West Germany. As of 31 December 1986, the U.S. had 208 of 464 planned GLCMs in Europe; Soviet Military Power 1987, p. 41.

[7] In addition, some 18 Pershing II launchers are at the U.S. Army Field Artillery School at Ft. Sill, Oklahoma and some 21 GLCM launchers at the U.S. Air Force training center at Davis-Monthan AFB, Arizona.

[8] Deployment of the 96 GLCMs to West Germany was scheduled to be completed by the end of 1987.

[9] In late October, 16 GLCMs reportedly arrived at Molesworth, with the nuclear warheads scheduled to arrive in December; John Witherow, "More cruise missiles here," Sunday Times (London), 25 October 1987, p. 1.

half of 1988, and reportedly received its first GLCM support equipment on October 21.[10]

The 1,800 kilometer range (1,120 mile) Pershing II missile was declared operational in West Germany on 31 December 1983. The missile replaced the 740 kilometer range (460 mile) U.S. Pershing Ia missile on a one-for-one basis. The Pershing I had been operational with U.S. forces since 1964. The Pershing II system was fully deployed in Europe by the end of 1985. The 2,500 kilometer range (1,500 mile) GLCM, officially named Gryphon, is an almost identical Air Force version of the Navy's Tomahawk sea-launched cruise missile. It began development in October 1977 and became operational at Greenham Common in the U.K. on January 1, 1984.

The total number of Pershing II missiles which will be destroyed under the INF Treaty is estimated to be about 250, while the total number of GLCMs that will be destroyed is about 350, depending on the date of Treaty ratification.[11]

At one time the U.S. was planning to build "reloads" for the Pershing II system, i.e., extra missiles and nuclear warheads

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[10] "Base in Netherlands receives U.S. cruise-missile equipment," Baltimore Sun, October 22, 1987, p. 11. On November 1, 1985, the coalition government of Prime Minister Ruud Lubbers agreed to accept 48 GLCMs in 1988 at Woensdrecht. The Dutch Parliament approved this agreement on February 28, 1986.

[11] The total number of GLCMs planned for procurement is 602. These are to arm 116 operational launchers (four missiles each). Another 21 launchers are also to be built in the complete GLCM program through the end of 1988.

which could be used after the initial missiles were fired.[12] These plans were cancelled at the urging of the West German government in 1982, and there was a subsequent reduction in the number of warheads and missiles produced from about 385 to 288. According to Congressional testimony in 1985, the "total quantity required has been reduced...[because of] operational considerations precluding the need for the full previously planned procurements."[13] Whether there are any extra missiles and warheads allocated for "contingency missions" and how many remains unclear at this time.

While not officially included in the INF Treaty, the U.S. and the Soviet Union have agreed that 72 short-range West German

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[12] The Army testified this year that 758 Pershing II missiles were originally planned; HAC, FY 1988 DOD, Part 2, p. 71.

[13] SASC, FY 1986 DOD, Part 1, p. 151. According to Secretary of the Army John Marsh, "a CONUS [Continental U.S.] reserve is deemed necessary to be able to provide the JCS [Joint Chiefs of Staff] with a worldwide mission flexibility and because the number of forward deployed is far short of the recognized requirement." HAC, FY 1986 DOD, Part 2, p. 151. These missiles, according to 1984 Congressional testimony, would be stored in the United States "in case they have to be used in other places or for replacements, in addition to the 108 that [the U.S. Army] would have in Europe;" SASC, FY 1985 DOD, Part 2, p. 538. Yet according to the U.S. Army Posture Statement for Fiscal Year 1987, "The FY 86 funding request would have completed procurement of missiles required to support fielding and the planned missile flight test program. However, the FY 86 appropriation results in a decrement of 33 missiles. This precludes the planned assignment of contingency missions to the Pershing II battalion at Fort Sill, Oklahoma." HAC, FY 1987 DOD, Part 1, p. 223. According to the U.S. Army, "All three PII battalions in USAREUR [U.S. Army, Europe] and the battalion at Fort Sill, Oklahoma had reached final operational capability (FOC) on or before 31 January 1985;" HAC, FY 1987 DOD, Part 3, p. 82.

Pershing Ia missiles will be eliminated.[14] The U.S. will dismantle the 100 Pershing Ia nuclear warheads[15] which arm the missiles before the Treaty period expires. The U.S. has also announced that it will destroy some 200 Pershing Ia missiles that it had removed from Europe but has retained in storage.

Soviet INF Weapons to be Withdrawn

Soviet INF weapons include the SS-20 Saber, the SS-4 Sandal,[16] the SS-12M Scaleboard B,[17] and the SS-23 Spider. The SS-20 and SS-4 are long-range intermediate forces and the SS-12 and the SS-23 are short-range. The SS-4 is a fixed missile located at launch sites in the western Soviet Union; the rest of the missiles are mobile. Only the SS-12M missiles are deployed outside the Soviet Union in East Germany and Czechoslovakia. All of the Soviet INF missiles are single warhead, except for the SS-20 which can deliver three 250 kiloton warheads.

Between 1977 and September 1985, the Soviet Union deployed 441 mobile 5,000 kilometer range (3,100 mile) SS-20 Saber

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[14] The 740 kilometer range (460 mile) Pershing Ia missiles were introduced into the West German Air Force in July 1966.

[15] This is the actual number of warheads stored in Europe, even though there are 72 launchers.

[16] The SS-5, which was one of three missiles of concern (the others being SS-4 and SS-20) in justifying the original NATO modernization decision, was retired in 1984.

[17] The SS-12M or SS-12 Mod 2 is often incorrectly referred to as the SS-22.

launchers. Today, some 270 are reported to be deployed west of the Urals in range of Western Europe and 171 are east of the Urals, in range of Alaska, China, Japan, and other Asian countries.[18] NATO called attention to the "flight-testing of an improved version of the SS-20" in its 20-21 March 1986 Communique of the Nuclear Planning Group session held in Wurtzburg, West Germany.[19] In March 1987, the Department of Defense again stated that "The Soviets are flight-testing an improved version of the SS-20 [reportedly designated SS-20 Mod 2], which is expected to be more accurate that its predecessor."[20]

The SS-20 missile is related in design, production and basing to two strategic missiles. The missile itself (and possibly the launcher) is a two-stage version of the three-stage SS-16 mobile ICBM, a weapon which was developed in the 1970s but was never deployed. Parts of the SS-20 missile were also reportedly produced at the same plant in Votkinsk which is currently producing the new SS-25 mobile ICBM (which was first

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[18] In April 1985, General Secretary Gorbachev announced a moratorium until November 1985 on the deployment of Soviet SS-20 missiles in Europe, at 270 launchers. This number has remained about the same in Europe since then. Global deployment of SS-20 launchers at 441 (171 in Asia) was completed in late 1985.

[19] According to U.S. government spokesmen, the SS-20 Mod 2 "is only a slight variation" of the missile; "U.S. officials say arms treaty will cover new SS-20 missiles," Washington Times, 6 November 1987.

[20] DOD, Soviet Military Power 1987, pp. 39-40; see also Ted Agres, "Soviets beefing up INF while negotiating treaty," Washington Times, November 5, 1987, p. A1.

deployed in 1985).[21] In addition, starting in 1984, many new SS-20 bases were constructed and SS-20 units were moved from their initial main operating bases to accommodate SS-25 ICBMs which began being deployed at the former SS-20 bases.[22]

One hundred and twelve 1,770 kilometer-range (1,100 mile) above ground fixed SS-4 missiles are also included in the INF Treaty. In 1964-1966, at peak deployment, some 608 of the liquid fuel (SS-4) missiles were deployed. The missile, which is 29 years old, began large scale retirement in the 1980s, but withdrawals ceased in 1985 at 112 missiles.

The Soviet Union reportedly has 160 short-range intermediate nuclear force (SRINF) missiles with a range of 300-600 miles. These are comprised of two missile types: 124 of the 900 kilometer range (560 mile) SS-12M Scaleboard B and 36 of the 500 kilometer range (300 mile) SS-23 Spider. Both are in production and are being deployed, and are replacing older, shorter range SS-12 and Scud B missiles. The SS-12M missiles are stationed in East Germany, Czechoslovakia, and the Soviet Union, while the SS-23s are stationed in the western Soviet Union.[23]

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[21] See statement by Frank Carlucci, in Edgar Ulsamer, "The Glasnost Watch," Air Force Magazine, September 1987, p. 28.

[22] DOD, Soviet Military Power, 1987, p. 40. As of 1 January 1986, the Joint Chiefs of Staff reported that 36 SS-20 launchers were "unlocated" due to the shifts in basing; JCS, U.S. Military Posture FY 1987, p. 31.

[23] DOD, Soviet Military Power 1987, p. 41 (March 1987) states that "If the SS-23 follows the same sequence of deployment seen with the SCUD B [the missile it is replacing], the western military districts will receive it first, followed by the Group of Soviet Forces, Germany [in East Germany]." This statement

There are about 124 SS-12 launchers. The original SS-12 Scaleboard missile was deployed in the Soviet Union in 1969, and the more accurate solid fuel Mod 2 (now designated the SS-12M Scaleboard B) become operational in 1979-1980. Since 1984, some 72 SS-12M launchers have been forward-deployed in East Germany and Czechoslovakia.[24] Another 40 are "along the border with China. A battalion [4-6 launchers] is opposite Southwest Asia and eastern Turkey, and one battalion [4-6 launchers] is maintained in strategic reserve."[25]

The SS-23 Spider became operational in 1985, when "a brigade [12-18 launchers] in the Belorussian Military District became the first operational unit to receive the SS-23 shorter-range missile."[26] This was over ten years after a prototype SS-23 missile was reported in development. The missile evidently experienced serious problems in research, and to this date, only some 36 launchers have been deployed.

