
ARMS CONTROL CHRONOLOGY

Jack Mendelsohn (Editor)
David Grahame

Center for Defense Information

Winter 2002

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THE CENTER FOR DEFENSE INFORMATION
1779 Massachusetts Avenue, NW, Suite 615
Washington, DC 20036-2109

202.332.0600
www.cdi.org

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EDITOR'S PREFACE

This *Arms Control Chronology* is based on a 1997 U.S. Government publication originally prepared by Ms. Catherine R. Mendelsohn under contract to the United States Information Agency (USIA) but never officially released in the United States. It was updated, expanded and revised by David Grahame, a Cambridge University honors graduate in History, who interned at the Lawyers Alliance for World Security (LAWS) during the summer of 2001. Scott Cantor, a Scoville Fellow, also worked on the project in the spring of 2001.

While most of the editorial work was done while I was at LAWS, the text was prepared for publication by Rachel Freedman of the Center for Defense Information (CDI) and published by CDI. Invaluable source material was provided by the publications and websites of the Acronym Institute, the Arms Control Association, the Carnegie Endowment for International Peace, the Center for Defense Information, the Federation of American Scientists, the Monterey Institute of International Studies and the Natural Resources Defense Council.

As with any document with a substantial amount of detail, this *Arms Control Chronology* is subject to errors of fact and formatting. Any comments, corrections or criticisms are welcome and will be incorporated as appropriate in future editions.

Jack Mendelsohn
Senior Associate
Center for Defense Information

MESSAGE FROM THE PRESIDENT

This *Arms Control Chronology* gathers together and organizes in one document the record of arms control efforts undertaken since the beginning of the nuclear age. It is both a concise history and a factual reference tool and, if it is found useful by readers, the Center for Defense Information (CDI) will undertake to update it from time to time.

I would like to thank Jack Mendelsohn, a Senior Associate at CDI, and David Grahame, both working at the Lawyers Alliance for World Security (LAWS) at the time, for their hard work compiling, revising and editing this chronology. Rachel Freedman of CDI helped prepare it for publication.

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Dr. Bruce Blair
President
Center for Defense Information

ACRONYMS AND ABBREVIATIONS

ABM	Anti-Ballistic Missile (Treaty)	FMCT	Fissile Material Cut-Off Treaty
AHG	Ad Hoc Group	FRY	Federal Republic of Yugoslavia
ACDA	U.S. Arms Control and Disarmament Agency	FSC	Forum for Security Cooperation
ACV	armored combat vehicle	GCS	global control system
AFNFZ	African Nuclear-Weapon-Free Zone	GEMI	global exchange of military information
ALBM	air-launched ballistic missile	GLCM	ground-launched cruise missiles
ALCM	air-launched cruise missile	GPALS	global protection against limited strikes
APC	armored personnel carrier	GPS	global protection system
APL	anti-personnel landmine	G-7	Group of Seven (Industrialized Nations)
ASAT	anti-satellite weapon	HEU	highly-enriched uranium
ASEAN	Association of Southeast Asian Nations	IAEA	International Atomic Energy Agency
ATBM	anti-tactical ballistic missile	ICBL	International Campaign to Ban Landmines
ATTU	Atlantic Ocean to the Ural Mountains (CFE Treaty)	ICBM	intercontinental ballistic missile
BJP	Bharatiya Janata Party	ICJ	International Court of Justice
BMD	ballistic missile defense	ICRC	International Committee of the Red Cross
BMDO	Ballistic Missile Defense Organization	INF	intermediate-range nuclear forces
BW	biological warfare/weapons	IOC	initial operating capability
BWC	Biological and Toxin Weapons Convention	IRBM	intermediate-range ballistic missile
CAT	Conventional Arms Transfer	ISTC	International Science and Technology Center
CBM	confidence-building measure	JCG	Joint Consultative Group (CFE Treaty)
CCW	Convention on Certain Conventional Weapons	JCIC	Joint Compliance and Inspection Commission (START I Treaty)
CD	United Nations Conference on Disarmament in Geneva	JVE	joint verification experiment
CDE	Conference on Confidence- and Security-Building Measures and Disarmament in Europe	KEDO	Korean Peninsula Energy Development Organization
CFE	Conventional Armed Forces in Europe (Treaty)	LEU	low-enriched uranium
CFE 1A	CFE Treaty Follow-On Agreement	LRINF	longer-range intermediate nuclear forces
CIS	Commonwealth of Independent States	LTBT	Limited Test Ban Treaty
COCOM	Coordinating Committee for Multilateral Export Controls	LWR	light water-moderated nuclear power reactor
CORRTEX	continuous reflectometry for radius versus time experiments (nuclear testing)	MBFR	mutual and balanced force reductions
CSBM	confidence- and security-building measure	MCTL	military critical technologies list
CSCE/OSCE	Conference on (Organization for) Security and Cooperation in Europe	MINATOM	Ministry of Atomic Energy
CTBT	Comprehensive Nuclear Test Ban Treaty	MIRV	multiple independently-targetable reentry vehicle
CW	chemical warfare/weapons	MOU	memorandum of understanding
CWC	Chemical Weapons Convention	MTCR	Missile Technology Control Regime
DMA	Dangerous Military Activities (Agreement)	NATO	North Atlantic Treaty Organization
DPRK	Democratic People's Republic of Korea	NGO	non-governmental organization
ECOWAS	Economic Community of West Africa	NIE	National Intelligence Estimate
EKV	exoatmospheric kill vehicle	NIKIET	Mendeleev University of Chemical Technology and the Scientific Research and Design Institute of Power Technology
EPCI	Enhanced Proliferation Control Institute	NMD	national missile defense
EU	European Union	NNA	Neutral and Non-aligned States
		NNWS	non-nuclear-weapon state
		NPT	Nuclear Non-Proliferation Treaty
		NRRC	Nuclear Risk Reduction Center

NSG	Nuclear Suppliers Group	VD94	Vienna Document 1994
NST	Nuclear and Space Talks	VEREX	United Nations Ad Hoc Group of Governmental Experts on BWC Verification
NTM	national technical means (of verification)		
NTT	Nuclear Testing Talks	WMD	Weapons of Mass Destruction (nuclear, chemical, and biological)
NWFZ	nuclear-weapons-free zone		
NWS	nuclear-weapon state	WTO	Warsaw Treaty Organization (Warsaw Pact)
OAS	Organization of American States		
OAU	Organization for African Unity		
OPANAL	Organismo para la Proscripcion de las Armas nucleares en America Latina y el Caribe (Treaty of Tlatelolco)		
OPCW	Organization for Prohibition of Chemical Weapons		
OSIA	On-Site Inspection Agency		
PNET	Peaceful Nuclear Explosion Treaty		
PNI	President nuclear initiative		
RAF	Royal Air Force		
RV	re-entry vehicle		
PNET	Peaceful Nuclear Explosion Treaty		
SALT	Strategic Arms Limitation Talks		
SCC	Standing Consultative Commission (ABM Treaty)		
SDI	Strategic Defense Initiative		
SDIO	Strategic Defense Initiative Organization		
SEANWFZ	Southeast Asian Nuclear-Weapon-Free Zone		
SLBM	submarine-launched ballistic missile		
SLCM	sea-launched cruise missile		
SLV	space-launch vehicle		
SNDV	strategic nuclear delivery vehicle		
SNF	short-range nuclear forces		
SPNWFZ	South Pacific Nuclear-Weapon-Free Zone		
SRAM	short-range attack missile		
SRINF	shorter-range intermediate nuclear forces		
SSBN	nuclear-powered ballistic missile submarine		
SSD	safety, security and dismantlement talks		
START	Strategic Arms Reduction Talks		
SVC	Special Verification Commission (INF Treaty)		
THAAD	theater high altitude area defense (system)		
TLE	treaty-limited equipment		
TMD	theater missile defense		
TNF	theater nuclear force		
TTBT	Threshold Test Ban Treaty		
UN	United Nations		
UNGA	United Nations General Assembly		
UNMOVIC	United Nations Monitoring, Verification, and Inspection Commission (for Iraq)		
UNSC	United Nations Security Council		
UNSCOM	United Nations Special Commission (for Iraq)		
USSR	Union of Soviet Socialist Republics		
VD90	Vienna Document 1990		
VD92	Vienna Document 1992		

CHAPTER I : HIGHLIGHTS OF INTERNATIONAL ARMS CONTROL

JUNE 17, 1925

The Geneva Protocol is signed prohibiting the use of chemical weapons or bacteriological warfare. It enters into force in 1928. The United States accedes to the Protocol in 1975.

DECEMBER 1, 1959

The Antarctic Treaty is signed to internationalize and demilitarize the Antarctic continent. It is the first nuclear-weapons-free-zone (NWFZ) agreement. The treaty enters into force on June 23, 1961.

AUGUST 5, 1963

The United States, the United Kingdom and the Soviet Union sign the Limited Test Ban Treaty (LTBT) which outlaws nuclear tests in the atmosphere, in outer space and underwater. The treaty enters into force on October 10, 1963.

JANUARY 27, 1967

The Outer Space Treaty is signed prohibiting the placement of weapons of mass destruction in orbit, on the moon or on any celestial body. The treaty enters into force on October 10, 1967.

FEBRUARY 14, 1967

The Treaty of Tlatelolco is signed prohibiting nuclear weapons in Latin America. To date all 33 States in the region of Latin America and the Caribbean have signed the Treaty. Of these, 32 have ratified it with Cuba being the only exception. The treaty has two protocols that allow both nuclear weapon states and those countries with territories in the region to participate in the regime. The treaty enters into force on April 22, 1968.

JULY 1, 1968

The United States, the United Kingdom, the Soviet Union and 59 other nations sign the Nuclear Non-Proliferation Treaty (NPT). The treaty:

- Bars Nuclear Weapons States (NWS) from transferring, assisting or encouraging Non Nuclear Weapons States (NNWS) to acquire, manufacture or control nuclear weapons.
- Bars NNWS from seeking, acquiring or receiving nuclear weapons.
- Permits the development, research, production and use of nuclear energy for peaceful purposes.
- Commits the parties to the treaty to undertake negotiations in good faith to end the arms race and pursue nuclear disarmament.

It enters into force March 5, 1970 and is extended indefinitely and unconditionally on May 11, 1995.

APRIL 10, 1972

The Biological Weapons Convention (BWC) is opened for signature. Parties to the Convention undertake not to develop, produce, stockpile, or acquire biological agents or toxins “of types and in quanti-

ties that have no justification for prophylactic, protective, and other peaceful purposes,” as well as related weapons and means of delivery. It enters into force on March 26, 1975.

MAY 26, 1972

The United States and the Soviet Union sign the Anti-Ballistic Missile Treaty (ABMT), limiting strategic antiballistic missile defenses, and the Strategic Arms Limitation Talks (SALT I) Interim Agreement, providing an interim ceiling on strategic offensive nuclear weapons.

JUNE 18, 1979

The United States and the Soviet Union sign the Strategic Arms Limitations (SALT II) in Vienna that further limits strategic nuclear weapons. The parties also agree that the 1972 ABM Treaty will remain in effect. The treaty is never ratified.

OCTOBER 10, 1980

The Convention on Certain Conventional Weapons (CCW) is concluded in Geneva. The Convention bases itself on the principal “that prohibits the employment in armed conflicts of weapons, projectiles and material and methods of warfare of a nature to cause superfluous injury or unnecessary suffering.” The CCW provides the framework to which separate protocols are added governing individual weapons. There are initially three protocols:

- Restricting fragmentation weapons.
- Restricting mines, booby traps and certain other explosive devices.
- Restricting incendiary weapons.

On October 13, 1995 the states parties add an additional protocol banning the use or transfer of blinding laser weapons while on May 3, 1996 they amend Protocol II to toughen land mine restrictions. The CCW enters into force on December 2, 1983 – six months after being ratified by 20 states.

AUGUST 6, 1985

The Raratonga Treaty is signed establishing the South Pacific Nuclear-Weapon-Free Zone (SPNFZ). To date the treaty has 16 parties. The treaty has three protocols that allow both the nuclear weapon states and those countries which hold territories in the region to participate in the regime. The treaty enters into force on December 11, 1986.

DECEMBER 8, 1987

The United States and the Soviet Union sign the Intermediate-Range Nuclear Forces (INF) Treaty to eliminate all ground-launched ballistic and cruise missiles with ranges between 500 and 5500 km. The treaty enters into force June 1, 1988 and is fully implemented June 1, 1991.

NOVEMBER 19, 1990

The 22 North Atlantic Treaty Organization (NATO) and Warsaw Pact nations sign the Conventional Armed Forces in Europe (CFE) Treaty. The agreement reduces and limits five categories of conventional weapons to equal levels for each alliance grouping. The treaty enters into force July 17, 1992 and its reductions are completed November 17, 1995. The treaty is adapted on November 19, 1999 to give it renewed relevance in the post Cold War world.

JULY 31, 1991

Presidents Bush and Gorbachev sign the Treaty Between the United States and the Soviet Union on the Reduction and Limitation of Strategic Offensive Arms (START I). The treaty calls for a 25-35 percent cut in the strategic warheads of both sides and enters into force on December 5, 1994. It is fully implemented Dec. 4, 2001.

SEPTEMBER 27, 1991

The United States announces a presidential nuclear initiative (PNI) involving the unilateral withdrawal from overseas bases and operational deployment of all land- and sea-based tactical nuclear weapons. The following month, the Soviet Union responds with unilateral nuclear reductions of its own.

DECEMBER 12, 1991

President Bush signs the Soviet Nuclear Threat Reduction Act (the Nunn-Lugar legislation) approving U.S. aid to help the CIS with the storage, transportation, dismantlement and destruction of nuclear and chemical weapons, as well as defense conversion, and military-to-military exchanges. Over the next 10 years around \$4 billion is budgeted for these nonproliferation activities under the Nunn-Lugar legislation.

MARCH 24, 1992

The Open Skies Treaty, intended to strengthen confidence and transparency with respect to military activities, is signed during a meeting of the CSCE in Helsinki. Parties to the treaty are required to open their airspace, on a reciprocal basis, to the overflight of their territory by unarmed reconnaissance aircraft. All treaty signatories have access to all collected data. To date Kyrgyzstan is the only country of the 27 signatories that has not yet ratified the treaty.

JANUARY 3, 1993

The United States and Russia sign the Treaty on Further Reduction and Limitation of Strategic Offensive Arms (START II), which calls for a reduction in U.S. and Russian strategic warheads to no more than 3,000 to 3,500 each. The treaty is still awaiting ratification by the United States of subsequent amendments.

JANUARY 13, 1993

One hundred and thirty nations, including the United States, the United Kingdom, France, Russia and China sign the Chemical Weapons Convention (CWC). The convention aims to achieve the global elimination of chemical weapons within ten years of its entry into force on April 29, 1997.

OCTOBER 23, 1994

The United States and the Democratic People's Republic of Korea (DPRK) sign an Agreed Framework to freeze the North Korean nuclear program and halt the DPRK's withdrawal from the NPT.

DECEMBER 15, 1995

Ten Southeast Asian nations sign the Bangkok Treaty establishing the Southeast Asia Nuclear-Weapon-Free Zone (SEANWFZ). The treaty has one protocol that allows nuclear weapons states to participate in the regime. The treaty has yet to enter into force.

APRIL 11, 1996

Forty-three African nations sign the Pelindaba Treaty establishing the African Nuclear-Weapon-Free Zone (AFNFZ). The treaty has three protocols that allow both the nuclear weapon states and those countries which hold territories in the region to participate in the regime. The treaty has yet to enter into force.

SEPTEMBER 24, 1996

The Comprehensive Test Ban Treaty (CTBT) is opened for signature. U.S. President Bill Clinton is the first head of state to sign, followed by the other four declared nuclear powers and a host of nonnuclear states. The U.S. Senate rejected the treaty in October 1999.

DECEMBER 3, 1997

One hundred and twenty one States sign the Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on Their Destruction in Ottawa, Canada. The treaty enters into force on March 1, 1999 and States Parties have 10 years to destroy their land mine stockpiles. The United States is not a party to the treaty.

DECEMBER 13, 2001

The United States announces that it intends to withdraw from the ABM treaty in six months. This is the first formal renunciation of an international arms control agreement since the end of World War II.

CHAPTER II : NUCLEAR TESTING

1945 — JULY 16

THE WORLD'S FIRST NUCLEAR TEST

The United States conducts the world's first nuclear weapons test, code-named *Trinity*, at Alamogordo, New Mexico. A War Department statement released some time after the test explains that, "Mounted on a steel tower, a revolutionary weapon destined to change war as we know it, or which may even be the instrumentality to end all wars, was set off with an impact which signaled man's entrance into a new physical world." (See Jan. 31, 1950)

1949 — AUGUST 29

FIRST SOVIET NUCLEAR TEST

The first Soviet nuclear test, code-named *First Lightning*, is conducted at a test site near Semipalatinsk in Kazakhstan. The explosion produces a yield of 22 kilotons. In a November 9 speech, Politburo member Georgi Malenkov reflects on the danger of the new strategic situation: "Can there be any doubt that, if the imperialists start a third world war, it will mean the end, not of individual capitalist states, but of all the capitalist world." (See Aug. 12, 1953)

1950 — JANUARY 31

HYDROGEN BOMB ANNOUNCEMENT

President Harry Truman announces that in order for the United States to be able "to defend itself against any possible aggressor," he has "directed the Atomic Energy Commission to continue its work on all forms of atomic weapons, including the so-called hydrogen or super-bombs." (See Nov. 1, 1952)

1952 — OCTOBER 3

FIRST BRITISH NUCLEAR TEST

The first British nuclear test, code-named *Hurricane*, takes place near the Monte Bello Islands off the northwest coast of Australia as a 25-kiloton nuclear device is exploded inside the hull of the warship *HMS Plym*. (See May 15, 1957)

1952 — NOVEMBER 1

FIRST THERMONUCLEAR TEST

The United States detonates the first thermonuclear device, code-named *Mike*, at Eniwetok Atoll in the Marshall Islands. Utilizing the Teller-Ulam configuration, it produces a 10-megaton yield, a vast increase in the destructive capability of nuclear weapons. However, *Mike* itself is a bulky 60-metric ton construction and further work is needed before a deliverable thermonuclear bomb is produced. (See March 1, 1954)

1953 — AUGUST 12**SOVIET THERMONUCLEAR DEVICE**

On August 8, Georgi Malenkov, now Chairman of the Soviet Council of Ministers, announces in a major speech before the Supreme Soviet that, “The United States has no monopoly in the production of the hydrogen bomb.” Following this remark the Soviets test the RDS-6 – their first limited thermonuclear device – at the Semipalatinsk site in Kazakhstan. The detonation produces a yield of 400 kilotons – about 25 times smaller than that of *Mike*. While thermonuclear reactions are central to the test, the Soviet Union does not yet possess the more advanced U.S. configurations that allow for massive increases in explosive yield. (See Nov. 22, 1955)

1954 — MARCH 1**BRAVO HYDROGEN BOMB TEST AND CONTAMINATION OF THE LUCKY DRAGON**

Continuing to develop the thermonuclear concept, the United States carries out the *Bravo* test detonation on Bikini Atoll. This is a deliverable thermonuclear bomb that unexpectedly turns out to be the largest U.S. nuclear device ever exploded. Due to a miscalculation, the yield of 15 megatons is far higher than expected and the range of radioactive contamination is greatly increased. A Japanese fishing vessel, the *Lucky Dragon*, sailing 80 miles east of the explosion, is showered with radioactive fallout, the 23 crew members all contract radiation sickness and one of them later dies from it. The fallout also reaches the Marshall Islands leading to more human contamination. (See July 7, 1977)

1954 — APRIL 2**INDIA CALLS FOR A HALT TO TESTING**

Jawaharlal Nehru, Prime Minister of India, calls for a “standstill agreement” on nuclear testing, the first initiative of its kind. (See Aug. 21, 1957)

1955 — NOVEMBER 22**FIRST “TRUE” SOVIET SUPERBOMB TEST**

The Soviet Union tests the RDS-3 – the first thermonuclear device to use a two-stage radiation implosion to greatly increase explosive yields – at the Semipalatinsk test site in Kazakhstan. The device has a yield of 1.6 megatons and is also the world’s first air-dropped thermonuclear bomb test.

1957 — MAY 15**FIRST BRITISH THERMONUCLEAR TEST**

The United Kingdom tests its first thermonuclear weapon at the Christmas Islands in the Pacific. The test is named *Grapple 1/Short Granite* and produces a yield of 200-300 kilotons, far below the 1-megaton yield predicted.

1957 — AUGUST 21
U.S. NUCLEAR TESTING PROPOSAL

President Dwight D. Eisenhower announces that the United States would be willing, as part of a first-step disarmament agreement, to suspend testing of nuclear weapons for up to two years under certain conditions and safeguards. These include Soviet acceptance of the U.S. call for a permanent cessation of the production of fissionable materials for weapons purposes and the installation of inspection systems to insure compliance. (*See March 31, 1958*)

1958 — JANUARY 15
PETITION TO END NUCLEAR TESTING

A Petition to the United Nations Urging the International Agreement to Stop the Testing of Nuclear Bombs be made Now, signed by 9,235 scientists, is presented to United Nations Secretary-General Dag Hammarskjold. The petition concludes, “We deem it imperative that immediate action be taken to effect an international agreement to stop testing of all nuclear weapons.”

1958 — MARCH 31
SOVIET NUCLEAR TESTING MORATORIUM

The Soviet Union announces that it will unilaterally halt all nuclear tests, provided Western nations also stop testing.

1958 — APRIL 8-AUGUST 21
CONFERENCE OF EXPERTS

President Eisenhower proposes a Conference of Experts to examine the issues involved in verifying a nuclear test ban. The conference convenes on July 1 in Geneva with scientists from the United States, the United Kingdom, the Soviet Union, France, Canada, Czechoslovakia, Romania and Poland. On August 21, the conference releases a report indicating that a Comprehensive Nuclear Test Ban (CTB) can be verified through a network of 160 to 170 monitoring stations and that nuclear tests in space out to 50 kilometers can be verified, but that current technology cannot detect tests in deep space. (*See Aug. 22, 1958*)

1958 — AUGUST 22
U.S. NUCLEAR TESTING PROPOSAL

President Eisenhower announces that the United States is prepared “to negotiate an agreement with other nations which have tested nuclear weapons for the suspension of nuclear weapons tests and the establishment of an international control system.” (*See Oct. 31, 1958*)

1958 — OCTOBER 31
CTB NEGOTIATIONS BEGIN AND NUCLEAR TESTS ARE SUSPENDED

The United States, the United Kingdom, and the Soviet Union begin negotiations on a Comprehensive

Nuclear Test Ban Treaty (CTBT) at the Geneva Conference on the Discontinuance of Nuclear Weapons Tests. The United States and United Kingdom begin a one-year testing moratorium, which the Soviet Union joins a few days later.

1959 — APRIL 13**U.S. NUCLEAR TEST BAN PROPOSAL**

In a letter to Soviet Premier Nikita Khrushchev, President Eisenhower offers an alternative approach to a nuclear test ban: If the Soviet Union insists on a veto over an on-site control system to monitor underground detonations, the two sides could implement a test ban in phases, starting with a prohibition of nuclear weapons tests in the atmosphere up to 50 kilometers. Meanwhile, negotiations could continue to resolve the political and technical problems associated with control of underground and outer space tests. Premier Krushchev rejects this proposal and suggests instead a CTBT with a predetermined number of on-site inspections. (*See May 5, 1959*)

1959 — MAY 5**U.S. NUCLEAR TEST BAN PROPOSAL**

In another letter to Premier Krushchev, President Eisenhower urges technical discussions on the possibility of banning nuclear tests to a greater atmospheric height than that mentioned in his April 13 letter. The president again urges the Soviet Union either to accept the control measures that would make possible a complete ban on nuclear weapons tests or to agree to the U.S. proposal for a partial ban. The president states that the United States is prepared to explore Premier Khrushchev's proposal for a predetermined number of inspections in the territory of the United States, the United Kingdom and the Soviet Union, but adds that the number should be related to scientific facts and detection capabilities. (*See May 2, 1960*)

1959 — AUGUST 26**EXTENSION OF U.S. TESTING MORATORIUM**

President Eisenhower extends the voluntary one-year suspension of nuclear weapons testing by the United States to December 31, 1959. (*See Aug. 28, 1959*)

1959 — AUGUST 28**SOVIET STATEMENT ON TESTING MORATORIUM**

The Soviet Union states that it will not resume nuclear testing provided the Western powers continue to observe a moratorium. (*See Dec. 29, 1959*)

1959 — DECEMBER 29**U.S. TESTING MORATORIUM EXPIRES**

President Eisenhower announces that when the U.S. nuclear testing moratorium expires at the end of 1959 "we consider ourselves free to resume nuclear testing." The United States will not resume testing, however, without advance notice. (*See Sept. 1, 1961*)

1960 — FEBRUARY 13
FIRST FRENCH NUCLEAR TEST

France explodes its first nuclear device at a test site in the Sahara Desert in Algeria. The test, code-named *Gerboise Bleue*, has a yield of 60-70 kilotons. (See Aug. 24, 1968)

1960 — MAY 2
U-2 INCIDENT

A U.S. U-2 reconnaissance plane is shot down over Sverdlovsk in the Soviet Union. Premier Khrushchev cancels the scheduled four-power Paris summit and no further progress is made in the CTBT negotiations for the balance of the Eisenhower administration. (See March 21, 1961)

1961 — MARCH 21
CTBT NEGOTIATIONS RECONVENE

After a policy review by the administration of President John F. Kennedy, the CTBT negotiations between the United States, the United Kingdom, and the Soviet Union reconvene in Geneva. While the sides are close on many points, the United States and the United Kingdom call for 20 on-site inspections per year, while the Soviet Union proposes only three. (See April 18, 1961)

1961 — APRIL 18
DRAFT CTBT

The United States and the United Kingdom introduce a draft CTBT at the Geneva negotiations proposing a ban on all nuclear tests except for underground explosions measuring less than 4.75 on the Richter scale – detection below this threshold is considered uncertain. The plan further calls for a three-year moratorium on such underground tests while research on verification techniques continues. The Soviet Union rejects the verification provisions and presents counterproposals that are unacceptable to the United States and the United Kingdom. (See Oct. 3, 1977)

1961 — SEPTEMBER 1
SOVIET UNION RESUMES NUCLEAR TESTING

Arguing that increased international tensions and the French nuclear test program have created a changed security environment, the Soviet Union resumes atmospheric nuclear testing. On October 30, the Soviet Union conducts the largest nuclear test explosion ever as its *Tsar Bomba* detonates with a yield of around 50 megatons. (See March 2, 1962)

1961 — SEPTEMBER 3
ATMOSPHERIC TEST BAN PROPOSAL

In response to Soviet resumption of nuclear tests in the atmosphere on September 1, President Kennedy and British Prime Minister Harold Macmillan urge the Soviet Union to agree to a ban on atmospheric tests. Premier Khrushchev rejects this proposal. The United States resumes underground nuclear test-

ing less than two weeks later, on September 15.

1962 — MARCH 2

PRESIDENT KENNEDY ANNOUNCES U.S. ATMOSPHERIC TESTS

President Kennedy announces that the United States will resume atmospheric testing unless the Soviet Union agrees to the U.S.-British atmospheric test ban proposal by late April. In the absence of agreement, the United States resumes atmospheric testing on April 25.

1963 — JUNE 10

TEST BAN TALKS

The United States, the United Kingdom, and the Soviet Union announce that high-level talks will be held in Moscow in July to seek agreement on a test ban. In a speech on the settlement of Cold War problems, President Kennedy says the United States will voluntarily suspend nuclear tests in the atmosphere pending negotiation of a test ban agreement, provided other countries follow suit. (*See July 15-Aug. 5, 1963*)

1963 — JULY 15-AUGUST 5

LIMITED TEST BAN TREATY

The United States, the United Kingdom and the Soviet Union negotiate and sign on August 5 the Limited Test Ban Treaty (LTBT) outlawing nuclear tests in the atmosphere, in outer space and underwater. Underground tests are also outlawed if they result in spreading radioactive debris outside the territorial limits of the state where the explosion is conducted. The treaty enters into force October 10, 1963. (*See March-April 1974*)

1964 — OCTOBER 16

FIRST CHINESE NUCLEAR TEST

China explodes its first nuclear weapon at Lop Nor testing site on the Qinghai Plateau in Sinkiang Province. The detonation produces a yield of about 15 kilotons. (*See June 17, 1967*)

1967 — JUNE 17

FIRST CHINESE THERMONUCLEAR TEST

Marking rapid progress on their nuclear program, the Chinese test their first thermonuclear weapon. A bomb is dropped over the Lop Nor test site and detonates with a three megaton yield. (*See June 8, 1996*)

1968 — JULY 1

NUCLEAR NONPROLIFERATION TREATY

The United States, the United Kingdom, the Soviet Union and 58 other countries sign the Nuclear Non-Proliferation Treaty (NPT). The Preamble of the agreement refers explicitly to the CTBT and to “the determination expressed by the Parties [to the treaty] to seek to achieve the discontinuance of all test

explosions of nuclear weapons for all time ...” The NPT enters into force March 5, 1970. (*See April 17-May 12, 1995*)

1968 — AUGUST 24
FIRST FRENCH HYDROGEN BOMB TEST

France tests its first hydrogen bomb at Fangataufa Atoll in the South Pacific. It has a yield of 2.6 megatons. (*See July 15, 1991*)

1974 — MARCH-APRIL
RESUMPTION OF DISCUSSION ON NUCLEAR TESTING LIMITS

The United States and the Soviet Union resume discussions on nuclear testing limits, which are to lead to the Threshold Test Ban Treaty (TTBT) and Peaceful Nuclear Explosions Treaty (PNET). (*See July 3, 1974 and May 28, 1976*)

1974 — MAY 18
FIRST INDIAN NUCLEAR TEST

India conducts its first nuclear test at an underground test site at Pokharan in the Rajasthan Desert. It declares the test a “peaceful nuclear explosion” and claims a yield of 12 kilotons. The U.S. intelligence community later estimates the actual yield to be in the range of four to six kilotons. (*See March 3, 1998*)

1974 — JULY 3
THRESHOLD TEST BAN TREATY

The United States and the Soviet Union sign the Treaty on the Limitation of Underground Nuclear Weapon Tests (the Threshold Test Ban Treaty). The treaty bans underground nuclear weapon tests with a yield exceeding 150 kilotons and obligates the parties to continue negotiations toward a CTBT. (*See Oct. 3, 1977*). The treaty provides for verification by national technical means, exchange of data on test site geology and testing only on national territory at announced sites. (*See July 19, 1982*)

1976 — MAY 28
PEACEFUL NUCLEAR EXPLOSIONS TREATY

U.S. President Gerald Ford and Soviet General Secretary Leonid Brezhnev sign the Treaty on Underground Nuclear Explosions for Peaceful Purposes, (PNET), which sets a ceiling of 150 kilotons on such explosions, equal to that established in the TTBT. The treaty provides for verification by national technical means, information exchange and access to the test site. Pending ratification, both parties pledge not to test above 150 kilotons. (*See July 19, 1982*)

1977 — JULY 7**ANNOUNCEMENT OF FIRST NEUTRON BOMB TEST**

The United States announces it has tested a neutron bomb. Described as an “enhanced radiation weapon,” it is intended to disable or kill troops while leaving physical structures largely undamaged. (*See Dec. 7, 1993*)

1977 — OCTOBER 3**TRILATERAL CTBT TALKS**

Trilateral talks for a CTBT begin in Geneva between the United States, the United Kingdom, and the Soviet Union. Over the next three years considerable progress is made on the draft treaty. The parties agree that the treaty will:

- Ban all nuclear weapons tests.
- Suspend peaceful nuclear explosions until they can be distinguished from weapons tests.
- Establish an extensive verification regime including national technical means and seismic monitoring stations.
- Permit on-site inspections to ensure confidence in the treaty.

Differences remain on details of the verification regime, the definition of a “nuclear explosion,” and the status of the treaty after its three-year term.

By 1979, the trilateral CTBT negotiations are overshadowed by the Strategic Arms Limitation Treaty (SALT II) and undercut by the Soviet invasion of Afghanistan. The trilateral CTBT talks recess at the end of the Carter administration and never resume. (*See Dec. 5, 1985*)

1980 — OCTOBER 16**LAST ATMOSPHERIC TEST**

China conducts the last atmospheric nuclear test by any nation to date.

1982 — JULY 19**TTBT AND PNET VERIFICATION PROTOCOLS**

U.S. President Ronald Reagan decides that the United States will seek to negotiate additional verification protocols before ratifying the TTBT and the PNET. (*See March 14, 1986*)

1985 — JULY 30**SOVIET TEST MORATORIUM**

Soviet General Secretary Mikhail Gorbachev announces a nuclear testing moratorium beginning August 6, the 40th anniversary of the Hiroshima bombing, until the end of 1985. He pledges to continue the testing ban beyond December if the United States reciprocates. (*See Jan. 15, 1986*)

1985 — DECEMBER 5
COMPREHENSIVE TEST BAN DISCUSSIONS

In a letter to President Reagan, General Secretary Gorbachev proposes the resumption of negotiations on a CTBT. On December 19, the White House states that, “A comprehensive test ban ... is a long-term objective of the United States in the context of achieving broad, deep, and verifiable arms reductions, substantially improved verification capabilities, expanded confidence-building measures, greater balance in conventional forces, and at a time when a nuclear deterrent is no longer as essential an element as currently for international security and stability.” (*See Jan. 9, 1990*)

1986 — JANUARY 15
SOVIET TESTING MORATORIUM EXTENSION

In connection with his three-stage nuclear disarmament plan, General Secretary Gorbachev extends the Soviet testing moratorium for three months beyond its December 31, 1985 expiration date. (*See May 14, 1986*)

1986 — MARCH 14
ON-SITE MONITORING OF NUCLEAR TESTS WITH CORTEX

President Reagan announces a new, specific proposal for on-site monitoring of nuclear tests to strengthen the verification provisions of the TTBT and PNET. The proposal involves a new hydrodynamic yield measurement method – known as CORTEX – which Soviet scientists are invited to inspect at the U.S. test site and to monitor during a nuclear weapons test. (*See Jan. 13, 1987*)

1986 — MAY 14
SOVIET TESTING MORATORIUM EXTENDED AFTER CHERNOBYL

After the Chernobyl nuclear reactor accident in April, General Secretary Gorbachev extends the Soviet nuclear testing moratorium through August 6, 1986. It is later extended until the end of the year. (*See Feb. 5, 1987*)

1987 — JANUARY 13
VERIFYING NUCLEAR TESTING TREATIES

President Reagan sends a message to the U.S. Senate requesting advice and consent on ratification of the TTBT and PNET with a reservation that would ensure the treaties would not take effect until they are effectively verifiable. (*See Sept. 17, 1987*)

1987 — FEBRUARY 5
END OF SOVIET MORATORIUM

The Soviet Union announces that, since the United States has not stopped testing, its own moratorium has ended. The Soviets carry out nuclear tests on February 26, but announce their willingness to resume its moratorium if the United States will do the same. (*See Oct. 24, 1990*)

**1987 — SEPTEMBER 17
WASHINGTON MINISTERIAL**

U.S. Secretary of State George Shultz and Soviet Foreign Minister Eduard Shevardnadze announce that, “The U.S. and Soviet sides have agreed to begin before December 1, 1987, full-scale stage-by-stage negotiations which will be conducted in a single forum. In these negotiations, the sides, as the first step, will agree upon effective verification measures which will make it possible to ratify the [TTBT and PNET], and proceed to negotiating further intermediate limitations on nuclear testing leading to the ultimate objective of the complete cessation of nuclear testing as part of an effective disarmament process.” (*See Dec. 9, 1987*)

**1987 — DECEMBER 9
JOINT VERIFICATION EXPERIMENT (JVE)**

During the Washington Summit, the United States and the Soviet Union agree to design and conduct a Joint Verification Experiment (JVE) at each other’s test site. The U.S. portion of the JVE is conducted August 17, and the Soviet portion of the JVE is conducted September 14. U.S. and Soviet scientists, technicians, and observers are present at both experiments. (*See June 1, 1990*)

**1990 — JANUARY 9
U.S. POLICY STATEMENT ON A CTBT**

U.S. President George Bush approves a policy statement on nuclear testing indicating that the United States “has not identified any further limitations on nuclear testing ... that would be in the U.S. national security interest.” The United States considers a CTBT to a “long-term objective” which will be attainable only “when we do not need to depend on nuclear deterrence.” (*See Jan. 14, 1994*)

**1990 — JUNE 1
TTBT AND PNET VERIFICATION PROTOCOLS**

Presidents Bush and Gorbachev sign the verification protocols to the unratified TTBT and PNET treaties. (*See Sept. 25/Oct. 9, 1990*)

**1990 — SEPTEMBER 25/OCTOBER 9
TTBT AND PNET RATIFICATION**

The U.S. Senate ratifies the TTBT and PNET on September 25, and the Supreme Soviet approves them on October 9. The treaties enter into force on December 11, when the two sides exchange instruments of ratification at a ministerial meeting in Houston, Texas.

**1990 — OCTOBER 24
LAST SOVIET NUCLEAR TEST**

The Soviet Union conducts its last nuclear test before entering into a unilateral moratorium. As of September 2001, Russia has continued to observe this testing halt. (*See Aug. 16, 1997*)

1991 — JULY 15
FRENCH NUCLEAR TESTING MORATORIUM

France conducts its last nuclear test before entering into a unilateral nuclear testing moratorium that lasts until September 1995. (*See June 13, 1995 and Sept. 5, 1995*)

1991 — SEPTEMBER–DECEMBER
DISSOLUTION OF THE SOVIET UNION

A series of historic events brings about the end of the Soviet Union and the creation of 15 independent republics:

- On September 6, 1991 the State Council of the Soviet Union releases the three Baltic republics of Lithuania, Latvia and Estonia from its ranks and recognizes their independence.
- The remaining 12 republics all proclaim their independence by December 1991 and at a meeting held in Alma-Ata on December 21, they declare that they now constitute the Commonwealth of Independent States (CIS) and that with the formation of the CIS, “the Union of Soviet Socialist Republics ceases to exist.”
- On December 25, 1991, the Soviet Union formally dissolves as its President, Mikhail Gorbachev, resigns.

Four of the new republics – Russia, Ukraine, Kazakhstan and Belarus – have nuclear weapons on their territory.

1991 — NOVEMBER 26
LAST BRITISH NUCLEAR TEST

Britain, which used the U.S. test site in Nevada, conducts its last nuclear test before the U.S. moratorium takes effect.

1992 — SEPTEMBER 23/OCTOBER 2
LAST U.S. NUCLEAR TEST/U.S. MORATORIUM

On September 23, the United States conducts its last nuclear test to date. (*See Dec. 7, 1993*). Subsequently, on October 2, President Bush signs into law the Hatfield Amendment establishing a nuclear testing moratorium. President Bill Clinton extends the moratorium until September 1996, at which time he signs the CTBT. (*See Sept. 24, 1996*)

1993 — FEBRUARY 2
CLOSURE OF FORMER SOVIET TEST SITE

Kazakhstan announces the closure of the Semipalatinsk nuclear test site. (*See May 31, 1995*)

1993 — AUGUST 10
CTBT MANDATE

The United Nations Conference on Disarmament (CD) in Geneva agrees to give its Ad Hoc Committee on a Nuclear Test Ban a mandate to negotiate a CTBT. (*See Jan. 25, 1994*)

1993 — DECEMBER 7
SECRET UNDERGROUND NUCLEAR TESTING REVEALED

The U.S. Department of Energy reveals that the United States conducted 204 secret underground nuclear tests over a 45-year period. This brings the total number of known U.S. nuclear tests between 1945 and 1992 to 1,030.

1994 — JANUARY 14
MOSCOW SUMMIT STATEMENT

In a joint statement issued at the Moscow Summit, Presidents Clinton and Yeltsin reaffirm their support for a CTBT. The two leaders call for completing the treaty “as soon as possible” and for “other states to refrain from carrying out nuclear explosions while [CTBT negotiations] are being held.” (*See Jan. 25, 1994*)

1994 — JANUARY 25
CTBT NEGOTIATIONS BEGIN

Negotiations on the CTBT begin at the CD in Geneva. (*See April 17–May 12, 1995*)

1995 — APRIL 17–MAY 12
NPT REVIEW AND EXTENSION CONFERENCE

In order to achieve the indefinite extension of the Non-Proliferation Treaty (NPT), the delegates of the nuclear-weapon states (NWS) agree to several “principles and objectives” in the field of nuclear disarmament. One of these is “the completion by the Conference on Disarmament of the negotiations on a universal and internationally and effectively verifiable Comprehensive Nuclear Test Ban Treaty no later than 1996. Pending the entry into force of the Comprehensive Test Ban Treaty, the nuclear-weapon states should exercise the utmost restraint.” (*See Aug. 11, 1995*)

1995 — MAY 31
SOVIET NUCLEAR DEVICE AT SEMIPALATINSK

A chemical explosion destroys a Soviet nuclear device which had been emplaced at the Semipalatinsk test site before the beginning of the testing moratorium and which was not retrievable. On October 3, the United States agrees to assist Kazakhstan in permanently shutting down the test site.

1995 — JUNE 13

FRENCH RESUME NUCLEAR TESTING

French President Jacques Chirac announces that France will resume nuclear testing in September with a series of eight tests in the South Pacific to last until May 1996. Two months later, in the face of worldwide negative reaction, France announces that the tests will end more quickly. (*See Sept. 5, 1995*)

1995 — AUGUST 4

U.S. STOCKPILE STEWARDSHIP REPORT

The U.S. Department of Energy releases a major study on the U.S. stockpile prepared by an independent group of senior nongovernmental scientists (the JASON group). The report finds that “the United States can, today, have high confidence in the safety, reliability, and performance margins of the nuclear weapons that are designated to remain in the enduring stockpile.”

1995 — AUGUST 11

U.S. PROPOSES “ZERO-YIELD” CTB

President Clinton announces that the United States plans to seek a true “zero-yield” CTBT banning all nuclear weapons test explosions. According to U.S. officials, “so long as we implement a strong science-based stockpile stewardship program, we can maintain a safe and reliable stockpile without tests of any size – and can rule out even so-called hydronuclear experiments of a few pounds nuclear energy release.” (*See Oct. 5, 1995*)

1995 — SEPTEMBER 5

FRENCH NUCLEAR TESTS

Amid widespread international protests, France resumes nuclear testing in the South Pacific with a 20-kiloton explosion at the Moruroa atoll. (*See Jan. 27, 1996*)

1995 — OCTOBER 5

RUSSIA ACCEPTS A ZERO-YIELD CTB

At the Hyde Park, New York summit meeting with President Clinton, President Yeltsin agrees to seek a zero-yield CTBT. (*See April 20, 1996*)

1995 — DECEMBER 12

UNITED NATIONS URGES END OF TESTING

The United Nations General Assembly “strongly urges the immediate cessation of all nuclear testing” as it will “contribute to the nonproliferation of nuclear weapons in all its aspects, to the process of nuclear disarmament leading to the ultimate objective of the complete elimination of nuclear weapons and therefore to the further enhancement of international peace and security.” (*See April 20, 1996*)

1996 — JANUARY 27
END OF FRENCH TESTS

France conducts its final nuclear test to date. Five days later, in an address to a joint session of the U.S. Congress, President Chirac announces that France has finished testing “once and for all,” and is prepared to push for completion of a zero-yield CTBT in 1996. (*See April 20, 1996*)

1996 — APRIL 20
THE G-7 COMMITMENT

At the Nuclear Safety Summit in Moscow, the Group of Seven (G-7) governments (the United States, the United Kingdom, Canada, France, Germany, Italy and Japan) and Russia release a statement affirming their commitment to conclude and sign a CTBT by September 1996. They declare “that a CTBT will be a concrete step toward the achievement of one of the highest priority objectives of the international community in the field of disarmament and nonproliferation.” (*See June 20, 1996*)

1996 — JUNE 8
CHINESE NUCLEAR TEST

In connection with its 44th nuclear weapons test, China announces its plan to conduct one more nuclear test before September 1996, after which it “will exercise a moratorium on nuclear testing” and will “work with other countries for the conclusion, within this year, of a fair, reasonable and verifiable CTB treaty with universal adherence and unlimited duration.” (*See July 29, 1996*)

1996 — JUNE 20
INDIA REJECTS THE CTBT

India announces that it will not sign the CTBT as drafted because the treaty would still permit the nuclear-weapon states to “continue refining and developing their nuclear arsenal.” (*See June 28, 1996*)

1996 — JUNE 28
DRAFT CTBT

The Chairman of the Nuclear Test Ban Ad Hoc Committee submits a compromise draft CTBT for approval by the CD. In a statement issued by the White House, President Clinton applauds this action as bringing “us one step closer to the day when no nuclear weapons are detonated anywhere on the earth.” Because of the objections of India, however, the CD is unable to agree to forward the draft to the United Nations. (*See Aug. 1996*)

1996 — JULY 29
LAST CHINESE NUCLEAR TEST

China conducts its 45th and last known nuclear test and announces a unilateral moratorium on testing pending the conclusion of a CTBT.

1996 — AUGUST**CTBT NEGOTIATIONS AND AUSTRALIAN RESOLUTION**

After consultations in the Nuclear Test Ban Ad Hoc Committee, its chairman announces on August 9 that he has confirmed that continuing negotiations on the draft treaty as a whole would not yield further results. On August 16, the committee meets and agrees to report to the CD that “no consensus” could be reached either on adopting the text of the CTBT or on formally passing it to the CD, owing to objections by India.

In order to break this deadlock Australian Foreign Minister Alexander Downer announces on August 23, that Australia will sponsor a resolution seeking endorsement of the CTBT from the United Nations General Assembly and its opening for signature at the earliest possible date. (*See Sept. 10, 1996*)

1996 — SEPTEMBER 10**UNITED NATIONS GENERAL ASSEMBLY ADOPTION OF CTBT**

The United Nations General Assembly (UNGA) reconvenes and votes 158 to 3 to adopt the Comprehensive Test Ban Treaty and open it for signature at the earliest possible date. India, Bhutan and Libya vote against, while Cuba, Lebanon, Syria, Mauritius and Tanzania abstain. (*See Sept. 24, 1996*)

1996 — SEPTEMBER 24**SIGNING OF CTBT**

President Clinton is the first world leader to sign the CTBT. Over the next two days, an initial group of 70 other nations including the United Kingdom, China, France, and Russia sign the CTBT. (*See Sept. 22, 1997*)

1997 — AUGUST 16**RUSSIAN SEISMIC EVENT**

A “seismic event” is detected in the vicinity of the Novaya Zemlya nuclear test site fueling speculation that Russia has been cheating on its self-imposed testing moratorium. Critics of the CTBT grasp this as evidence of intended Soviet noncompliance. As Sen. John Kyl (R-AZ) writes in *The Washington Times*, “When will the Clinton administration get serious about Russian violations of its arms control commitments.” However, after further study, the CIA concludes in a November 4 statement that although “nuclear weapons-related experiments were conducted by the Russians at Novaya Zemlya in mid-August 1997 ... that seismic event was almost certainly not associated with the activities at Novaya Zemlya and was not nuclear.”

1997 — SEPTEMBER 22**CTBT TRANSMITTED TO SENATE**

In a speech to the UNGA, President Clinton announces that he is sending the CTBT to the U.S. Senate for ratification. He declares the CTBT “the longest-sought, hardest-fought prize in the history of arms control. It will help to prevent the nuclear powers from developing more advanced and more danger-

ous weapons. It will limit the possibilities for other states to acquire such devices.” (See Jan. 21, 1998)

1998 — JANUARY 21
HELMS LETTER TO CLINTON

Sen. Jesse Helms (R-NC), Chairman of the Senate Foreign Relations Committee, writes a letter to President Clinton indicating that his committee will only consider the CTBT after the administration has submitted its ABM Treaty related agreements and the Kyoto Protocol on Global Warming to the Senate. He concludes: “Mr. President, the CTBT is very low on the Committee’s list of priorities. The treaty has no chance of entering into force for a decade or more.” With this position established, the committee does not hold any hearings on the CTBT in 1998. (See July 20, 1999)

1998 — FEBRUARY 3
NATIONAL LABORATORIES SUPPORT CTBT

The directors of the three major U.S. nuclear weapons laboratories – Dr. John Browne of Los Alamos, Dr. Paul Robinson of Sandia, and Dr. Bruce Tarter of Lawrence Livermore – announce that, “We are confident that the Stockpile Stewardship Program will enable us to maintain America’s nuclear deterrent without nuclear testing.” (See April 6, 1998)

1998 — MARCH 3
BJP WIN IN INDIA

The Bharatiya Janata Party (BJP) wins India’s parliamentary elections. During the campaign the party manifesto declares how the BJP will “reevaluate the country’s nuclear policy and exercise the option to induct nuclear weapons.” (See May 11-13, 1998)

1998 — APRIL 6
CTBT RATIFIED BY BRITAIN AND FRANCE

Britain and France become the first declared nuclear-weapons states to deposit their instruments of ratification for the CTBT. British Foreign Secretary Robin Cook declares that “the CTBT is a cornerstone of international efforts to prevent nuclear proliferation.” (See July 20, 1999)

1998 — MAY 11-13
INDIAN NUCLEAR TESTS

India carries out two sets of nuclear tests. On May 11, Indian Prime Minister Atal Vajpayee announces that, “Today at 1545 hours (1015 GMT), India conducted three underground nuclear tests in the Pokhran range. The tests conducted today were with a fission device, a low-yield device and a thermonuclear device.” At a May 17 press conference, the Indian Department of Atomic Energy announces the yields of these three tests as 12, 0.2 and 43 kilotons respectively. Two days later, on May 13, India declares that it has conducted two more tests with yields of between 0.2 and 0.6 kilotons. These are the first nuclear tests since the CTBT opened for signature in September 1996.

Of great international concern is Pakistan's reaction to the tests which could provoke a nuclear arms race on the subcontinent. On May 11, Foreign Minister Gihar Ayub Khan declares that "Pakistan's defence will be made impregnable against any Indian threat, be it nuclear or conventional." (*See May 28-30, 1998*)

1998 — MAY 28-30
PAKISTANI NUCLEAR TESTS

On May 28, Pakistani Prime Minister Nawaz Sharif announces five Pakistani nuclear tests, declaring that "our security, and the peace and stability of the entire region was thus gravely threatened [by the Indian tests]. As a self respecting nation we had no choice left to us. Our hand was forced by the present Indian leadership's reckless actions." The tests take place in the Chagai Hill region, close to the Iranian border, and according the head of Pakistan's nuclear program one of the tests was in the 30-35 kiloton range, with the others producing much smaller yields suitable for tactical weapons. Two days later on May 30, Pakistan announces that it has tested one more device, which exploded with a yield of 15 to 18 kilotons.

The tests of both India and Pakistan are universally condemned. U.N. Secretary-General Kofi Annan declares "I deplore both the Indian and Pakistani tests," while the Conference on Disarmament issues a statement in which 47 nations declare that "the actions of India and Pakistan threaten and undermine the process of disarmament and the goal of eliminating nuclear weapons altogether." The international economic response is led by the United States which imposes a wide-ranging list of sanctions based on the 1994 Nuclear Proliferation Prevention Act. The G-8 also agrees to block international financial loans to both India and Pakistan unless they are for humanitarian aid projects. (*See Dec. 1, 1998*)

1998 — DECEMBER 1
PARTIAL LIFTING OF U.S. SANCTIONS

President Clinton waives some of the U.S. sanctions imposed on India and Pakistan in the wake of their nuclear tests in the hope of creating a better atmosphere on the subcontinent for dialogue, restraint and arms control.

1999 — JULY 20
SENATE DEMOCRATS' LETTER TO HELMS

Annoyed by continuing delays to the consideration of the CTBT, 45 Democratic senators write to Sen. Jesse Helms (R-NC) arguing that, "The United States must not relinquish its leadership in the nuclear nonproliferation arena. We respectfully urge you to hold all necessary hearings and to report the Comprehensive Test Ban Treaty to the Senate for timely consideration before the CTBT inaugural conference." (*See Oct. 6-8, 1999*)

1999 — OCTOBER 6-8
FIRST CONFERENCE ON FACILITATING ENTRY INTO FORCE OF THE CTBT

In Vienna, 92 ratifying and signatory states meet for the 1st Conference on Facilitating Entry into Force

of the CTBT. In the Final Declaration the States reaffirm their “commitment to the Treaty’s basic obligations.” They call upon non-signatories “to sign and ratify it as soon as possible and refrain from acts which would defeat its object and purpose in the meanwhile” while urging those that have signed “to accelerate their ratification processes.” (*See Oct. 13, 1999 and Sept. 25-27, 2001*)

1999 — OCTOBER 13

SENATE REJECTION OF CTBT

In a highly truncated process, the U.S. Senate rejects the CTBT by a vote of 51-48. After the treaty has been bottled up in the Senate Foreign Relations Committee for two years, (*See Jan. 21, 1998*) Majority Leader Trent Lott (R-MS) moves for a quick vote on it and thus forces the White House and the Democratic leadership to choose between a limited debate or no vote at all until the next congress. Confronted by this choice the Democrats agree to Lott’s offer that, in the end, allows for just 18 hours of floor debate before the CTBT is voted upon. The agreement also constrains the potential for compromise by limiting the respective Democratic and Republican leaderships to only one amendment each. This limited process is heavily criticized, as Sen. Arlen Specter (R-PA) declares on October 7, “The Senate is not yet ready to vote. There should have been hearings a long time ago.”

The Treaty’s defeat is met by condemnation both from the White House and overseas. President Clinton declares that “never before has a serious treaty involving nuclear weapons been handled in such a reckless and ultimately partisan way” and promises to continue efforts for CTBT ratification: “The test ban treaty is strongly in America’s interests. It is still on the Senate calendar. It will not go away.” (*See Jan. 5, 2001*). Russia, China and the European allies of the United States also all express their dismay at the decision. (*See April 21, 2000*)

2000 — APRIL 21

CTBT RATIFIED BY RUSSIAN DUMA

The Russian Duma approves the ratification of the CTBT by 298 votes to 74, with three abstentions. The approval is unconditional although amendments are added criticizing the U.S. Senate’s failure to ratify and confirming “the striving of the Russian Federation to go down the road of nuclear disarmament and consolidation of international security.”

2001 — JANUARY 5

SHALIKASHVILI REPORT

Charged with reviewing the CTBT in the wake of the Senate’s rejection, the former Chairman of the Joint Chiefs of Staff, General John Shalikashvili, submits a report that strongly supports the treaty and outlines measures to build a bipartisan consensus for ratification. He concludes that “an objective and thorough net assessment shows convincingly that U.S. interests, as well as those of friends and allies, will be served by the Treaty’s entry into force.” The report offers a number of recommendations to address those concerns that arose during the ratification debate in the Senate.

2001 — JANUARY 17

BUSH ADMINISTRATION POLICY ON THE CTBT

During his confirmation hearings for Secretary of State, General Colin Powell noted that “we will not be asking for the Congress to ratify the CTBT in its next session. We are mindful of the work that was done by ... General Shalikashvili. We will examine that work, but we believe that there are still flaws with the Treaty as it was voted down in 1999 ... General Shalikashvili gave us some good ideas with respect to the stockpile stewardship program, which we will be pursuing, and at the same time President-elect Bush has indicated he has no intention of resuming testing as part of our efforts. We do not see any need for such testing in the foreseeable future.”

2001 — SEPTEMBER 11

TERRORIST ATTACK ON THE UNITED STATES

Terrorists destroy the World Trade Center in New York City and heavily damage the Pentagon in Washington, D.C.

2001 — NOVEMBER 11-13 (*Postponed from Sept. 25-27 after the September 11 terrorist attacks*)

SECOND CONFERENCE ON FACILITATING ENTRY INTO FORCE OF THE CTBT

The second Conference on Facilitating the Entry into Force of the CTBT meets at the United Nations November 11-13. Its final declaration calls on all countries that have not yet ratified the Treaty to do so as soon as possible and asks the nuclear weapons states to maintain their moratoria on nuclear testing.

To date, 87 nations have ratified the Treaty but 13 specifically named countries, including the United States, still need to sign and/or ratify the agreement before it can enter into force. The United States boycotted the conference, however, and the Bush administration has said it has no intention of seeking Senate advice and consent to ratification.

(See table on following page for a tally of testing to date)

**TABLE 1:
TESTING TALLY TO
DATE**

UNITED STATES (1030)

First tested: 7/16/45
Last Tested: 9/23/92
Signed CTBT: 9/24/96

USSR/RUSSIA (715)

First tested: 8/29/49
Last tested: 10/24/90
Signed CTBT: 9/24/96

GREAT BRITAIN (45)

First tested: 10/3/52
Last tested: 11/26/91
Signed CTBT: 9/24/96
Deposited CTBT
Ratification: 4/6/98

FRANCE (210)

First tested: 2/13/60
Last tested: 1/27/96
Signed CTBT: 9/24/96
Deposited CTBT
Ratification: 4/6/98

CHINA (45)

First tested: 10/16/64
Last tested: 7/29/96
Signed CTBT: 9/24/96

INDIA (3¹)

First tested: 5/18/74
Subsequent tests:
5/11/98 and 5/13/98
Not a CTBT signatory

PAKISTAN (2¹)

First tested: 5/28/98
Subsequent test:
5/30/98
Not a CTBT signatory

YEAR	United States	USSR/-Russia	Britain	France	China	India	Pakistan	Total
1945	1							1
1946	2							2
1947	0							0
1948	3							3
1949	0	1						1
1950	0	0						0
1951	16	2						18
1952	10	0	1					11
1953	11	5	2					18
1954	6	10	0					16
1955	18	6	0					24
1956	18	9	6					33
1957	32	16	7					55
1958	77	34	5					116
1959	0	0	0					0
1960	0	0	0	3				3
1961	10	59	0	2				71
1962	96	79	2	1				178
1963	47	0	0	3				50
1964	45	9	2	3	1			60
1965	38	14	1	4	1			58
1966	48	18	0	7	3			76
1967	42	17	0	3	2			64
1968	56	17	0	5	1			79
1969	46	19	0	0	2			67
1970	39	16	0	8	1			64
1971	24	23	0	5	1			53
1972	27	24	0	4	2			57
1973	24	17	0	6	1			48
1974	22	21	1	9	1	1		55
1975	22	19	0	2	1	0		44
1976	20	21	1	5	4	0		51
1977	20	24	0	9	1	0		54
1978	19	31	2	11	3	0		66
1979	15	31	2	11	3	0		58
1980	14	24	3	12	1	0		54
1981	16	21	1	12	0	0		50
1982	18	19	1	10	1	0		49
1983	18	25	1	9	2	0		55
1984	18	27	2	8	2	0		57
1985	17	10	1	8	0	0		36
1986	14	0	1	8	0	0		23
1987	14	23	1	8	1	0		47
1988	15	16	0	8	1	0		40
1989	11	7	1	9	0	0		28
1990	8	1	1	6	2	0		18
1991	7	0	1	6	0	0		14
1992	6	0	0	0	2	0		8
1993	0	0	0	0	1	0		1
1994	0	0	0	0	2	0		2
1995	0	0	0	5	2	0		7
1996	0	0	0	1	2	0		3
1997	0	0	0	0	0	0		0
1998	0	0	0	0	0	2	2	4
1999	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0
2001	0	0	0	0	0	0	0	0
Total	1,030	715	45	210	45	3	2	2,050

NOTE:

1. In accordance with the definition of a nuclear test contained in the Threshold Test Ban Treaty and to allow accurate comparison with other countries' figures, India's three simultaneous nuclear explosions on May 11 are counted as only one nuclear test, as are the two explosions on May 13. Likewise, Pakistan's five simultaneous explosions May 28 are counted as a single test.

SOURCE: This table is taken from the website of the Arms Control Association.

CHAPTER III : STRATEGIC NUCLEAR WEAPONS AND POLICY

1945 — AUGUST 6-9 HIROSHIMA AND NAGASAKI

On August 6, 1945 the *Enola Gay*, a U.S. B-29 bomber, drops the 4,000 kg *Little Boy* atomic bomb on the Japanese city of Hiroshima in the world's first nuclear attack. The bomb explodes with a yield of 12-15 kilotons (kt), causing an estimated 140,000 deaths by the end of 1945. In a statement following the event, President Truman declares that “with this bomb we have now added a new and revolutionary increase in destruction to supplement the growing power of our armed forces.” Three days later, on August 9, a second bomb – nicknamed *Fat Man* – is dropped on Nagasaki. It explodes with a yield of 21 kilotons, causing approximately 70,000 deaths by the end of 1945.

1950 — APRIL 14 NSC-68

The U.S. National Security Council completes document NSC-68 that warns of the possibility of a “surprise atomic attack” by the Soviet Union once “it has sufficient atomic capability.” It is recommended that there be “a much more rapid and concerted buildup of the actual strength of both the United States and the other nations of the free world” in order to deter this. On September 30, after the outbreak of the Korean War, President Truman adopts the document's recommendations as official U.S. policy and defense spending begins to rise rapidly.

1954 — JANUARY 12 POLICY OF MASSIVE RETALIATION

U.S. Secretary of State John Foster Dulles announces the policy of massive retaliation. He states that, in response to Communist aggression anywhere in the world, the United States reserves the right to use “massive retaliatory power” applied “at places and with means of its own choosing.”

1956-58 BOMBER GAP

Fear of a “bomber gap” arises as U.S. intelligence community predicts that the Soviet Union will have over 700 long-range *Bear* and *Bison* bombers by mid-1959. Pictures from a U-2 spy plane subsequently determine that the Soviet Union has approximately 85 heavy bombers. (*See Oct. 4, 1957*)

1957 — MAY 9 NATO AND NUCLEAR WEAPONS

The North Atlantic Council adopts a Military Committee document (MC-14/2) that formalizes NATO's reliance on nuclear weapons as the key component of its defensive strategy. It declares “the principle elements of the deterrent are adequate nuclear and other ready forces and the manifest determination

to retaliate against any aggressor with all the forces at our disposal, including nuclear weapons.” (See Dec. 12, 1967)

1957 — OCTOBER 4 SPUTNIK I LAUNCH

The Soviet Union launches *Sputnik I*, the world’s first orbiting artificial satellite. There is concern that the missile technology used to put *Sputnik I* in orbit will be employed in intercontinental ballistic missiles (ICBMs) capable of delivering nuclear payloads from the Soviet Union to the United States. Fear of a “missile gap” ensues, encouraged by inflated estimates from the intelligence community and the U.S. Air Force which predict up to 500 operational Russian ICBMs by 1961. This spurs U.S. ICBM development, but in 1960, U.S. intelligence satellites reveal that, in fact, the Soviets have only four operational ICBMs.

1962 — OCTOBER 15-28 CUBAN MISSILE CRISIS

The world is plunged into a nuclear standoff as October 15 photographs from a U-2 overflight reveal the deployment of Russian ballistic missiles on Cuba. After almost two weeks of strained negotiations and a U.S. naval blockade of the island, Soviet Secretary General Khrushchev agrees on October 28 to remove the missiles. The crisis is marked by a lack of adequate communications between the two leaders as no direct link exists and messages become confused and contradictory. (See June 20, 1963)

1963 — JUNE 20 “HOT LINE” AGREEMENT

The United States and the Soviet Union sign a Memorandum of Understanding (MOU) in Geneva to establish a direct communications link, or “hot line,” between the two governments for use in the event of a crisis. The “hot line” agreement is updated in 1971 and again in 1984. (See Sept. 30, 1971)

1964 — OCTOBER 16 CHINESE NO FIRST USE POLICY

In an official statement Beijing proclaims that “China will never at any time under any circumstance be the first to use nuclear weapons.” This position is reiterated at the negotiation of the Non-Proliferation Treaty (NPT) in 1978 and at subsequent NPT Review Conferences.

1967 — DECEMBER 12 NEW NATO NUCLEAR STRATEGY

NATO adopts a new nuclear strategy in MC 14/3 known as “flexible response.” It abandons the strategy of massive retaliation and instead commits the alliance to respond to any aggression, short of general nuclear attack, at the level of force – conventional or nuclear – at which it was initiated. However, the alliance retains the option to use nuclear weapons first if its initial response to a conventional attack does not prove adequate and, if necessary, to deliberately escalate to general nuclear war. (See July 5-6, 1990)

1969 — NOVEMBER 17
SALT I TALKS

The United States and the Soviet Union open the Strategic Arms Limitation Talks (SALT I) in Helsinki to discuss limits on both strategic nuclear offensive weapons and antiballistic missile (ABM) systems. (*See May 26, 1972*)

1971 — SEPTEMBER 30
ACCORD ON ACCIDENTAL NUCLEAR WAR

The United States and the Soviet Union sign an Agreement on Measures to Reduce the Risk of Outbreak of Nuclear War. The agreement calls for:

- A pledge to maintain and improve safeguards against accidental or unauthorized use of nuclear weapons.
- Immediate notification should a risk of nuclear war arise from detection of unidentified objects or any other unexplained incident involving a possible detonation of a nuclear weapon.
- Advance notice of any planned missile launches beyond the territory of the launching party and in the direction of the other party. (*See June 22, 1973*)

1972 — MAY 26
SALT I TREATIES

U.S. President Richard Nixon and Soviet General Secretary Leonid Brezhnev sign the two basic SALT I documents in Moscow. Both agreements enter into effect on October 3 of that year:

- The ABM Treaty (ABMT) limiting launchers, interceptors and radars associated with strategic antiballistic missile defense systems. (*See Chapter VI, May 26, 1972*)
- The Interim Agreement (SALT I) limiting strategic offensive nuclear weapons. The agreement freezes the number of intercontinental and submarine-launched ballistic missile launchers (ICBMs and SLBMs) at existing levels (1,710 for the United States and 2,347 for the Soviet Union). (*See Dec. 27, 1979*)

1973 — JUNE 22
PREVENTION OF NUCLEAR WAR AGREEMENT

“Conscious that nuclear war would have devastating consequences for mankind,” the United States and the Soviet Union sign the Prevention of Nuclear War Agreement under which they formally agree to consult with each other in time of crisis to avoid nuclear conflict. (*See May 31, 1988*)

1974 — NOVEMBER 24
VLADIVOSTOK AGREEMENT

Meeting in Vladivostok, President Gerald Ford and General Secretary Brezhnev announce an agreement on a formula for a second treaty to limit strategic offensive arms (SALT II):

- Both sides will be entitled to an equal aggregate number of strategic nuclear delivery vehicles (SNDVs).
- Both sides will be entitled to an equal aggregate number of ICBMs and SLBMs equipped with multiple independently-targetable re-entry vehicles (MIRVs). (*See June 18, 1979*)

1979 — JUNE 18

SALT II TREATY

At a summit meeting in Vienna, U.S. President Jimmy Carter and Soviet General Secretary Brezhnev sign the Second Strategic Arms Limitation Treaty (SALT II). Its major provisions are:

- A ceiling of 2,400 ICBMs, SLBMs and heavy bombers for both sides to be reached within six months after the treaty enters into force, with a further reduction to 2,250 SNDVs by 1981.
- A sub-limit of 1,320 on strategic ballistic missiles and heavy bombers equipped with multiple-warhead ballistic or multiple cruise missiles.
- Agreement that each side may build and deploy only one new type of ICBM.
- Agreement that the 1972 ABM Treaty will remain in effect.
- Monitoring of compliance by national technical means (NTM). (*See Dec. 27, 1979*)

1979 — DECEMBER 27

SOVIET INVASION OF AFGHANISTAN

Following the Soviet invasion of Afghanistan, President Carter withdraws the SALT II Treaty from Senate consideration. The United States announces that, on a reciprocal basis, it will not “undercut” the provisions of SALT II. (*See June 10, 1985*)

1982 — JUNE 29-DECEMBER 1983

START I TALKS

On June 29, 1982, the first session of the Strategic Arms Reductions Talks (START) opens between the United States and the Soviet Union in Geneva. After an initial series of discussions, the Soviets suspend the talks on December 8, 1983 alleging a “change in the strategic situation” following NATO deployment of intermediate-range nuclear missiles in Western Europe. The Soviet Union refuses to set a date for resumption of the talks but the United States offers to return to the table whenever the Soviets are ready. (*See March 12, 1985*)

1985 — MARCH 11

MIKHAIL GORBACHEV BECOMES LEADER OF THE SOVIET UNION

Following Konstantin Chernenko’s death, Mikhail Gorbachev becomes General Secretary of the Communist Party Central Committee.