Some 3600 Soviet SS-20, SS-4s, SS-12s, and SS-23 missiles are thought to be in existence and accountable under the INF

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seems to indicate that the missile is not yet deployed outside the Soviet Union. The West German newspaper Die Welt reported on October 23 that the Soviet Union was deploying SS-23 missiles in East Germany for the first time.

[24] On April 10, 1987, Gorbachev stated publicly that all SRINF systems in Czechoslovakia and East Germany would be withdrawn upon the signing of an INF agreement, thus admitting their presence in eastern Europe; see also DOD, Soviet Military Power 1987, p. 41; and Jane's Defence Weekly, 7 March 1987, p. 351.

[25] DOD, Soviet Military Power 1987, p. 41.

[26] DOD, Soviet Military Power 1987, p. 41.

Treaty.[27] Although deployment of SS-20 launchers ended in 1985, it is not known when production of SS-20 missiles and warheads stopped or the level of reload missiles and warheads which exist. According to the Department of Defense, "the SS-20 launcher can be reloaded and refired, and the Soviets stockpile refire missiles."[28] In addition, more accurate and modified reentry vehicles and warheads may be in production. The SS-12M and SS-23 missiles are reportedly capable of carrying nuclear, conventional and chemical warheads.[29] The number of total missiles and reentry vehicles associated with the two missiles is not known, but the U.S. Arms Control and Disarmament Agency has stated that "both these systems have multiple re-load missiles."[30] Some additional missiles and warheads are probably nuclear reloads.[31]

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[27] This would be six times as many Soviet missiles and U.S. INF missiles (Pershing II and GLCM). According to the Los Angeles Times, the Soviet Union officially informed the U.S. that it would eliminate "six times more medium-range missiles than the United States will when the expected treaty goes into effect;" Jack Nelson, "Missile Pact Faces Big Hurdles, Adelman Says," Los Angeles Times, 3 November 1987, p. 6. Later, the U.S. government stated that the Soviet Union reported that it would destroy about 2000 missiles; 1000 SS-20s and Ss-4s, and 1000 SS-12Ms and Ss-23s. It is still unclear whether this number represents all deployed and non-deployed missiles or just deployed missiles with "ready reloads."

[28] DOD, Soviet Military Power 1987, p. 40.

[29] DOD, Soviet Military Power 1987, p. 74.

[30] Fact Sheet issued April 24, 1987, and published in NATO's Sixteen Nations, June 1987, p. 103.

[31] Defense Intelligence Agency, Warsaw Pact Ground Force Equipment Identification Guide: Artillery, Rockets, and Missiles, DDB-1100-313-82, February 1982, pp. 115-118.

Implications for Current and Future NATO Nuclear Force Levels

Even without INF reductions, the number of U.S. European nuclear warheads has steadily declined during the Reagan Administration. At the end of 1987, the U.S. will have about 4,300 warheads deployed in Europe, fewer nuclear warheads than any time since the early 1960s (see Table 2). To secure European agreement for the new INF weapons in the face of strong public opposition, compensating withdrawals have had to be negotiated with the NATO nations. This has resulted in three separate withdrawal packages:

1) a unilateral withdrawal of 1,000 old Honest John short-range nuclear warheads in 1980-1981 as part of the original 1979 modernization agreement;

2) an agreement reached by NATO Ministers at Montebello, Canada in October 1983 to reduce the numbers of nuclear warheads in Europe by another 1,400 before 1988; and

3) the commitment by NATO that the reductions of 1,000 and 1,400 warheads "should not be affected by the deployment of Pershing II or GLCM, i.e., that one existing warhead would be removed for each Pershing II or GLCM warhead deployed,"[32] totaling 572 warheads at full deployment.

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[32] SAC, FY 1987 Energy and Water Development Appropriations, Part 2, p. 1259.

Political controversies and fiscal decisions have resulted in additional unexpected or accelerated reductions and retirements in the NATO nuclear stockpile, or have prevented planned nuclear modernization. These include: the accelerated withdrawal of atomic demolition munitions (nuclear land mines), a decision not to deploy enhanced radiation warheads (neutron bombs) in Europe, and cuts in the nuclear artillery modernization program.

Since the original NATO INF modernization decision in December 1979 to put Pershing II and GLCM into Europe, at a time when some 6,800 nuclear weapons were already deployed in Europe, some 2,900 warheads have been withdrawn. These include:

a) withdrawal of all 372 atomic demolition munitions (ADMs) stationed in West Germany and Italy (completed by the end of fiscal year 1985);[33]

b) retirement of all U.S. Nike Hercules surface-to-air missile warheads (some 296) and phased reductions of warheads on non-U.S. missiles from a level of 390 to some 100 today. This is a net reduction of 586 warheads beginning in 1981 (a total retirement of 686 warheads by 1988-1989);

c) withdrawal of 1,000 Honest John warheads held in storage in 1980-1981, followed by the retirement of 198 additional

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[33] Medium Atomic Demolition Munitions (W45) were retired after their removal from Europe. Special Atomic Demolition Munitions (B54) were removed by the end of fiscal year 1985 but have been retained in the stockpile; SAC, FY 1987 Energy and Water Development Appropriations, Part 2, p. 1330.

warheads used to arm Greek and Turkish Honest John tactical missiles (a total of 1,198 warheads were withdrawn by 1985);

d) "significant reductions in the total of tactical bombs," with a reduction from 1,737 in 1981 to about 1,400 today (a net reduction of 337), both as a trade-off for the deployment of new bombs and as an offset for GLCM deployments (since 1981);[34]

e) retirement of 193 U.S. Pershing Ia warheads with the deployment of 108 Pershing IIs (a net reduction of 85);

f) phased withdrawal of old and obsolete 8-inch artillery warheads, both for safety reasons and to compensate for the deployment of new W79 warheads (a net reduction of 200 warheads to the end of 1987 out of 938 deployed in 1981).

In addition, 420 enhanced radiation warheads produced between August 1981 and October 1984 for the Lance missile and 8-inch artillery were never deployed in Europe, as planned, because of political opposition. Production of new W79 8-inch artillery warheads was also halted prematurely in August 1986, resulting in hundreds fewer than originally called for by NATO. Plans to deploy U.S. Pershing II reload missiles and warheads were cancelled in 1982 at the insistence of the West German government.

NATO will now have about 4,200 nuclear warheads in Europe when the last Nike Hercules are withdrawn next year. The INF

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[34] As new B61 Mod 3/4 bombs are deployed to Europe, older B28 and B43 bombs are being retired on a less than one-for-one basis; SAC, Energy and Water Development Appropriations for 1987, Part 2, pp. 1258-1259.

Treaty will result in the withdrawal of an additional 108 Pershing II warheads, 256 GLCM warheads, and 100 Pershing Ia warheads, bringing the stockpile down to 3858 warheads. Old W33 8-inch artillery warheads will continue to be withdrawn. By 1992, an additional 500 W33s will have been retired, leaving a stockpile of 732 W48 155mm artillery warheads and 240 W79 8-inch artillery warheads.

By 1992, when the INF missiles are withdrawn, about 3,250 U.S. nuclear warheads will remain on European soil. The composition of the post-INF U.S. European nuclear stockpile in 1992 will be:

- about 950 nuclear artillery shells,
- 700 short-range Lance missile warheads,
- 1,400 nuclear bombs, and
- 200 anti-submarine nuclear depth bombs.

It is with these figures in mind that NATO Ministers have been meeting since 1983 to plan for the modernization and re-equipping of NATO's nuclear arsenal.

There are four possible ways to increase NATO's nuclear capabilities: a nuclear Lance missile replacement; a new nuclear armed, aircraft delivered, air-to-surface missile; an increase in the number of nuclear artillery shells; and increased pressure on European governments to agree to deployment of the 420 neutron warheads already produced but sitting in U.S. depots.

Nuclear Artillery: The composition and future of nuclear artillery in Europe has been in flux for almost a decade. The number of nuclear projectiles in Europe increased from some 975 in 1965 to some 1,670 in 1981, is at about 1,470 today, and will decrease to about 950 by 1992.

Controversies surrounding the neutron bomb deployment from 1978 onward and disagreements over the role short-range battlefield nuclear weapons should play, particularly in West Germany, have prevented introduction of two types of nuclear artillery which were intended to replace the currently deployed W33 for 8-inch howitzers and W48 for 155mm howitzers, weapons that are 30 and 24 years old respectively. The level of nuclear artillery projectiles in the future will therefore continue to decline, as new warheads are finally introduced, on a less than one-for-one basis, and as emphasis shifts away from battlefield nuclear weapons towards longer-range systems.

The primary reason for the significant reduction of nuclear artillery in Europe is the U.S. Congressional decision taken in the FY 1985 Defense Authorization Act that only 925 new nuclear artillery projectiles (both 8-inch and 155mm types) could be built as part of an Army modernization program.[35] The numerical limit applies not only to the U.S. and NATO forces in Europe, but to nuclear artillery allocated for U.S. forces in the Pacific and for the U.S. Marine Corps. Some 600-700 warheads will thus be

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[35] Congress also specified that no enhanced-radiation (neutron bomb) shells could be produced after October 1984.

built and available for European deployment, resulting in a net reduction of some 1,100 artillery warheads from the 1981 figure.[36]

One of the two new nuclear artillery projectiles, an 8-inch warhead designated the W79, was first produced in July 1981, and became operational in November 1981. The Congressional restriction imposed in 1984 forced the U.S. government to curtail production of planned artillery warheads, and particularly affected the 8-inch projectile.[37] Since there are much greater numbers of 155mm artillery guns in the U.S. and NATO armies than 8-inch guns, a rationalization has been that the 155mm nuclear shell will become "the principal NATO nuclear artillery system" in the future.[38] Some 40 enhanced radiation versions of the W79 were reportedly produced and will likely be (or may already have been) converted back to fission warheads, and another 200 or so fission versions that were manufactured will find their way to

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[36] Older W33 and W48 warheads may be kept in the short-term, but they will have to be retired in the 1990s.