1985 — MARCH 12

NST NEGOTIATIONS OPEN

The United States and Soviet Union begin the Nuclear and Space Talks (NST). The Soviet Union

insists on placing limits on the U.S. Strategic Defense Initiative (SDI) as a precondition for progress in the strategic arms area. (*See Nov. 21, 1985*)

1985 — JUNE 10

UNITED STATES ADHERENCE TO SALT I AND II

President Reagan announces that the United States will continue to abide by the terms of the expired SALT I and unratified SALT II agreements. To this end, the United States will deactivate and dismantle an existing Poseidon strategic missile submarine (SSBN) when the seventh U.S. Trident submarine starts sea trials in the fall. (*See May 27, 1986*)

1985 — NOVEMBER 21

GENEVA SUMMIT

President Reagan and General Secretary Gorbachev issue a joint statement in Geneva following two days of intensive negotiations. They agree to commit their two countries to early progress at the Nuclear and Space Talks and to focus on areas where there is common ground – the “principle of 50 percent reductions in the nuclear arms of the United States and the Soviet Union appropriately applied.” (*See May 29, 1986*)

1986 — JANUARY 15

SOVIET PROPOSAL TO ELIMINATE NUCLEAR WEAPONS

General Secretary Gorbachev announces a three-stage proposal to eliminate nuclear weapons by the year 2000. President Reagan, in response, indicates that the elimination of all nuclear weapons by the year 2000 is “clearly not appropriate for consideration at this time.” As a counterproposal, the president calls for “immediate progress” in the negotiations on the reduction of intermediate-range nuclear forces. (*See Chapter IV, Feb. 23, 1986*)

1986 — MAY 27

U.S. POSITION ON SALT

Claiming Soviet noncompliance with major arms control commitments and the continued buildup of Soviet strategic forces, President Reagan announces that the United States will no longer “base decisions regarding its strategic force structure on ... standards contained in ... a flawed SALT II Treaty.” The president then announces that the United States will exceed the SALT II treaty limits in fall 1986 when it equips the 131st B-52 heavy bomber with long-range air-launched cruise missiles (ALCMs).

1986 — MAY 29

SOVIET START AND SDI PROPOSAL

Abandoning its previous refusal to negotiate reductions in offensive strategic weapons until the United States agrees to renounce SDI, the Soviet Union introduces a new two-part proposal in Geneva. It offers “interim” reductions in strategic offensive forces if both sides agree not to withdraw from the 1972 ABM Treaty for 15-20 years. (*See Oct. 11-12, 1986*)

**1986 — OCTOBER 11-12
REYKJAVIK SUMMIT**

President Reagan and General Secretary Gorbachev have a wide-ranging security discussion and finally agree to limits of 1,600 on SNDVs and 6,000 on ICBM, SLBM, and air-launched cruise missile (ALCM) warheads. The sides agree that each heavy bomber not equipped with ALCMs will count as one warhead regardless of its weapons loading and that nuclear sea-launched cruise missiles (SLCMs) will be limited in a separate agreement.

The Soviet Union, however, demands that the United States accept measures that would cripple SDI, a condition that President Reagan refuses. (*See Dec. 7-10, 1987*)

**1987 — DECEMBER 7-10
WASHINGTON SUMMIT**

President Reagan and General Secretary Gorbachev agree that their START negotiators should build upon the areas of agreement in the joint draft START treaty text being developed in Geneva. These include:

- A ceiling of 1,600 SNDVs with 6,000 warheads.
- A ceiling of 1,540 warheads on 154 heavy missiles.
- A 50 percent reduction in ballistic missile throw-weight.

During the summit, the two leaders make further progress on START, agreeing on a sub-limit of 4,900 for the total number of ballistic missile warheads and guidelines for effective verification of a START treaty, building on the verification provisions of the INF Treaty. (*See June 19, 1989*)

**1988 — MAY 31
LAUNCH NOTIFICATION AGREEMENT**

The United States and the Soviet Union sign the Ballistic Missile Launch Notification Agreement. Designed to reduce the risk of nuclear war, the agreement requires each side to notify the other at least 24 hours in advance of all ICBM and SLBM launches.

**1989 — JUNE 19
U.S. VERIFICATION AND STABILITY INITIATIVE**

President George Bush announces a Verification and Stability Initiative, designed to build confidence, enhance stability, accelerate resolution of outstanding verification issues, and provide both sides practical verification experience, facilitating efforts to conclude a START treaty. The initiative proposes:

- Immediate establishment of on-site perimeter/portal monitoring of certain missile production facilities.
- Exchange of data on each side's strategic nuclear forces.
- Prohibition of encryption of telemetry on ICBMs and SLBMs.

- Familiarization with procedures for inspections to monitor the number of warheads on ballistic missiles.
- Notification of strategic exercises.
- Demonstration of tagging techniques for identifying missiles. (*See Sept. 22-23, 1989*)

1989 — SEPTEMBER 22-23 WYOMING MINISTERIAL

During two days of meetings between U.S. Secretary of State James Baker and Soviet Foreign Minister Eduard Shevardnadze, progress is made in the following areas:

- The Soviet Union drops its linkage between an agreement on missile defense and an agreement on START, but indicates that it might withdraw from a START treaty if the United States does not abide by the ABM Treaty.
- The Soviet Union agrees to eliminate its illegal early-warning radar at Krasnoyarsk without preconditions. (*See Chapter VI, Sept. 22-23*)
- Following President Bush's June 19 initiative on verification and stability measures, Secretary Baker and Foreign Minister Shevardnadze sign the Agreement on Principles of Implementing Trial Verification and Stability Measures.
- Secretary Baker and Foreign Minister Shevardnadze sign an Agreement on Reciprocal Advance Notice of Major Strategic Exercises which requires each side to notify the other no less than 14 days in advance of one of its major strategic exercises involving heavy bombers to be held during that calendar year. (*See May 31-June 3, 1990*)

1990 — MAY 31-JUNE 3 WASHINGTON SUMMIT

At the Washington summit, Presidents Bush and Gorbachev sign the Joint Statement on the Treaty on Strategic Offensive Arms. The statement recapitulates already agreed START provisions and adds two new provisions agreed during the summit:

- A sub-limit of 1,100 on mobile ICBM warheads.
- A schedule for implementing the reductions in three phases over seven years.

The Presidents also agree that follow-on START negotiations will begin “at the earliest practical date.” (*See July 31, 1991*)

1990 — JULY 5-6 NATO LONDON DECLARATION

As the Soviet Union weakens and the security environment in Europe changes fundamentally, NATO undertakes a reconsideration of its nuclear strategy. In the London Declaration NATO announces a review of the alliance's political and military strategy to reflect “a reduced reliance on nuclear weapons” and lead to the adoption of “a new NATO strategy making nuclear weapons truly weapons of last resort.” (*See Nov. 7-8, 1991*)

1991 — JULY 31
START I TREATY SIGNED

Presidents Bush and Gorbachev sign the Treaty Between the United States and the Soviet Union on the Reduction and Limitation of Strategic Offensive Arms (START I).

START I calls for the United States and the Soviet Union to reduce their strategic nuclear forces over seven years to 1,600 SNDVs and 6,000 “accountable” warheads, of which no more than 4,900 may be on ballistic missiles. This will result in a cut in deployed strategic warheads of between 25 to 35 percent.

In addition, the Soviet Union will reduce its “heavy” (large throw-weight) SS-18 ballistic missiles by 50 percent (to 1,540 RVs) and its aggregate ballistic missile throw-weight by 46 percent (to 3,600 metric tons).

1991 — SEPTEMBER–DECEMBER
DISSOLUTION OF THE SOVIET UNION

A series of historic events brings about the end of the Soviet Union and the creation of 15 independent republics:

- On September 6, 1991, the State Council of the Soviet Union releases the three Baltic republics of Lithuania, Latvia and Estonia from its ranks and recognizes their independence.
- The remaining 12 republics have all proclaimed their independence by December 1991 and at a meeting held in Alma-Ata on December 21 they declare that they now constitute the Commonwealth of Independent States (CIS) and that with the formation of the CIS “the Union of Soviet Socialist Republics ceases to exist.”
- On December 25, 1991, the Soviet Union formally dissolves as its President, Mikhail Gorbachev, resigns.

Four of the new republics – Russia, Ukraine, Kazakhstan and Belarus – have nuclear weapons on their territory. (*See Oct. 9, 1992*)

1991 — SEPTEMBER 27
U.S. UNILATERAL PRESIDENTIAL NUCLEAR INITIATIVE (PNI)

President Bush announces the United States will withdraw all of its land-based tactical nuclear weapons from overseas bases and all of its sea-based tactical nuclear weapons from U.S. ships, submarines and aircraft. (*See Chapter IV, Sept. 27, 1991*) The U.S. will also:

- Immediately stand down all strategic bombers from day-to-day alert status and return their weapons to storage areas.
- Immediately stand down all ICBMs scheduled for deactivation under START.
- Halt development of the rail garrison and mobile ICBM program.
- Cancel the follow-on short-range attack missile (SRAM-II) for heavy bombers. (*See Oct. 5, 1991*)

1991— OCTOBER 5

SOVIET RESPONSE TO U.S. PRESIDENTIAL NUCLEAR INITIATIVE

President Gorbachev, in response to President Bush's initiative, announces that the Soviet Union will immediately:

- Stand down all strategic bombers currently on day-to-day alert status and store their weapons.
- Stand down 503 ICBMs, including 134 MIRVed missiles.
- Stop the buildup of launching facilities for rail-based ICBMs, halt their modernization, and return them to basing facilities.
- Discontinue development of a small mobile ICBM and of a short-range attack missile for heavy bombers.

1991 — NOVEMBER 7-8

NEW NATO STRATEGIC CONCEPT

As a result of the review announced in the London Declaration (*See July 5-6, 1990*), NATO unveils a new strategic concept. It specifically states that “the circumstances in which any use of nuclear weapons might have to be contemplated by [NATO] are remote.”

1991 — DECEMBER 12

NUNN-LUGAR LEGISLATION

President Bush signs the Soviet Nuclear Threat Reduction Act (the Nunn-Lugar legislation), approving U.S. aid to help the CIS with the storage, transportation, dismantlement and destruction of nuclear and chemical weapons, as well as defense conversion, and military-to-military exchanges. Over the next 10 years, around \$4 billion will be budgeted for these nonproliferation activities under the Nunn-Lugar legislation.

1992 — JANUARY 27

RUSSIAN ANNOUNCEMENT OF FURTHER UNILATERAL PRESIDENTIAL NUCLEAR INITIATIVES

Russian President Boris Yeltsin announces that Russia intends to cease production of strategic bombers and ALCMs, forego replacing tactical nuclear warheads for ground-launched weapons that are scheduled to be destroyed, and close down all remaining nuclear reactors that produce plutonium for weapons by the year 2000. He calls on the United States and Russia to reduce their strategic nuclear arsenals to 2,000-2,500 warheads each, to begin talks on a fissile material cutoff agreement, and to de-target strategic nuclear missiles aimed at each other's territory. (*See Jan. 28, 1992*)

1992 — JANUARY 28

UNITED STATES WEAPONS REDUCTION OFFER

In a speech to the U.S. Congress, President Bush offers to cut U.S. strategic weapons further. He announces that, “After completing 20 planes for which we have begun procurement, we will shut down

further production of the B-2 bomber. We will cancel the small ICBM program. We will cease production of new warheads for our sea-based ballistic missiles. We will stop all new production of the Peacekeeper missile. And we will not purchase any more advanced cruise missiles.”

In a preview of what will become basic provisions of the START II Treaty, President Bush reports that “I have informed President Yeltsin that if the [CIS] will eliminate all land-based multiple-warhead ballistic missiles ... [w]e will eliminate all Peacekeeper missiles. We will reduce the number of warheads on Minuteman missiles to one, and reduce the number of warheads on our sea-based missiles by about one-third. And we will convert a substantial portion of our strategic bombers to primarily conventional use.” (*See June 16-18, 1992*)

1992 — MAY 23 LISBON PROTOCOL

The United States, Belarus, Kazakhstan, Russia and Ukraine sign the START Protocol at a ceremony in Lisbon. Under the protocol, all five countries become parties to START, and the three non-Russian former Soviet republics agree to join the NPT as non-nuclear-weapon states “in the shortest possible time.” In addition to the protocol, in letters to President Bush the heads of the three republics pledge to eliminate all the strategic weapons on their territories within the seven-year START reduction period. (*See July-Nov. 1992*)

1992 — JUNE 16-18 WASHINGTON SUMMIT “JOINT UNDERSTANDING” ON START II

During a summit meeting in Washington, Presidents Bush and Yeltsin develop the framework for a follow-on strategic arms reduction agreement (START II) during the summit in Washington. The “Joint Understanding” calls for:

- Elimination of all MIRVed ICBMs.
- A limit of 1,750 SLBM warheads.
- Counting rules whereby bombers count as “the number of warheads they are actually equipped to carry.”
- Reductions by both sides to between 3,000 and 3,500 warheads each by the year 2003. (*See Jan. 3, 1993*)

1992 — JULY-NOVEMBER START I ACTIVITIES

On July 2, the Kazakhstan Parliament ratifies START I. The U.S. Senate ratifies it on October 1, and Russia ratifies it on November 4. However, Russia decides not to exchange instruments of ratification until Belarus, Kazakhstan, and Ukraine reach agreement on dismantlement of their nuclear forces and join the NPT. (*See April 23, 1993*)

1992 — DECEMBER 5

U.S. DISMANTLEMENT ASSISTANCE TO UKRAINE

President Bush offers Ukraine \$175 million in Nunn-Lugar assistance for the dismantlement of its strategic weapons. (*See Nov. 18, 1993*)

1993 — JANUARY 3

START II

Presidents Bush and Yeltsin sign the Treaty on Further Reduction and Limitation of Strategic Offensive Arms (START II).

The treaty calls for a reduction in U.S. and Russian strategic warheads to no more than 3,000 to 3,500 each on ICBMs, SLBMs and heavy bombers. The reductions are to be completed in two phases by the year 2003 – or by the end of 2000, if the United States helps finance the destruction and dismantling of weapons in Russia. Additional limits include:

- A ban on MIRVed ICBMs.
- Elimination of all SS-18 “heavy” missiles.
- A sub-limit of 1,700 to 1,750 SLBM warheads (about one-half the SLBM warheads projected for the United States under START I).
- Freedom to “download” (remove) warheads from strategic missiles in order to meet required reductions or to deMIRV ICBMs.
- No discount for heavy bomber weapons (the number of weapons counted for heavy bombers will be the number they are actually equipped to carry).
- The right to “reorient” to conventional missions (and thus exempt from the overall limits) up to 100 heavy bombers provided they have never been equipped to carry long-range nuclear ALCMs.

On January 15, President Bush submits START II for Senate ratification. On February 9, President Yeltsin submits START II for Supreme Soviet ratification. The ratification process in both countries will prove difficult and be dogged by delays.

1993 — FEBRUARY 4

BELARUS RATIFICATIONS

On February 4, Belarus ratifies START I, the Nuclear Non-Proliferation Treaty, and the Lisbon Accord. (*See Jan. 15, 1994*)

1993 — APRIL 23

SPEEDING UP ELIMINATION UNDER START I

In an effort to “help build a new security partnership with Russia and the other Commonwealth states,” U.S. President Bill Clinton announces an accelerated timetable for U.S. strategic force reductions under START I.

1993 — JULY 2**KAZAKHSTAN RATIFICATIONS**

Kazakhstan ratifies START I. It accedes to the NPT on February 14, 1994. (*See April 25, 1995*)

1993 — NOVEMBER 18**UKRAINE RATIFICATIONS**

The Ukrainian Parliament ratifies START I and the Lisbon Protocol but with such serious reservations as to place Ukraine's commitment to join the NPT as a non-nuclear-weapon state in doubt. (*See Jan. 14, 1994*)

1994 — JANUARY 14**TRILATERAL STATEMENT**

The United States, Russia, and Ukraine sign a Trilateral Statement in which Ukraine agrees to transfer strategic nuclear warheads on Ukrainian territory to Russia in exchange for compensation in the form of fuel assemblies for nuclear power stations and security assurances once Ukraine becomes a non-nuclear weapons state (NNWS) party to the NPT. (*See June 1, 1996*)

The United States and Russia also issue the Moscow Declaration in which they agree to de-target their nuclear missiles no later than May 30, 1994. (*See May 30, 1994*)

1994 — JANUARY 15**AID PLEDGE TO BELARUS**

President Clinton pledges \$50 million in additional aid to Belarus, including \$25 million in assistance for transferring strategic nuclear weapons to Russia. (*See Nov. 23, 1996*)

1994 — FEBRUARY 3**UKRAINIAN PARLIAMENT ACCEPTS TRILATERAL STATEMENT**

The Ukrainian Parliament accepts the Trilateral Statement clearing the way for START I ratification. The Parliament acknowledges that Article V of the Lisbon Protocol applies to Ukraine, but continues to refuse to accede to the NPT. (*See Nov. 7-16, 1994*)

1994 — MAY 30**DETARGETING OF U.S. AND RUSSIAN STRATEGIC NUCLEAR MISSILES**

The United States and Russia complete the "detracting" of their strategic nuclear missiles.

1994 — SEPTEMBER 27-28**WASHINGTON SUMMIT**

In a joint statement, Presidents Clinton and Yeltsin "confirm their intention to seek early ratification of

the START II Treaty.” The presidents further agree that “once the START II Treaty is ratified, the United States and Russia will proceed to deactivate all strategic nuclear delivery systems to be reduced under START II by removing their nuclear warheads or taking other steps to remove them from combat status.” (*See June 22, 1995*)

**1994 — NOVEMBER 7-16
UKRAINE AND THE NPT**

Over November 7-9, President Clinton and the leaders of Russia and Britain send letters to President Kuchma of Ukraine, extending formal promises of security assurances once his country accedes to the NPT. After receiving these assurances, the Ukrainian Parliament, on November 16, approves Ukraine’s accession to the NPT as a nonnuclear weapons state (NNWS). (*See June 1, 1996*)

**1994 — DECEMBER 5
START I TREATY ENTERS INTO FORCE**

The five parties to the START I Treaty – the United States, Belarus, Kazakhstan, Russia, and Ukraine – exchange instruments of ratification for START I at a Budapest Conference on Security and Cooperation in Europe (CSCE) summit.

**1995 — APRIL 25
KAZAKHSTAN BECOMES NUCLEAR-FREE**

Kazakhstan announces that it has completed the transfer of 104 SS-18s and that it is now nuclear-free.

**1996 — JANUARY 26
U.S. SENATE RATIFIES START II**

The U.S. Senate approves a resolution of ratification of START II by a vote of 87 to 4. Sen. Richard Lugar (R-IN) declares after the vote “START II removes thousands of missiles that are pointed at targets in the United States, threatening every American family ... It eliminates the most destabilizing segment of nuclear inventories, specifically multiple-warhead weapons and heavy ICBMs.”

**1996 — FEBRUARY 22-23
FRENCH NUCLEAR FORCES**

French President Jacques Chirac announces:

- The closing of the facilities for the production of fissile materials for nuclear weapons and the Pacific test site.
- The deployment of four rather than five SSBNs.
- The withdrawal and dismantling of the two surface-to-surface missile systems (the 18 S3Ds and the remaining 30 Hades) in France’s arsenal.
- A further reduction in the nuclear force alert status.

1996 — JUNE 1**UKRAINE BECOMES NUCLEAR-FREE**

President Kuchma announces that Ukraine has transferred the last strategic nuclear warhead on its territory to Russia and is now nuclear free.

1996 — JULY 8**INTERNATIONAL COURT OF JUSTICE RULING ON THE LEGALITY OF NUCLEAR WEAPONS USE**

At the request of the U.N. General Assembly, the International Court of Justice (ICJ) issues an advisory opinion on the legality of the threat or use of nuclear weapons. The Court rules seven to seven with a tie-breaking vote from the court's President that "the threat or use of nuclear weapons would generally be contrary to the rules of international law applicable in armed conflict, and in particular the principles and rules of humanitarian law." However, the court went on to add that it could not "conclude definitively whether the threat or use of nuclear weapons would be lawful or unlawful in an extreme circumstance of self-defense, in which the very survival of a State would be at stake."

1996 — OCTOBER 16-18**RUSSIAN DELAYS IN RATIFYING START II**

U.S. Secretary of Defense William Perry visits Moscow in an attempt to persuade Russian legislators to ratify START II. He addresses the Duma on October 17 but it appears that even this direct appeal has no major impact on the Russian Lower House's reluctance to ratify. (*See April 9, 1997*)

1996 — NOVEMBER 23**BELARUS BECOMES NUCLEAR-FREE**

Belarus fulfills its START I and NPT obligations by transferring its last 16 Soviet SS-25 ICBMs and associated nuclear warheads to Russia. It thus becomes nuclear-free.

1997 — MARCH 21**HELSINKI SUMMIT**

At the Helsinki Summit, Presidents Clinton and Yeltsin issue a Joint Statement on Parameters on Future Reductions in Nuclear Forces, in which they agree:

- To extend the elimination deadline for SNDVs under START II from January 1, 2003 to December 31, 2007.
- To deactivate all SNDVs scheduled for elimination under START II by December 31, 2003.
- To begin negotiations on a START III agreement immediately once START II enters into force.
- To include in a framework for START III:
 - Reductions to 2,000-2,500 deployed strategic nuclear warheads by December 31, 2007 (coterminous with the extended START II deadline).
 - Measures, to be determined through negotiation, to establish transparency in warhead

inventories and then their destruction.

- The goal of making the START treaties permanent.

1997 — APRIL 9

FURTHER START II DELAYS

The Russian Duma votes to indefinitely postpone debate over START II ratification. (*See Dec.16-19, 1998*)

1997 — MAY 27

NATO-RUSSIAN FOUNDING ACT AND RUSSIAN DETARGETING

Partially in response to Russian fears surrounding NATO expansion, the allies explicitly state in the Founding Act with Russia (*See Chapter VIII, May 27, 1997*) that “they have no intention, no plan and no reason to deploy nuclear weapons on the territory of new members.” Nonetheless, in the same document they indicate that they do not see “any need to change any aspect of NATO’s nuclear posture or nuclear policy – and do not foresee any future need to do so.”

During the signing of the Founding Act in Paris on May 27, President Yeltsin seems to declare that “everything that is aimed at the countries present here [the NATO member states], all of those weapons are going to have their warheads removed.” The Russian presidential press spokesman quickly corrects this “mistranslation,” saying that Yeltsin’s commitment is rather to the less ambitious aim of no longer targeting Russian strategic missiles against NATO countries.

1997 — SEPTEMBER 16

FRENCH DETARGETING

French President Jacques Chirac, on a visit to Moscow, announces that, with the dismantlement of the missiles deployed on the Plateau d’Albion, no component of the French nuclear deterrent force is aimed at designated targets.

1998 — JULY 8

BRITISH NUCLEAR REDUCTIONS AND DETARGETING

The British Government’s new Strategic Defense Review decides that due to the improved European strategic landscape “we [the United Kingdom] can safely make significant reductions from Cold War levels, both in the number of weapons and in our day-to-day operating posture.” With this in mind:

- Britain is to reduce its stockpile to less than 200 nuclear warheads.
- Only one of Britain’s four Vanguard-class ballistic missile submarines is to be on nuclear deterrence patrol at any time and it will carry a maximum of 48 warheads.
- SLBMs are to be detargeted and are put on a “notice to fire” (alert) measured in days rather than minutes.

**1998 — SEPTEMBER 1-2
U.S.-RUSSIAN SUMMIT**

During a summit in Moscow, Presidents Clinton and Yeltsin decide on two main nuclear arms control measures. Firstly, they agree that Russia and the United States will share early-warning information on the launches of ballistic missiles and space-launch vehicles by any nation. This agreement includes the creation of an early warning center that will be permanently staffed by both U.S. and Russian personnel. Secondly, they commit the United States and Russia to remove approximately 50 metric tons of plutonium each from their nuclear weapons programs.

**1998 — OCTOBER–DECEMBER
NO-FIRST-USE POLICY**

In the run up to NATO's 50th anniversary summit in Washington several member nations take steps urging the Alliance to consider a no-first-use policy for its nuclear weapons:

- On October 20, the German Social Democrat and Green Parties sign a coalition agreement pledging that the new government “will advocate a lowering of the alert status for nuclear weapons and renunciation of the first use of nuclear weapons.”
- On December 3, the Dutch Parliament passes a resolution (NR 22/26200-V) calling upon NATO to consider the adoption of a no-first-use policy.
- On December 10, the Canadian Parliament's Standing Committee for Foreign Affairs and International Trade releases a report that recommends that Ottawa urge NATO to review its nuclear weapons policy. (*See April 23, 1999*)

**1998 — DECEMBER 16-19
U.S.-BRITISH AIR STRIKES AND START II**

The Duma vote on ratification of START II – planned for the final weeks of December – is postponed due to Russian anger surrounding joint U.S.-British air strikes on Iraq. As Sergei Prikhodko, President Yeltsin's Deputy Chief-of-Staff for Foreign Affairs bluntly puts it “You can forget about START II ratification.” (*See March 26, 1999*)

**1999 — MARCH 26
NATO AIR STRIKES AND START II**

Ratification of START II is once again stalled by air strikes. The start of the NATO campaign against Yugoslavia forces the Russian Prime Minister Yevgeny Primakov to ask the Duma to postpone consideration of the treaty due to the poisoned climate of anti-Western anger generated by the bombings. (*See April 14, 2000*)

**1999 — APRIL 23
NATO STRATEGIC CONCEPT**

NATO meets for its 50th anniversary summit in Washington and releases a new Strategic Concept. This

document concludes that, while use of nuclear weapons remains an “extremely remote” possibility, NATO’s nuclear arsenal makes “a unique contribution in rendering the risks of aggression against the Alliance incalculable and unacceptable. Thus, they remain essential to preserve peace.”

Canadian pressure at the Summit does lead to the North Atlantic Council initiating a review of the Alliance’s nuclear policy: “in light of overall strategic developments and the reduced salience of nuclear weapons [to] consider options for confidence- and security-building measures, verification, nonproliferation and arms control and disarmament.”

2000 — JANUARY 10 NEW RUSSIAN NATIONAL SECURITY CONCEPT

Acting Russian President Vladimir Putin signs a new National Security Concept that appears to mark both a hardening of Russian views towards NATO and the West and a lowering of its threshold for the use of nuclear weapons. The new concept criticizes “the attempt to create a structure of international relations based on the domination of developed western countries, led by the USA ... with the use of military force, in violation of the fundamental norms of international law.” At the same time it endorses “the use of all available means and forces, including nuclear weapons, in case of the need to repel an armed aggression when all other means of settling the crisis situation have been exhausted or proved ineffective.” An earlier (1997) security concept allowed for first use of nuclear arms only “in case of a threat to the existence of the Russian Federation.”

2000 — APRIL 14 DUMA RATIFICATION OF START II

By a vote of 288-131, with four abstentions, the Duma finally ratifies START II, but with crucial provisions. Under Article II of the Duma’s ratifying legislation, deputies approve motions that allow Russia to abandon its arms control agreements if the United States violates the ABM Treaty through the deployment of a national missile defense system.

The bill further requires that the U.S. Senate approve several additional documents as part of the START II package before instruments of ratification can be exchanged and the treaty can enter into force. These documents include two controversial additional protocols on the vexed question of the demarcation of TMD and NMD interceptors. (*See Chapter VI, Sept. 26, 1997*) On April 19, the Russian upper house supports the Duma’s resolution 122-15 and on May 4, Putin adds his signature to officially ratify the treaty.

2000 — NOVEMBER 13 PRESIDENT PUTIN OFFERS LOWER START NUMBERS

In a Kremlin statement, President Putin says that the Russian government would be willing to drop strategic warhead numbers to below the 1,500 mark and he adds that “this is not the limit ... We are prepared to consider even lower levels in the future.” He links the offer to the continued viability of the ABM Treaty.

2001 — MAY 1**PRESIDENT BUSH'S NATIONAL SECURITY SPEECH**

In a speech to the National Defense University George W. Bush outlines the strategic vision of his new administration. In addition to stating his commitment to ballistic missile defense and desire to “leave behind the constraints” of the ABM Treaty, Bush also makes clear his willingness to cut the number of U.S. strategic warheads. As he puts it “I am committed to achieving a credible deterrent with the lowest-possible nuclear weapons consistent with our national security needs ... My goal is to move quickly to reduce nuclear forces. The United States will lead by example to achieve our interests and the interests for peace in the world.”

2001 — JULY 22**BUSH-PUTIN MEETING IN GENOA, ITALY**

Presidents Bush and Putin agree to “intensive” discussions on the issue of offensive and defensive systems.

2001 — SEPTEMBER 11**TERRORIST ATTACK ON THE UNITED STATES**

Terrorists destroy the World Trade Center in New York City and heavily damage the Pentagon in Washington, D.C.

2001 — NOVEMBER 13-15**BUSH-PUTIN MEETING IN CRAWFORD, TEXAS**

Presidents Bush and Putin meet in Washington and Crawford, Texas. President Bush announces that the United States will unilaterally cut its nuclear weapons to between 1,700 and 2,200 warheads within the next ten years. President Putin says Russia will cut its arsenal by two-thirds and indicates he would prefer a written agreement to codify these unilateral declarations. Later in Moscow he indicates that the Russian preferred warhead levels are 1500-2200. There is no mention of bringing START II into force or negotiating the terms of a START III agreement. (*See March 21, 1999*)

2001 — DECEMBER 4**START I REDUCTIONS COMPLETED**

CHAPTER IV : INTERMEDIATE AND SHORT-RANGE NUCLEAR FORCES

1954 — DECEMBER NATO DEPLOYS TACTICAL NUCLEAR WEAPONS

The North Atlantic Treaty Organization (NATO) agrees to integrate tactical nuclear weapons into its defensive deployments in Europe. By the 1970s there will be around 7,400 tactical nuclear weapons assigned to NATO's land, sea and air forces.

1957 — DECEMBER INTERMEDIATE RANGE NUCLEAR FORCES IN TURKEY

The Turkish government agrees to the deployment of 30 U.S. nuclear-armed Jupiter missiles under U.S. control on Turkish soil. These missiles will be withdrawn after the Cuban Missile Crisis.

1958 — FEBRUARY INTERMEDIATE RANGE NUCLEAR FORCES IN THE UNITED KINGDOM

The United Kingdom agrees to station 60 nuclear armed Thor intermediate-range ballistic missiles (IRBMs) at four U.K. bases. Royal Air Force (RAF) Bomber Command would man the bases but "all nuclear weapons so provided shall remain in full U.S. ownership, custody and control." These missiles were put on a high level of alert during the Cuban Missile Crisis and were withdrawn shortly thereafter.

1959 — MARCH INTERMEDIATE RANGE NUCLEAR FORCES IN ITALY

The United States and Italy agree to the deployment of 15 U.S. nuclear-armed Jupiter missiles under U.S. control at Italian bases. These missiles will be withdrawn after the Cuban Missile Crisis.

1977 — EARLY MONTHS SOVIET SS-20 DEPLOYMENT

The Soviet Union begins deployment of the SS-20 missile in the Western European part of its territory. This is a modern, mobile, nuclear-armed intermediate range ballistic missile (IRBM) with three independently targetable warheads and the range to target all of Western Europe. (*See Dec. 12, 1979*)

1979 — DECEMBER 12 NATO DUAL TRACK STRATEGY

NATO unanimously adopts a dual track strategy to respond to the Soviet deployment of SS-20 missiles. One track calls for arms control negotiations with the Soviet Union to restore the balance in intermediate-range nuclear forces (INF) at the lowest possible level.

In the absence of an arms control agreement, NATO's second track is to modernize its INF with 464 single-warhead U.S. ground-launched cruise missiles (GLCMs) and 108 single-warhead U.S. Pershing II ballistic missiles. Deployment of these systems in Western Europe is to begin in December 1983. (*See Nov. 22-23, 1983*)

NATO also decides to withdraw 1,000 of its 7,400 tactical nuclear warheads in Europe and to retire an existing nuclear weapon for every new weapon deployed. (*See Oct. 27, 1983*)

1980 — OCTOBER PRELIMINARY TNF TALKS

Preliminary Theater Nuclear Force (TNF) talks between the United States and the Soviet Union begin in Geneva. The U.S. opening position calls for an equal ceiling on land-based theater nuclear missile systems. These talks recess at the end of President Jimmy Carter's administration.