[37] SAC, FY 1986 Energy and Water Development Appropriations, Part 2, p. 1269. According to Army testimony this year, "the ceilings imposed by that Act on the total number of modern nuclear projectiles results in a total number of modern AFAP [Artillery Fired Atomic Projectiles] less that the original NATO, CINCs [Commanders-in-Chief of Unified Commands, specifically Pacific, Atlantic, and Central (Middle Eastern) commands in addition to Europe], and JCS requirements."

[38] SAC, Energy and Water Development Appropriations for 1987, Part 2, p. 1261. According to Congressional testimony, prior to 1985 the Chief of Staff of the Army and the Under Secretary of the Army directed the removal of 8-inch systems from Army divisions and making them part of Corps Artillery; SASC, FY 1986 DOD, Part 3, p. 1451.

Europe. In mid-1986, it was reported that non-enhanced radiation versions of the W79 nuclear artillery projectile had already been deployed in West Germany, albeit in small numbers compared to the overall stockpile.

As part of the Montebello Agreement in October 1983, NATO Ministers "endorsed the introduction of rocket-assisted non-enhanced radiation artillery shells...," specifically the W82 155mm projectile under development.[39] The new 155mm projectile entered production engineering in May 1986, and will be ready for deployment in 1990-1991.

If the Congressional restrictions on a total of 925 artillery warheads holds, some 625 W82s will be built, and most of them are likely to be sent to Europe.

Nevertheless, the number of nuclear artillery shells will fall from 1,470 today to about 800 warheads at the end of modernization.

Lance Missile Follow-on: With 692 Lance warheads currently stockpiled in Europe, modernization or replacement of the Lance missile will have a significant impact on the future arsenal. Since at least 1978, the Army has been working on a successor to the short-range Lance missile, a program which is now called the "Follow-on to Lance."[40]

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[39] SAC, FY 1986 Energy and Water Development Appropriations, Part 2, p. 1457.

[40] The Follow-on to Lance (FOL) nomenclature is currently used in the Nuclear Weapons Stockpile Memorandum as the Presidentially

In July 1981 a nuclear warhead Phase 1 Conceptual Study was initiated by the Departments of Energy and Defense entitled Corps Support Weapon System. This effort was renamed Joint Tactical Missile System (JTACMs) (with the Army portion called ATACMs), and the Phase 1 Nuclear Warhead Study was completed in November 1983. In October 1986, a Phase 2 Warhead Feasibility Study was initiated, renaming the JTACMs/ATACMs system "Follow-on to Lance" (FOL).[41]

The development program has been plagued with problems, most notably a Congressional stipulation in 1985 that the new Army extended range missile under development -- the Army Tactical Missile System (ATACMs) -- could not be developed with a nuclear warhead.[42]

Nonetheless, the 1983 Montebello agreement commits the U.S. and NATO to develop a nuclear replacement for the current Lance

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approved and anticipated replacement for the Lance missile. The program has also been called Corps Support Weapon System, Lance II, Improved Lance, Nuclear Corps Support Missile System and Assault Breaker in the past. The Army's Tactical Missile System (ATACMs) under development is a specific candidate for the Follow-on to Lance, but Congress has so far restricted developing this missile with a conventional warhead.

[41] Senate Armed Services Committee, Questions for the Record, Submitted by Senator Edward Kennedy, to Admiral Foley (FY 1987 Defense Budget).

[42] The Army testified in 1984 that it "does not currently plan to develop, nor integrate, a nuclear warhead for the JTACMS;" SAC, FY 1985 DOD, Part 3, p. 424. ATACMs is a conventional ballistic missile with a high rate of fire and greater range than Lance. ATACMs will be transported and launched from the Multiple Launch Rocket System (MLRS) launchers, which are becoming standard in U.S. Army, West German, and United Kingdom artillery units in Europe. The MLRS launcher will carry two ATACMs missiles.

missile that will have a range of at least 250 kilometers (155 miles). At the latest Nuclear Planning Group (NPG) meeting in November 1987, an improved version of the old Lance was suggested rather than development of a completely new missile.[43] The Army, however, still clearly favors making the ATACMs the extended range Lance with a nuclear warhead and has put together detailed justifications to lift the Congressional ban. According to Department of Defense testimony before Congress in early 1987,

> Army TACMs is generally considered to be a strong candidate for the Lance Follow-on for at least three reasons. First, it would allow the Army to take advantage of development work already invested in conventional ATACMs, as well as the force structure planned for it. Modifications to the MLRS launcher and procurement of the necessary missiles to make ATACMs dual-capable would cost significantly less than developing and procuring the same number of an entirely new, nuclear-only system. Second, a dual-capable ATACMs would be more survivable than a force of nuclear-only systems, since all MLRS launchers will be capable of firing ATACMs. Third, a dual-capable ATACMs would be more attractive to allies, because they plan to field, and in some cases, co-produce MLRS. Therefore we would like to include Army TACMs as one of the candidates in the Phase 2 Warhead Feasibility Study. However, a Congressional restriction (initially the Kennedy-Nunn amendment to the 1984 Appropriations Act but carried forward each year) has been interpreted as preventing even the study of nuclear capability for the Army Tactical Missile System (Army TACMs). We ask Congress lift that restriction on studying a nuclear Army TACMs in order that it can be studied with other candidates as a replacement for Lance. We expect to fully justify to Congress any request for a Lance follow-on.[44]

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[43] Vernon A. Guidrey, Jr., "NATO sees need to beef up leftover forces in Europe after INF treaty," Baltimore Sun, November 4, 1987, p. 13.

[44] HAC, FY 1988 Energy and Water Development Appropriations, Part 6, pp. 797-798.

Tactical Aircraft and Air-delivered Nuclear Weapons:

Nuclear bombs (gravity nuclear weapons delivered by aircraft) constitute about 30 percent of the U.S. arsenal in Europe today. This will increase to 37 percent after the withdrawal of INF missiles.[45] The B61 bomb is the only new nuclear weapon, other than GLCMs, that is currently in production and being deployed in Europe. It is equipping aircraft of the U.S. Air Force, and the Air Forces of Belgium, Italy, the Netherlands, Turkey, and West Germany.

NATO is upgrading the capabilities, range and survivability of its aircraft capable of carrying nuclear weapons. The most significant aspect of this upgrading is the continuing introduction of modern F-16 and Tornado aircraft, "with greatly enhanced range, survivability, and penetration capability."[46] Both aircraft are replacing older F-4 and F-104 aircraft in NATO which had nuclear missions. The F-16 has, or is, being deployed with the U.S., Belgian, Dutch, Greek, and Turkish Air Forces and deployment will be completed by 1995.[47] The Tornado is being deployed with the British, West German, and Italian Air Forces

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[45] Nuclear bombs constituted only 20 percent of the European nuclear stockpile in 1965.

[46] SAC, FY 1987 Energy and Water Development Appropriations, Part 2, p. 1261.

[47] SAC, FY 1987 Energy and Water Development Appropriations, Part 2, p. 1261. The Dutch government decision announced on November 1, 1985 to abandon its nuclear role for the F-16s, one of the conditions set out to accept deployment of GLCMs in the Netherlands, will most likely be cancelled, and the 32 aircraft will remained nuclear armed.

and deployment is scheduled to be completed by 1991.[48] According to Secretary of Defense Weinberger, this modernization of nuclear bombs and aircraft is essential to provide the Alliance with a capability to strike Soviet territory from Western Europe.[49]

Enhancements of NATO nuclear capable aircraft in the future include:

1) Deployment of the nuclear capable F-15E Strike Eagle to Europe. The F-15E will augment the F-111, Tornado, and F-16 aircraft, and replace the non-nuclear F-15C/D currently stationed in West Germany. Capable of delivering the B61 nuclear bomb, the F-15E is scheduled to begin deployment with U.S. Forces in Europe in 1992. This date could be moved up to as early as 1989 to augment nuclear targeting capabilities lost with removal of the INF weapons.

2) Deployment of additional F-111 long-range nuclear fighters to Europe, particularly to Britain, to augment current nuclear capabilities.[50]

3) Possible deployment of nuclear bombers transferred from the strategic forces. This has been suggested as a way of increasing the long-range strike capabilities of NATO. FB-111

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[48] The British Tornado aircraft carry U.K., as opposed to U.S., nuclear bombs.

[49] R. Jeffrey Smith, "NATO Evaluates Its Nuclear Strength After Medium-Range Arms Are Gone," Washington Post, November 3, 1987, p. 27.

[50] Some, such as British Defence Minister George Younger reportedly favor this option. See report from the Guardian (November 3, 1987) in Current News, November 5, 1987, p. 6.

bombers of the Strategic Air Command could be transferred to the tactical inventory as early as 1992 when initial Stealth Strategic bombers are deployed.[51] Also, a number of military officials have suggested assignment of B-52G bombers to NATO after completed deployment of the B-1B.

The development of a new aircraft delivered nuclear weapon has also been a long-term objective of NATO. At Montebello in 1983, the NATO Ministers agreed that a new air-to-surface missile with a range of about 400 kilometers would be developed and procured. General Rogers in his Nuclear Warhead Requirements Study for 1988-1995 (published in May 1985), requested a "standoff air-to-surface missile to be available (deleted). The primary objective of this system would be to increase survivability of dual capable aircraft by improving the probability to penetrate (deleted). The weapon system would increase effectiveness of the dual capable aircraft through high accuracy attack...Conceptual studies of such a weapon system have been completed and several concepts are currently under consideration."[52]

The development of a tactical air-to-surface missile has a long history. Starting in 1972, Sandia Laboratories began

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[51] The Department of Defense testified in 1986 that transfer of the FB-111s to the tactical air forces would "provide a much needed supplement to our long range conventional force, particularly in the Pacific region;" HASC, FY 1987 DOD Procurement, p. 984.

[52] House Armed Services Committee, "Responses to Questions for DOE Budget Hearing, Submitted by Mr. Stratton, Questions for Admiral Foley," February 19, 1986.

evaluating an "extended-range tactical nuclear bomb (ERB)," which "with modest propulsion and airfoils could provide tactical aircraft with a new airburst delivery option that is especially effective against defended targets."[53] The program was designed to provide stockpiled B61 bombs with inertial guidance, an altimeter, and a flight computer to allow them to "be employed against either fixed, preselected targets, or mobile battlefield targets."[54] A "tactical air-to-surface missile" Phase 1 nuclear warhead study by DOE was conducted from April 1979-January 1981. The study looked at missile possibilities against road mobile units, assembly areas, and fixed targets, and recommended that a Phase 2 Feasibility Study be conducted.[55] However, because of a lack of Air Force interest in a nuclear warhead for stand-off delivery at that time, TASM development did not advance beyond the Phase 1 stage.[56] Nonetheless, spurred on by the Montebello decision and General Roger's Nuclear Warhead Requirements Study, a tactical air-to-surface missile program continued in development. According to Department of Energy Congressional testimony in 1986, "In response to SACEUR's nuclear modernization

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[53] Sandia Laboratories, Weapon Review, Table of Contents, April 1975 (released under the FOIA).

[54] Sandia National Laboratories, "Tiger: A technology to improve the delivery capability of nuclear bombs and the survivability of the delivery aircraft," n.d. (1980).

[55] Air Force Weapons Laboratory, "Tactical Air-to-Surface Munition Phase I Conceptual Study," AFWL-TR-83-78, n.d. (1983) (partially declassified and released under the FOIA).

[56] Senate Armed Services Committee, Questions for the Record by Senator Edward Kennedy, (FY 1987 DOE Budget), for Admiral Foley.

requirements, we have initiated studies of...a tactical air-to-surface standoff missile....The standoff missile, by replacing gravity bombs, will provide increased weapon effectiveness and decreased aircraft attrition against heavily defended targets."[57]

According to Department of Defense officials, the United Kingdom wants to join the U.S. in the development of this missile, and a possible joint U.K.-French development of a nuclear armed stand-off air-to-surface missile as a follow-on to the 300 kilometer range French ASMP has also been suggested.[58]

A tactical air-to-surface missile is not the only new aircraft delivered nuclear weapon that is, or has been, under consideration for Europe. Congressional testimony also indicates an interest on the part of the U.S. Air Force in developing a nuclear earth penetration warhead for aerial delivery. According to the Air Force, "Preliminary target analysis in the Pacific and Europe has identified more than [deleted] potential targets which are well hardened or are underground."[59] A Department of Energy Phase 2 Feasibility Warhead Study of a "Tactical Earth Penetrating Warhead" was completed from February 1974-March 1975.[60]

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[57] HASC, FY 1987 DOD Procurement, p. 934.

[58] Paul Beaver, "UK/French talks to fill cruise and Pershing gap," Jane's Defence Weekly, October 10, 1987, p. 783.

[59] SAC, FY 1987 Energy and Water Development Appropriations, Part 2, p. 1264.

[60] Senate Armed Services Committee, Questions for the Record by Senator Edward Kennedy, (FY 1987 DOE Budget), for Admiral Foley.

Three other nuclear weapons have also been investigated for possible deployment in Europe by the Departments of Energy and Defense:

- A "Minimum Residual Radiation Tactical Bomb:" (A Phase 2 study was conducted from February 1974-May 1976, but the weapon did not advance beyond that stage).[61]

- A "Modular Guided Glide Bomb:" (A Phase 2 study was conducted from November 1972-January 1975 but the weapon did not advance beyond that stage).[62]

- A "Theater Deep Attack Concept:" (In FY 1987, a nuclear warhead for this purpose was reported in development by the Department of Energy).[63]

Options for NATO Nuclear Modernization after INF

As the INF Treaty has drawn closer, pressure has mounted to develop new programs to "compensate" for the removal of Pershing IIs and GLCMs from Europe. Undoubtedly, any modernization of NATO's nuclear forces in the aftermath will prove controversial; NATO officials are already stating that no programs are underway

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[61] Senate Armed Services Committee, Questions for the Record by Senator Edward Kennedy, (FY 1987 DOE Budget), for Admiral Foley.

[62] Senate Armed Services Committee, Questions for the Record by Senator Edward Kennedy, (FY 1987 DOE Budget), for Admiral Foley. This study looked at the possibility of using insertable nuclear components for tactical bombs.

[63] House Armed Services Committee, "Responses to Questions for DOE Budget Hearing, Submitted by Mr. Stratton, Questions for Admiral Foley," February 19, 1986.

to build-up forces in the post-INF period.[44] They surely will attempt to create that impression, but the reality is different. A number of possible options for nuclear modernization have been floated in the past year:

1) moving forward with the nuclear artillery, follow-on to Lance, and tactical air nuclear enhancements that are already underway;

2) increasing the number of nuclear weapons allocated to the European theater through the addition of more sea-based missiles or other nuclear weapons which are stationed outside of Europe; or

3) undertaking a series of measures that will increase the capabilities of existing nuclear forces, but will not result in more nuclear weapons.

Nuclear artillery modernization, which is already underway, will likely continue to move forward. But it will prove to be highly controversial. Ever since the Montebello decision in 1983 to modernize NATO nuclear artillery, there has been growing dissatisfaction voiced by the West German government with the continued heavy reliance on short-range nuclear weapons which can only be targeted on German territory. "No government in Bonn is

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[44] According to Alton Keel, U.S. Ambassador to NATO, for instance, "There is no need to compensate for the removal of Pershing IIs and GLCMs, so compensation is really not what is being considered. There is a need to assure that we maintain an effective, reliable survivable nuclear arsenal and make sure that the remaining arsenal in fact is credible;" U.S. Information Service, "U.S.-NATO Bonds go Beyond Arms Systems, Official Says (Transcript: Ambassador Alton Keel on 11/6 Worldnet)," November 9, 1987, pp. 9.

likely to sustain support for a strategy under which only Germans are threatened by nuclear retaliation from German soil," Henry Kissinger wrote recently in Newsweek.[65]

Under the current modernization program, the number of artillery shells to be produced and deployed to Europe by 1992 will be 700 warheads fewer than those which existed prior to the original INF modernization agreement. Even though the warheads will be new, the role of nuclear artillery in NATO strategy will be diminished.

The Army, nonetheless, is already planning to challenge the Congressional restrictions on nuclear artillery modernization, oblivious to the political winds in central Europe. According to a recent article in Defense Week, it is considering asking Congress to relax its 925 projectile ceiling and is even considering raising the possibility of deploying its W82 155mm warhead as an enhanced radiation weapon.[66] It is unlikely that either of these two proposals will be accepted.

Factors militating against deployment of the Follow-on to Lance are threefold:

1) the possible difficulties developing and deploying a new missile (as opposed to aircraft or artillery) will have on public opinion in the post-INF era;

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[65] Henry A. Kissinger, "Kissinger: A New Era for NATO," Newsweek, 12 October 1987, p. 59.

[66] Tony Capaccio, "Army Seeks To Relax Nuclear Shell, Neutron Bomb Restrictions," Defense Week, 9 November 1987.

2) the possible extension of the INF Treaty to include elimination of short-range missiles below the range of 300 miles (a proposal of both the Soviet Union and West Germany), thus obviating the development of a new missile; and

3) continued Congressional restriction on the development of a new Army nuclear missile. According to one report, Congressional committees have already agreed to relax the prohibition which exists on development of a nuclear ATACMs.[67] Cost may be another factor in development of a new short-range nuclear missile.

In the end, the only real option open to NATO of the three nuclear modernization programs under development is increasing the number and capability of nuclear fighter planes, and introducing a medium range nuclear missile that these planes will be able to fire. Nuclear capable fighter aircraft are not as controversial as artillery or short-range missiles, and numerous modernization programs (including the ongoing production of a modern non-strategic nuclear bomb for aircraft) are underway to bolster the fighter force. Fighter aircraft, in addition, would provide the flexibility to execute both short- and long-range nuclear strikes, a feature attractive to nuclear planners.

In addition to the three nuclear modernization programs already underway, another option which has been floated as a way of enhancing NATO's long-range nuclear strike capability after

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[67] Tony Capaccio, "Army Seeks To Relax Nuclear Shell, Neutron Bomb Restrictions," Defense Week, 9 November 1987.

INF is increasing the number of nuclear weapons allocated to the European theater by adding more sea-based missiles or other weapons which are stationed outside of Europe. As the presence of nuclear weapons in Europe has become more politically controversial, over 2,000 nuclear weapons that are not stationed in Europe have already been committed to NATO for nuclear planning. These additional nuclear weapons include:

1) Some 400 SALT- and START-accountable Poseidon ballistic missile submarine warheads operating in the Mediterranean and formally committed to NATO;

2) Some 360 aircraft delivered nuclear bombs aboard U.S. aircraft carriers operating in European waters;

3) Some 600 aircraft delivered bombs, some 140 nuclear depth bombs, and some 100 Special Atomic Demolition Munitions (SADMs) stored in the U.S. but earmarked for European deployment during a war; and

4) Some 420 enhanced radiation warheads stored in the U.S. and earmarked for possible European deployment during a crisis.