1981 — NOVEMBER 18 U.S. ZERO OPTION PROPOSAL

In a major policy address calling for a framework of negotiations on reductions in all types of arms, President Ronald Reagan proposes the "zero option" – cancellation of planned INF missile deployments by the United States if the Soviet Union agrees to eliminate its SS-4, SS-5 and SS-20 missiles. The Soviet Union rejects the zero option as inequitable and proposes a freeze on any new deployments and subsequent cuts in existing forces. (*See Nov. 30, 1983 and Jan. 15, 1986*)

1981 — NOVEMBER 30 INF NEGOTIATIONS OPEN

Formal negotiations on INF begin in Geneva. The United States seeks elimination ("global zero") of U.S. and Soviet longer-range intermediate nuclear force (LRINF) missiles and collateral constraints on shorter-range intermediate nuclear force (SRINF) missiles. (*See Dec. 1981*)

1981 — DECEMBER SOVIET INF PROPOSAL

The Soviet Union proposes an agreement to establish an eventual ceiling of 300 medium-range missiles and nuclear-capable aircraft in Europe for each side. British and French nuclear forces would be included in the U.S. count. (*See June/July 1982*)

1982 — JUNE/JULY "WALK IN THE WOODS" PROPOSAL

During an outing in the countryside near Geneva, U.S. and Soviet negotiators develop an informal package of elements to be included in a possible INF agreement. This so-called "walk in the woods" proposal calls for:

- Equal levels (75) of INF missile launchers in Europe. (As U.S. GLCMs have four warheads and the Soviet SS-20 has three, the United States would have 300 warheads and the Soviet Union would have 225.)
- No deployment of U.S. Pershing IIs.
- A limit of 90 on Soviet SS-20 deployments in the Asian part of the Soviet Union

Moscow rejects the “walk in the woods” package in September. (The United States, in internal deliberations, had already decided it would not to accept the terms in any case.) (*See March 30, 1983*)

1983 — MARCH 30
U.S. INTERIM AGREEMENT PROPOSAL

President Reagan announces that the United States and its allies are prepared to accept an interim agreement on INF missiles to establish equal global levels of U.S. and Soviet warheads on INF missile launchers at the lowest possible number – between 50 and 450 warheads, with zero still the ultimate goal.

The Soviet Union rejects the new proposal on April 2.

1983 — OCTOBER 27
MONTEBELLO DECISION ON NATO NUCLEAR CAPABILITY

At a NATO meeting in Montebello, Canada, the allies agree to maintain NATO’s nuclear capability at the lowest level consistent with security and deterrence, and to withdraw 1,400 U.S. nuclear warheads from Europe. (*See Oct. 17, 1991*)

1983 — NOVEMBER 22-23
U.S. INF DEPLOYMENT

The West German Parliament approves Pershing II deployments on November 22. (*See Aug. 26, 1987*) The first U.S. INF missiles arrive in Europe the next day and the Soviet delegation walks out of the INF negotiations in Geneva. The United States offers to resume the talks whenever the Soviets are willing to return, but the talks remain suspended until March 12, 1985.

1984 — NOVEMBER 24
AGREEMENT ON NST TALKS

President Reagan announces that the United States and the Soviet Union have agreed to enter into new negotiations, to be called the Nuclear and Space Talks (NST), concerning nuclear offensive arms and defense and space issues. (*See Jan. 7-8, 1985*)

1985 — JANUARY 7-8
MINISTERIAL MEETING

U.S. Secretary of State George Shultz and Soviet Foreign Minister Andrei Gromyko agree to renew

talks on INF as one of three items on the NST agenda (the other two are strategic offensive arms and defense and space weapons). (*See March 12, 1985 and Chapters II and VI*)

1985 — MARCH 11

MIKHAIL GORBACHEV BECOMES LEADER OF THE SOVIET UNION

Following Konstantin Chernenko's death, Mikhail Gorbachev becomes General Secretary of the Communist Party Central Committee.

1985 — MARCH 12

NST TALKS OPEN

At the NST talks, the United States reaffirms its draft treaties of 1983 calling for the global elimination of INF missiles and an interim agreement with equal INF limits at the lowest possible number. The Soviet Union maintains its 1983 position, opposing any INF deployment by the United States. The Soviet delegation tables a proposal for a bilateral moratorium on INF deployments followed by subsequent reductions that will permit Soviet INF missiles at levels equivalent to British and French strategic forces but not allow U.S. INF missiles. (*See Oct. 11-12, 1986*)

General Secretary Gorbachev also announces a unilateral Soviet moratorium on INF missile deployments in the Soviet Union.

1986 — JANUARY 15

SOVIET NUCLEAR DISARMAMENT INITIATIVE

General Secretary Gorbachev announces a plan for complete nuclear disarmament by the year 2000. He includes a proposal to eliminate all U.S. and Soviet INF missiles "in the European zones" as well as the first indication of Soviet willingness to agree to on-site inspections.

On February 23, in a written response to General Secretary Gorbachev's proposal, President Reagan presents a revised version of his 1981 zero option. This plan calls for "the elimination [by 1990] of U.S. Pershing II, GLCMs and Soviet SS-20 missiles not only in Europe, but in Asia as well."

1986 — MARCH 4

U.S. VERIFICATION PROPOSALS

At the INF negotiations, the United States proposes "a comprehensive verification regime that includes the use of national technical means (NTM) of verification and cooperative measures between the two governments, such as on-site inspection and data exchanges." (*See Sep. 14, 1987*)

1986 — OCTOBER 11-12

REYKJAVIK SUMMIT: LONG-RANGE INF AGREEMENT

At the Reykjavik Summit, the United States and the Soviet Union agree to equal global ceilings of 100 Long-range INF (LRINF) missile warheads for each side, with none in Europe. (*See March 4, 1987*)

The Soviet Union also offers to freeze its short-range INF (SRINF) missile systems, pending negotiation of reductions, if U.S. SRINF missile systems are frozen at the current level of zero. (*See June 16, 1987*) In addition the Soviet Union agrees, in principle, to some key verification elements. However, it links an INF agreement to U.S. acceptance of constraints on the Strategic Defense Initiative (SDI). (*See Feb. 28, 1987*)

1987 — FEBRUARY 28
SOVIET UNION DE-LINKS INF

General Secretary Gorbachev de-links INF negotiations from resolution of SDI and ABM issues thereby clearing the way for the conclusion of a separate treaty on INF systems.

1987 — MARCH 4
U.S. DRAFT INF TREATY

The United States presents a draft INF treaty that provides for the reduction of LRINF missile warheads to 100 globally on each side, with zero in Europe, as agreed to by U.S. and Soviet leaders at Reykjavik. The global elimination of U.S. and Soviet INF missiles, however, remains the preferred U.S. outcome. (*See April 27, 1987*)

1987 — APRIL 27
SOVIET DRAFT INF TREATY

The Soviet Union presents a draft INF treaty that reflects the basic agreements on land-based LRINF missiles reached at Reykjavik. The Soviet draft would reduce each side's LRINF in Europe to zero by the end of five years, and would limit Soviet LRINF missile warheads in Soviet Asia and U.S. LRINF missile warheads deployed on U.S. territory to 100 warheads for each side. (*See Sept. 15-17, 1987*)

1987 — JUNE 16
U.S. CALL FOR SRINF ELIMINATION

The United States formally presents its "global double zero" position calling for the total elimination of all U.S. and Soviet SRINF – as well as LRINF – missile systems. (*See July 22-23, 1987*)

1987 — JULY 22-23
SOVIET ACCEPTANCE OF DOUBLE GLOBAL ZERO

General Secretary Gorbachev indicates that the Soviet Union is prepared to agree to the elimination of all INFs in Europe and Asia and all short-range missiles worldwide. (*See Sept. 15-17, 1987*)

1987 — AUGUST 26
GERMANY AGREES TO ELIMINATE ITS PERSHING IA MISSILES

Chancellor Helmut Kohl announces that the Federal Republic of Germany will dismantle its 72 shorter-range INF Pershing IA missiles and will not replace them with more modern weapons if the

United States and the Soviet Union eliminate all of their LRINF and SRINF missiles as foreseen under the proposed INF treaty. (*See Oct. 4, 1990*)

1987 — SEPTEMBER 14
U.S. INSPECTION PROTOCOL

At the INF negotiations in Geneva, the United States presents an Inspection Protocol detailing the procedures it considers necessary to effectively verify compliance with an INF treaty. Key elements of the verification regime include:

- The requirement that all INF missiles and launchers be in agreed areas or in announced transit between such areas during the reductions period.
- A detailed exchange of data, updated as necessary, on the location of missile support facilities and missile operating bases, the number of missiles and launchers at those facilities and bases, and technical parameters of those missile systems.
- Notification of the movement of missiles and launchers between declared facilities.
- A base line on-site inspection to verify the number of missiles and launchers at declared missile support facilities and missile operating bases prior to elimination.
- On-site inspection to verify the destruction of missiles and launchers.
- Follow-on, short-notice inspection of declared facilities during the reductions period to verify residual levels until all missiles are eliminated.
- Short-notice, mandatory challenge inspections of certain facilities in the United States and Soviet Union at which banned missile activity could be carried out.
- A separate “close out” inspection to ensure that, when a site is deactivated and removed from the list of declared facilities, it has indeed ended INF-associated activity. (*See Jan. 26, 1988*)

1987 — SEPTEMBER 15-17
NUCLEAR RISK REDUCTION CENTERS

U.S. Secretary of State George Shultz and Soviet Foreign Minister Eduard Shevardnadze announce in a joint statement that the United States and the Soviet Union have agreed “in principle” to conclude the INF Treaty and announce a summit meeting between President Reagan and General Secretary Gorbachev in the fall “to sign a treaty on intermediate-range and shorter-range missiles and to cover the full range of issues in the relationship between the two countries.” (*See Dec. 8, 1987*)

Secretary Shultz and Foreign Minister Shevardnadze also sign an agreement to establish Nuclear Risk Reduction Centers (NRRCs) in Washington and Moscow to reduce the risk of conflict between the United States and the Soviet Union that might result from accidents, miscalculations or misinterpretations. The centers will be connected by a new, dedicated communications link and will play a role in exchanging information and notifications required under existing and future arms control and confidence-building measures agreements. The United States and Soviet centers open April 1, 1988.

1987 — DECEMBER 8
INF TREATY

President Reagan and General Secretary Gorbachev sign the Treaty on the Elimination of Intermediate-Range and Shorter-Range Missiles.

The INF Treaty requires the elimination of all LRINF missiles (ranges between 1,000 to 5,500 km) by June 1, 1991, and all SRINF (ranges between 500 to 1,000 km) missiles within 18 months. In all, 2,692 missiles are to be eliminated. In addition, all associated launchers, equipment, support facilities, and operating bases worldwide are to be eliminated or closed out from any further INF missile system activity. (*See Jan. 26, 1988; May 27-28, 1988; and May 31, 2001*)

1988 — JANUARY 26
THE U.S. ON-SITE INSPECTION AGENCY (OSIA) ESTABLISHED

The U.S. On-Site Inspection Agency (OSIA) is established to carry out the on-site inspection, escort and monitoring provisions of the INF Treaty. It later becomes responsible for U.S. inspection activities under other arms control agreements. (*See June 6-July 15, 1988*)

1988 — MAY 27-28
RATIFICATION OF INF TREATY

The U.S. Senate gives its advice and consent to the ratification of the INF Treaty by a vote of 93 to 5. The Soviet Union ratifies the treaty the following day. The treaty enters into force on June 1, 1988.

1988 — JUNE 6-JULY 15
SPECIAL VERIFICATION COMMISSION (SVC)

The United States and the Soviet Union hold the first session of the Special Verification Commission (SVC) for the INF Treaty in Geneva. The SVC resolves INF treaty compliance questions and agrees upon measures necessary to improve the viability and effectiveness of the treaty. (*See July 2, 1988*)

1988 — JULY 2
CONTINUOUS PERIMETER AND PORTAL MONITORING

The United States begins continuous perimeter and portal monitoring at the Soviet Votkinsk Machine Building Plant, where SS-20s were assembled, and the Soviet Union begins continuous monitoring at Hercules Plant Number 1 at Magna, Utah, where the Pershing II had been produced. (*See May 31, 2001*)

1988 — JULY 22/SEPTEMBER 8
INF ELIMINATIONS

The Soviet Union begins eliminations under the INF Treaty on July 22 and the United States on September 8. (*See May 24, 1991 and May 28, 1991*)

1989 — APRIL 12**SHORT-RANGE NUCLEAR FORCES (SNF) NEGOTIATIONS**

The Soviet Union proposes short-range (less than 500 km) nuclear forces (SNF) negotiations between itself and the United States. (*See May 29, 1989*)

1989 — MAY 11**SOVIET UNILATERAL SNF REDUCTIONS**

President Gorbachev informs U.S. Secretary of State James Baker that the Soviet Union intends to announce a unilateral cut of 500 short-range nuclear weapons. (*See May 3, 1990 and June 1990*)

1989 — MAY 29**SNF NEGOTIATIONS**

President George Bush proposes that an agreement on Conventional Armed Forces in Europe (CFE) be concluded within six months to a year. Negotiations on SNF would begin once CFE implementation is complete.

1990 — MARCH 7**SRINF MISSILES IN EAST GERMANY**

East Germany admits that its forces possess 24 conventionally armed Soviet-origin SS-23 SRINF missiles and that it has begun dismantling them. The Soviet Union claims that it had transferred the conventionally armed missiles to Bulgaria, Czechoslovakia, and East Germany in 1985, before entry into force of the INF Treaty. (*See Nov. 14, 1991*)

1990 — MAY 3**UNITED STATES CANCELS SNF MODERNIZATION**

U.S. President Bush announces the cancellation of the U.S. follow-on to the Lance system – a ground-based, short-range missile program – and stops any further modernization of U.S. nuclear artillery shells deployed in Europe. The president says there is “less need for nuclear systems of the shortest range” in Europe “as democracy comes to Eastern Europe and Soviet troops return home.”

1990 — JUNE**SOVIET ANNOUNCEMENT ON UNILATERAL REDUCTIONS**

The Soviet Union announces its decision to withdraw a “very substantial” portion of its nuclear arsenal deployed in Central Europe before the end of the year. Foreign Minister Shevardnadze says the Soviet Union “will unilaterally cut in Central Europe, 60 tactical rocket launchers, more than 250 nuclear artillery pieces, and will withdraw 1,500 nuclear warheads.” These reductions are intended to supplement the unilateral cut of 500 short-range nuclear weapons announced by President Gorbachev in May 1989. According to Foreign Minister Shevardnadze, total Soviet unilateral reduction in tactical nuclear forces will include 140 “missile launchers” and 3,200 “nuclear guns ... by the end of the current year.” (*See July 1990*)

1990 — JULY

U.S. UNILATERAL WITHDRAWALS

President Bush announces the U.S. decision to unilaterally withdraw all of its nuclear artillery shells from Europe if the Soviet Union takes parallel steps. (*See Sept. 27, 1991*)

1990 — SEPTEMBER

LAST U.S. INF MISSILES REMOVED FROM EUROPE

The last U.S. INF missiles are removed from Europe to undergo destruction back in the United States.

1990 — OCTOBER 4

DECOMMISSIONS OF GERMAN PERSHING 1As

Germany decommissions its 72 Pershing IA missiles and associated launchers.

1991 — MAY 24

U.S. COMPLETION OF INF ELIMINATIONS

As of the end of May 1991, the United States has eliminated 234 Pershing II and 443 BGM-109 INF missiles, as well as 169 Pershing IA SRINF missiles. (*See May 28, 1991*)

1991 — MAY 28

SOVIET COMPLETION OF INF ELIMINATIONS

As of the end of May 1991, the Soviet Union has eliminated 654 SS-20, 149 SS-4, 6 SS-5, and 80 SSC-X-4 INF missiles, as well as 239 SS-23 and 718 SS-12 SRINF missiles.

1991 — SEPTEMBER-DECEMBER

DISSOLUTION OF THE SOVIET UNION

A series of historic events brings about the end of the Soviet Union and the creation of 15 independent republics:

- On September 6, 1991 the State Council of the Soviet Union releases the three Baltic republics of Lithuania, Latvia and Estonia from its ranks and recognizes their independence.
- The remaining twelve republics have all proclaimed their independence by December 1991 and at a meeting held in Alma-Ata on December 21 they declare that they now constitute the Commonwealth of Independent States (CIS) and that with the formation of the CIS “the Union of Soviet Socialist Republics ceases to exist.” (*See Dec. 21, 1991*)
- On December 25, 1991 the Soviet Union formally dissolves as its President, Mikhail Gorbachev, resigns.

Four of the new republics – Russia, Ukraine, Kazakhstan and Belarus – have nuclear weapons on their territory. (*See Oct. 9, 1992*)

1991 — SEPTEMBER 27**U.S. UNILATERAL WITHDRAWAL OF TACTICAL NUCLEAR WEAPONS**

President George Bush announces a major presidential nuclear initiative (PNI) involving the unilateral withdrawal of U.S. tactical nuclear weapons: “I am ... directing that the United States eliminate its entire worldwide inventory of ground-launched short-range, that is, theater nuclear weapons. We will bring home and destroy all of our nuclear artillery shells and short-range ballistic missile warheads. We will, of course, insure that we preserve an effective air-delivered nuclear capability in Europe.”

“In turn, I have asked the Soviets ... to destroy their entire inventory of ground-launched theater nuclear weapons ...”

“Recognizing further the major changes in the international military landscape, the United States will withdraw all tactical nuclear weapons from its surface ships, attack submarines, as well as those nuclear weapons associated with our land-based naval aircraft. This means removing all nuclear Tomahawk cruise missiles from U.S. ships and submarines, as well as nuclear bombs aboard aircraft carriers.” (*See Oct. 5, 1991 and July 2, 1992*)

1991 — OCTOBER 5**SOVIET RESPONSE**

President Gorbachev responds to President Bush’s unilateral withdrawal of tactical nuclear weapons by calling for the elimination of air-based weapons and announcing that:

- All nuclear artillery munitions and nuclear warheads for tactical missiles shall be eliminated.
- Nuclear warheads for air defense missiles shall be withdrawn from the troops and concentrated in central bases, and a portion of them shall be eliminated. All nuclear mines shall be eliminated.
- All tactical nuclear weapons shall be removed from surface ships and multipurpose submarines. These weapons, as well as nuclear weapons on land-based naval aviation, shall be stored in central storage sites and a portion shall be eliminated.

“Moreover, we propose that the United States eliminate fully, on the basis of reciprocity, all tactical nuclear weapons of naval forces. In addition, on the basis of reciprocity, it would be possible to withdraw from combat units on frontal (tactical) aviation, all nuclear weapons (gravity bombs and air-launched missiles) and place them in centralized storage bases.”

Due to the unilateral nature of these initiatives and the lack of verification measures, the United States continues to remain uncertain whether all these reduction commitments have actually been carried out.

1991 — OCTOBER 17**NATO REDUCTION OF TACTICAL NUCLEAR WEAPONS**

NATO agrees to remove all but 400 to 600 nuclear gravity bombs from Europe. (*See May 27, 1997*)

1991 — NOVEMBER 14
GERMAN DESTRUCTION OF SS-23s

Germany announces that all former East German SS-23 “components crucial for deployment” have been destroyed. (*See Jan. 19, 1993*)

1991 — NOVEMBER 7-8
NEW NATO STRATEGIC CONCEPT

Against the backdrop of the Bush-Gorbachev tactical nuclear weapons initiative, NATO releases a new strategic concept that states that the Allies can “significantly reduce their sub-strategic nuclear forces ... There is no requirement for nuclear artillery or ground-launched short-range nuclear missiles and they will be eliminated.”

1991 — DECEMBER 12
SOVIET NUCLEAR THREAT REDUCTION ACT (NUNN-LUGAR LEGISLATION)

President Bush signs the Soviet Nuclear Threat Reduction Act (the Nunn-Lugar legislation) approving U.S. aid to help the CIS with the storage, transportation, dismantlement and destruction of nuclear and chemical weapons, as well as defense conversion, and military-to-military exchanges.

Over the next 10 years around \$4 billion will be budgeted for these nonproliferation activities under the Nunn-Lugar legislation.

1991 — DECEMBER 21
TACTICAL NUCLEAR WEAPONS IN THE NON-SOVIET REPUBLICS

During their conference at Alma-Ata, the leaders of Belarus, Kazakhstan, and Ukraine agree to transfer all tactical nuclear weapons on their territories to Russia by July 1, 1992. (*See Dec. 25, 1991 and Feb.-May 1992*)

1992 — FEBRUARY-MAY
TRANSFER OF TACTICAL NUCLEAR WEAPONS TO RUSSIA

- On February 1, Russian President Boris Yeltsin announces that the transfer of tactical nuclear weapons from Kazakhstan was completed in January.
- On April 28, Belarusian Defense Minister Pavel Koszlevsky announces that all tactical nuclear warheads in Belarus have been transferred to Russia.
- On May 6, Ukrainian President Leonid Kravchuk confirms that all tactical nuclear weapons have been transferred to Russia except for those on the ships and submarines of the Black Sea Fleet.

1992 — JULY 2**UNITED STATES COMPLETES TACTICAL NUCLEAR WITHDRAWALS**

President Bush announces that the United States has completed the worldwide withdrawals of its ground- and sea-launched tactical nuclear weapons.

1992 — OCTOBER 9**INF MULTILATERALIZATION**

During a meeting in Minsk, the Commonwealth of Independent States agrees to adhere to the INF Treaty. (*See Nov. 3, 1994*)

1993 — JANUARY 19**SS-23s IN GERMANY, BULGARIA AND CZECHOSLOVAKIA**

The annual U.S. report on arms control treaty compliance notes that some SS-23 missiles still remain in Bulgaria and the former Czechoslovakia. (*See July 25, 1996*)

1994 — NOVEMBER 3**INF MULTILATERALIZATION**

The United States and representatives from Belarus, Kazakhstan, Russia, and Ukraine sign a document ensuring the continued implementation of the INF Treaty.

1996 — FEBRUARY 22-23**FRENCH NUCLEAR FORCES**

French President Jacques Chirac announces the withdrawal and dismantling of the two surface-to-surface missile systems (the 18 intermediate-range S3Ds and the 30 shorter-range Hades) in France's nuclear arsenal. Since the short-range Pluton missile had been retired by the end of 1993, this decision eliminates France's ground-based nuclear weapons.

1996 — JULY 25**CZECH DESTRUCTION OF SS-23s**

The Czech Republic announces that it has destroyed the last of its SS-23 missiles. (*See Oct. 27, 2000*)

1997 — MAY 27**NATO-RUSSIAN FOUNDING ACT AND TACTICAL NUCLEAR WEAPONS**

Partially in response to Russian fears surrounding NATO expansion, the Allies explicitly state in the Founding Act with Russia that "they have no intention, no plan and no reason to deploy nuclear weapons on the territory of new members." (*See Chapter VIII, July 8, 1997*)

1998 — MARCH 31**U.K. WITHDRAWAL OF TACTICAL NUCLEAR WEAPONS**

The United Kingdom withdraws from service the last of its estimated 100 WE-177 tactical nuclear free-fall bombs. The United States is now the only country with tactical nuclear weapons deployed outside of its territory.

1998 — JULY 8**INDIAN MISSILE PROGRAM**

The Indian Parliament's Standing Committee on Defense publishes a report urging rapid development of India's ballistic missile forces. The Committee concludes that "the government should go full steam in a time-bound manner to develop a full range of missiles, in addition to the variants of the *Agni* currently under development, as a deterrent to potential enemies from using their ballistic missile capabilities against any of our assets." Such a declaration, coupled with Indian and Pakistani nuclear tests earlier in the year raises serious concerns of an INF arms race on the subcontinent. (*See April 11, 1999 and Chapter V, May 11-13 and 28-30, 1998*)

1998 — JULY 22**IRAN TESTS *SHAHAB-3***

Iran carries out the first known test of its *Shahab-3* ballistic missile. This missile has an estimated range of 1,300 km and can thus strike virtually any country in the Middle East, including Israel. The missile explodes after 100 seconds of flight, raising questions over whether the test was a success or a failure. Nonetheless the test heightens concerns over the possible growth of regional INF forces.

Further *Shahab* tests follow on July 15, 2000 and September 21, 2000.

1998 — SEPTEMBER 7**RUSSIAN SUITCASE BOMBS**

Alexander Lebed, the former secretary of the Russian Security Council, declares on U.S. television that more than 100 "suitcase-sized" nuclear weapons may have been "lost" by Russia. These weapons could be transported and detonated by a single person and do not have the safeguard of launch codes. Lebed's assertion is immediately challenged by a wide array of Russian government officials and agencies. The Ministry of Defense, the Ministry of Atomic Energy (MINATOM) and the Federal Security Service all attack the veracity of the claim. Russian Prime Minister Victor Chernomyrdin labels it "absolute stupidity" and Defense Minister Igor Sergeev declares that Russia's "nuclear weapons are under constant control. And today I, as Defense Minister, have no fears."

Despite this opposition Lebed maintains his assertion and, speaking on September 22, he concludes "these are the ideal weapons to conduct nuclear terrorism ... We must seriously look for them or else humankind cannot rest in peace." His allegations are never confirmed.

1999 — APRIL 11
INDIAN MISSILE TEST

India carries out a test of the *Agni II* IRBM, beginning a new round of escalation on the subcontinent. According to a Foreign Ministry Statement the missile has a range of over 2,000 km with the test demonstrating “that we have achieved perfection of a very high order in missile technology.” In a press conference the Indian defense minister George Fernandes states that “this concerns our national security. No one can put pressure on us ... I believe we have reached a point where nobody from anywhere can dare to threaten us.” India, already capable of striking any target in Pakistan, may now also be able to reach Beijing and Shanghai. (See April 14, 1999 and Aug.17, 1999)

1999 — APRIL 14
PAKISTANI MISSILE TEST

Pakistan tests its *Ghauri II* IRBM and, according to a government statement, “the successful flight test is the result of Pakistan’s technical prowess in the field of missile technology.” Pakistan claims that the missile has a maximum range of 2,300 km and this would allow it to target and strike anywhere in India. There is the clear potential for the development of a new arms race and in light of this the international community calls for restraint from the two countries. As U.S. Assistant Secretary of State Karl Inderfurth argues “Both sides have said they want to meet their security requirements at the lowest possible levels. We would like to see concrete steps by both countries that they intend to do so.”

1999 — APRIL 29
RUSSIAN DECREE ON TACTICAL NUCLEAR WEAPONS

According to Reuters, Russian President Boris Yeltsin signs a decree “committing Moscow to develop and deploy tactical nuclear weapons.” The aim appears to be to place greater emphasis on Russia’s tactical nuclear weapons for security to offset its growing weakness in conventional weapons. (See Jan. 10, 2000)

1999 — AUGUST 17
INDIAN DRAFT NUCLEAR DOCTRINE

While maintaining its nuclear policy of “retaliation only,” India releases a draft nuclear doctrine that suggests the serious development of INF forces. According to the doctrine “India’s strategic interests require effective, credible nuclear deterrence and adequate retaliatory capability should deterrence fail.” With this in mind a nuclear force should be developed “to provide for a level of capability consistent with maximum credibility, survivability, effectiveness, safety and security.” This force should function under an “integrated operational plan” and be based on a “triad of aircraft, mobile land-based missiles and sea-based assets.”

International reaction to the document is adverse with the U.S. State Department commenting that “in general, we don’t find it an encouraging document. We find it a document that describes the desire to develop a nuclear arsenal and that is something that we think is not in the security interests of India, the subcontinent, or the United States, or the world.”

2000 — JANUARY 10
NEW RUSSIAN NATIONAL SECURITY CONCEPT

Acting Russian President Vladimir Putin signs a new National Security Concept that appears to mark a lowering of its threshold for the use of nuclear weapons. The concept endorses “the use of all available means and forces, including nuclear weapons, in case of the need to repel an armed aggression when all other means of settling the crisis situation have been exhausted or proved ineffective.” An earlier (1997) security concept allowed for first use of nuclear arms only “in case of a threat to the existence of the Soviet Union.”

2000 — OCTOBER 27
SLOVAK DESTRUCTION OF SS-23s

Slovakia destroys the last of its SS-23 missiles.

2001 — MAY 31
INF CONTINUOUS PERIMETER AND PORTAL MONITORING ENDS

Ten years after the withdrawal of Intermediate Nuclear Forces from Europe the intrusive inspection regime of the INF Treaty expires and continuous perimeter and portal monitoring is brought to an end in the United States and Russia.

2001 — DECEMBER 6
BULGARIA TO DESTROY ITS SS-23 MISSILES

The Bulgarian Defense Minister announces that Sofia will destroy its eight SS-23 missiles as part of its preparations for NATO membership. (*See Jan. 19, 1993*)

CHAPTER V : NUCLEAR AND MISSILE PROLIFERATION

1946 — JUNE 14 BARUCH PLAN

Bernard M. Baruch, U.S. representative to the United Nations Atomic Energy Commission, submits a proposal for the international control of atomic energy. The Baruch Plan calls for “the creation of an International Atomic Energy Development Authority, to which should be entrusted all phases of the development and use of atomic energy, starting with the raw material.” The plan recommends that the authority have direct control of all potentially dangerous atomic activities and license all other atomic activities. The authority would further be empowered to send officials into states to conduct comprehensive inspections for treaty violations. Decisions of the authority would not be subject to veto in the United Nations Security Council (UNSC). The Soviet Union, which does not yet possess a nuclear weapon, opposes the plan. (*See Dec. 8, 1953*)

1949 — NOVEMBER CREATION OF COCOM

The United States and six other Western European nations (later expanded to include most of NATO, Australia and Japan) create the Coordinating Committee for Multilateral Export Controls (COCOM) to prevent the transfer of militarily useful technology to the communist world. COCOM restricts the transfer of items in three categories:

- Dual-use items (i.e., items with both civilian and military applications).
- Items for nuclear-weapons design and testing.
- Conventional arms. (*See Nov. 17, 1993*)

1953 — DECEMBER 8 U.S. “ATOMS FOR PEACE” PROPOSAL

Speaking to the United Nations General Assembly (UNGA), President Dwight D. Eisenhower presents his Atoms for Peace plan. This calls for the creation of an international atomic energy agency that would receive contributions from nations holding stocks of nuclear materials and utilize such contributions for peaceful purposes. (*See July 29, 1957*)

1957 — JULY 29 ESTABLISHMENT OF IAEA

The Vienna-based International Atomic Energy Agency (IAEA) is established as an autonomous organization under the United Nations. This marks the culmination of widespread international efforts to turn President Eisenhower’s Atoms for Peace proposals into reality. The agency is “to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world.” Part of this role is the establishment and administering of safeguards to ensure that “special fissionable and

other materials, equipment, facilities, and information” are not diverted to military uses.

1957 — OCTOBER 15
SINO-SOVIET AGREEMENT

China and the Soviet Union sign a new Defense Technical Accord. Under the agreement the Soviets will provide China with a prototype atomic bomb, two R-2 ballistic missiles, and related technical data. However, Sino-Soviet relations deteriorate rapidly after the signing of the Accord and on June 20, 1959 the Central Committee of the Soviet Communist Party formally notifies the Chinese that it will not provide them with a prototype or plans for an atomic bomb. On August 23, 1960, the break is completed as all Soviet technical advisors are withdrawn from China.

1959 — DECEMBER 1
THE ANTARCTIC TREATY

In Washington the United States, the Soviet Union and ten other states sign the Antarctic Treaty. This bans both military use of the continent and the detonation of nuclear explosions there – it thus forms the first agreed nuclear weapons-free zone (NWFZ). The treaty enters into force on June 23, 1961 and, to date, 14 acceding states and 16 non-consultative parties have joined the 12 original signatories. (*See Feb. 14, 1967*)

1967 — JANUARY 27
OUTER SPACE TREATY

The Outer Space Treaty is opened for signature in Washington, London and Moscow. According to Article IV of the Treaty, “States Parties to the Treaty undertake not to place in orbit around the earth any objects carrying nuclear weapons or any other kinds of weapons of mass destruction, install such weapons on celestial bodies, or station such weapons in outer space in any manner.”

On October 10, 1967, the United States, the Soviet Union and the United Kingdom deposit their instruments of ratification and the treaty enters into force. (*See Feb. 11, 1971*)

1967 — FEBRUARY 14
TREATY OF TLATELOLCO

The Treaty of Tlatelolco is signed prohibiting nuclear weapons in Latin America. To date, all 33 States in the region of Latin America and the Caribbean have signed the Treaty. Of these, 32 have ratified it, with Cuba being the only exception. Parties agree not to manufacture, test or acquire nuclear weapons, or accept nuclear weapons deployed on their territory by others. The Treaty establishes the *Organismo para la Proscripcion de las Armas Nucleares en America Latina y el Caribe* (OPANAL) to ensure that its obligations are met.

Protocol I of the Treaty requires states with territories in the region to respect the terms of the agreement. It has been signed and ratified by the United Kingdom, Holland, France and the United States.

Protocol II requires that nuclear weapons states do not threaten to use their nuclear arsenals against parties to the Treaty. It has been signed and ratified by China, France, the United Kingdom, the Soviet Union and the United States. The Treaty enters into force on April 22, 1968. (*See Jan. 27, 1967*)

1968 — JULY 1 THE NPT TREATY

The United States, the United Kingdom, the Soviet Union and 59 other countries sign the Treaty on the Non-Proliferation of Nuclear Weapons (NPT). The treaty:

- Bars nuclear weapons states (NWS) from transferring, assisting or encouraging nonnuclear weapons states (NNWS) to acquire, manufacture or control nuclear weapons.
- Bars NNWS from seeking, acquiring or receiving nuclear weapons.
- Permits the development, research, production and use of nuclear energy for peaceful purposes.
- Commits the parties to the treaty to undertake negotiations in good faith to end the arms race and pursue nuclear disarmament.