Assignment of another ballistic missile submarine to NATO, or the formal commitment of nuclear-armed Tomahawk sea-launched cruise missiles aboard attack submarines and surface ships is popular with a number of defense analysts. However, there are a number of problems for NATO if it places greater reliance on sea-based systems:

1) Greater reliance on sea-based forces would be an admission that sea-based systems could just as easily do the job

as land-based weapons, and it could therefore accelerate the process of denuclearization by admitting that nuclear weapons don't necessarily have to be on European soil in order to deter potential aggression.

2) Assignment of another ballistic missile submarine may become a casualty of the START negotiations if a 50 percent reduction in nuclear weapons is agreed to. The number of submarines would decline significantly to the point where the European mission would no longer be feasible as a priority.

3) Assignment of the Tomahawk SLCM to Europe, while more promising given that naval nuclear weapons are not even being discussed in any arms control negotiations would create interservice problems with the U.S. Navy and its land-based colleagues. Former Secretary of Defense Harold Brown has suggested converting Poseidon ballistic missile submarines to cruise missile carriers instead of retiring after they are dismantled under START as a means of creating nuclear platforms which do not impinge upon the Navy's tactical warfighting capabilities.[66]

Finally, a series of measures that will increase the warfighting capabilities of existing nuclear forces, but will not result in more nuclear weapons, are being examined for the post-INF period. The deployment, survivability, penetrability, and targeting capacity of the remaining nuclear forces is to be

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[66] George C. Wilson, "U.S. May Strengthen NATO Nuclear Forces," Washington Post, 12 May 1987, p. A3.

improved. To some degree, particularly with aircraft, these warfighting improvement are already happening. At the NATO NPG meeting in Stavangar, Norway last May, the Ministers agreed to make numerous improvements in nuclear capable aircraft, including measures to increase survivability and capability to penetrate Warsaw Pact air defenses. The U.S. has built well over 1,000 hardened shelters for tactical aircraft at over 50 air bases in Europe over the past decade. It has also begun a program to store nuclear bombs on airbases in underground vaults beneath these hardened shelters, rather than at central storage sites remote from the runways and aircraft. The Air Force is studying a concept of developing a NATO aerial refueling aircraft along the lines of the NATO AWACs to extend the long-range bombing capabilities of NATO's fighters.[69]

Congressional Ratification Issues[70]

The Treaty ratification process gives the U.S. Senate three major options to express reservations about a treaty offered for its consent: "understandings," "reservations" and "amendments." Understandings clarify the U.S. government interpretation of the Treaty's effects. Reservations provide conditional Senate approval of specific Treaty provisions, which in turn may require

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[69] Aviation Week & Space Technology, 3 August 1987, p. 21.

[70] See Arms Control and Foreign Policy Caucus, "Fact Sheet: The INF Treaty," November 3, 1987.

Soviet consent depending on their substance. Amendments actually change the Treaty language, and would require Soviet consent. Each of these three devices require only a majority vote (as opposed to the two-thirds vote required for passage of the ratification resolution).

The Senate ratification debate will undoubtedly raise many issues, but it is highly improbable that the INF Treaty would not be ratified. As Henry Kissinger wrote recently, The INF Treaty's "provisions will no doubt be fully debated when it comes up for ratification before the Senate. But the debate will miss a crucial point. Domestic political support for stationing American missiles on the Continent has disappeared in all the European countries. In that sense, the negotiations have already created a new reality. Hence, nonratification is not an option."[71] So confident is the Reagan Administration about the ratification process, that the White House insisted on November 25 that the Senate ratify the INF Treaty in its existing form without amendments or reservations.

In the end, while some Senators have expressed concern about the actual content of the Treaty and its effects on the European "balance" and the future of U.S. nuclear strategy in Europe, it is unlikely that any ratification amendments or riders will deal with the substance of the Treaty. Thus far, the most likely

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[71] Henry A. Kissinger, "Kissinger: A New Era for NATO," Newsweek, 12 October 1987, p. 57.

specific major questions that will be raised appear to be the following:

- The INF Treaty's linkage to the START negotiations for a "50-percent" reduction in strategic weapons, as well as adherence to the SALT II Treaty ceilings should be an increasingly contentious issue. Failure to conclude a strategic reductions agreement coupled with non-adherence to the SALT II Treaty would allow both sides to increase strategic nuclear forces without restrictions. U.S. government officials and numerous Senators have already pointed to ongoing production and deployment of Soviet SS-24 and SS-25 mobile strategic missiles, which could be used for theater missions.[72] Some Senators have also expressed concern about the testing of an SS-20 follow-on missile.[73]

- Senate Majority Leader Robert Byrd has indicated that he may insist that the Senate first deal with ratification of the Peaceful Nuclear Explosions Treaty and the Threshold Test-Ban Treaty, two arms control treaties already on the Senate calender ahead of INF.

- Riders delaying the effective date of the dismantlement of INF missiles until the European conventional "balance" has

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[72] Elmo Zumwalt/Worth Bagley, "Potential impact of INF deal," The Washington Times, October 20, 1987, p. F3. See also Rowland Evans and Robert Novak, "Spy Story for the Senate," Washington Post, October 26, 1987, p. A13 who claim that U.S. intelligence analysts are concerned about mobile SS-11 ICBMs which could circumvent SS-20 retirements and could be used as theater nuclear weapons.

[73] Ted Agres, "Soviet beefing up INF while negotiating treaty," Washington Times, November 5, 1987, p. A1.

improved in Europe will likely be offered. One proposal is making dismantlement and destruction of the final 25 percent of INF missiles contingent on reversing Soviet numerical conventional superiority.'[74]

- Some members of Congress oppose signing any new treaty with the Soviet Union until there has been a resolution of compliance questions dealing with existing treaties including the Limited Test Ban Treaty, the Helsinki Final Act, and the ABM Treaty.'[75]

- Senator Nunn, Chairman of the Armed Services Committee, and Senator Pell, Chairman of the Foreign Relations Committee, have suggested that the Senate delay considering the Treaty until they have been able to consult the complete negotiating record. This is due to the Reagan Administration's use of the ABM Treaty negotiating record to try to justify their reinterpretation of the ABM Treaty.'[76]

- Senators, from Helms to Dole to Cranston, have suggested that they may try to strengthen the verification procedures and have indicated that they may offer an amendment making

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[74] Some of the strongest advocates of this position are in the Administration. For example, Edward L. Rowny says "We must redouble our efforts to redress the imbalance in conventional forces;" "Arms Control: Taking Stock," The New York Times, October 19, 1987, p. A23.

[75] See, e.g., Jack Kemp, "Rushing to the treaty table?," The Washington Times, October 23, 1987.

[76] Don Oberdorfer, "Nunn Threatens to Link INF, ABM Treaties," Washington Post, 3 September 1987; Lou Canon, "Reagan Seeks to Avert Treaty Fight With Nunn," Washington Post, 4 September 1987.

ratification contingent on "unquestionable" verification.'' Others have declared that explicit enforcement provision be included in the INF Treaty.''

Conclusion

The purported reason that U.S. INF systems were said to be needed was that they would enhance the U.S. nuclear commitment to NATO. Critics at the time said that numerous other weapons and the presence of over 300,000 troops were evidence of a firm commitment. Now that the Reagan Administration wants to remove the weapons, it is using the critic's argument. Undoubtedly, the biggest substantive implication of the Treaty will be on NATO alliance politics and on the coherence of NATO strategy in the future.''

'' On September 24, 1987, the Senate voted on a Helms Amendment to the DOD Authorization bill which called for "unquestionable" verification in the INF Treaty and on the Soviet Union to reverse its violations of the ABM Treaty. The amendment got 28 votes. See also Peter Almond and Jeremiah O'Leary, "Senators warn of battle over INF treaty vote," Washington Times, November 2, 1987, p. 1.

'' Pete Wilson, "Before Arms Ratification, Senate Needs Assurances," Los Angeles Times, 25 September 1987; Malcolm Wallop, "Arms Control Amnesia," Washington Times, 13 May 1987.

'' Another consideration, given the global nature of the reductions, is the impact the INF Treaty will have on U.S. allies in the Pacific. U.S. success in its efforts to persuade the Soviets to eliminate nuclear missile deployments in Asia was to meet the concerns of China and Japan, each of which approached the United States to seek reductions in Soviet nuclear forces able to strike its territory. But an elimination and improvements in Sino-Soviet/Sino-Japanese relations could sour U.S. efforts to increase military cooperation with China and to increase Japanese defense spending.