On March 5, 1970, the United States and the Soviet Union deposit their instruments of ratification and the treaty enters into force. It becomes the base of the international nonproliferation regime. (*See April 17-May 12, 1995*)

1971 — FEBRUARY 11 SEABED TREATY

The Seabed Arms Control Treaty opens for signature in Washington, London and Moscow. Article I prohibits placing “any nuclear weapons or any other types of weapons of mass destruction as well as structures, launching installations or any other facilities specifically designed for storing, testing or using such weapons” on the seabed and the ocean floor beyond a 12-mile coastal zone. On May 18, 1972, the United States, the United Kingdom and the Soviet Union deposit their instruments of ratification and the treaty enters into force. (*See Aug. 6, 1985*)

1974 — SEPTEMBER 3 ZANGGER COMMITTEE

From 1971 to 1974, a group of 15 states, including the United States and the Soviet Union, holds a series of informal meetings in Vienna, chaired by Professor Claude Zangger of Switzerland. This group, which comes to be known as the Zangger Committee, represents the first major international effort to develop export controls on nuclear materials.

On August 14, 1974, the committee publishes two separate memoranda that establish export guidelines, including a “trigger list” of controlled items – so-called because their export triggers safeguards. These items consist of material, equipment and facilities that, if diverted from peaceful uses, could contribute to a nuclear weapons program. Each member of the committee then writes identical letters to the Director-General of the IAEA, indicating each state’s intention to abide by the export controls

and asking the agency to make the decisions public. The IAEA accordingly publishes the memoranda and letters as IAEA document INFCIRC/209 dated September 3, 1974. (*See Feb. 1978*)

1978 — FEBRUARY NUCLEAR SUPPLIERS GROUP

In the aftermath of the 1974 Indian nuclear test (*See Chapter V, May 18, 1974*), the United States, the Soviet Union, the United Kingdom, France, West Germany, Canada and Japan found the Nuclear Suppliers Group (NSG) which begins meeting in London on April 23, 1975 to consider further restrictions on sensitive nuclear exports. In September 1977, the NSG adopts the Zangger list and expands it to include other nuclear-related technologies. The agreement takes the form of a document entitled Guidelines on Nuclear Transfers. The NSG formally transmits the document to the IAEA Director-General on January 11, 1978, and the IAEA publishes it as INFCIRC/254 in February 1978. (*See March 21-April 3, 1992*)

1979 — FEBRUARY/JULY NEW RULERS IN MIDDLE EAST

Two important changes of power during the year greatly increase tensions and proliferation concerns in the Middle East:

- On February 1, Ayatollah Khomeini flies into Tehran and on February 11, the government of the Shah of Iran is effectively overthrown by Islamic fundamentalists.
- In Iraq, President al-Bakr formally retires on July 16, and Saddam Hussein becomes chairman of the Revolutionary Command Council and President of the Country.

1980 — MARCH 3 PROTECTION OF NUCLEAR MATERIALS

The Convention on the Physical Protection of Nuclear Materials is signed in New York. The convention:

- Sets out the levels of physical protection necessary during the transportation of nuclear materials.
- Establishes a general framework of cooperation among states in the recovery and return of stolen nuclear material.
- Defines certain serious offenses involving nuclear weapons that states are to make punishable “by appropriate penalties which take into account their grave nature.”

The Convention is ratified by the United States on December 13, 1982 and by the Soviet Union on May 25, 1983. The Convention enters into force on February 8, 1987.

1984 — APRIL U.S.-SINO NUCLEAR TRADE PACT

The United States signs the Peaceful Nuclear Cooperation Agreement with China after Peking agrees to join the IAEA and accept IAEA inspection of any exported nuclear equipment and material. The

agreement comes into force December 16, 1985. However, it remains dormant as Congress' approval of the pact includes a condition requiring the President to certify that China has not been promoting proliferation. This certification is not seriously attempted until the Clinton administration. (*See Oct. 29, 1997*)

1985 — AUGUST 6 RARATONGA TREATY

The South Pacific Nuclear-Free Zone (SPNFZ) Treaty is signed in Rarotonga in the Cook Islands. To date, the Treaty has 16 parties. The Treaty bans the production, acquisition, possession, testing or control of nuclear explosive devices within the zone. It also outlaws the provision of fissile material or related equipment to states or territories within the zone unless they are under NPT and IAEA regulations.

Protocol I of the Treaty requires states with territories in the region to respect the terms of the agreement and has been signed and ratified by France and the United Kingdom.

Protocol II requires that nuclear weapons states do not threaten to use their nuclear arsenals against parties to the Treaty and has been signed and ratified by China, France, the United Kingdom and the Soviet Union.

Protocol III commits states not to carry out nuclear tests within the zone and has been signed and ratified by China, France, the United Kingdom and the Soviet Union.

The United States has signed all three protocols but has yet to ratify any of them. The treaty enters into force on December 11, 1986. (*See Dec. 15, 1995 and March 25, 1996*)

1985 — NOVEMBER 29 BRAZIL-ARGENTINA JOINT DECLARATION

Brazil and Argentina sign the Joint Declaration on Nuclear Policy at Foz do Iguacu. The declaration states their commitment to develop nuclear energy exclusively for peaceful purposes. This lays the groundwork for further progress and cooperation and the heads of state of the two countries make subsequent joint declarations in Brasilia (1986), Viedma (1987), Ipero (1988), Ezeiza (1988) and Buenos Aires (1990). On November 28, 1990, the second Foz do Iguacu declaration is signed which restates the importance of using their nuclear technology "for peaceful purposes to promote the scientific, economic and social development of both countries." (*See Dec. 13, 1991*)

1985 — DECEMBER 12 NORTH KOREA JOINS THE NPT

North Korea (DPRK) formally accedes to the NPT but fails to complete a safeguards agreement with the IAEA. This is a point of contention that takes seven years to resolve. (*See Jan. 30, 1992*)

1987 — APRIL 7**MISSILE TECHNOLOGY CONTROL REGIME (MTCR)**

The United States, the United Kingdom, West Germany, France, Italy, Japan and Canada create the Missile Technology Control Regime (MTCR) to restrict the proliferation of missiles and missile technology. The MTCR guidelines ban the transfer of unmanned missiles, rockets, and cruise missiles capable of delivering at least a 500 kg payload a minimum of 300 km. The agreement also restricts the export of a wide range of missile design and production technologies. (*See Jan. 1993*)

1990 — JUNE 1**U.S.-SOVIET JOINT STATEMENT ON NONPROLIFERATION**

The United States and the Soviet Union issue a Joint Statement on Nonproliferation following the Washington summit meeting between U.S. President George Bush and Soviet President Mikhail Gorbachev. The statement:

- Expresses support for the IAEA, NPT, and the Treaty of Tlatelolco, and for placing all nuclear activities under IAEA safeguards.
- Agrees on the need for stringent controls over exports of nuclear-related material, equipment and technology to ensure that they will not be misused for nuclear explosive purposes.
- Supports discussions among states in regions of nuclear proliferation for the purpose of achieving concrete steps to reduce the risk of nuclear proliferation.

1990 — DECEMBER 13**ENHANCED PROLIFERATION CONTROL INITIATIVE**

The United States announces the Enhanced Proliferation Control Initiative (EPCI), to tighten the licensing regulations for the export of products useful for the development of missiles, and for chemical and biological weapons.

In addition, domestic regulations are promulgated criminalizing activities that promote the spread of missile technology and chemical weapons.

1991 — JANUARY 16**PERSIAN GULF WAR**

In response to the Iraqi invasion of Kuwait on August 2, 1990 an Allied coalition force goes to war against Iraq. The destruction of Iraq's nuclear, chemical and biological research, development, and production facilities is established as a key war aim. (*See April 3, 1991*)

1991 — APRIL 3**RESOLUTION 687 ON IRAQ**

The United Nations Security Council (UNSC) passes Resolution 687 requiring the destruction of Iraq's nuclear capability, as well as its chemical and biological weapons, and missiles with a range over 150

kilometers. The United Nations assigns the IAEA responsibility for implementation of the nuclear element of the resolution while a special commission (UNSCOM) is established to deal with Iraq's biological, chemical and missile capabilities. (*See June 1, 1992 and Chapter VII, April 19, 1991*)

1991 — MAY 14-22
FIRST IAEA INSPECTION OF IRAQ

The first IAEA inspection of Iraq's nuclear facilities covers the main nuclear research facility at Al Tuwaitha and an additional site near Baghdad.

1991 — MAY 27
MTCR SANCTIONS ON CHINA AND PAKISTAN

The State Department's Bureau of Political-Military Affairs announces the imposition of MTCR Category II sanctions on several entities in China and Pakistan over the suspected transfer of technology related to M-11 short range ballistic missiles. The sanctions are lifted on March 23, 1992 after China gives the United States written confirmation that it will abide by the MTCR "guidelines and parameters." (*See Aug. 25, 1993*)

1991 — MAY 28
MIDDLE EAST ARMS CONTROL

President George Bush announces an arms control initiative to stem the proliferation of weapons of mass destruction (WMD) in the Middle East. He also calls on the five leading conventional arms suppliers (the United States, China, France, the United Kingdom and the Soviet Union) to restrain destabilizing conventional arms transfers to the region.

1991 — JULY 10
SOUTH AFRICA JOINS THE NPT

South Africa formally joins the NPT as a NNWS. This follows a prolonged period of concern over South Africa's nuclear status which had culminated on August 13, 1988 with South African Foreign Minister R. F. Botha publicly acknowledging that his nation has the ability to produce a nuclear weapon. (*See March 23, 1993*)

1991— AUGUST 15
U.N. RESOLUTION 707

The U.N. Security Council adopts Resolution 707, calling for Iraq to "halt all nuclear activities of any kind, except for the use of isotopes for medical, agricultural or industrial purposes."

1991 — SEPTEMBER-DECEMBER
DISSOLUTION OF THE SOVIET UNION

A series of historic events brings about the end of the Soviet Union and the creation of 15 independent

republics:

- On September 6, 1991, the State Council of the Soviet Union releases the three Baltic republics of Lithuania, Latvia and Estonia from its ranks and recognizes their independence.
- The remaining twelve republics have all proclaimed their independence by December 1991 and at a meeting held in Alma-Ata on December 21, they declare that they now constitute the Commonwealth of Independent States (CIS) and that with the formation of the CIS “the Union of Soviet Socialist Republics ceases to exist.”
- On December 25, 1991, the Soviet Union formally dissolves as its President, Mikhail Gorbachev, resigns.

Four of the new republics – Russia, Ukraine, Kazakhstan and Belarus – have nuclear weapons on their territory. (*See May 23, 1992*)

1991 — DECEMBER 4 CARTAGENA RENUNCIATION

Bolivia, Colombia, Ecuador, Peru and Venezuela adopt a Declaration on the Renunciation of Weapons of Mass Destruction at Cartagena, Colombia.

1991 — DECEMBER 12 SOVIET NUCLEAR THREAT REDUCTION ACT (NUNN-LUGAR LEGISLATION)

President Bush signs the Soviet Nuclear Threat Reduction Act (the Nunn-Lugar legislation) approving U.S. aid to help the CIS with the storage, transportation, dismantlement and destruction of nuclear and chemical weapons, as well as defense conversion, and military-to-military exchanges.

Over the next 10 years around \$4 billion is budgeted for these nonproliferation activities under the Nunn-Lugar legislation. (*See Feb. 17, 1992*)

1991 — DECEMBER 13 THE QUADRIPARTITE AGREEMENT

At the headquarters of the IAEA in Vienna an agreement is signed allowing for full-scope IAEA safeguards of Argentine and Brazilian nuclear installations. Brazil, Argentina, the IAEA and the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials sign the accord and it thus becomes known as the Quadripartite Agreement.

It enters into force in March 4, 1994.

1992 — JANUARY 20 NORTH-SOUTH KOREAN PACT

North and South Korea agree to denuclearize the Korean Peninsula. The accord bans both countries from testing, producing, acquiring, or deploying nuclear weapons, and prohibits them from possessing

facilities to produce weapon-grade fissionable material. (*See July 2, 1992*)

1992 — JANUARY 30

NORTH KOREA SIGNS AN IAEA SAFEGUARDS AGREEMENT

As required by the NPT, the DPRK finally signs a safeguards agreement with the IAEA (*See Dec. 12, 1985*) and ratifies it on April 9. On May 4, the DPRK submits an initial report on its nuclear material and facilities to the IAEA, in which it admits that it was building a facility capable of reprocessing plutonium and that it had already separated a very small quantity of plutonium. (*See March 10-12, 1993*)

1992 — FEBRUARY 17

INTERNATIONAL SCIENCE AND TECHNOLOGY CENTER

The United States, Russia and Germany agree to set up a center in Moscow to aid Russian and CIS nuclear scientists and engineers by giving them “opportunities to redirect their talents to nonmilitary endeavors [and to] minimize any incentives to engage in activities that would result in proliferation of nuclear, biological and chemical weapons, and missile delivery systems.” A similar international science and technology center (ISTC) is established in Kiev, Ukraine. (*See Sept. 22, 1998*)

1992 — MARCH 9

CHINA JOINS THE NPT

China accedes to the NPT as the fourth NWS. Proliferation worries concerning China continue however and the United States is later to implement sanctions over Sino-Pakistani technology transfers. (*See Aug. 25, 1993*)

1992 — MARCH 21-APRIL 3

NSG GUIDELINES

At a meeting of the NSG, the group agrees to tighten export restrictions on thousands of items on the dual-use list and to require importers to accept full-scope safeguards prior to any significant new supply of equipment. (*See Jan. 1993*)

1992 — MAY 23

THE LISBON PROTOCOL TO START I

Russia, Belarus, Kazakhstan and Ukraine sign the Lisbon Protocol under which they assume the Soviet Union’s START I obligations and, in particular, agree to keep the nuclear weapons within their combined national territories “under the safe, secure, and reliable control of a single authority.” In addition, under Article IV of the Protocol, Belarus, Kazakhstan, and Ukraine agree to adhere to the NPT as nonnuclear weapon state parties “in the shortest possible time.” (*See July 22, 1993*)

1992 — JUNE 1**IAEA DESTRUCTION OF IRAQI NUCLEAR FACILITIES**

The 12th IAEA inspection team, aided by the U.N. Special Commission (UNSCOM), completes the destruction of key facilities and equipment at Al-Atheer, Iraq's main nuclear weapon design and development installation.

1992 — JULY 2**REMOVAL OF U.S. NUCLEAR WEAPONS FROM SOUTH KOREA**

The U.S. Department of Defense announces the withdrawal of all nuclear weapons from South Korea in connection with President Bush's unilateral initiative to retire or store all ground-based and sea-based tactical nuclear weapons. (*See Chapter IV, Sept. 27, 1991*)

1992 — JULY 13**U.S. NONPROLIFERATION INITIATIVE**

President Bush announces that, as part of a general nonproliferation initiative, the United States will no longer produce plutonium or highly-enriched uranium (HEU) for nuclear explosive purposes. (*See Feb. 18, 1993*)

1992 — AUGUST 3**FRANCE JOINS THE NPT**

France, the last of the five acknowledged NWS, joins the NPT.

1993 — JANUARY**FURTHER EXPORT RESTRICTIONS**

On January 7, the MTCR members announce that the MTCR will now restrict the transfer of all missiles intended for the delivery of weapons of mass destruction, regardless of their range and payload. This measure is augmented on January 15, when the United States and Russia open their bilateral negotiations on a missile technology agreement by agreeing not to export missile technology capable of delivering weapons of mass destruction.

1993 — FEBRUARY 18**U.S.-RUSSIAN AGREEMENT ON URANIUM SALE**

During the Safety, Security and Dismantlement (SSD) talks, the United States commits itself over the next 20 years to purchase from Russia the low-enriched uranium (LEU) produced from the blending down of 500 metric tons of HEU. This HEU is to be removed from warheads that Russia is committed to destroy under its existing arms control treaty commitments. (*See Sept. 23, 1993*)

1993 — MARCH 10-12

NORTH KOREAN ANNOUNCES ITS WITHDRAWAL FROM NPT

On March 10, the DPRK refuses to accept a special IAEA inspection team and on March 12 announces its decision to withdraw from the NPT, citing a provision in Article X that allows withdrawal for supreme national security considerations. (*See May 11-June 11, 1993*)

1993 — MARCH 23

SOUTH AFRICAN NUCLEAR PROGRAM

South African President Frederik W. de Klerk announces that South Africa had developed “a limited nuclear deterrent capability” involving the design and manufacture of seven gun-assembled devices. He claims that these were dismantled before South Africa joined the NPT. Nonetheless, the news prompts the IAEA to extend and expand the NPT verification program they are carrying out in South Africa. The IAEA team later concludes that the South African Nuclear Weapons program has indeed been fully terminated. (*See Oct. 3, 1994*)

1993 — MAY 11-JUNE 11

INTERNATIONAL EFFORTS TO RESOLVE KOREAN NUCLEAR CRISIS

On May 11, the U.N. Security Council approves Resolution 825, which calls on the DPRK to reconsider its decision to withdraw from the NPT and to meet its treaty obligations.

Further efforts are made a month later when, on June 2, the United States and the DPRK open talks at the U.S. mission to the U.N. in New York. On June 11, the countries release a joint statement in which they agree to the “principles of assurances against the threat and use of force, including nuclear weapons” and the DPRK announces suspension of its withdrawal from the NPT for “as long as it considers necessary.” On July 19, it further agrees to consult with the IAEA and to renew contacts with South Korea. (*See March-June 1994*)

1993 — JULY 22

BELARUS FORMALLY ACCEDES TO NPT

Belarus formally accedes to the NPT and signs three agreements with the United States releasing Nunn-Lugar funding for denuclearization assistance. (*See Feb. 14, 1994*)

1993 — AUGUST 25

MTCR SANCTIONS ON CHINA AND PAKISTAN

Following “a close examination of a growing body of evidence over several months” the United States imposes MTCR Category II sanctions on “certain Chinese and Pakistani entities,” including the Chinese and Pakistani ministries of defense and their subagencies. The sanctions are scheduled to last two years. (*See Oct. 4, 1994*)

1993 — SEPTEMBER 1-2**RUSSIA AGREES TO ABIDE BY THE MTCR GUIDELINES**

Russia announces that it will comply with MTCR guidelines.

1993 — SEPTEMBER 23**NEW U.S. NONPROLIFERATION AND EXPORT POLICY**

President Bill Clinton establishes a framework for U.S. efforts to prevent the proliferation of weapons of mass destruction. The plan proposes to:

- Negotiate a multilateral convention to prohibit the production of fissionable materials for nuclear weapons. (*See Jan. 14, 1994*)
- Submit U.S. fissile material no longer needed for weapons to IAEA inspection.
- Pursue the purchase of HEU from the former Soviet Union. (*See Nov. 23, 1994*)
- Explore long-term options for plutonium disposition. (*See June 23, 1994*)
- Streamline U.S. nonproliferation export controls.
- Promote the MTCR as a global missile nonproliferation norm.
- Seek ratification of the Chemical Weapons Convention (CWC).

1993 — NOVEMBER 17**COCOM AGREES TO DISBAND BY MARCH 31, 1994**

In view of the changed security environment, the 17 COCOM members agree to abolish the organization and to start a new, broader one. (*See Dec. 19, 1995*)

1994 — JANUARY 14**MOSCOW SUMMIT JOINT STATEMENT ON Nonproliferation**

Presidents Clinton and Yeltsin issue a Joint Statement on Non-Proliferation that reaffirms support for:

- The indefinite and unconditional extension of the NPT. (*See April 17–May 12, 1995*)
- The IAEA and its efforts to carry out its safeguards responsibilities.
- The negotiation of a verifiable ban on the production of fissile materials for nuclear weapons. (*See March 1995*)

1994 — FEBRUARY**FINAL SHIPMENT OF SPENT FUEL FROM IRAQ**

The IAEA supervises the final shipment of spent fuel from Iraq to Russia and declares that all nuclear-weapons-grade material has been removed from the country.

1994 — FEBRUARY 14
KAZAKHSTAN JOINS THE NPT

Kazakhstan formally accedes to the NPT after a December 13, 1993 vote by the Kazakhstan Parliament approving accession to the NPT as a non-nuclear-weapon state. (*See Dec. 5, 1994*)

1994 — MARCH-JUNE
NORTH KOREAN DEVELOPMENTS

Tensions on the Korean Peninsula begin to rise as the IAEA reports significant DPRK interference during March 1-15 inspections at North Korea's seven declared nuclear sites. The situation deteriorates further on April 21, when the DPRK shuts down its reactor and prepares to remove fuel elements from it. In response to this the Clinton administration decides, on June 2, to pursue sanctions against North Korea.

The situation is somewhat calmed after the DPRK confirms its willingness to accept a verified "freeze" of its nuclear weapons program – an idea that had been discussed during a June 15-18 visit to Pyongyang by former U.S. President Jimmy Carter – and, in response, the Clinton administration agrees on June 22 to resume high-level political talks with the DPRK. These talks are to lead to the "Agreed Framework." (*See Oct. 23, 1994*)

1994 — JUNE 23
GORE-CHERNOMYRDIN REACTOR SHUTDOWN AGREEMENT

Vice President Al Gore and Russian Prime Minister Viktor Chernomyrdin sign an agreement to shut-down by the year 2000 the remaining plutonium production reactors operating in Russia. Russia also agrees not to use newly produced plutonium from the reactors in nuclear weapons. (*See June 4, 2000*)

1994 — OCTOBER 3
U.S.-SOUTH AFRICAN MISSILE Nonproliferation AGREEMENT

The United States and South Africa sign a missile nonproliferation agreement committing South Africa to abide by the MTCR and terminate its Category I missile and space-launch vehicle (SLV) programs.

1994 — OCTOBER 4
MTCR SANCTIONS ON CHINA ENDED

In the Joint Statement on Missile Nonproliferation the United States agrees to lift its MTCR Category II sanctions on China (*See Aug. 25, 1993*) in return for a Chinese pledge not to export ground-to-ground missiles featuring the primary parameters of the MTCR – capable of reaching a range of at least 300 km with a payload of at least 500 kg (*See Oct. 16, 1997*). The two countries also agree to work together to promote the early achievement of a convention banning the production of fissile materials for nuclear weapons. (*See March 1995 and Nov. 21, 2000*)

1994 — OCTOBER 23**U.S.-NORTH KOREAN “AGREED FRAMEWORK”**

In an “Agreed Framework” to “freeze” North Korea’s nuclear program, the United States agrees over the next 10 years to construct two new proliferation-resistant, light-water moderated nuclear power reactors (LWRs) in the DPRK in exchange for the shutting down of all existing DPRK nuclear facilities.

The DPRK agrees to allow 8,000 spent nuclear reactor fuel elements to be removed to a third country once components for the first reactor are delivered, to remain a party to the NPT, and to comply fully with its IAEA safeguards agreement, which includes “special inspections.” The agreement explicitly includes a DPRK obligation to accept inspections at two suspected nuclear waste storage sites.

The United States agrees to normalize economic and diplomatic relations with Pyongyang and to provide formal assurances to the DPRK against the threat or use of nuclear weapons by the United States. (*See Oct. 27, 1994*)

1994 — OCTOBER 27**FORMATION OF KEDO**

The United States, South Korea and Japan meet immediately after the signing of the Agreed Framework to plan the formation (on March 9, 1995) of the Korean Peninsula Energy Development Organization (KEDO). KEDO is to have up to 10 partner countries and will oversee the \$4.5 billion costs of the nuclear deal. (*See Nov. 29, 1994*)

1994 — NOVEMBER 23**UNITED STATES SECRETLY REMOVES HEU FROM KAZAKHSTAN**

In a secret operation code-named *Sapphire*, the United States removes nearly 600 kilograms of highly enriched uranium from Kazakhstan. The HEU is brought to the U.S. Department of Energy facility in Oak Ridge, Tennessee, for safekeeping until it can be blended down for sale as fuel for commercial reactors.

1994 — NOVEMBER 29**IAEA VERIFIES THE DPRK HAS HALTED ITS NUCLEAR PROGRAM**

The IAEA notes that an inspection team “visited the [DPRK] nuclear facilities ... and confirmed that these facilities were not in operation and that construction work had stopped.”

1994 — DECEMBER 5**UKRAINE JOINS THE NPT**

Ukraine accedes to the NPT as a non-nuclear-weapon state.

1995 — MARCH
FISSILE MATERIAL DEVELOPMENTS

On March 1, President Clinton announces the permanent removal of 200 tons of fissile material from the U.S. nuclear stockpile. Following this unilateral measure the delegates of the U.N. Conference on Disarmament (CD) establish, on March 23, an ad hoc committee to negotiate a fissile material production cutoff agreement. (*See April 19-20, 1996*)

1995 — MAY 9-10
MOSCOW SUMMIT

Presidents Clinton and Yelstin sign a joint statement on The Transparency and Irreversibility of the Process of Reducing Nuclear Weapons, expanding their cooperative efforts to account for and remove nuclear weapons and fissile material from their nuclear weapons stockpiles.

1995 — APRIL 17-MAY 12
NPT REVIEW AND EXTENSION CONFERENCE

On May 11, the NPT Review and Extension Conference extends the treaty indefinitely and unconditionally. The treaty, which established the basic international norm against proliferation, currently has 187 adherents.

1995 — AUGUST 8
RUSSIA ADMITTED INTO THE MTCR

After announcing in June 1995 its decision to join, Russia is formally admitted into the MTCR. It participates in its first plenary meeting on October 10-12, 1995. Despite its membership, concerns remain over Russian export controls and illicit transfers of missile technology to Iran. (*See Jan. 22, 1998*)

1995 — SEPTEMBER 19
NATIONAL SECURITY SCIENCE AND TECHNOLOGY STRATEGY

The Clinton administration announces its decision to develop improved nuclear, chemical, and biological detection sensors and technology to track the attempted smuggling of nuclear material.

1995 — DECEMBER 15
THE BANGKOK TREATY

The seven-member Association of Southeast Asian Nations (ASEAN) – Brunei, Indonesia, Malaysia, the Philippines, Singapore, Thailand and Vietnam – joined by Cambodia, Laos and Myanmar (Burma) approves the creation of the Southeast Asian Nuclear-Weapons-Free Zone (SEANWFZ). The treaty prohibits the parties from acquiring, manufacturing, possessing and stationing nuclear explosive devices.

The treaty has one protocol that calls on the nuclear weapons states not to use or threaten to use nuclear

weapons against any party to the treaty or to use nuclear weapons within the zone. However, difficulties have arisen with the protocol due to the fact SEANWFZ includes large stretches of international waters within it. To date, none of the nuclear weapons states have signed the protocol. (*See April 11, 1996*)

1995 — DECEMBER 19 THE WASSENAAR ARRANGEMENT

The United States and 27 other nations establish the Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies as a successor organization to COCOM. The participants agree to exchange, on a regular basis, specific information regarding transfers of sensitive dual-use goods and technologies to nonparticipating countries.

1996 — APRIL 11 THE PELINDABA TREATY

At a meeting of the Organization for African Unity (OAU) in Cairo 43 African nations sign the Pelindaba Treaty establishing a nuclear-weapon-free zone in Africa (AFNFZ). The treaty prohibits the parties from research, development, production, acquisition, assistance, control, or testing of nuclear explosive devices and mandates the reversal of African nuclear capabilities according to IAEA procedures.

Protocol I requires that nuclear weapons states not threaten to use their nuclear arsenals against parties to the Treaty and has been signed and ratified by China and France. Russia, the United Kingdom and the United States have all signed but are yet to ratify.

Protocol II commits states not to carry out nuclear tests within the zone. Once again all the NWS have signed the protocol but only China and France have ratified it.

Protocol III requires states with territories in the region to respect the terms of the Treaty. It has been signed and ratified by France.

The treaty has yet to enter into force. This will occur upon the deposit of the 28th instrument of ratification with the OAU.

1996 – APRIL 19-20 NUCLEAR SAFETY SUMMIT

At a Nuclear Safety Summit between leaders of the G-7, the Russian Federation, and Ukraine in Moscow, the leaders reaffirm their commitment to the conclusion and signing of a comprehensive nuclear test ban treaty and call for, among other things:

- The negotiation of a universally binding fissile material production ban. (*See Oct. 29, 1997*)
- Improved nuclear material protection, control, and accounting procedures.
- Safe and effective management of weapons fissile material no longer required for defense purposes.
- An improved program for preventing and combating illicit trafficking in nuclear material.

1997 — OCTOBER 16
CHINA JOINS THE ZANGGER COMMITTEE

China attends its first meeting as a full member of the Zangger Committee. Despite its accession, proliferation concerns persist since under the Zangger guidelines China is still able to export trigger list items to safeguarded facilities in countries that also possess unsafeguarded sites. Critics question why China is unwilling to join the related NSG, whose members require the more stringent full scope safeguards as a condition for export. (*See Oct. 29, 1997*)

1997 — OCTOBER 29
U.S.-CHINA SUMMIT

In a summit between Presidents Clinton and Jiang Zemin, significant progress is made in the areas of nonproliferation and nuclear cooperation. According to a joint statement released after the summit the United States and China:

- Agree to work to bring the Comprehensive Test Ban Treaty (CTBT) into force at the earliest possible date.
- Agree to pursue the early start of formal negotiations on the Fissile Material Cut-off Treaty (FMCT) at the CD in Geneva.
- Reiterate their commitments against assistance to “unsafeguarded nuclear facilities and nuclear explosion programs” with China promising to take further measures to strengthen dual-use export controls by mid-1998.
- Agree to build on the 1994 Joint Statement on Missile Proliferation. (*See Oct. 4, 1994*)
- Reaffirm their respective commitments to the guidelines and parameters of the MTCR. (*See Nov. 21, 2000*)
- Agree to take the necessary steps to implement the 1985 U.S.-China Agreement on Peaceful Nuclear Cooperation.

In a confidential letter from Chinese Foreign Minister Qian Qichen to U.S. Secretary of State Madeleine Albright, China also pledges to cease all new nuclear cooperation with Iran. (*See May 1999*)

1998 — JANUARY 22
RUSSIAN ‘CATCHALL’ EXPORT REGULATIONS

Russian Prime Minister Viktor Chernomyrdin issues an edict aimed at stemming the transfer of dual-use technologies. It contains “catchall” regulations under which Russian businesses are to forego transactions when “it is known to them that these goods and technologies would be used in creating and operating nuclear, chemical and biological weapons or their missile delivery means.” This is aimed at closing a gap in Russian trade laws whereby dual-use technologies not explicitly listed for control could be easily exported and proliferated. Despite this measure, the United States worries continue over Russian dual-use transfers to “states of concern” – in particular Iran. (*See May 22, 1998*)

1998 — MARCH 6**UKRAINIAN-U.S. NONPROLIFERATION AGREEMENT**

During meetings in Kiev, Ukraine agrees to refrain from nuclear and missile cooperation with Iran, including the supply of turbines to the Bushehr power plant. In response, the United States supports the immediate accession of Ukraine into the MTCR and Secretary of State Albright pledges that “Ukraine’s responsible missile nonproliferation policies will allow us to expand cooperation between our space agencies.”

1998 — APRIL 6**PAKISTAN TESTS GHOURI MISSILE**

Pakistan tests a new ballistic missile called the *Ghauri* that could have a maximum range of 1,500 km. It could thus target almost all of India if deployed. Although a Pakistani Foreign Ministry spokesman claims the next day that the missile was an “indigenous effort,” its features suggest that it has been based on North Korea’s *Nodong* missile. This belief is supported on April 17, when the United States imposes MTCR Category I sanctions – which concern transfer of whole ground-to-ground missiles or major subsystems – on Khan Research Laboratories in Pakistan and the Changgwang Sinyong Corporation in North Korea.

1998 — MAY 22**IRAN PROLIFERATION ACT**

The U.S. Senate passes the Iran Missile Proliferation Sanctions Act by a vote of 90-4. The legislation requires sanctions on those foreign companies and entities for which there is “credible information indicating” assistance or attempted assistance to the Iranian ballistic missiles program. Unlike all other U.S. export control measures those targeted would not have to have knowledge of their involvement in proliferation activities in order to be punished. The President could waive sanctions for national security reasons or if new evidence exonerated a suspect. The Act immediately draws criticism from the White House, which promises to veto it due to its low evidentiary standards. (*See July 23, 1998*)

1998 — JULY 15**RUMSFELD COMMISSION REPORT ON THE BALLISTIC MISSILE THREAT**

The Commission to Assess the Ballistic Missile Threat to the United States, led by Donald Rumsfeld, releases its unclassified executive summary. It concludes in stark terms that “a new strategic environment now gives emerging ballistic missile powers [North Korea, Iran, Iraq] the capacity, through a combination of domestic development and foreign assistance, to acquire the means to strike the United States within about five years of a decision to acquire such a capability (10 years in the case of Iraq). During several of those years, the United States might not be aware that such a decision had been made.” The impact of the report is greatly increased by the dramatic *Taepo Dong* launch by North Korea in late August. (*See Aug. 31, 1998*)

1998 — JUNE 23**IRAN PROLIFERATION ACT VETO**

President Clinton carries through his promise to veto the Iran Missile Proliferation Sanctions Act. His accompanying letter attacks the Act's "unworkable low standard of evidence" and concludes that "this legislation, however, is indiscriminate, inflexible and prejudicial to these [nonproliferation] efforts, and would, in fact, undermine the national security objectives of the United States." Despite this veto Congressional pressure for firmer action on Iranian proliferation does encourage Presidential sanctions later in the year. (See *July 15, 1998 and March 14, 2000*)

1998 — JULY 15**ACTIONS AGAINST RUSSIAN PROLIFERATORS**

The Yeltsin administration announces nine companies that are to be investigated for violation of Russia's new export laws. This move is reinforced when later in the day the United States imposes sanctions on seven of the nine entities targeted by Moscow. Those punished by Washington are: Baltic State Technical University, Europalace 2000, Glavkosmos, Grafit, INOR Scientific Center, MOSO Company, and Polyus Scientific Production Association. (See *Jan. 12, 1999*)

1998 — JULY 22**IRAN TESTS *SHAHAB-3***

Iran carries out the first known test of its *Shahab-3* ballistic missile, which has an estimated range of 1,300 km. The missile explodes after 100 seconds of flight, raising questions over whether the test was a success or a failure. Nonetheless, the test raises Western concerns that are to be greatly heightened by North Korea's *Taepo Dong* launch. (See *Aug. 31, 1998*)

1998 – AUGUST 31**NORTH KOREAN *TAEPO DONG* LAUNCH**

In an attempt to launch a satellite into orbit, North Korea fires a three stage *Taepo Dong* rocket from its Musudan-ri test site in North Hamgyong province. Although the rocket fails to place the satellite in orbit it does manage to fly over the main Japanese island of Honshu, greatly alarming both Japan and the West. The second stage impacts in the Pacific Ocean about 1,600 km east of the launch site. The third stage fails to insert its payload into orbit and burns up with a trail of debris stretching approximately 4,000 km from the launch site. The use of three stages means that the North Koreans have progressed towards developing missiles with a potential range of 4,000-6,000 km. The launch threatens the implementation of the 1994 Agreed Framework and also brings strong calls in the United States to speed up work on national missile defense. (See *May 20-24, 1999*)

1998 — SEPTEMBER 22**NUCLEAR CITIES AGREEMENT**

U.S. Secretary of Energy Bill Richardson and Russian Minister of Atomic Energy Yevgeny Adamov sign an agreement pledging cooperation to bring jobs and commercial enterprises to Russia's 10 closed

“nuclear cities.” Improved employment opportunities are aimed at preventing the possible spread of nuclear personnel and know-how, as Richardson puts it “I can not emphasize enough how important it is to us all that economic hardship not drive Russian nuclear weapons scientists into employment places like Iran and North Korea.”