Former Supreme Allied Commander Europe (SACEUR) General Bernard Rogers has argued that this sudden reversal, and the Treaty, weakens the credibility of deterrence in Europe. He has been joined by others who fear that withdrawal of U.S. nuclear weapons will lead to a crisis in NATO and "decoupling" of the United States from its European allies. Rejecting such concerns, Paul H. Nitze, senior arms control advisor to President Reagan, asks, "Would the United States and NATO be decoupled? Given the systems remaining in Europe as well as our extensive conventional contribution to NATO's defense, including over 300,000 U.S. troops deployed in Western Europe? I believe talk of decoupling is unjustified."[••]

NATO critics of the Treaty have argued that a path towards "denuclearization" in Western Europe could undermine NATO's overall doctrine. Since 1967, NATO has adhered to the doctrine of "flexible response" to respond to a Warsaw Pact attack on Western Europe. The doctrine provides three options open to NATO in defending against such an attack. The first is "direct defense." The purpose of direct defense is "to defeat an attack or to force the burden of escalation on the shoulders of the

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•• See, e.g., Paul H. Nitze [U.S. Department of State], "INF Negotiations and European Security," Current Policy No. 1005, October 1987. Even General Rogers testified before the Congress in early 1987 that though he thought that nuclear strategy was called into question under the INF Treaty, "I am not concerned about de-coupling....As long as we have 326,000 forces in Europe, the United States is not going to walk away from that;" HAC, FY 1988 DOD, Part 4, p. 853.

aggressors."[*1] Should NATO's direct defense prove ineffective, the alliance would escalate to the use of nuclear weapons (the so-called "first use" strategy). This option is called "deliberate escalation." Should deliberate escalation to the use of battlefield nuclear weapons fail to stop the attack, NATO doctrine calls for the utilization of intermediate-range and strategic nuclear forces to defeat an attack. This third option is called "general nuclear response" -- the use of strategic nuclear forces.

The deployment of Pershing II and GLCMs was greeted by most military and nuclear strategists as enhancing the options open to NATO. The missiles were seen as providing greater abilities to fight a limited nuclear war and another escalation option to respond to an attack before strategic nuclear weapons were used. Another justification was stated as communicating to the Soviet Union that its territory was not a "sanctuary" if it attacked Western Europe.

The withdrawal of intermediate nuclear weapons from Europe will eliminate these dangerous "options." It is, and has always been, an illusion that a limited nuclear war, with many ladders of controlled escalation, could be fought.

In addition, elimination of short flight time ballistic missiles from field military units in general will enhance crisis stability. As stated by retired General Bernard Rogers, a critic

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[*1] General Bernard Rogers, before the HAC, FY 1988 DOD, Part 4, p. 844.

of the INF Treaty, "The advantage of no ballistic missiles is that I believe it contributes to stability because, one, there is always a doubt in each side's mind whether or not its air breathers [aircraft with nuclear bombs] will get through and what targets it will strike, and two, you can always call them back in case you have made a mistake."[82]

Critics of the INF Treaty are arguing that Soviet conventional superiority leaves NATO more vulnerable if long- and short-range intermediate nuclear forces are removed. This is unlikely to be a strong enough argument for nonratification, but it has already accelerated consideration of far reaching conventional arms control and disarmament measures, measures which have not received much serious attention until the INF Treaty began to take shape.

The Soviet Union, for its part, has stated that it wants to eliminate short-range missiles with a range less than 500 kilometers. It also has proposed other nuclear disarmament measures, and has stated its willingness to reduce conventional forces as well. The Soviets have made numerous concessions in the INF negotiations process in order to accept the U.S. position without linkage to other issues, such as the Strategic Defense

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[82] HAC, FY 1988 DOD, Part 4, p. 885.

Initiative,[83] strategic forces or French and British nuclear forces.[84]

In the end, the only serious obstacle that could be introduced to forestall the process of denuclearization is Soviet development of new nuclear strategic or non-strategic weapons which could set off another round of the arms race.

The Soviets began new tactical missile development programs in earnest in the mid 1970s and the 120-kilometer range SS-21 started to replace the 70-kilometer range FROG-7 in East Germany in late 1981. One of the Soviet INF missiles, the 500-kilometer range SS-23, began deployment in 1985 in the Soviet Union to replace the 280 kilometer range Scud B, of which some 700 launchers exist. Likewise, nuclear artillery guns and nuclear capable tactical aircraft are in production. The Soviet Navy has two land-attack sea-launched cruise missiles -- the SS-NX-21 and the SS-NX-24 -- in advanced stages of development and ready for imminent deployment. In addition, according to the Joint Chiefs of Staff, "we expect the Soviets to deploy the SSC-X-4 ground-

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[83] On February 28, 1987, Gorbachev dropped the Soviet insistence that an agreement at the space and defense talks first be reached, and added a statement that reductions in or the elimination of short-range systems could be negotiated immediately.

[84] Gorbachev's January 15, 1986 comprehensive disarmament proposal envisioned a first stage of reductions to occur between 1986 and 1994, for "the complete elimination of intermediate range missiles of the U.S.S.R. and the U.S.A. in the European zones..." Under the proposal, the United Kingdom and France would have to agree to halt their current nuclear modernization programs, and in 1990, begin to destroy their weapons as well. Gorbachev explicitly dropped previous Soviet objections to modernization of British and French nuclear forces at the Reykjavik Summit.

launched cruise missile over the next several years..."[**] It is still unclear how this weapon is dealt with in the INF Treaty.

For now at least, development of a new generation of U.S. land-based non-strategic nuclear weapons seems unlikely due to political and fiscal realities. The Soviets are not likely to give up on their desire to have short-range weapons included in an INF II Treaty. Because of the political problems that will be faced in modernizing NATO nuclear weapons after the INF Treaty, the U.S. is likely to be forced back to the negotiations table. It should develop a coherent strategy for the long term denuclearization and conventional demilitarization of Europe.

[**] JCS, United States Military Posture FY 1988, p. 46. According to JCS, U.S. Military Posture FY 1987, p. 32 and DOD, Soviet Military Power 1986, p. 33, deployment of the SSC-X-4 ground-launched cruise missile and a ground-launched variant of the SS-NX-24 sea-launched cruise missile was expected as early as 1986.

Appendix A: Background to the INF Treaty

In December 1979, NATO agreed to modernize its long-range nuclear forces and to also work towards an arms control agreement. This "dual track decision" called for the introduction of 572 new nuclear missiles -- 472 Ground-launched Cruise Missiles and 108 Pershing IIs while also seeking negotiations with the Soviet Union to reduce INF systems -- including its SS-20, SS-4, and SS-5 missiles. NATO's 1979 Integrated Decision Document sets forth the basic aims of NATO INF policy as "deterrence and stability based upon a triad of forces, the coupling between those forces, and the important political principle of the strategic unity of the alliance." The modernization agreement stated, in addition, that even a negotiated arms control agreement would not eliminate the need for some U.S. long-range INF systems in Europe.

At the end of the Carter Administration, preliminary discussion were held in October-November 1980. The U.S. sought to fix a ceiling on Soviet missiles, balanced by Pershing IIs and GLCMs. The Soviet Union sought to freeze U.S. deployments and set equal levels of NATO and Warsaw Pact nuclear weapons, including French and British nuclear forces and U.S. forward-based nuclear capable aircraft.

The first LRINF round under the Reagan Administration began in November 1981. President Reagan made his original "zero

option" proposal on November 18: this called for the cancellation of GLCM and Pershing II in exchange for the dismantlement of Soviet SS-20s, SS-4s, and SS-5s, as well as a freeze on short-range missiles. The U.S. presented the "zero option" proposal at Geneva on December 11.

In December, the Soviets propose an agreement that would establish an eventual ceiling of 300 "medium-range" missiles and nuclear capable aircraft in Europe for each side, including British and French forces. The Soviet Union then formally rejected the "zero option" proposal in February 1982, arguing that inclusion of SS-20s in Asia and exclusion of British and French forces and U.S. aircraft was unacceptable. Their counterproposal was a phased reduction of Soviet missiles by 1990 in exchange for cancellation of U.S. INF weapons. In March, General Secretary Brezhnev also announced a moratorium of new SS-20 deployments in the western Soviet Union, a moratorium which remained in effect until December 1983 when GLCMs and Pershing IIs began to arrive in Europe.

In July 1982, the famous "walk in the woods" formulas were agreed upon by Paul Nitze and Yuli Kvitsinsky. U.S. and Soviet INF missile launchers in Europe would be limited to 75 SS-20 or GLCMs. Pershing IIs would not be deployed. Each side would be allowed 150 nuclear capable aircraft and short-range missiles would be frozen at existing levels. The Soviet Union would be allowed 90 SS-20 launchers in Asia. British and French nuclear

forces would not be included. The formula was later rejected by both sides.

In December 1982, General Secretary Andropov offered to reduce Soviet INF in Europe to the level of British and French nuclear forces if the U.S. abandoned deployment of GLCMs and Pershing II. A later Soviet offer on May 3 proposed limits on warheads as well as missiles and launchers and pledged to reduce Soviet European nuclear forces to lower levels than the number that existed in 1977 when SS-20 deployments began. This was the first statement of willingness on the part of the Soviets to discuss the possibility of limits upon "ready reloads" in the vicinity of deployment sites.[••]

In September 1983, President Reagan stated at the United Nations that the U.S. would reserve the right to deploy INF missiles to match the Soviet total, but not necessarily in Europe.

The U.S. stated that it would also consider proposals involving land-based aircraft, part of a new interim agreement package presented at Geneva on September 22. In October, General Secretary Andropov announced "additional flexibility" on the issue of counting intermediate-range nuclear aircraft, although details are not provided.

On November 23, 1983, deliveries of the first missile components begin in the U.K. and West Germany. The Soviet

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[••] House Foreign Affairs Committee, Verifying Arms Control Agreements: The Soviet View, Report (Congressional Research Service), May 1987, p. 63.

delegation walks out of the INF negotiations. In protest against the deployment of Pershing II and GLCMs to Europe on December 8, 1983, the Soviets declined to set a date to resume arms control negotiations. A last Soviet offer was made just before the West German Parliament voted to accept Pershing II deployments. The proposal agreed to reduce Soviet launchers to 120, a level equal to British and French forces, in exchange for not deploying Pershing II and GLCM.