1998 — DECEMBER 16
IAEA QUILS IRAQ

The IAEA leaves Iraq at the request of UNSCOM. No monitoring of Iraq’s nuclear activities has taken place since this date.

1999 — JANUARY 12
FURTHER RUSSIAN SANCTIONS

The United States announces economic sanctions on three more Russian entities – the Moscow Aviation Institute, the Mendeleev University of Chemical Technology and the Scientific Research and Design Institute of Power Technology (NIKIET). Once again the sanctions concern alleged technology transfers to Iran. (*See March 14, 2000*)

1999 — MAY 20-24
U.S. INSPECTION TEAM VISITS KUMCHANG-NI

Against the background of the *Taepo Dong* launch, concerns arise over the purpose of a North Korean underground facility at Kumchang-ni. After negotiations, a U.S. team is allowed to visit the site May 20-24 and according to the State Department Press release, “based on the data gathered by them at the time and a subsequent technical review, the United States concluded that the underground site at Kumchang-ni did not violate the 1994 U.S.-DPRK Agreed Framework.” (*See Sept. 17-24, 1999*)

1999 — MAY
WORSENING SINO-U.S. RELATIONS

On May 7, in the midst of NATO’s Kosovo campaign, alliance planes accidentally bomb the Chinese embassy in Belgrade. Against a background of outrage and protest in Beijing China suspends all arms control negotiations with the United States. Relations between the two nations deteriorate even further on May 25, when a bipartisan select committee from the House of Representatives led by Christopher Cox (R-CA) releases a declassified version of its report which charges extensive Chinese nuclear espionage. As Cox himself put it in a May 21 interview with NBC news, “No other country has succeeded in stealing so much from the United States. And no other country having stolen such secrets has used it to design weapons that will threaten the United States.”

1999 — JUNE
GLOBAL CONTROL SYSTEM

At the G-8 Summit in Cologne, Germany, Boris Yeltsin proposes a regime known as the Global Control System for the Non-Proliferation of Missiles and Missile Technology (GCS). There are two main ele-

ments to the GCS:

- It would encourage an international transparency regime by requiring nations to provide prior notice of pending missile test-launches which would be stored and handled by an international data exchange center.
- It would counter proliferation through offering incentives – such as access to satellite launch opportunities and security guarantees against missile attack – to those members that renounced the use of missiles as WMD delivery systems.

However, objections are raised that the GCS will legitimize the missile programs of states of concern and thus the chances of the regime entering into existence remain slim.

1999 — SEPTEMBER 17-24 NORTH KOREAN FREEZE ON MISSILE TESTS

The United States and North Korea take important steps in improving relations and reducing proliferation worries. On September 14, President Clinton eases strict trade, banking and travel restrictions against the DPRK. Although U.S. nonproliferation and counter-terrorism controls remain in place, the move allows, in the words of the White House press secretary, “most consumer goods to be available for export to North Korea and will allow the importation of most North Korean-origin goods into the United States.”

An apparent response comes seven days later when, on September 24, a DPRK Foreign Ministry spokesman declares that North Korea will freeze its test launches of long-range missiles while it is in negotiations with the United States as “we think that the step helps create an atmosphere favorable for a negotiated solution to outstanding issues between the two countries.” This moratorium on tests remains in place, having been renewed in June 2000 and May 2001, and is now scheduled to last until 2003. (*See July 19, 2000*)

2000 — MARCH 14 PRESIDENTIAL SIGNATURE OF IRAN NONPROLIFERATION ACT

After vetoing the 1998 Iran Nonproliferation Act, President Clinton finally signs a revised version of the legislation. Under the 2000 version of the Act, the President has far greater scope for action as sanctions on firms and entities aiding the Iranian WMD program are under the discretionary authority of the White House rather than required by law. Thus, if the President decided not to take action, only a written explanation, not a waiver, is required. Clinton noted “the bill, as amended is less problematic than the earlier version which passed the House and will not harm our efforts to halt international cooperation with Iran’s WMD and missile programs.”

2000 — APRIL 14 IRANIAN-NORTH KOREAN SANCTIONS

The United States applies MTCR Category I sanctions – concerning the transfer of whole ground-to-ground missiles or major subsystems – on a North Korean aerospace company, two Iranian government

agencies and two Iranian private companies. The official Korean Central News Agency responds strongly, declaring on April 19 that the sanctions are “a virulent challenge to the process for the normalization of the DPRK-U.S. relations.”

2000 — JUNE 4**RUSSIAN–U.S. PLUTONIUM DEAL**

During a summit in Moscow Presidents Clinton and Putin agree that the United States and Russia will each dispose of 34 metric-tons of weapons-grade plutonium. The White House describes the venture as “a critical, indispensable step toward the goal of ensuring proper disposition of this plutonium from weapons programs.” The agreement recognizes the need for international funding and assistance to allow the Russian disposition and at their July 21-23 summit in Okinawa the G-8 nations commit to developing such a financing plan.

2000 — JULY 19**NORTH KOREAN MISSILE OFFER**

President Putin becomes the first Russian or Soviet leader to visit Pyongyang and, after a two-hour meeting with Kim Jong-Il, he declares that “North Korea on the whole is ready to use exclusively other nations’ rocket technologies if it receives rocket boosters for peaceful space exploration.” On July 22, Putin and Russian officials expand on the details of Kim Jong’s offer, explaining that North Korea was willing to launch from the territory of other countries and that the deal did not require the direct supply of booster technology and materials to the DPRK.

This proposal generates a great deal of interest in the West. However, on August 13, Kim Jong-Il downplays the offer, telling 46 South Korean publishers and broadcasters that it was meant “in humor” as “I told Russian President Putin that we will stop developing rockets when the United States comes forward and launches our satellites.” (*See May 3, 2001*)

2000 — NOVEMBER 21**CHINA AND THE MTCR**

The Chinese Ministry of Foreign Affairs releases a statement reaffirming its commitment to the guidelines of the MTCR. It declares that “China has no intention to assist, in any way, any country in the development of ballistic missiles that can be used to deliver nuclear weapons (i.e., missiles capable of delivering a payload of at least 500 kilograms to a distance of at least 300 kilometers.)” The statement also promises further improvements and reinforcements of China’s export control practices.

2001 — MAY 3**NORTH KOREA EXTENDS ITS MISSILE TESTING MORATORIUM UNTIL 2003**

North Korean leader Kim Jong-Il tells a European Union delegation headed by Swedish Prime Minister Göran Persson that Pyongyang will extend its moratorium on long-range missile testing at least through 2003.

CHAPTER VI : STRATEGIC AND THEATER BALLISTIC MISSILE DEFENSE**1944 — SEPTEMBER 8
V-2 MISSILE STRIKES**

The first German V-2 missile strikes London. It marks the beginning of the first and heaviest use of ballistic missiles against a city. By the time the campaign ends on March 27, 1945 more than 500 V-2s have hit London, causing over 2,500 deaths.

**1944-46
PROJECTS THUMPER AND WIZARD**

The United States Army Air Force begins two surface-to-air missile studies. Project Thumper aims to create a short-range interceptor that is able to destroy missiles such as the V-2 by direct collision. Project Wizard is a more ambitious effort, which looks to develop an interceptor system capable of destroying missiles traveling at great speeds in the upper atmosphere. (*See Jan. 1958*)

**1953 — AUGUST
SOVIETS INITIATE AN ANTIBALLISTIC MISSILE (ABM) DEVELOPMENT PROGRAM**

The Chief of the General Staff and seven Marshals of the Soviet Union write to the Communist Party's Central Committee requesting that it consider constructing ABM weapons. This is the beginning of a process that culminates with the Galosh ABM system. (*See Nov. 10, 1966*)

**1957 — FEBRUARY
NIKE ZEUS**

The Army awards Western Electric and its research and development arm, Bell Laboratories, a contract to develop the Nike Zeus long-range rocket interceptor. This army research continues into the later Nike-X and Sentinel programs. (*See Sept. 18, 1967*)

**1957 — OCTOBER 4
SPUTNIK I LAUNCH**

The Soviet Union launches *Sputnik I*, the world's first orbiting artificial satellite. There is concern that the missile technology used to put *Sputnik I* in orbit will be employed in intercontinental ballistic missiles (ICBMs) capable of delivering nuclear payloads from the Soviet Union to the United States. The fear of a "missile gap" ensues, encouraged by inflated estimates in 1957 from the intelligence community and the U.S. Air Force which predict up to 500 operational Russian ICBMs by 1961. This greatly spurs U.S. developments in missile defense. In 1960, U.S. intelligence satellites reveal that, in fact, the Soviets have only four operational ICBMs.

1966 — NOVEMBER 10
SOVIET GALOSH ABM SYSTEM

U.S. Secretary of Defense Robert McNamara publicly confirms that the USSR is deploying the Galosh antiballistic missile system around Moscow. (*See Sept. 18, 1967*)

1967 — JUNE 23
U.S.-SOVIET SUMMIT IN GLASSBORO

At a summit meeting in Glassboro, New Jersey, U.S. President Lyndon B. Johnson and U.S. Secretary of Defense McNamara discuss with Soviet Premier Alexei Kosygin the relationship between the deployment of strategic defenses and the size of offensive arsenals. The United States proposes the adoption of strict limits on strategic ABM systems, a suggestion rejected by the Soviet Premier. (*See Nov. 17, 1969*)

1967 — SEPTEMBER 18
SENTINEL DECISION

Secretary McNamara announces the U.S. decision to deploy a “thin” national ABM system, named Sentinel, to defend its population against an accidental Soviet missile launch or a limited Chinese long-range ballistic missile attack. (*See March 14, 1969*)

1969 — MARCH 14
SAFEGUARD DECISION

U.S. President Richard Nixon announces the Safeguard system, a reorientation of the Sentinel missile defense program from a thin population defense to a system to protect “our land-based retaliatory forces against a direct attack by the Soviet Union.” On August 6, 1969, the Senate approves deployment of Safeguard by a vote of 50-50, with Vice President Spiro Agnew casting a vote to break the tie. (*See 1975-76*)

1969 — NOVEMBER 17
STRATEGIC ARMS LIMITATION TALKS (SALT I) COMMENCE

The United States and the Soviet Union begin the Strategic Arms Limitation Talks (SALT I) on limiting both ABM defensive systems and strategic nuclear offensive systems. (*See May 26, 1972*)

1972 — MAY 26
CONCLUSION OF SALT I TREATIES

President Nixon and Soviet Communist Party Secretary Leonid Brezhnev sign the two basic SALT I documents in Moscow:

- The Interim Agreement limiting strategic offensive weapons. (*See Chapter III, May 26, 1972*)
- The ABM Treaty limiting strategic defensive systems.

The ABM Treaty constrains strategic defenses to a total of 200 launchers and interceptors, 100 at each of two widely separated deployment areas. (*See July 3, 1974*) These restrictions are intended to prevent the establishment of a nationwide defense or the creation of a base for deploying such a defense. The Treaty also bans the advanced development and testing of sea-based, air-based, space-based and mobile land-based ABM systems

The treaty codifies the principle of “noninterference” by one party with the national technical means (NTM) of verification of the other, thereby protecting the right of overflight by reconnaissance satellites. In addition, the ABM Treaty establishes the Standing Consultative Commission (SCC) to handle treaty-related compliance and implementation issues.

1974 — JULY 3 ABM TREATY PROTOCOL

The United States and the Soviet Union sign a protocol reducing the number of ABM deployment areas permitted to each side from two to one, and the number of ABM launchers and interceptors from 200 to 100.

1975-76 SAFEGUARD SYSTEM

A single U.S. Safeguard ABM deployment site with 100 launchers and interceptors and associated radars is completed at Grand Forks, North Dakota. High operating costs and limited capabilities lead to a decision to deactivate the site in 1976. The main radar at Grand Forks becomes part of the North American Air Defense Command missile early warning system.

1978 — NOVEMBER 1 ABM AGREED STATEMENT

The Standing Consultative Commission (SCC) concludes an Agreed Statement to the ABM Treaty to establish rules for the use of air defense radars at ABM test ranges and to clarify the meaning of the term “tested in an ABM mode.” Under this statement, an interceptor missile is deemed tested in an ABM mode if it has attempted to intercept a strategic ballistic missile or its elements in flight trajectory. (*See Oct. 6, 1985*)

1983 — MARCH 23 U.S. STRATEGIC DEFENSE INITIATIVE

In an address to the nation, U.S. President Ronald Reagan announces his intention to commit the United States to a research program, “consistent with our obligations under the ABM Treaty,” that will study the feasibility of defensive measures against ballistic missiles to maintain the peace. The program comes to be known as the Strategic Defense Initiative (SDI). (*See Jan. 29, 1991*)

President Reagan expresses his desire to find “the means of rendering ... nuclear weapons impotent and obsolete.” He calls for “a long-term research and development program to begin to achieve our ultimate goal of eliminating the threat posed by strategic nuclear missiles.” (*See April 24, 1984*)

**1983 — JULY-AUGUST
KRASNOYARSK RADAR**

The United States reveals that it has detected a large early warning radar under construction near the city of Krasnoyarsk in the Soviet Union. This installation is roughly 800 kilometers from the nearest border and thus in violation of the ABM Treaty (which requires that all such radars be located on a nation's periphery and oriented outward). The United States raises the issue of the Krasnoyarsk radar in the fall 1983 SCC session. (*See Jan. 23, 1984*)

**1984 — JANUARY 23
PRESIDENT'S REPORT ON SOVIET NONCOMPLIANCE**

The Reagan administration issues the first of a series of reports on Soviet noncompliance with arms control agreements. This report deems the Krasnoyarsk radar an outright violation of the ABM treaty. (*See Aug. 31, 1988*)

**1984 — APRIL 24
CHARTERING OF SDIO**

U.S. Secretary of Defense Casper Weinberger charts the Strategic Defense Initiative Organization (SDIO) to carry out the SDI program of research and development and resolve questions of feasibility. (*See May 1993*)

**1984 — JUNE 10
"HIT-TO-KILL" INTERCEPTOR TEST**

A test intercept vehicle mounted upon a modified Minuteman rocket and using hit-to-kill technology destroys a target missile over the Pacific Ocean. However, the General Accounting Office, in a later (1994) report, notes that the infrared visibility of the target was increased during the test to improve the chances of detection and interception.

**1985 — MARCH 12
NUCLEAR AND SPACE TALKS (NST) OPEN**

The United States and the Soviet Union begin the Nuclear and Space Talks (NST) in Geneva. (*See Chapter III, March 12, 1985*) In the Defense and Space Talks portion of the NST, the United States seeks to discuss a transition from deterrence based solely on the threat of nuclear retaliation to increased reliance on defenses, either ground- or space-based, against ballistic missiles. The Soviet Union, in response to the U.S. SDI program, seeks a comprehensive ban on research, development, testing and deployment of "space-strike arms."

There follows prolonged debate and discussion about possible amendments to the ABM Treaty in the light of SDI development. (*See Oct. 11-12, 1986*)

1985 — OCTOBER 6

U.S. “BROAD” INTERPRETATION OF THE ABM TREATY

U.S. National Security Advisor Robert McFarlane introduces a new, “broad” interpretation of the ABM Treaty on national television. Under the “broad” interpretation, space-based and mobile ABM systems and components that are based on “other physical principles,” (i.e. lasers, particle beams) may be developed and tested but not deployed. Under the traditional, or “narrow,” interpretation of the Treaty, the development and testing, but not deployment, of ABM systems based on other physical principles are allowed only for fixed, land-based systems and components. (*See Oct. 11, 1985*)

1985 — OCTOBER 11

U.S. POSITION ON ABM TREATY

President Reagan determines that the “broad” interpretation of the ABM Treaty is fully justified. However, the president directs that, as a matter of policy, the SDI program will continue to be conducted according to a more restrictive interpretation of the ABM Treaty. (*See July 13, 1993*)

1986 — OCTOBER 11-12

REYKJAVIK SUMMIT

At a meeting in Reykjavik, Iceland, President Reagan and Soviet General Secretary Mikhail Gorbachev nearly agree to significant reductions of offensive ballistic missiles. Sharp differences over SDI, however, prevent a settlement.

In response to a Soviet proposal that the United States provide a 10-year commitment not to withdraw from the ABM Treaty, the United States offers to accept such a commitment until 1996 contingent upon:

- A 50 percent reduction in strategic offensive forces of the United States and the Soviet Union by 1991.
- Elimination by 1996 of all U.S. and Soviet offensive ballistic missiles.
- Agreement that either side could deploy advanced strategic defenses after 1996 unless both sides agreed otherwise.

In conjunction with a commitment to abide by the ABM Treaty, General Secretary Gorbachev seeks to ban the testing of space-based “elements” of a missile defense system outside of laboratories. President Reagan rejects this proposal because of its potential impact on the SDI program. (*See Dec. 7-10, 1987*)

1987 — DECEMBER 7-10

WASHINGTON SUMMIT

At the Washington Summit, President Reagan and General Secretary Gorbachev agree to seek an agreement at the Defense and Space Talks that would require both nations to observe the ABM Treaty, as signed in 1972, while conducting their research, development and testing as required, which are permitted by the ABM Treaty, and not to withdraw from the ABM Treaty for a specified period of time for

the purpose of deploying advanced defenses. (*See Jan. 22, 1988*)

1988 — JANUARY 22

DRAFT U.S. DEFENSE AND SPACE TREATY

The United States tables a draft Defense and Space Talks treaty that includes the following provisions:

- Entry into force contingent upon entry into force of START I. (*See Chapter III, June 29, 1982*)
- Unlimited duration with a “specified period” of non-withdrawal from the ABM Treaty to be negotiated.
- Continued observance of the ABM Treaty through that period.

After the “specified period,” either party is free to choose its own course of action, including deployment of strategic missile defenses that are prohibited by the ABM Treaty, upon six months’ written notice of its intention to do so. (*See Sept. 22-23, 1989*)

1988 — AUGUST 31

U.S. STATEMENT ON ABM TREATY REVIEW CONFERENCE

In a unilateral statement following the Third U.S.-Soviet Review Conference of the ABM Treaty, the United States declares that “Since the Soviet Union was not prepared to satisfy U.S. concerns with respect to the Krasnoyarsk radar violation ... the United States will have to consider declaring this continuing violation a material breach of the treaty. In this connection, the United States reserves all its rights, consistent with international law, to take appropriate and proportionate responses in the future.” (*See Sept. 22-23, 1989*)

1989 — SEPTEMBER 22-23

WYOMING MINISTERIAL

During two days of meetings between U.S. Secretary of State James Baker and Soviet Foreign Minister Eduard Shevardnadze in the state of Wyoming, progress is made in several areas:

- The Soviet Union drops its linkage between achieving a Defense and Space Talks agreement on the future of ABM systems and completing and implementing START. The Soviet Union indicates, however, that it reserves the right to withdraw from the START treaty if the United States does not abide by the ABM Treaty. (*See June 13, 1991*)
- The Soviet Union agrees to eliminate its illegal radar at Krasnoyarsk without preconditions – a long-standing U.S. requirement for the signing of any strategic arms control treaty. (*See Oct. 23, 1989*)
- Secretary Baker invites Soviet experts to visit two U.S. laboratories involved in SDI research.

1989 — OCTOBER 23

SOVIET REPLEDGE TO DISMANTLE RADAR

In a speech to the Soviet Parliament, Foreign Minister Shevardnadze acknowledges that the Krasnoyarsk

radar is a violation of the ABM Treaty and repeats the pledge to dismantle the installation. The dismantling does indeed take place over the next few years.

1990 — MARCH-APRIL
U.S. PREDICTABILITY INITIATIVES

The United States proposes an executive agreement, not tied to the ABM Treaty, on predictability measures in the field of strategic missile defense. The proposal, which is designed to build confidence, would involve the exchange of data on defensive programs, meetings of experts, briefings, visits to laboratories, observations of tests and notifications of ABM tests.

1991 — JANUARY 29
GLOBAL PROTECTION AGAINST LIMITED STRIKES

In his State of the Union address, President George Bush announces a change in the mission of the SDI program from defense against a large-scale ballistic missile attack to “providing protection against limited ballistic missile strikes – whatever their source.”

The new Global Protection Against Limited Strikes (GPALS) program would include some 1,000 space-based “Brilliant Pebbles” interceptors, 750 to 1,000 long-range ground-based interceptors at six sites, space-based and mobile sensors, and transportable theater ballistic missile defenses. (*See Sept. 27, 1991 and Jan. 31, 1992*)

1991 — JANUARY-FEBRUARY
PATRIOT DEFENSE

During the Persian Gulf War, Patriot Theatre Missile Defenses (TMD) are used in Israel and Saudi Arabia against Iraqi SCUD missiles. President Bush announces that 41 of 42 SCUD missiles fired were shot down. Later evidence suggests that the Patriot system was, in fact, nowhere near this successful.

1991 — JUNE 13
U.S. AND SOVIET UNILATERAL STATEMENTS AT START

The Soviet Union makes a formal, unilateral statement that START “may be effective and viable only under conditions of compliance” with the ABM Treaty. The United States replies, in a formal unilateral statement, that “changes in the ABM Treaty agreed to by the Parties would not be a basis for questioning the effectiveness or viability” of the START Treaty.

1991 — SEPTEMBER-DECEMBER
DISSOLUTION OF THE SOVIET UNION

A series of historic events brings about the end of the Soviet Union and the creation of 15 independent republics:

- On September 6, 1991 the State Council of the Soviet Union releases the three Baltic republics

of Lithuania, Latvia and Estonia from its ranks and recognizes their independence.

- The remaining 12 republics have all proclaimed their independence by December 1991 and at a meeting held in Alma-Ata on December 21, they declare that they now constitute the Commonwealth of Independent States (CIS) and that with the formation of the CIS “the Union of Soviet Socialist Republics ceases to exist.”
- On December 25, 1991 the Soviet Union formally dissolves as its President, Mikhail Gorbachev, resigns. (*See Oct. 9, 1992*)

1991 — SEPTEMBER 27

UNITED STATES CALLS FOR AGREEMENT ON GPALS

President Bush announces unilateral cuts in U.S. tactical nuclear weapons and calls “upon the Soviet leadership to join us in taking immediate concrete steps to permit the limited deployment of non-nuclear defenses to protect against limited ballistic missile strikes – whatever their source – without undermining the credibility of existing deterrent forces.” (*See Jan. 31, 1992*)

1991 — OCTOBER 3

NEW U.S. GPALS PROPOSAL

The United States tables a new proposal at the Defense and Space Talks indicating it is “prepared to discuss specific limits on the scope and timing of defense deployments” to permit the United States and the Soviet Union to implement GPALs while retaining confidence in each side’s deterrent offensive forces.

1991 — DECEMBER 5

MISSILE DEFENSE ACT

President Bush signs the Missile Defense Act of 1991 which mandates the Department of Defense to “develop for deployment by the earliest date allowed by the availability of appropriate technology or by Fiscal Year 1996 a cost effective, operationally effective, and ABM Treaty-compliant antiballistic missile system.” (*See Sept. 27, 1994*)

1992 — JANUARY 31

RUSSIAN PROPOSAL FOR A JOINT GLOBAL DEFENSE SYSTEM

Russian President Boris Yeltsin, in an address to the United Nations Security Council (UNSC), reaffirms Russia’s “allegiance” to the ABM Treaty, calling it “an important factor in maintaining strategic stability in the world.” President Yeltsin also announces that Russia is “ready to develop, then create and jointly operate a global defense system instead of the SDI system.” President Yeltsin says he is calling for the United States and Russia “to jointly devise a global system for protection from space,” while both sides continue to “faithfully observe ... all of the provisions” of the ABM Treaty. (*See June 17, 1992*)

1992 — JUNE 17

WASHINGTON SUMMIT DECLARATION

At a summit meeting in Washington, the United States and Russia agree to create “a high-level group to explore on a priority basis” the concept of a Global Protection System (GPS). The group will discuss:

- The potential for sharing of early warning information through the establishment of an early warning center.
- The potential for cooperation with participating states in developing ballistic missile defense capabilities and technologies.
- The development of a legal basis for cooperation, including new treaties and agreements and possible changes to existing treaties and agreements necessary to implement a GPS. (*See Sept. 21-22, 1992*)

1992 — SEPTEMBER 21-22

SECOND U.S.-RUSSIAN MEETING ON GPS

At the second U.S.-Russian meeting on GPS the United States tables a protocol to the ABM Treaty which would:

- Permit six sites with 150 interceptors each.
- Permit unlimited ABM development and testing.
- Permit unlimited space-based sensor development and testing.
- Redefine “testing in an ABM mode” to permit more capable theater ballistic missile defenses.
- Permit the transfer of ABM systems to other states.

The Protocol would last for 10 years at which time either side would be free to deploy space-based defenses.

1992 — OCTOBER 9

BISHKEK AGREEMENT

At Bishkek, the CIS sign an agreement pledging to support and implement the ABM Treaty. (*See Sept. 26, 1997*)

1992 — NOVEMBER 3

U.S. PRESIDENTIAL ELECTION

During his campaign for the U.S. Presidency, Bill Clinton renounces the goal of a space-based defense system and supports the development of an option for “a limited missile defense system within the strict framework” of the ABM Treaty. Clinton, who is elected President on November 3, also supports the development and deployment of TMD systems “to protect our troops from short- and medium-range missiles.” (*See May 1993*)

1993 — MAY**CHANGE IN MISSILE PRIORITIES**

U.S. Secretary of Defense Les Aspin announces change of SDIO to Ballistic Missile Defense Organization (BMDO), placing theater missile defenses as the first priority and national missile defenses second.

1993 — JULY 13**U.S. REAFFIRMS “TRADITIONAL” INTERPRETATION OF THE ABM TREATY**

A senior U.S. government official informs Congress that “it is the position of the Clinton Administration that the ‘narrow,’ or ‘traditional,’ interpretation of the ABM Treaty is the correct interpretation and, therefore, that the ABM Treaty prohibits the development, testing, and deployment of sea-based, air-based, space-based, and mobile land-based ABM systems and components without regard to technology utilized.” (*See Nov. 29-Dec. 3, 1993*)

1993 — NOVEMBER 29-DECEMBER 3**U.S. PROPOSES ABM TREATY “CLARIFICATION”**

The United States presents a proposed ABM Treaty “clarification” to establish guidelines for deployment of TMD systems, which are permitted by the ABM Treaty.

The United States proposes to define a TMD interceptor as one with a demonstrated capability to intercept a ballistic missile whose reentry vehicle (RV) velocity does not exceed 5 km/second, roughly the reentry speed of a warhead on a 3,500 km range missile.

The Clinton administration also formally withdraws the revisions to the ABM Treaty put forward by the Bush administration in September 1992 and agrees to multilateralize the treaty. (*See Sept. 28, 1994*)

1994 — SEPTEMBER 27**“CONTRACT WITH AMERICA”**

In their “Contract With America” pre-Congressional election platform, 350 Republican House candidates pledge to deploy both ABM and TMD systems. (*See Feb. 15, 1995*)

1994 — SEPTEMBER 28**WASHINGTON SUMMIT**

At a summit meeting in Washington, President Clinton and Russian President Boris Yeltsin issue a joint statement noting that they have “agreed on the fundamental importance of preserving the viability and integrity of the ABM Treaty.” The two Presidents also note that “Both sides have an interest in developing and fielding effective theater missile defense systems on a cooperative basis. The Presidents agree that the two sides will conduct a joint exercise of theater missile defenses and early warning. This exercise would contribute to providing a basis for U.S. and Russian forces to operate together, for example, in peacekeeping operations.” (*See May 9-10, 1995*)

1995 — FEBRUARY 15
HOUSE DEFEAT OF A MISSILE DEFENSE BILL

The section of the Republican “Contract with America,” HR 7, to require the United States to deploy “as soon as practical” an antimissile defense for U.S. territory is narrowly defeated in the House of Representatives, 218-212. (*See March 19, 1998*)

1995 — MAY 9-10
U.S.-RUSSIAN SUMMIT STATEMENT

At a summit meeting in Moscow, Presidents Clinton and Yeltsin endorse a set of principles for negotiations on TMD. They agree that “theater missile defense systems may be deployed by each side which will not pose a realistic threat to the strategic nuclear force of the other side and will not be tested to give such systems that capability.”

These agreed principles mean that the ABM Treaty “does not apply to theater missile defense systems that may simply have a theoretical capability against some strategic missiles but which would not be militarily significant in the context of operational considerations.”

In addition, the two presidents agree that “theater missile defense systems will not be deployed by the sides for use against each other,” and that “the scale of deployment – in number and geographic scope – of theater missile defense systems by either side will be consistent with theater missile defense programs confronting that side.”

The two presidents “under[take] to promote reciprocal openness in activities of the sides in theater missile defense systems and in the exchange of corresponding information” and “confirmed the interests of the sides in the development and fielding of effective TMD systems on a cooperative basis.” (*See Nov. 17, 1995*)

1995 — NOVEMBER
NATIONAL INTELLIGENCE ESTIMATE (NIE) 95-19

A National Intelligence Estimate (NIE 95-19) judges that “No country, other than the major declared nuclear powers, will develop or otherwise acquire a ballistic missile in the next 15 years that could threaten the contiguous 48 states or Canada” This estimate is contested by NMD advocates and gives rise to a sharp debate over the ballistic missile threat to the United States. (*See July 15, 1998*)

1996 — MARCH 6
REORIENTED U.S. MISSILE DEFENSE PROGRAM

The Clinton administration announces a reoriented missile defense program that emphasizes those TMD systems intended to counter the existing short-range missile threat and defers deployment decisions on the most advanced TMD systems (Theater High Altitude Air Defense, or THAAD, and the Navy upper-tier) until after the year 2000.

The administration also announces its plan to begin a national missile defense (NMD) “3-plus-3” program. This calls for the development over the next three years of the basic elements of a NMD system that could be deployed in three more years if a threat emerges that would justify such a decision.

1997 — SEPTEMBER 26

SIGNING OF TMD/NMD DEMARCATION AGREEMENTS

After nearly four years of complex discussions surrounding the demarcation of TMD and NMD interceptors, the United States, Russia, Belarus, Kazakhstan and Ukraine sign a set of defining agreements during a ceremony in New York.

Under the First Agreed Statement, TMD systems with interceptor velocities of 3 km per second or less (lower velocity systems) can be deployed under the ABM Treaty provided that they are not tested against ballistic missiles which have velocities above 5 km per second or ranges that exceed 3,500 km.

The Second Agreed Statement deals with TMD systems with interceptor velocities above 3 km per second and reflects the differences between U.S. and Russian positions. It simply bans the testing of high speed interceptor systems against missile targets with velocities above 5 km per second or ranges that exceed 3,500 km. The Second Agreed Statement also bans space-based TMD interceptors.

The delegates also sign a Memorandum of Understanding that names Russia, Belarus, Kazakhstan, and Ukraine as the successor states to the ABM treaty, who “assume the rights and obligations of the former USSR under the Treaty and its associated documents.”

1998 — FEBRUARY 27

WELCH PANEL FINDINGS

An independent panel of experts chaired by retired Air Force General Larry Welch reports its findings on the U.S. ballistic missile defense programs. The Welch Report concludes that the NMD testing plan has “high schedule risks and inadequate test assets” and that, in order to avoid a “rush to failure,” it will “benefit from the earliest possible restructuring to a more achievable set of goals.” (*See Nov. 1999*)

1998 — MARCH 19

AMERICAN MISSILE PROTECTION ACT

Senator Thad Cochran (R-MS) introduces the American Missile Protection Act of 1998. The Bill declares that: “It is the policy of the United States to deploy as soon as technologically possible, a National Missile Defense system capable of defending the territory of the United States against limited ballistic missile attack (whether accidental, unauthorized, or deliberate.)” On both May 13 and September 9, motions of cloture on the Cochran Bill fail as votes of 59-41 leave the legislation one short of the 60 votes it needs to proceed to floor debate. (*See Feb. 3, 1999*)

1998 — JULY 15**RUMSFELD COMMISSION REPORT RELEASED**

The Commission to Assess the Ballistic Missile Threat to the United States, led by Donald Rumsfeld, releases its unclassified executive summary. It concludes in stark terms that “a new strategic environment now gives emerging ballistic missile powers [North Korea, Iran, Iraq] the capacity, through a combination of domestic development and foreign assistance, to acquire the means to strike the United States within about five years of a decision to acquire such a capability (10 years in the case of Iraq). During several of those years, the United States might not be aware that such a decision had been made.” This challenges the conclusions of NIE 95-19 and forms part of a continuing fierce debate over the extent of the long-range ballistic missile threat to the United States.