After a hiatus of more than a year, Secretary of State Schultz and Foreign Minister Gromyko met in Geneva on January 7-8, 1985 and agreed to initiate a new series of negotiations -- the Nuclear and Space Arms Talks (NST), consisting of three separate fora: strategic weapons (START), intermediate weapons (INF) and new Defense and Space negotiations.

In March 1985 the U.S. and the Soviet Union resumed negotiations in Geneva on Intermediate Nuclear Forces (INF). Soviet and U.S. proposals through January 1986 called for equal global forces of INF missiles in different combinations, with the continuation of deployments in Asia to be matched by U.S. North American deployments. On October 3, 1985, during a visit to Paris, General Secretary Gorbachev calls for a freeze in U.S. and Soviet INF missile deployment, and announces that Soviet SS-4s are being phased out and to reduce SS-20's west of the Urals to

243 (from a reported 270), and "dismantle their stationary facilities."[8]

During Round IV of the INF negotiations in Geneva, the Soviet Union put forth new proposals following up on the Gorbachev disarmament plan unveiled on January 15, 1986. All U.S. and Soviet intermediate range missiles in Europe would be eliminated in exchange for a freeze on British and French nuclear forces and Soviet SS-20s in Asia, and a pledge not to transfer nuclear systems to third parties.

Before the opening of Round V, on May 8, 1986, the U.S. once again proposed the "zero-zero" option, calling for the phased global reduction of U.S. and Soviet INF missiles, eliminating all such missiles by 1990. No limitations would be allowed on British or French nuclear forces. The Soviets tabled a draft treaty on May 15 based on the Gorbachev January plan.

During the Reykjavik Summit in October 1986, the two sides agreed that long-range INF weapons should be reduced to zero in Europe and that the Soviets would reduce INF warheads in Asia to 100. The Soviets proposed that equal global levels would allow the U.S. to deploy a mix of 100 GLCMs and Pershing IIs on continental U.S. territory but not within range of the Soviet Union (i.e., Alaska). The Soviets made an important concession and dropped their insistence that limits be placed on British and French nuclear forces. The Reykjavik proposals followed up on the

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[8] House Foreign Affairs Committee, Verifying Arms Control Agreements: The Soviet View, Report (Congressional Research Service), May 1987, p. 62.

U.S. proposals offered at Round VI of negotiations that started on September 18. Contentious issues that still remained included the U.S. position to freeze shorter-range systems at the Soviet level and questions of verification.

In November 1986 at Geneva, the U.S. accepted in principle the Soviet offer at Reykjavik that within five years of the signing of an agreement all SS-20s, GLCMs, and Pershing IIs be removed from Europe, that SS-20s east of the Urals be reduced to 33 (100 warheads), and that the would U.S. store or deploy a mix of 100 GLCMs and Pershing IIs on its own territory. Constraints on short-range INF were reaffirmed.

In February 1987, one month into Round VII of negotiations, General Secretary Gorbachev announced that the Soviet Union was willing to sign "without delay" an INF Treaty. The announcement dropped once again Soviet insistence that INF and strategic arms control be part of a comprehensive arms control package.

On March 4, the U.S. tabled a draft treaty which called for a global ban of all long- and short-range missiles. It also asserted the right to deploy shorter-range nuclear missiles in Western Europe to match the deployments of comparable Soviet systems in Eastern Europe while an agreement was being negotiated. The U.S. draft treaty included detailed verification procedures including on-site inspection of current inventories and destruction activities, as well as permanent monitoring of missile production and storage facilities.

On April 14, General Secretary Gorbachev told Secretary of State Schultz in Moscow that the Soviets were prepared to include the elimination all SRINF in Europe and Asia with a range of 300-600 miles as part of an INF Treaty. At first, it appeared that the U.S. had no weapons in this category. But on April 27, four days after the beginning of Round VII, the Soviets tabled a draft treaty in Geneva calling for the destruction of Pershing Ia missile warheads. The missiles are owned and operated by the West German Air Force, while the nuclear warheads on the missiles are owned and controlled by the U.S.

In June 1987, the Soviets agreed to station their reduced force of 33 SS-20 missiles 600 miles east of the Urals, out of range of both Western Europe and Japan.

On June 12, at a NATO Foreign Ministers Meeting in Reykjavik, the U.S. and its NATO allies agreed to accept the "double zero" option that would remove all LRINF and SRINF systems from Europe.

On July 22, General Secretary Gorbachev agreed to destroy all remaining SS-20s thereby accepting the "zero option" proposal first offered by the U.S. in 1981. This, coupled with the April offer, constituted a "global double zero" that would result in the total world-wide elimination of all long- and short-range missiles in Europe and Asia. The Soviets proposed that in return for total elimination, the U.S. must pledge to destroy Pershing Ia warheads and eliminate all GLCMs and Pershing IIs and their warheads. President Reagan welcomed the Soviet shift to the

"zero-zero" the next day, and announced a new proposal banning the "transfer of existing U.S. and Soviet INF missiles and launchers to any third party" and restricting any "conversion of these systems and launchers to other types of weapons."

On August 25, the U.S. tabled a new verification package, removing a requirement for on going on-site inspection at production and assembly facilities, and restricting "challenge" inspections to "certain" suspect sites. The next day (August 26), West German Chancellor Kohl announced that West Germany would dismantle its Pershing Ias under certain conditions after the U.S. and Soviet Union destroyed all of its INF weapons.**

On September 18, the United States and the Soviet Union reached an "agreement in principle" on a double zero option: all long- and short-range INF systems would be dismantled including a "ban on the modernization, production or flight-testing of any INF missile system."

On October 26, the two sides began a "data exchange" that enumerated the types of systems and location that each side has and believed the other to have. On November 24, the U.S. and Soviet Union reached final agreement on an INF Treaty.

** On June 4, 1987, the Kohl government agreed to the "double zero option," but refused to include its 72 Pershing Ias in the overall reductions of SRINF.

Appendix B: INF Treaty and Verification Provisions

The U.S. and the Soviet Union have agreed that:

- All long-range intermediate nuclear forces (LRINF) and short-range intermediate nuclear forces (SRINF) of the U.S. and Soviet Union will be eliminated and destroyed, and that "none of these missiles will be converted to other types or transferred to other countries."[89]

- SRINF (SS-12M and SS-23 missiles) will be destroyed within 18 months after the Treaty is ratified, and that LRINF systems (Pershing II, GLCM, SS-20 and SS-4) will be destroyed in the 3-year period following the effective date after ratification.[90]

- The Soviet Union will be allowed to deploy or store 80-100 short-range INF weapons for approximately 30 months (pending West German removal of their Pershing Ia missiles). The United States will be able to keep an equal number of Pershing Ia missiles on its own soil during the same period.[91]

- The missile bodies and reentry vehicle (minus the guidance

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[89] See, e.g., Paul H. Nitze [U.S. Department of State], "INF Negotiations and European Security," Current Policy No. 1005, October 1987.

[90] The time frame can be extended if destruction in one and three years is "technically and environmentally" infeasible.

[91] Michael R. Gordon, "U.S. Sees Progress in Moscow on a Missile Accord," New York Times, October 25, 1987, p. 12.

systems and the nuclear warheads) will be destroyed in the presence of observers from the other side.

- The U.S. and the Soviet Union may return the missiles to their territory to destroy them.

- During the first six months of the Treaty period, up to one-quarter of the missiles can be fired off with dummy warheads to burn up the fuel and destroy them. Other missiles will be blown apart with conventional explosives after the nuclear warheads and guidance systems have been removed.

- Guidance systems will be able to be removed from the missile reentry vehicles and returned to the U.S. and the Soviet Union. The guidance system does not need to be destroyed.

- The "nuclear explosives package" (the warheads) including the nuclear materials (plutonium, uranium, lithium deuteride and tritium) will be removed from "and returned to national authorities and the remaining reentry vehicle structure destroyed."[92]

- Launchers for INF missiles will be destroyed although components of those launchers (tires, engines, etc.) can be salvaged.

- No missiles covered by the Treaty will be tested while they are being phased out.

- Future INF missile modernization, including production and flight testing is banned for an indefinite period of time.

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[92] See, e.g., Paul H. Nitze [U.S. Department of State], "INF Negotiations and European Security," Current Policy No. 1005, October 1987.

- No conventional missiles in these same ranges will be developed.[93]

In addition to the specific provisions of the treaty, West Germany pledges to dismantle its Pershing Ia missiles at least 15 days before the Treaty's deadline and return the W50 nuclear warheads currently arming the missiles to the U.S. before the deadline itself.

Verification and Compliance Provisions

The INF Treaty, in the words of President Reagan, "will result in the most comprehensive verification regime in history."[94]

- Both sides will conclude a satisfactory "baseline inventory," exchange information on the technical characteristics of the missiles involved and agree to a count of the total number of missiles of all types. "Walk through" visits at INF related facilities will be conducted and "closeout" inspections will be

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[93] R. Jeffrey Smith, "President paving Way for Pact," Washington Post, 13 September 1987, p. A1; see also "The INF Negotiations," Interview with Kenneth Adelman, Georgetown Diplomatic Journal, Summer 1987. According to a State Department statement in June, "GLCMs with conventional warheads could be retained, if the side retaining the GLCMs could demonstrate to the other side that they did not carry nuclear warheads;" House Foreign Affairs Committee, Developments in Europe, June 1987, Hearings, 29 June 1987, p. 58.

[94] The White House, Statement by the President, 30 October 1987.

carried out after missiles are bases to make certain they were really removed.

- The dismantlement and destruction of the weapons will be accompanied by on-site inspections, for which the West European nations will allow Soviet inspectors on U.S. INF bases in their countries, and East European countries will allow U.S. inspectors on Soviet INF bases in their countries.

- For a 13 year period, including three years while the INF missiles are being dismantled, and ten years thereafter, U.S. inspectors will be stationed at Votkinsk, 600 miles east of Moscow, at the site of a former SS-20 missile assembly plant and currently an SS-25 strategic missile production facility. Soviet inspectors will be stationed at Hercules Inc. Aerospace Division, in Magna, Utah, 15 miles west of Salt Lake City, a former Pershing missile production plant and currently a production facility for strategic MX missile components.

- For a 13 year period, including three years while the INF missiles are being dismantled, and ten years thereafter, short-notice challenge inspections will be allowed at a set of specified sites involved in missile basing, storage, and repair. These sites would include current and formerly used facilities. The NATO allies previously refused to allow Soviet challenge inspections in their countries after the three year period of the Treaty dismantlement process. Twenty inspections would be allowed every year in the first three years, 15 would be allowed in years

four through eight, and 10 will be allowed in years nine through 13.

- Intermittent inspections would be allowed at specified "suspect sites" in the U.S. and the Soviet Union that could be used to produce materiel that could undermine the Treaty. The U.S. site chosen for such intermittent inspections is a plant in San Diego that makes the launchers for the Ground-launched cruise missile. The corresponding Soviet site which produces launchers is located in Sverdlovsk.

- The two sides will resolve any disagreement over treaty interpretation or compliance through "diplomatic channels" -- rather than through the existing Standing Consultative Commission in Geneva.

- The two sides have agreed not to deny telemetry of missile tests to the other side.

- The two sides can withdraw from the Treaty with six-month advance notification if "supreme national interests" are jeopardized by continued adherence.

Appendix C: General Political Guidelines for the Employment of Nuclear Weapons in Defense of NATO

During the NATO Minister's meeting in Gleneagles, Scotland on 20-21 October 1986, NATO adopted new political guidelines for the use of its nuclear forces. Although a process of reevaluating NATO's nuclear capabilities had been ongoing for about eight years, the deployment of long-range nuclear forces and the withdrawal of major portions of NATO's European stockpile necessitated a restatement of nuclear strategy as it related to the initiation of the use of nuclear weapons, follow-on nuclear strikes, and strikes on Soviet territory.

These new General Political Guidelines are the European equivalent of the Carter Administration's Presidential Directive 59 (PD-59), the Nuclear Weapons Employment Policy for strategic forces that was approved in 1980. The new General Political Guidelines, like PD-59 (and the Reagan Administration affirmation in National Security Decision Directive 13), sought to better articulate a counterforce nuclear doctrine relating to the use of nuclear weapons that had been evolving during the 1970s.

The new General Political Guidelines were prepared by a NATO working group under the Defense Planning Committee,[88] which resulted in four drafts (the last was in 1982) that were discussed and debated at numerous Defense Planning Committee, Nuclear Planning Group, and Ministerial meetings. It updates and

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[88] The Defense Planning Committee of NATO consists of the Defense Ministers under the chairmanship of the Secretary General.

replaces the 1969 "Provisional" Political Guidelines (known as the PPGs) on the initial (aka "first") use of nuclear weapons, and the 1970 "General Release" guidelines, which together with two other NATO statements that were previously in effect on the use of nuclear weapons constituted NATO's nuclear employment policy:[96]

-- Provisional Political Guidelines for the Initial Defensive Tactical Use of Nuclear Weapons By NATO ((DPC/D(69)58 (Revised)) (November 1969).

-- Concept for the Role of Theater Nuclear Strike Forces in ACE [Allied Command Europe] ((DPC/D(70)59 (Revised)) (October 1970).

-- Guidelines for consultation procedures on use of nuclear weapons (November 1969).[97]

-- Political guidelines for use of atomic demolition munitions (October 1970).[98]

The General Political Guidelines (GPG) specify the following:

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[96] See Secretary of Defense James R. Schlesinger, The Theater Nuclear Force Posture in Europe, A Report to the United States Congress in compliance with Public Law 93-365, 1975, p. 26.

[97] These procedures, recognized that "special weight should be given in the consultation process to the country on or from whose territory the weapons would be employed; to the country providing the delivery system concerned; and to the country providing the warhead...;" J. Michael Legge, "Theater Nuclear Weapons and the NATO Strategy of Flexible Response," April 1983 (Rand Corporation R-2964-FF), p. 22. The procedures are regularly practiced in the biennial NATO WINTEX command post exercises.

[98] As a result of a 1980 study of the role of Defensive Nuclear Forces (DNF) in NATO strategy by the High Level Group of the Nuclear Planning Group, Nike Hercules missiles and Atomic Demolition Munitions were earmarked for withdrawal. All atomic demolition munitions were withdrawn from Europe in 1985.

- Reaffirms NATO's 1967 Flexible Response strategy, which calls for NATO to defend itself against attack in three phases: "direct defense," "deliberate escalation," and "general nuclear response."[99]

- Reaffirms the policy of initial ("first") use of NATO nuclear weapons in response to a Soviet conventional attack.

- Discusses in great detail the selective use of NATO nuclear weapons. The GPG put greater emphasis on "follow-on" nuclear strikes, assuming a Warsaw Pact nuclear response to "initial" use. Since the assumption is one of a series of selective strikes, the priority for the "deliberate escalation" phase of the flexible response strategy is strikes beyond the battlefield (i.e., not on NATO territory). Initial attacks, under the GPG, will be made "mainly on the territory of the aggressor, including the Soviet Union."[100] Strikes on Soviet homeland territory in previous NATO employment policy was highly restricted to specific circumstances such as warfare on the Soviet-Turkish border.

- States that nuclear weapons will be developed and deployed, to implement the new long-range employment doctrine.

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[99] NATO flexible response strategy is contained in Overall Strategic Concept for the Defense of the North Atlantic Treaty Organization Area (MC 14/3).

[100] See Lothar Ruehl [State Secretary of the Ministry of Defense, West Germany], "The Nuclear Balance in the Central Region and Strategic Stability in Europe," NATO's Sixteen Nations, August 1987, p. 19. This is the only known public discussion or mention of the GPG by an NATO or U.S. official.

"...TNF [Theater Nuclear Force] modernization in Europe has shifted the weight of regional nuclear armaments and target options away from the battlefield towards the adversary's side with a tendency of striking deep in WP [Warsaw Pact] territory."[101]

- Contains guidance for nuclear targeting, stating that priority be given to militarily significant ("counterforce") strikes as a means to convey political messages, rather than "countervalue" strikes. This is in contrast to the 1969 guidelines which stated that the objective of the initial NATO use of nuclear weapons "would be essentially political and that initial use would therefore be very selective."[102]

- Contains new guidance on NATO declaratory policy dealing with nuclear weapons.

- Contains new guidance on communicating NATO intentions to the Soviet Union in a crisis, as well as after selective use of nuclear weapons (such as in the case of demonstration nuclear strikes).

- Provides new guidelines for political consultation to ensure control over battlefield commanders. Reaffirms the

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[101] Lothar Ruehl [State Secretary of the Ministry of Defense, West Germany], "The Nuclear Balance in the Central Region and Strategic Stability in Europe," NATO's Sixteen Nations, August 1987, p. 19.

[102] J. Michael Legge, "Theater Nuclear Weapons and the NATO Strategy of Flexible Response," April 1983 (Rand Corporation R-2964-FF), p. 20.

traditional "Athens" guidelines that consultation would be subject to "time and circumstances permitting."

- Provides guidelines on the use of sea-based nuclear weapons for the first time. The 1969 guidelines only considered the initial use of land-based nuclear weapons in response to an attack.

Table 1

Long- and Short-range Intermediate Nuclear Missiles

	SS-20	SS-4	SS-12	SS-23	Pershing II	GLCM	Pershing 1a
Introduced	1977	1958	1979	1985	1983	1983	1966*
Operational Mode	mobile	fixed	mobile	mobile	mobile	mobile	mobile
Range (km)	5000	2000	900	500	1800	2500	740
(mi)	3100	1240	560	300	1120	1500	450
Dual Capable	no	no	yes	yes	no	no	no
Warheads	3	1	1	1	1	1	1
Yield (kt)	3x250	500-1000	500	100	.3-80	.2-150	60-400
Launchers Deployed	441	112	124	36	108	64	72
Total Launchers	441	112	124	36	126	93	72
Reloadable	yes	yes	yes	yes	yes	no	yes
Warheads Deployed	1323	112	124	36	108	256	100
Total Warheads	~2700	~230	275	50	120	300	100

* In service with West Germany.

Table 2
Changes in U.S. Nuclear Arsenal in Europe (1980-1992)

Nuclear warheads in Europe beginning 1980	6840
Major withdrawals by end of 1987	
Atomic demolition munitions (ADMs)	372
Nike Hercules surface-to-air missile warheads	586
Honest John short-range missile warheads	1198
Nuclear gravity bombs (net reduction)[103]	337
U.S. Pershing Ia missile warheads	193
W33 8-inch artillery warheads (net reduction)	200
Total	-2887
Additions to the European stockpile by end of 1987	
Pershing II warheads	108
Ground-launched cruise missile warheads	256
Total	+364
Nuclear warheads in Europe end of 1987	4317
Planned INF withdrawals by 1992	
Pershing II warheads	108
Ground-launched cruise missile warheads	256
Pershing Ia warheads	100
Total	-464
Ongoing withdrawals due to retirements thru 1992	
Nike Hercules surface-to-air missile warheads	100
W33 8-inch artillery warheads	500
Total	-600
Nuclear warheads in Europe end of 1992	3253

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103 New B61 bombs were deployed to Europe during this period but they replaced older bombs on a less than one-for-one basis.

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