1998 — JULY 22**IRAN TESTS *SHAHAB-3***

Iran carries out the first known test of its *Shahab-3* ballistic missile which has an estimated range of 1,300 km and can thus strike virtually any country in the Middle East, including Israel. The missile explodes after 100 seconds of flight, raising questions over whether the test was a success or a failure. Nonetheless, the test raises Western concerns which are to be greatly heightened by North Korea’s *Taepo Dong* launch. (See Aug. 31, 1998)

1998 — AUGUST 31**NORTH KOREAN *TAEPO DONG* LAUNCH**

In an attempt to launch a satellite into orbit, North Korea fires a three stage *Taepo Dong* rocket from its Musudan-ri test site in North Hamgyong province. Although the rocket fails to place the satellite in orbit it does manage to fly over the main Japanese island of Honshu, greatly alarming both Japan and the West. The second stage impacts in the Pacific Ocean about 1,600 km east of the launch site. The third stage fails to insert its payload into orbit and burns up with a trail of debris stretching approximately 4,000 km from the launch site. The use of three stages means that the North Koreans have progressed towards developing missiles with a potential range of 4,000-6,000 km. This would threaten Alaska and Hawaii and thus there are strong calls in the United States to step up progress on national missile defense.

1999 — FEBRUARY 3**SANDY BERGER LETTER TO CARL LEVIN**

President Clinton’s National Security Advisor Sandy Berger writes to Sen. Carl Levin (D-MI) explaining the Administration’s opposition to the Cochran American Missile Protection Bill. It notes that “the Administration shares with Congress a commitment to ensuring the American people are provided effective protection against the emerging long-range missile threat from rogue states” but opposes the narrow formulation of the bill which suggests that a decision on deployment should be made solely on technological grounds. Instead, the administration puts forward four criteria that need to be considered in the deployment decision:

- The effectiveness of the system based on the state of NMD testing and technology.
- Whether the rogue state ballistic missile threat develops as quickly as expected.
- The cost of the system.
- The effect of the system's deployment on general arms control and national security. (*See July 22, 1999*)

1999 — JULY 22

COCHRAN BILL PASSES INTO LAW

In the wake of Berger's letter to Levin, the Senate adds two amendments to the Cochran bill that make it acceptable both to the White House and Senate Democrats. These amendments are passed on March 16 by identical 99-0 votes. The first, sponsored by Cochran himself, adds that the funding of the proposed deployment is "subject to the annual authorization of appropriations and the annual appropriation of funds for National Missile Defense." The second amendment, introduced by Sen. Mary Landrieu (D-LA), declares that "It is the policy of the United States to seek continued negotiated reductions in Russian nuclear forces."

Thus amended, the bill passes the Senate 97-3 on March 17 and the House on May 20. On July 23, President Clinton signs it into law while still maintaining that the final deployment decision would be made by him in 2000 according to the four criteria laid out in the Berger letter.

1999 — OCTOBER 2

NMD INTERCEPT TEST

The NMD testing program conducts its first attempt intercept trial. A modified Minuteman ICBM target vehicle is launched for Vandenberg Air Force Base in California and a prototype NMD interceptor is launched 20 minutes later from the Kwajalein atoll in the Marshall Islands – approximately 4,300 miles away. In this test the interceptor is pre-programmed to place the exoatmospheric kill vehicle (EKV) in the general area of the incoming dummy warhead. An intercept occurs and, at first, it seems the test has been a complete success. However, later data will reveal complications as it becomes apparent that the EKV first targets on the test's decoy balloon before subsequently targeting and hitting the ICBM itself. (*See Jan. 18, 2000*)

1999 — NOVEMBER

SECOND WELCH REPORT

The panel of independent experts chaired by Larry Welch release an updated version of their February 1998 report with a new focus on the NMD program. Although citing improvements, the report remains critical of the NMD setup and recommends that the President consider his summer 2000 decision on the system as a feasibility, rather than a readiness to deploy, judgment. Indeed, the panel holds that a "demonstration of readiness to deploy will not come until 2003 at the earliest." (*See June 13, 2000*)

2000 — JANUARY 18
SECOND NMD INTERCEPT TEST

Two malfunctioning infrared sensors on the EKV are blamed for the failure of the second intercept trial. This is the first test in which the interceptor is not pre-programmed with the incoming trajectory of the ICBM. (*See July 8, 2000*)

2000 — APRIL 14
DUMA RATIFICATION OF START II

By a vote of 288-131 with four abstentions the Russian Lower House of Parliament, the Duma, finally ratifies START II, but with provisions crucial to the future of the ABM treaty and plans for NMD. Under Article II of the ratifying legislation, Russia may abandon START II if the United States violates the ABM Treaty through the deployment of a national missile defense system. Russian President Vladimir Putin goes even further in his speech to the Duma prior to the vote, saying if “the United States decides to destroy the 1972 ABM Treaty ... we will withdraw not only from the START II treaty but also the whole system of treaties on limitation and control of strategic and conventional weapons.”

The bill further requires that the U.S. Senate approve several additional documents as part of the START II package before instruments of ratification can be exchanged and the treaty can enter into force. These documents include the two additional 1997 ABM protocols – on the vexed question of the demarcation of TMD and NMD interceptors – which Sen. Jesse Helms (R-NC) and other Congressional conservatives have vowed to reject.

On April 19, the Russian upper house supports the Duma’s resolution 122-15 and on May 4, Putin adds his signature to officially ratify the treaty.

2000 — JUNE 13
THIRD WELCH REPORT

The Welch panel of independent experts reports on NMD progress towards the planned Initial Operating Capability (IOC) of 2005. It reports that “meeting the 2005 IOC schedule goal with required performance remains high risk” but that the panel “sees no technical reason to change the schedule at present.”

2000 — JULY 8
THIRD NMD INTERCEPT TEST

The third NMD intercept test ends in failure as the EKV fails to separate from its booster, preventing an attempt at intercepting the incoming missile. This is the last test before President Clinton is to make his decision on deployment. (*See Sept. 1, 2000*)

2000 — SEPTEMBER 1
CLINTON DEFERS NMD

In a speech at Georgetown University, President Clinton announces his decision to defer deployment

of NMD. Clinton acknowledges a growing international ballistic threat but cites a lack of confidence in the technology of NMD and concerns about the international impact of the missile shield as the main reasons for the decision. Although he considers the NMD technology “promising” the “system as a whole is not yet proven” and the United States “should not move forward until we have absolute confidence the system will work.” Likewise, he expresses his desire for more international negotiations and consultations as “it would be far better to move forward in the context of the ABM treaty and allied support.” (*See May 1, 2001*)

2001 — MAY 1**BUSH NATIONAL SECURITY SPEECH**

In a major policy speech to the National Defense University, President George W. Bush makes clear his administration’s determination to pursue missile defense. Pointing to the threat of ballistic missile proliferation, Bush argues that “we must move beyond the constraints of the 30 year old ABM Treaty” and that “when ready, and working with Congress, we will deploy missile defenses to strengthen global security and stability.” To soften opposition to the announcement, Bush promises heavy reductions in U.S. strategic nuclear arms and “real consultations” with Russia, China and the European allies.

2001 — JULY 14**FOURTH NMD INTERCEPT TEST**

A prototype missile defense interceptor warhead launched from Kwajalein Atoll collided with an incoming dummy warhead on a Minuteman II missile launched from Vandenberg Air Force Base. The intercept took place 144 miles above the Pacific Ocean in the fourth test of a new U.S. ground-based ABM system.

2001 — SEPTEMBER 11**TERRORIST ATTACK ON THE UNITED STATES**

Terrorists, using hijacked commercial airliners as suicide bombers, destroy the World Trade Center in New York City and heavily damage the Pentagon in Washington, D.C.

2001 — DECEMBER 3**FIFTH NMD INTERCEPT TEST**

A prototype missile defense kill vehicle destroyed a mock warhead 140 miles above the Pacific Ocean. It was the third successful intercept in five attempts in the current NMD test program.

2001 — DECEMBER 13**U.S. WITHDRAWAL FROM ABM TREATY**

President Bush announces U.S. intent to withdraw from the ABM Treaty in six months. (*See May 26, 1972 and May 1, 2001*)

CHAPTER VII : CHEMICAL AND BIOLOGICAL WEAPONS

1899 — JULY 29

THE HAGUE CONVENTION

The Hague Convention (II) with Respect to the Laws and Customs of War on Land declares that “it is especially prohibited to employ poison or poisoned arms.” (*See June 17, 1925*)

1915 — APRIL 22

CHEMICAL WEAPONS DURING WWI

The first major use of chemical weapons (CW) in the modern era takes place as Germany launches a large-scale poison gas attack against French troops on the battlefield of Ypres. The *New York Tribune* reports that “its effect on the French was a violent nausea and faintness, followed by an utter collapse.” As the war continues the Allies respond in kind and by the time of the armistice, chemical warfare has inflicted over 1 million casualties, of which around 90,000 were fatal. (*See March 20, 1995*)

1925 — JUNE 17

THE GENEVA PROTOCOL

The Geneva Protocol, which prohibits “the use in war of asphyxiating, poisonous or other gases, and of bacteriological methods of warfare,” opens for signature. Over the next decade, some 40 countries ratify the Protocol, including all of the Great Powers except Japan and the United States. It enters into force on February 8, 1928. (*See April 10, 1972 and Jan. 22, 1975*)

1932-1945

JAPANESE BW EXPERIMENTS

The Japanese drop typhus, cholera and plague-infested fleas on parts of China. A Japanese army biological weapons research and development group, Unit 731, experiments with more than a dozen bio-agents on POWs. Over the course of the experiments, over 10,000 prisoners are killed.

1939 DECEMBER — 1945 MAY

CHEMICAL WEAPONS DURING WORLD WAR II

During World War II, hydrogen cyanide (called Zyklon B by the Germans) and carbon monoxide are used by the Nazis to murder millions of people in extermination camps (i.e., at Majdanek, Auschwitz, Sobibor and Treblinka).

1962-1970

VIETNAM WAR

During the War, the United States uses tear gas and several types of defoliant, including Agent Orange.

1963-67**WAR IN YEMEN**

Egypt uses phosgene and mustard gas against Yemen. Casualties are probably in the low hundreds.

1969 — NOVEMBER 25**U.S. RENUNCIATION OF CHEMICAL AND BIOLOGICAL WEAPONS**

President Richard Nixon declares that the United States unilaterally renounces the first use of lethal or incapacitating chemical weapons and unconditionally renounces all methods of biological warfare. The U.S. biological program will be confined strictly to research on defensive measures such as immunization. The president further instructs the Department of Defense to draw up a plan for the disposal of existing stocks of biological agents and weapons. (*See Feb. 14, 1970*)

1970 — FEBRUARY 14**U.S. BAN ON TOXIN WEAPONS**

The United States closes a potential loophole by extending its ban on BW to include toxins (agents which are produced through biological or microbic processes).

1972 — APRIL 10**SIGNATURE OF BIOLOGICAL WEAPONS CONVENTION**

The Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction (BWC) is opened for signature. Parties to the Convention undertake not to develop, produce, stockpile, or acquire biological agents or toxins “of types and in quantities that have no justification for prophylactic, protective, and other peaceful purposes,” as well as related weapons and means of delivery. The BWC does not prohibit BW research and does not contain provisions to verify compliance. (*See April 1979 and Sept. 30, 1986*)

On March 26, 1975 the United States, the United Kingdom and Soviet Union ratify the Convention, thus triggering its entry into force. (*See Dec. 26, 1975 and April 1979*)

1975 — JANUARY 22**U.S. RATIFICATION OF GENEVA PROTOCOL**

The United States ratifies the 1925 Geneva Protocol, which it had originally signed on June 17, 1925. This protocol bans the use of chemical weapons, but not their manufacture or stockpiling. (*See Jan. 7-11, 1989*)

1975 — DECEMBER 26**U.S. DESTRUCTION OF BIOLOGICAL WEAPONS**

In implementation of the BWC, the United States completes the destruction of all its biological weapons.

**1979 — FEBRUARY/JULY
NEW RULERS IN MIDDLE EAST**

Two important changes of power during the year greatly increase tensions in the Middle East:

- On February 1, Ayatollah Khomeini flies into Tehran and on February 11, the government of the Shah of Iran is effectively overthrown by Islamic fundamentalists.
- In Iraq, President al-Bakr formally retires on July 16 and Saddam Hussein becomes chairman of the Revolutionary Command Council and President of the Country. (*See 1980-88*)

**1979 — APRIL 2
PULMONARY ANTHRAX EPIDEMIC IN THE SOVIET UNION**

An epidemic of human pulmonary anthrax kills at least 64 civilians in Sverdlovsk in the Soviet Union. The exact cause of the epidemic remains controversial for years and the incident generates questions about Soviet compliance with the BWC.

In 1992, Russian President Boris Yeltsin acknowledges that the outbreak was caused by an accidental release of anthrax spores from a Soviet microbiology facility. This suggests the Soviet Union was in violation of the BWC. (*See Feb. 1, 1992*)

**1980 — MARCH
CHEMICAL WEAPONS CONVENTION**

The U.N. Committee on Disarmament (CD) begins work on a Chemical Weapons Convention (CWC). (*See April 18, 1984*)

**1980-1988
CHEMICAL WEAPONS DURING IRAN-IRAQ WAR**

On September 22, 1980, Iraq launches a surprise cross-border attack on Iran. Meeting with heavy Iranian resistance, the Iraqi invasion soon escalates into full-blown war.

Reports of Iraqi chemical weapon attacks first begin to emerge in 1983. On March 7, 1984, the International Committee of the Red Cross (ICRC) announces that 160 wounded combatants visited in a Tehran hospital “presented a clinical picture whose nature leads to the presumption of the recent use of substances prohibited by international law.” Other cases are soon reported and on March 26, 1984, U.N. Document S/16433, referring to an event in August 1983, officially concludes, “Iraqi forces have used chemical warfare against Iranian forces.”

Cases of Iraqi CW use, namely mustard gas, tabun and hydrogen cyanide, continue throughout the rest of the war and culminate with the attack on Halabja. (*See March 16, 1988*)

1984 — APRIL 18**U.S. DRAFT TREATY BANNING CHEMICAL WEAPONS**

At the CD, Vice President George Bush presents a draft U.S. treaty banning the development, production, stockpiling and use of chemical weapons. The plan calls for systematic on-site inspection of CW facilities to ensure compliance. (*See Nov. 21, 1985*)

1984 — JUNE 28**REESTABLISHMENT OF BILATERAL U.S.-SOVIET TALKS**

In parallel with the multilateral negotiations on a chemical weapons ban at the CD, the United States and the Soviet Union reestablish bilateral talks on chemical weapons that had begun in 1976 but were broken off in 1980. (*See Jan. 28, 1986*)

1985 — JUNE**FIRST MEETING OF THE AUSTRALIA GROUP**

In reaction to the use of CW in the Iran-Iraq War, the United States, Canada, Japan, New Zealand, Australia and 10 European Community members establish the Australia Group in 1984. The Group begins meeting in June 1985 to develop a system of voluntary export controls on the precursor chemicals required to manufacture the weapons being used in the war. At the June meeting, the Group adopts a Core List of five controlled chemicals. (*See June 1990*)

1985 — NOVEMBER 21**GENEVA SUMMIT**

U.S. President Ronald Reagan and Soviet General Secretary Mikhail Gorbachev issue a joint statement calling for an accelerated timetable to conclude an effective and verifiable CW ban and to begin discussions on preventing the proliferation of CW. (*See Feb. 5, 1987*)

1986 — JANUARY 28**U.S.-SOVIET DISCUSSIONS ON CHEMICAL WEAPONS**

The United States and the Soviet Union begin the first round of intensified bilateral discussions on a CW ban. (*See Feb. 7-9, 1986*)

1986 — SEPTEMBER 30**SECOND BWC REVIEW CONFERENCE**

The second BWC Review Conference adopts four “politically binding” confidence-building measures (CBMs):

- The declaration of all maximum containment facilities.
- The declaration of unusual outbreaks of disease.
- The encouragement of the publication of research results.

- The encouragement of international scientific contacts. (*See Sept. 1991*)

1987 — FEBRUARY 5
PROPOSED GLOBAL CHEMICAL WEAPONS BAN

At the CD, the United States asserts that it gives achieving a global CW ban “the highest priority.” However, it “will not accept ... a ban without sound machinery of verification.” (*See Aug. 11-12, 1987*)

1987 — AUGUST 11-12
SOVIET STATEMENT ON CHEMICAL WEAPONS

Soviet Foreign Minister Eduard Shevardnadze announces that the Soviet Union will henceforth be willing to accept the principle of “mandatory challenge inspections without right of refusal” as part of the verification provisions of a CW ban. This removes a critical remaining obstacle to an international ban. The Foreign Minister also invites CD participants to a Soviet military facility to observe the destruction of CW. (*See Oct.-Nov. 1987*)

1987 — OCTOBER-NOVEMBER
U.S. AND SOVIET VISITS TO CHEMICAL WEAPONS FACILITIES

On October 3-4, the Soviet Union hosts an international delegation of experts at its previously secret CW production facility at Shikhany. In a reciprocal visit on November 19-20, Soviet scientists and diplomats tour the U.S. CW storage and destruction facility at Tooele, Utah.

1987 — DECEMBER 26
SOVIET CW STOCKPILE DECLARATION

The Soviet Union declares for the first time the size of its CW stockpile. According to the official statement, “the stocks of chemical weapons in the Soviet Union do not exceed 50,000 tons of poisonous substances.” (*See July 28, 1988*)

1988 — MARCH 16
HALABJA ATTACK

Saddam Hussein uses chemical weapons in an attack on the Kurdish town of Halabja, which had just been occupied by Iranian forces. An estimated 5,000 civilians are killed and more than 10,000 injured. Further chemical attacks on the Kurds follow in the summer during the “Anfal” campaign. (*See Aug. 8, 1988*)

1988 — JULY 28
U.S. CHEMICAL WEAPONS PRODUCTION FACILITIES

At the CD, the United States declares the location of all its CW production facilities and outlines plans for their elimination under a CW ban. The United States calls on other states with CW to do the same. (*See Jan. 7-11, 1989*)

1988 — AUGUST 8
END OF IRAN-IRAQ WAR

A cease-fire ends the Iran-Iraq War. Although casualty figures are highly uncertain, as many as one million people may have been killed in the conflict.

1989 — JANUARY 7-11
PARIS CHEMICAL WEAPONS CONFERENCE

In the aftermath of the Iran-Iraq War, 149 nations meet at a conference in Paris to restore respect for the Geneva Protocol and its prohibition against the use of CW. In a concluding document, the nations “solemnly affirm their commitments not to use chemical weapons,” and stress “the necessity of concluding, at an early date, a convention on the prohibition of the development, production, stockpiling, transfer and use of all chemical weapons, and on their destruction.”

On January 8, Foreign Minister Shevardnadze announces at the conference that the Soviet Union plans to begin destruction of its CW stockpile upon completion of a destruction facility. He also says that the Soviet Union has ended production of CW and calls on other states to follow this example. (*See Sept. 23, 1989*)

1989 — FEBRUARY 21-23
U.S. TRIAL INSPECTION

The United States conducts a trial inspection of a private chemical production plant. This is part of an experiment by the CD to develop procedures for a routine inspection regime that would satisfy confidence and security requirements without significantly disrupting the civilian chemical industry. The Soviet Union and other members of the CD subsequently conduct similar trial inspections of their own chemical industries. (*See Sept. 18-22, 1989*)

1989 — SEPTEMBER 18-22
CANBERRA CHEMICAL WEAPONS CONFERENCE

Sixty-seven nations attend an International Government-Industry Conference against Chemical Weapons hosted by the Australian government in Canberra. In an unprecedented statement, chemical industry participants:

- Express willingness to work for an early conclusion of a global CW ban.
- Oppose misuse of industrial products for the dangerous proliferation of CW.
- Commit industry to continue its dialogue with governments on ways to implement a chemical weapons convention.
- Accept a self-policing role.

1989 — SEPTEMBER 23**U.S.-SOVIET MEMORANDUM ON CHEMICAL WEAPONS**

At a ministerial meeting in Wyoming, Secretary Baker and Foreign Minister Shevardnadze reaffirm the objective of an early conclusion of a comprehensive, effectively verifiable and global ban on CW. To intensify efforts toward this goal, and to enhance openness and confidence between the two countries, they sign a Memorandum of Understanding (MOU) on CW. The MOU provides for a voluntary exchange of CW stockpile data in the first phase, including “the aggregate quantity of its chemical weapons in agent tons,” the “specific types” of chemicals possessed, and the “precise location” of CW production, storage and destruction facilities. Phase I also provides for reciprocal visits to CW facilities. (*See Dec. 29, 1989*) Phase II calls for more detailed data exchanges and “the opportunity to verify Phase I and II data by means of on-site inspection.” (Phase II was never implemented) (*See Sept. 25, 1989*)

1989 — SEPTEMBER 25**PRESIDENT BUSH’S CHEMICAL WEAPONS INITIATIVE**

Speaking to the United Nations, President Bush reaffirms the U.S. commitment to a multilateral treaty to eliminate CW in 10 years provided all CW-capable states become parties to the treaty.

To accelerate agreement on, and implementation of, a total ban on the production, storage, transfer and use of chemical weapons, the president offers the following initiatives:

- The United States will destroy more than 98 percent of its current CW stockpile within eight years after entry into force of a multilateral CWC, provided the Soviet Union is also a party to the treaty.
- The remaining two percent of the stockpile will be destroyed in the next two years after all CW-capable states become parties to the convention.
- While working to complete a global CWC, the United States and the Soviet Union will destroy a major portion of their CW stockpiles to an equal, interim level set at about 20 percent of the current U.S. level. The process of destruction would take place on mutually agreed terms and would include verification provisions.
- The United States will accelerate and significantly expand its efforts to improve verification capabilities and resolve the problems associated with verifying a ban on chemical weapons. (*See May 13, 1991*)

1989 — DECEMBER 29**U.S.-SOVIET DATA EXCHANGE ON CHEMICAL WEAPONS STOCKPILES**

The United States and the Soviet Union provide each other with general data on their CW stockpiles and facilities, in accordance with their MOU on CW signed on September 23, 1989. This exchange is designed to facilitate negotiations on a multilateral CW ban. (*See Jan. 22, 1996*)

**1990 — FEBRUARY 7-9
MOSCOW MINISTERIAL**

Following meetings between Secretary Baker and Foreign Minister Shevardnadze, they issue a joint statement on CW that includes the following points:

- The sides agree to work “to expedite the negotiations [on a CWC] in Geneva with the view to resolving the main outstanding issues as soon as possible and to finalizing the draft convention at the earliest date.” (*See May 13, 1991*)
- Pending the multilateral CWC, the sides will seek to complete a bilateral agreement calling for the destruction of the bulk of their CW stocks to equal low levels. (*See June 1, 1990*)

**1990 — MAY 22
BIOLOGICAL WEAPONS ANTI-TERRORISM ACT**

President Bush signs The Biological Weapons Anti-Terrorism Act making it illegal for the U.S. citizens to develop or possess biological weapons. This legislation completes the U.S. implementation of the BWC.

**1990 — JUNE 1
U.S.-SOVIET CW ACCORD**

Presidents Bush and Gorbachev sign the bilateral Agreement on Destruction and Non-production of Chemical Weapons and on Measures to Facilitate the Multilateral Convention on Banning Chemical Weapons during a summit meeting in Washington. The agreement requires:

- The destruction, beginning in 1992, of CW stockpiles down to no more than 5,000 agent tons each by December 31, 2002.
- A halt to CW production upon entry into force of the accord.
- On-site inspections to confirm that destruction has taken place.
- Annual data exchanges on stockpile levels to facilitate monitoring.
- Support for conclusion of a global ban on CW “at the earliest date.”

**1990 — JUNE
AUSTRALIA GROUP EXPANDS LIST OF CONTROLLED ITEMS**

At a meeting of the Australia Group in Paris, the United States obtains an agreement “to control additional chemicals, expand the group’s activities into biological weapon proliferation, pursue further standardization, and create an export data base.” (*See May 21-23, 1991*)

**1990 — NOVEMBER 16
U.S. CW/BW POLICY**

President Bush issues Executive Order 12735, which finds that the spread of CW and BW constitutes an “unusual and extraordinary threat to the national security and foreign policy of the United States,”

and declares a state of national emergency to deal with this threat. The order reiterates U.S. policy to lead and seek multilaterally coordinated efforts to control the spread of CW and BW and directs the Secretaries of State and Commerce to adopt a variety of export controls.

1991 — JANUARY 16
PERSIAN GULF WAR

In response to the Iraqi invasion of Kuwait on August 2, 1990 an allied coalition force goes to war against Iraq. Destruction of Iraq's nuclear, chemical and biological research, development, and production facilities is established as a key war aim. (*See April 3, 1991*)

1991 — APRIL 3
U.N. SECURITY COUNCIL RESOLUTION 687 ON IRAQ

Following the Persian Gulf War, when Iraqi CW/BW threatened allied troops, the U.N. Security Council (UNSC) establishes a Special Commission (UNSCOM) to monitor the elimination of weapons of mass destruction and their means of delivery in Iraq. UNSC Resolution 687 empowers UNSCOM to carry out on-site inspection and elimination of Iraq's chemical and biological weapons capabilities as well as its ballistic missiles with a range greater than 150 kilometers. (*See Aug. 7, 1995*)

1991 — MAY 13
U.S. MODIFICATION OF CWC POSITION

In a significant modification of the U.S. position on the draft CWC, President Bush states that “[w]e are formally forswearing the use of chemical weapons for any reason, including retaliation, against any state, effective when the convention enters into force, and will propose that all states follow suit. Further, the U.S. unconditionally commits itself to the destruction of all our stocks of chemical weapons within 10 years of entry into force and will propose that all other states do likewise.” In addition, the White House announces that the U.S. will revise its position on CW verification, dropping its insistence on “anytime-anywhere” challenge inspections. This revision leads the way to the adoption of a “managed access” CW verification regime. (*See Sept. 3, 1992*)

1991 — MAY 21-23
AUSTRALIA GROUP CHEMICAL EXPORT RULES

The Australia Group expands its list of controlled chemicals to 50 and further requires member country chemical manufacturers to obtain a license for the sale of any controlled chemicals to nonmember nations.

1991 — SEPTEMBER-DECEMBER
DISSOLUTION OF THE SOVIET UNION

A series of historic events brings about the end of the Soviet Union and the creation of 15 independent republics:

- On September 6, 1991, the State Council of the Soviet Union releases the three Baltic republics

of Lithuania, Latvia and Estonia from its ranks and recognizes their independence.

- The remaining 12 republics have all proclaimed their independence by December 1991 and at a meeting held in Alma-Ata on December 21, they declare that they now constitute the Commonwealth of Independent States (CIS) and that with the formation of the CIS “the Union of Soviet Socialist Republics ceases to exist.”
- On December 25, 1991, the Soviet Union formally dissolves as its President, Mikhail Gorbachev, resigns.

1991 — SEPTEMBER THIRD BWC REVIEW CONFERENCE

The third BWC Review Conference reaffirms the four confidence-building measures (CBMs) developed at the second Review Conference and strengthens the convention by adding three more CBMs to provide information on

- National legislation related to the BWC.
- Past bio-defense programs.
- Human vaccine production facilities.

Because only half of all States Parties ever submitted any declarations, and of those only 11 submitted annual declarations, States Parties decided that a more serious effort needed to be undertaken to strengthen the Convention. States Parties therefore created the Ad Hoc Group of Governmental Experts on BWC Verification (VEREX) to identify, evaluate, and examine verification measures, from a scientific and technical standpoint, “which would determine whether a State Party is developing, producing, stockpiling, acquiring or retaining” BW. (*See Sept. 1993*)

1992 — FEBRUARY 1 END OF RUSSIAN OFFENSIVE BW RESEARCH

Russian President Boris Yeltsin announces the end of Russian offensive BW research. He further states that several Russian BW centers and programs have already been closed and that no further budget allocations will be made to that program. On April 11, President Yeltsin signs a decree On Fulfilling International Obligations with Regard to Biological Weapons, banning offensive BW programs. (*See Sept. 15, 1992*)

1992 — SEPTEMBER 3 CD AGREEMENT ON THE CWC

Greatly aided by the fears of Iraqi chemical attack raised during the Persian Gulf War, the CD agrees on the CWC and forwards it to the United Nations. (*See Jan. 13, 1993*)

1992 — SEPTEMBER 15 TRILATERAL STATEMENT ON BW

The United States, United Kingdom and Russia agree to establish a trilateral process of information

sharing and reciprocal site visits in order to increase the transparency of unauthorized Russian BW programs. (*See Sept. 1993*)

1993 — JANUARY 13
THE CWC IS OPENED FOR SIGNATURE IN PARIS

One hundred and thirty nations, including the United States, the United Kingdom, France, Russia and China, sign the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction (CWC).

The purpose of the CWC is to achieve the global elimination of chemical weapons within 10 years of the Treaty's entry into force. It bans the development, production, acquisition, transfer, stockpiling, and use of chemical and toxin weapons and mandates the destruction of all CW and CW production facilities. It further seeks to control the production and international transfer of the key chemical precursors of these weapons. The Treaty also creates a wide-reaching verification system which includes extensive reporting requirements, base line inspections, and on-site and challenge inspections. (*See Nov. 24, 1993*)

1993 — SEPTEMBER
VEREX REPORT ON BWC VERIFICATION

A group of verification experts (VEREX) submits its report on 21 potential BW verification measures including data exchanges and on-site inspections. (*See Sept. 19-20, 1994*)

1993 — SEPTEMBER 27
PRESIDENT CLINTON'S UNGA SPEECH

President Clinton announces in a speech to the U.N. General Assembly, that to help deter violations and enhance compliance with the BWC, the United States will promote new measures to increase the transparency of "every nation's biological activities and facilities ..."

1993 — NOVEMBER 24
CWC SUBMITTED FOR RATIFICATION

President Clinton submits the CWC to the U.S. Senate for ratification. Numerous delays follow before the CWC finally comes to a vote April 24, 1997. (*See Sept. 12, 1996*)

1994 — SEPTEMBER 19-20
SPECIAL CONFERENCE ON BIOLOGICAL WEAPONS

The 79 States Parties attending the Special Conference on BW in Geneva agree to establish an Ad Hoc Group with a mandate to draft a legally binding document to strengthen the BWC. (*See Jan. 4-6, 1995*)

**1995 — JANUARY 4-6
BWC AD HOC GROUP**

The Ad Hoc Group (AHG) convenes for its first meeting in Geneva. Chaired by Ambassador Tibor Toth of Hungary, it meets for 24 sessions over the next six years, aiming to complete the work of negotiating a protocol to strengthen compliance with the BWC in time for the Fifth BWC Review Conference, to be held November 19-December 7, 2001. From July 1997 onward, AHG work focuses on developing a draft protocol text in which areas of controversy are bracketed (the “Rolling Text”). Negotiations and compromise are aimed at removing these brackets of disagreement and advancing a clean text of the protocol. (*See Nov. 25-Dec. 6, 1996*)

**1995 — MARCH 20
NERVE GAS INCIDENT IN JAPAN**

Concern is heightened over terrorist activities involving CW and BW when members of a Japanese religious sect, Aum Shinrikyo (Supreme Truth), release the nerve gas Sarin in the Tokyo subway system. Although the CWC is not designed to deal with terrorism directly, the treaty would be accompanied by domestic implementing legislation criminalizing activities by individuals who attempt or intend to make or use CW.

**1995 — AUGUST 7
VX REVELATIONS**

Iraq hands over documents to UNSCOM that reveal that, contrary to its previous declarations, it has produced the nerve agent VX, an extremely toxic agent first produced in the 1950s. Iraq declares that it had produced 3.9 tons of VX for “research” purposes and that this has already been unilaterally destroyed. However, UNSCOM regards this as a serious underestimate and has uncovered precursors sufficient for the production of 200 tons. Also disputed is whether any of the VX has been weaponized. (*See Oct. 29, 1997 and June 1998*)

**1996 — JANUARY 22
U.S. DISCLOSURE OF CW STOCKPILE**

The United States discloses the exact amount (30,599 tons of unitary agents and 680 tons of binary agents) and location (nine storage facilities) of its chemical weapons stockpile.

**1996 — SEPTEMBER 12
DELAY OF UNITED STATES CWC RATIFICATION**

Supporters of the Chemical Weapons Convention are forced to remove the treaty from the U.S. Senate calendar rather than risk its possible defeat or the adoption of amendments to the resolution of ratification that would effectively block U.S. ratification. (*See Oct. 31, 1996*)

1996 — OCTOBER 31
65th RATIFICATION OF THE CWC

The Government of Hungary deposits its instruments of ratification of the CWC with the U.N. Secretary-General. As 65 countries have now ratified the Convention, the 180-day entry into force is triggered. (*See March 21, 1997*)

1996 — NOVEMBER 25-DECEMBER 6
FOURTH BWC REVIEW CONFERENCE

The Fourth Review Conference of the Biological Weapons Convention meets in Geneva, but members are unable to agree on measures to strengthen verification provisions of the 1972 BWC. Conference members instead call on the Ad Hoc Group, the body tasked with drafting a legally binding document to strengthen the BWC, to consider such verification provisions.

1997 — MARCH 21
HELSINKI SUMMIT

At the Helsinki Summit, Presidents Bill Clinton and Boris Yeltsin issue a Joint U.S.-Russian Statement on Chemical Weapons in which the presidents agree that both leaders will “take the steps necessary to expedite ratification in each of the two countries” and pressure their respective legislatures to ratify the convention. (*See April 24, 1997 and Nov. 1997*)

1997 — APRIL 24
SENATE RATIFIES CWC

Just five days before the CWC enters into force (*See April 29, 1997*), the Senate consents to its ratification by a vote of 74 to 26. However, the domestic laws intended to implement the treaty contain three crucial exemptions to the monitoring regime which are widely considered to undermine the treaty:

- The President is allowed to refuse an on-site inspection if it is deemed to “pose a threat” to national security.
- No sample collected during an inspection of a U.S. site can leave U.S. territory for analysis.
- The number of industrial facilities that are required to declare mixtures or solutions containing chemicals that pose a proliferation risk is greatly narrowed.

1997 — APRIL 29
CWC ENTERS INTO FORCE

The CWC enters into force and the Organization for the Prohibition of Chemical Weapons (OPCW), the monitoring and verification organization of the Convention, is established in The Hague. By this time 87 states have ratified the Convention. (*See Nov. 1997*)

1997 — OCTOBER 29
UNSCOM EXPULSIONS

In a letter from the Deputy Prime Minister of Iraq, Tariq Aziz, to the President of the Security Council, Iraq demands that UNSCOM withdraw all of its American personnel whom it accuses of spying. Iraq also alleges that UNSCOM is being used as a “cover” for the American U-2 spy plane. (*See Dec. 12, 1997*)

1997 — NOVEMBER 3-5
IRAN AND RUSSIA RATIFY CWC

On November 3, Iran, suspected of pursuing an offensive chemical weapons program, ratifies the CWC.

Russia ratifies the treaty two days later, on November 5, and thus commits the largest CW stockpile in the world to destruction. Russia is estimated to have around 40,000 tons of CW. This will cost around \$6 billion to eliminate and international assistance is sought to support this destruction effort. (*See May 15-19, 2000*)

1997 — DECEMBER 12
INSPECTION OF PRESIDENTIAL SITES IN IRAQ

Iraq denies UNSCOM access to eight of Saddam Hussein’s presidential sites on the basis that these were “sovereign territory” and thus beyond the prerogative of the United Nations. A crisis unfolds as on December 22, the President of the Security Council demands Iraq give “immediate, unconditional access to any and all areas, facilities, equipment, records and means of transportation.” Despite this, Iraq continues to block inspections to presidential sites and tensions rise against the background of threatened allied air strikes. (*See Feb. 23, 1998*)

1998 — FEBRUARY 23
UNITED NATIONS-IRAQI MEMORANDUM OF UNDERSTANDING

After the personal intervention of U.N. Secretary-General Kofi Annan, an MOU between the United Nations and the Republic of Iraq is signed in Baghdad. It reaffirms the commitments made by the Iraqi government to cooperate fully with UNSCOM and IAEA and to accord their inspection teams “immediate, unconditional and unrestricted access.” At the same time, the MOU requires UNSCOM “to respect the legitimate concerns of Iraq relating to national security, sovereignty and dignity.”

The MOU also lays out special procedures for the inspection of the eight presidential sites. A Special Group comprising “senior diplomats appointed by the Secretary-General and experts drawn from UNSCOM and IAEA” is to be formed for the task. They will operate under the established procedures of the IAEA and UNSCOM as well as under “specific detailed procedures which will be developed given the special nature of the presidential sites.”

The MOU provides temporary respite but over the summer the situation once again begins to deteriorate. (*See Sept.-Dec. 1998*)

1998 — JUNE

REPORTS OF WEAPONIZED VX

In April and May of 1998, UNSCOM obtains samples from 45 special missile warheads to verify Iraq's claims that 25 had been filled with biological warfare agents and 20 with a mixture of alcohols. In June 1998, a United States laboratory examining these samples reports that traces of VX have been found in 11 of the 46 swabs it analyzed. International controversy follows as subsequent tests at French and Swiss laboratories produce contrasting results. A meeting of VX experts on October 22-23, 1998 concludes that "The existence of VX degradation products conflicts with Iraq's declarations that the unilaterally destroyed special warheads had never been filled with any CW agents. The findings by all three laboratories, of chemicals known as degradation products of decontamination compound, also do not support Iraq's declarations that these warhead containers had only been in contact with alcohols."

1998 — SEPTEMBER-DECEMBER

WORSENING OF THE IRAQI SITUATION AND UNSCOM WITHDRAWAL

After continuing obstruction, the United Nations on September 9, suspends its regular review of economic sanctions on Iraq. In response Iraq announces on October 31, 1998 that it will cease all forms of cooperation with UNSCOM and halt all its activities inside Iraq, including monitoring. In the face of this deadlock UNSCOM withdraws its staff from Iraq on December 16, 1998. (*See Dec. 16-19, 1998*)

1998 — DECEMBER 16-19

U.S.-BRITISH BOMBING OF IRAQ

In response to the termination of UNSCOM operations, the United States and Britain launch 70 hours of air strikes against military and national security targets in Iraq. President Clinton declares: "I believe we cannot allow Saddam Hussein to dismantle UNSCOM and resume the production of weapons of mass destruction with impunity." A great deal of world opinion is critical of the strikes with U.N. Secretary-General Annan declaring "it was a sad day for the United Nations and the world" and Russian President Yeltsin saying that the action "evokes the most serious concern, as well as a feeling of dismay and alarm." The strikes deepen divisions over how to deal with Iraq and these divisions will plague the formation of a unified strategy in 1999. (*See Jan. 30, 1999*)

1999 — JANUARY 30

FORMATION OF U.N. PANELS ON IRAQ

In an attempt to break the deadlock over Iraq, the U.N. Security Council creates three panels to investigate various areas of concern and suggest ways to proceed. All the panels are chaired by Ambassador Celso Amorim of Brazil. They deal with:

- Humanitarian issues in Iraq.
- Missing Kuwaiti property and prisoners of war.
- Iraqi disarmament and current and future ongoing monitoring and verification issues.

The disarmament panel is comprised of 20 members, 14 of whom come from either UNSCOM or

IAEA. The Security Council is to receive recommendations from all three panels “no later than 15 April 1999.” (*See March 27, 1999*)

1999 — MARCH 27

U.N. DISARMAMENT PANEL REPORTS

In its report to the Security Council, the special U.N. disarmament panel describes how the absence of UNSCOM and IAEA inspectors from Iraq has “exponentially increased the risk of compromising the level of assurance already achieved.” In most major weapons categories, “critical gaps need to be filled” with biological proliferation and development being the major concern as “Iraq possesses the capability and knowledge base through which biological warfare agents could be produced quickly and in volume.”

With such an atmosphere, the panel recommends a “reinforced ongoing monitoring and verification” system that would be “if anything more intrusive than the one so far practiced.” Dealing with the diplomatic difficulties of implementing this is “in the hands of the Security Council.” (*See Dec. 17, 1999*)

1999 — DECEMBER 17

REPLACEMENT OF UNSCOM BY UNMOVIC

After months of diplomatic wrangling and deadlock over how to deal with Iraq, the Security Council adopts resolution 1284 which replaces UNSCOM with the United Nations Monitoring, Verification and Inspection Commission (UNMOVIC). The resolution is passed unanimously (11-0) but with four key abstentions – China, France, Malaysia and Russia. The failure of three of the Security Council’s permanent members to support the resolution suggests a gloomy outlook for its implementation in the face of Iraqi opposition. This concern is reinforced by comments made both during the debate and after the vote. Russian Ambassador Sergey Lavrov declares that “without cooperation from Iraq, any plans or projects will just remain on the paper they are written on” while Chinese Representative Qin agrees that “the implementation of this draft resolution before us is highly questionable.”

UNMOVIC retains UNSCOM’s mandate and Iraq is instructed to provide “immediate, unconditional and unrestricted access to any and all areas, facilities, equipment, records and means of transport which they wish to inspect.” If Iraq provides such cooperation and support then a suspension of sanctions is promised. The organizational details of UNMOVIC are left deliberately vague to allow negotiations over the coming months to craft a body more acceptable to Russia, China, France and Iraq than UNSCOM. (*See Feb.-March 2000*)

2000 — FEBRUARY-MARCH

IRAQI REJECTION OF UNMOVIC

The future of UNMOVIC is rapidly thrown into doubt as Iraq rejects the new body. On February 10, the Iraqi Vice President Taha Yassin Ramadan declares that Baghdad would not allow a return of the “so-called inspection teams. We reject the infiltration of our country by spies using such cover.” This opposition does not abate, with Ramadan arguing on March 2 that resolution 1284 reflects “the wick-

edness of old British colonialism and modern American hegemony” and on March 12 that UNMOVIC would establish “a protectorate under endless sanctions.” To date, UNMOVIC has still not been allowed back into Iraq.

**2000 — MAY 15-19
RUSSIAN DEADLINE EXTENDED**

During the fifth Conference of States Parties to the CWC, Russia receives an extension on its April 29, 2000 deadline to destroy one percent of its Category 1 chemical weapons. Russia is allowed to merge the missed deadline with its next timetabled commitment, the destruction of 20 percent of its Category 1 chemical weapons by April 29, 2002. Russia blames funding shortfalls for the delay.

**2001 — MARCH 30
BWC AD HOC GROUP CHAIRMAN’S COMPOSITE TEXT CIRCULATED**

The Chairman of the BWC Ad Hoc Group, Ambassador Tibor Toth, circulates a draft Protocol text to encourage conclusion of the negotiations. The Protocol is intended to provide reasonable and mutually reinforcing mandatory measures to enhance compliance with and transparency of the BWC. It includes off-site measures such as a declaration of relevant biological activities and programs and on-site measures such as non-challenge visits and challenge investigations.

**2001 — JULY 25
UNITED STATES ANNOUNCES IT CANNOT SUPPORT THE CHAIRMAN’S COMPOSITE TEXT**

At the 24th session of the Ad Hoc Group meeting in Geneva, the United States announces that it cannot support the Chairman’s text of the BWC Compliance Protocol.

**2001 — SEPTEMBER 11
TERRORIST ATTACK ON THE UNITED STATES**

Terrorists destroy the World Trade Center in New York City and heavily damage the Pentagon in Washington, D.C.

**2001 — SEPTEMBER-OCTOBER
LETTER-BORNE ANTHRAX EPISODE**

Unknown parties dispatch a series of letters containing anthrax spores to media and government addressees in the United States. Widespread contamination in the postal system and in several government and private buildings results in over a dozen cases of pulmonary and cutaneous anthrax and several deaths.

**2001 — NOVEMBER 19-DECEMBER 7
FIFTH BWC REVIEW CONFERENCE**

Following a last-minute effort by the United States to terminate the BWC Ad Hoc Group and its man-

date, the Fifth BWC Review Conference fails to reach agreement on any issues and formally adjourns until Nov. 11, 2002.

CHAPTER VIII : CONVENTIONAL WEAPONS**1949 — APRIL 4****FORMATION OF THE NORTH ATLANTIC TREATY ORGANIZATION (NATO)**

In the wake of a series of dramatic political events, including the communist coup in Czechoslovakia and the Berlin Blockade, 12 nations – Belgium, Canada, Denmark, France, Iceland, Italy, Luxembourg, the Netherlands, Norway, Portugal, the United Kingdom and the United States – sign the North Atlantic Treaty creating a common security alliance, NATO.

1950 — SEPTEMBER 9**THE UNITED STATES COMMITS FULLY TO NATO AND THE DEFENSE OF EUROPE**

President Truman approves a plan to deploy additional U.S. combat troops to Europe, to nominate a supreme allied commander to head NATO's armed forces, and to plan for the eventual rearmament of West Germany.

1955 — MAY 14**FORMATION OF WARSAW PACT**

The Treaty of Warsaw is signed by eight nations – Albania, Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, Romania and the Soviet Union – and establishes the Warsaw Pact as a means of countering the Western NATO alliance. This move follows the granting to West Germany earlier in the month of full sovereignty, NATO membership and the right to rearm with conventional forces.

1955 — JULY 21**OPEN SKIES PROPOSAL**

Meeting with the heads of the Soviet Union, the United Kingdom and France in Geneva, President Eisenhower presents his "Open Skies" plan designed to protect nations against military buildup and surprise attack. He proposes that the Soviet Union and the United States agree immediately to exchange blueprints of their military establishments and to furnish each other with facilities for aerial reconnaissance in order to prevent surprise attack and to begin a comprehensive and effective system of inspections and disarmament. (*See May 12, 1989*)

1959 — MAY 14**EUROPEAN PEACE PLAN**

At the Geneva Foreign Ministers' Conference, the United States, the United Kingdom and France present a peace plan to the Soviet Union containing proposals on German reunification, European security and a final peace settlement. This plan, coordinating the timing of conventional force reductions with steps in the reunification of Germany, envisages a gradual and logical development through

stages of “security” and “reunification” into a final and conclusive stage where “a final Peace Settlement” would be signed “with a Government representing all Germany.”

The three Western powers and the Soviet Union would restrict or reduce their armed forces to agreed limits such as 2,500,000 each for the United States and the Soviet Union. In the next stage, they would limit their armed forces further, to 2,100,000 each for the United States and the Soviet Union with negotiations aimed at further reductions.

1966 — MARCH/JULY FRANCE WITHDRAWS FROM NATO

In early March, President de Gaulle announces that all French land and air forces are withdrawn from NATO commands (naval forces had been effectively withdrawn in April 1964) and that France will cease participation in NATO’s integrated military command structure as of July 1. All NATO installations are to leave France by April 1967.

1966 — AUGUST MANSFIELD RESOLUTION

Sen. Mike Mansfield (D-Mont.) introduces a nonbinding resolution calling for a substantial reduction in U.S. forces in Europe. The resolution was predicated on the belief that the Europeans were now more capable of providing for their own defense and was intended to help satisfy the manpower requirements of Vietnam.

1973 — MARCH MANSFIELD AMENDMENT

Several years of congressional concern over the size of U.S. military presence in Europe peaked in 1973 with the defeat of the Mansfield amendment calling for a reduction in U.S. forces overseas of 40 percent to 50 percent over three years. Support for the amendment was weakened by a combination of competing amendments from conservative Democratic senators, a surplus in the U.S. balance of payments account for 1973, and the initiation of conventional force reduction talks with the Warsaw Pact. (*See Oct. 30, 1973*)

1973 — OCTOBER 30 MBFR TALKS

The United States, the Soviet Union, and other NATO and Warsaw Pact countries (Warsaw Treaty Organization, WTO) formally begin the Mutual and Balanced Force Reduction (MBFR) negotiations in Vienna to reduce conventional military forces in Central Europe to equal but significantly lower levels. (*See June 1976*)

1975 — AUGUST 1 HELSINKI FINAL ACT

The United States, the Soviet Union, and 33 other nations at the Conference on Security and Cooperation in Europe (CSCE) sign a concluding document in Helsinki. The Helsinki Final Act is comprised of three “baskets” covering security, economic, and humanitarian issues. Specific confidence- and security-building measures (CSBMs) in the security “basket” include notification 21 days in advance of maneuvers involving more than 25,000 troops and invitations to observe such maneuvers. (*See Sept. 22, 1986*)

1976 — JUNE DATA EXCHANGE

In order to establish an agreed database, the WTO provides manpower figures on its forces. The WTO claims it has 815,000 ground force personnel and 182,000 air force personnel. NATO’s estimate for WTO ground forces is 956,000 and 224,000 for its air force manpower. This data discrepancy is never resolved and plagues the MBFR talks until their end. (*See Dec. 5, 1985*)

1977-78 CONVENTIONAL ARMS TRANSFER (CAT) TALKS

The Conventional Arms Transfer (CAT) talks take place between the United States and the Soviet Union with the aim of controlling the flow of conventional weapons to regions of conflict. The first rounds of talks are held in Washington and Helsinki in 1977-78 and result in agreement on the parameters of any possible regime. However, the Soviet invasion of Afghanistan in 1979 destroys hopes for further progress.

1980 — OCTOBER 10 CONCLUSION OF THE CONVENTION ON CERTAIN CONVENTIONAL WEAPONS

The Convention on Certain Conventional Weapons (CCW) is concluded in Geneva. The Convention bases itself on the principal “that prohibits the employment in armed conflicts of weapons, projectiles and material and methods of warfare of a nature to cause superfluous injury or unnecessary suffering.” The CCW provides the framework to which separate protocols are added governing individual weapons. There are initially three protocols:

- Restricting fragmentation weapons.
- Restricting mines, booby traps and certain other explosive devices.
- Restricting incendiary weapons.

States become party to the Convention six months after adhering to at least two of the protocols. The Soviet Union becomes party to all three protocols on June 10, 1982 while the United States becomes party to protocols I and II on March 24, 1995.

The CCW enters into force on December 2, 1983 – six months after being ratified by 20 states. (*See Oct. 13, 1995 and May 3, 1996*)

1985 — DECEMBER 5
NEW NATO MBFR PROPOSAL

In an effort to break the data deadlock, NATO makes a new proposal at the MBFR talks which includes deferral of agreement on the number of troops in the reductions area and a verification regime with a detailed data exchange and 30 inspections a year. (*See June 1976*)

1986 — APRIL 18
SOVIET CONVENTIONAL DISARMAMENT PLAN

Soviet General Secretary Mikhail Gorbachev proposes “substantial reductions in all the components of the land forces and tactical air forces of the European states and the relevant forces of the United States and Canada deployed in Europe ... from the Atlantic to the Urals” (ATTU). He emphasizes the importance of “dependable verification,” including “both national technical means and international forms of verification, including, if need be, on-site inspection.” (*See June 11, 1986*)

1986 — JUNE 11
WTO BUDAPEST APPEAL

The WTO formalizes General Secretary Gorbachev’s disarmament proposal by announcing a new plan for reducing conventional forces in Europe. The proposal calls for each side to reduce its conventional forces by between 110,000 and 150,000 troops within the next one to two years. By the early 1990s, each side would cut its forces by 25 percent, or by approximately 500,000 soldiers each. (*See March 9, 1989*)

1986 — SEPTEMBER 22
STOCKHOLM DOCUMENT

In Stockholm, the 35-nation Conference on Confidence- and Security-Building Measures and Disarmament in Europe (CDE), which opened in January 1984, adopts additional CSBMs designed to reduce the risk of war in Europe.

Under the Stockholm Document, NATO and the Warsaw Pact agree to give each other advance notice, in some cases by as much as two years, of all major military activities (involving at least 13,000 troops or 300 tanks) in the ATTU. For any military activity involving more than 17,000 troops, observers from all other signatory nations have to be invited. The document also provides for air and ground on-site challenge inspections, without the right of refusal, to verify compliance.

1986 — DECEMBER 11
NATO PROPOSAL FOR A NEW NEGOTIATING FORUM

NATO foreign ministers propose a new forum, to supersede MBFR, for discussion of European force reductions in the ATTU. (*See Jan. 10, 1989 and March 9, 1989*)

1987 — JULY 10

NATO CSCE PROPOSAL

At the Third Review Meeting in Vienna of CSCE, the United States and its NATO allies table a proposal calling for two distinct negotiations to take place within the framework of the CSCE process:

- One set of negotiations, involving all 35 CSCE-participating states, would continue the work of the CDE.
- The other set of negotiations, involving only NATO and WTO members, would have as its goal strengthening stability in Europe at lower levels of conventional forces.

1988 — DECEMBER 7

SOVIET UNILATERAL CONVENTIONAL FORCE CUTS

In an address to the United Nations, General Secretary Gorbachev announces a unilateral decision to cut Soviet armed forces by 500,000 troops within two years. He also announces cuts of 8,500 artillery pieces, 800 aircraft and 10,000 tanks in East Germany, Hungary, Czechoslovakia and the western Soviet Union, and the withdrawal of 50,000 Soviet troops from Eastern Europe.

1989 — JANUARY 10

MANDATE FOR TALKS ON CONVENTIONAL FORCES

The 23 members of NATO and the WTO initial a mandate for the Negotiation on Conventional Armed Forces in Europe (CFE). The mandate sets out the following objectives for CFE:

- Strengthen stability and security in Europe through the establishment of a stable and secure balance of conventional forces at lower levels in Europe from the ATTU.
- Eliminate disparities prejudicial to stability and security.
- Eliminate the capability for launching surprise attack and for initiating large-scale offensive action.

The mandate also calls for “an effective and strict verification regime” to include on-site inspections as a matter of right. (*See March 9, 1989*)

1989 — MARCH 9

OPENING OF CFE NEGOTIATIONS

On February 2, the MBFR talks formally conclude and on March 9, the 23 members of NATO and the WTO formally open the CFE negotiations in Vienna. NATO tables a proposal to limit:

- Main battle tanks to 20,000 for each side.
- Armored combat vehicles (ACVs) to 28,000 for each side.
- Artillery pieces to 16,500 for each side.

The WTO presents a more detailed version of the Budapest Appeal:

- A first-phase reduction to “equal collective ceilings” for tanks, ACVs, artillery, aircraft, helicopters and manpower at 10 to 15 percent below that of the side with the lowest level.
- A second-phase reduction of an additional 25 percent or approximately 500,000 troops.
- A third-phase in which armed forces will be given a strictly defensive character.

1989 — MAY 23

WTO ACCEPTS NATO’S PARITY APPROACH

The WTO proposes parity with NATO in Europe at the level of 20,000 tanks, 28,000 ACVs, 24,000 artillery pieces, 1,500 tactical strike aircraft, 1,700 helicopters and 1.35M troops overall, of which 350,000 may be foreign-stationed. (*See May 29-30, 1989*)

1989 — MAY 12

U.S. “OPEN SKIES” INITIATIVE

President George Bush renews and expands upon President Eisenhower’s 1955 “Open Skies” proposal and invites the Soviet Union and other members of the WTO and NATO to agree to unarmed surveillance flights over their territories. The president says that such flights, “complementing satellites, would provide regular scrutiny for both sides. Such unprecedented territorial access would show the world the true meaning of the concept of openness.” (*See Feb. 12-28, 1990*)

1989 — MAY 29-30

U.S. INITIATIVE AT NATO SUMMIT

At NATO’s 40th anniversary summit, President Bush proposes to:

- Expand NATO’s original proposal to include reductions of land-based combat aircraft and helicopters to equal ceilings 15 percent below current NATO levels.
- Cut the manpower of U.S. and Soviet forces stationed outside national borders in Europe to equal ceilings of approximately 275,000. (*See Oct. 11, 1990*)

1989 — JUNE 12

AGREEMENT ON DANGEROUS MILITARY ACTIVITIES (DMA)

The United States and the Soviet Union sign the Dangerous Military Activities (DMA) Agreement, which commits both nations to seek to prevent four kinds of dangerous military activities during peacetime:

- Unintentional or emergency entry into the national territory of the other side.
- Hazardous use of laser devices.
- Disruption of military operations in a mutually agreed upon “Special Caution Area.”
- Interference with the command and control networks of either side. (*See Nov. 17, 1990*)

**1989 — DECEMBER 2-3
MALTA SUMMIT**

At a meeting in Malta between President Bush and General Secretary Gorbachev, the two leaders agree to complete a CFE agreement by the end of 1990 and to sign it at a summit of NATO and WTO leaders. (*See Nov. 19, 1990*)

**1990 — JANUARY 16-FEBRUARY 5
MILITARY DOCTRINE SEMINAR**

General Colin Powell, Chairman of the U.S. Joint Chiefs of Staff, and his 34 counterparts meet at the CSBM talks in Vienna to discuss military doctrines. More detailed discussion among experts cover force structure, military activities and training, and military budgeting and planning.

**1990 — FEBRUARY 12-28
OPEN SKIES NEGOTIATIONS**

At the beginning of the Open Skies negotiations, the 23 NATO and WTO nations agree that an Open Skies regime should:

- Ensure maximum possible openness and minimum restrictions for observation flights.
- Include the right to conduct, and the obligation to receive, observation flights.
- Provide for the use of unarmed observation aircraft and equipment capable of fulfilling the goals of the regime.
- Allow for the possible participation of other countries, primarily the European neutral and nonaligned states (NNAs). (*See March 24, 1992*)

**1990 — OCTOBER 11
AGREEMENT ON FLANK LIMITS AND AIRCRAFT LEVELS**

CFE delegates agree on armament levels (4,700 tanks, 5,900 ACV, and 6,000 artillery pieces) in the flanks (Bulgaria, Greece, Iceland, Norway, Romania, Turkey, and northern and southern military districts of the Soviet Union). On October 15, agreement is reached on an overall aircraft ceiling of 6,800. (*See Nov. 19, 1990*)

**1990 — NOVEMBER 17
VIENNA DOCUMENT 1990**

At the CSCE Paris summit, the United States and the other CSCE countries agree to the Vienna Document 1990 (VD90) on CSBMs. The VD90 expands and improves upon the notification measures and information exchanges in the Stockholm Document of 1986. It calls for annual information exchanges on troop strength, weapons systems, and military budgets, and establishes a Conflict Prevention Center to be based in Vienna. (*See Feb. 29, 1992*)

1990 — NOVEMBER 19

CFE TREATY IS SIGNED

The Treaty on Conventional Armed Forces in Europe (CFE Treaty) is signed by 22 NATO and WTO countries at a CSCE summit in Paris. The treaty creates a military balance between two “groups of states parties” – corresponding at the time to NATO and the WTO – by reducing to equal levels the holdings of each group in five categories of conventional weapons:

- 20,000 battle tanks, of which 3,500 are to be in storage.
- 30,000 ACVs, of which 2,700 are to be in storage.
- 20,000 artillery pieces, of which 3,000 are to be in storage.
- 2,000 attack helicopters.
- 6,800 combat aircraft.

Under the “sufficiency” provision, no one country may possess “more than approximately one-third of the conventional armaments and equipment limited by the Treaty.”

The overall “group” limits are further subject to “zonal” sub-limits formed by roughly concentric circles extending outward from a cluster of seven (now eight following the division of Czechoslovakia) countries in the middle of Europe to the outermost “flanks.” (*See March-Sept. 1993*)

Reductions of treaty-limited equipment may be by destruction, recategorization, or reclassification and will take place in three phases over 40 months. (*See Jan. 21, 1991*)

The treaty is ratified by the U.S. Senate on November 25, 1991 (by a vote of 90 to 4) and by the Russian Supreme Soviet on July 8, 1992. (*See May 15, 1992 and July 17, 1992*)

1991 — JANUARY 21

“ARTICLE III” DISPUTES

The second session of the CFE Treaty’s Joint Consultative Group (JCG) opens in Vienna. NATO countries bring up several issues related to Soviet force levels and data declarations. Among the more significant “Article III” disputes are:

- Equipment moved out of the ATTU: prior to signature of the CFE Treaty, the Soviet Union moved 57,300 items of treaty-limited equipment east of the Urals.
- Resubordination of units: three Soviet motorized rifle divisions (whose equipment is limited by CFE) were transferred to the Navy (whose equipment is not limited by CFE).
- Data on forces in Europe: the declared levels of Soviet equipment in the ATTU are significantly lower than expected. However, as the extent of equipment transfers beyond the Urals becomes clearer, the United States acknowledges that it had overestimated residual Soviet forces in the ATTU. (*See June 1, 1991*)

1991 — APRIL 1**THE MILITARY STRUCTURE OF THE WTO IS FORMALLY DISSOLVED**

The Warsaw Pact military structure, created in May 1955, formally dissolves.

1991 — JULY 7**OPENING OF THE PERMANENT 5 (P-5) TALKS ON CONVENTIONAL ARMS TRANSFERS**

During the Persian Gulf War there is increased international concern over conventional arms transfers as an Iraqi army that has been largely built up by the West confronts the allied forces. In the aftermath of the conflict the United States, the Soviet Union, Britain, France and China (the five permanent members of the U.N. Security Council – the P-5) begin talks on possible multilateral conventional arms transfer restraints. Four formal meetings take place over a period of two years and, as the participants are the five permanent members of the U.N. Security Council, they become known as the P-5 talks. The talks “noted with concern the dangers associated with excessive buildup of military capabilities, and confirmed they would not transfer conventional weapons in circumstances that would undermine stability.” With this in mind the P-5 agreed, at the London meeting on October 18, 1991, to avoid transfers that might:

- Prolong or aggravate an existing armed conflict.
- Increase tension in a region or contribute to regional instability.
- Introduce destabilizing military capabilities in a region.
- Contravene embargoes or other relevant internationally agreed restraints to which they are parties.
- Support or encourage international terrorism.
- Be used to interfere in the internal affairs of sovereign states.
- Seriously undermine the recipient state’s economy.

In the fall of 1992 the talks end as China walks out in protest over U.S. and French sales of advanced combat aircraft to Taiwan.

1991 — JUNE 1**RESOLUTION OF “ARTICLE III” DISPUTES**

U.S. Secretary of State James Baker and Soviet Foreign Minister Alexander Bessmertnykh reach agreement in principle on the “Article III” disputes during a meeting in Lisbon. On June 14, the Soviet Union formally announces its agreement to:

- Eliminate at least 14,500 pieces of treaty-limited equipment out of the 57,300 items which had been moved east of the Urals prior to signature of the CFE Treaty. (*See Dec. 31, 1995*)
- Freeze the equipment in those units transferred to the coastal defense and naval infantry forces and to reduce overall CFE entitlements by an equivalent amount.

**1991 — SEPTEMBER-DECEMBER
DISSOLUTION OF THE SOVIET UNION**

A series of historic events brings about the end of the Soviet Union and the creation of 15 independent republics:

- On September 6, 1991, the State Council of the Soviet Union releases the three Baltic republics of Lithuania, Latvia and Estonia from its ranks and recognizes their independence.
- The remaining 12 republics have all proclaimed their independence by December 1991 and at a meeting held in Alma-Ata on December 21, they declare that they now constitute the Commonwealth of Independent States (CIS) and that with the formation of the CIS “the Union of Soviet Socialist Republics ceases to exist.”
- On December 25, 1991, the Soviet Union formally dissolves as its President, Mikhail Gorbachev, resigns. (*See May 15, 1992*)

**1991 — NOVEMBER 7-8
NATO 1991 STRATEGIC CONCEPT**

The North Atlantic Council agrees on a new strategic concept as “since 1989, profound political changes have taken place in Central and Eastern Europe which have radically improved the security environment in which the North Atlantic Alliance seeks to achieve its objectives.” The concept goes on to affirm that NATO is “purely defensive in purpose: none of its weapons will ever be used except in self defense, and it does not consider itself to be anyone’s adversary” and to conclude that “the Alliance will maintain security at the lowest possible level of forces consistent with the requirements of defense.” (*See April 23-25, 1999*)

**1991 — DECEMBER 9
U.N. RESOLUTION ON “TRANSPARENCY IN ARMAMENTS”**

The U.N. General Assembly votes by 150-0 to formally establish a Register of Conventional Arms, declaring their determination “to prevent the excessive and destabilizing accumulation of arms, including conventional arms.” Beginning on April 30, 1993, the United Nations maintains a register to which states voluntarily report their arms exports and imports in seven major categories of weapons. (*See June 7, 1999*)

**1992 — FEBRUARY 29
VIENNA DOCUMENT 1992**

The CSCE adopts a package of CSBMs in the Vienna Document 1992 (VD92). It adds the following measures to the provisions of VD90:

- Reduction in the prior notification threshold from 13,000 troops or 300 tanks to 9,000 troops or 250 tanks.
- Two years prior notification for military activities involving more than 40,000 troops or 900 tanks with only one such activity per state in any given two-year period. In a single year, partici-

pants are constrained from carrying out more than six activities with more than 13,000 troops or 300 tanks.

- Expansion of the zone of application for CSBMs to include the territory of Soviet successor states which are beyond the ATTU (i.e., all of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan). (*See July 9-10, 1992 and Nov. 28, 1994*)

1992 — MARCH 24 TREATY ON OPEN SKIES

The Open Skies Treaty, intended to strengthen confidence and transparency with respect to military activities, is signed during a meeting of the CSCE in Helsinki. Parties to the treaty are required to open their airspace, on a reciprocal basis, to the overflight of their territory by unarmed reconnaissance aircraft. All treaty signatories have access to all collected data.

The U.S. Senate ratifies the Treaty unanimously on August 6, 1993 and the Russian Duma finally gives its approval 281-103 on April 18, 2001. Kyrgyzstan is the only country of the 27 signatories that has not yet ratified the treaty.

1992 — MAY 15 TASHKENT AGREEMENT

The successor states to the Soviet Union with territory within the area of application of the CFE Treaty meet in Tashkent to apportion among themselves the equipment entitlements of the Soviet Union. The agreement is signed and enters into force June 5.

1992 — JULY 9-10 CSCE HELSINKI SUMMIT

During the two-day Helsinki summit meeting, CSCE leaders approve two major documents. The first, the Helsinki Document 1992, among other provisions, requires members to:

- Start a new negotiation on arms control, disarmament and confidence- and security building.
- Enhance regular consultation and to intensify cooperation among [members] on matters related to security, and to further the process of reducing the risk of conflict.

To carry out these tasks the participating states decide both to establish a new CSCE Forum for Security Cooperation (FSC) – a merger of the CSBM and CFE talks which includes all 52 CSCE members and opens on September 22, 1992 – and to strengthen the Conflict Prevention Center. Member states also agree to “negotiate new stabilizing measures in respect of military forces and new [CSBMs] designed to ensure greater transparency in the military field.”

At the same meeting, 29 states sign the Concluding Act of the Negotiations on Personnel Strength of Conventional Armed Forces in Europe (the CFE 1A Treaty). In CFE 1A, the CFE States Parties declare national limits on the personnel strength of their conventional armed forces in the ATTU.

1992 — JULY 17**THE CFE PROVISIONAL ENTRY INTO FORCE**

Originally the provisional starting date, after all states ratify the CFE Treaty, this date is confirmed as the official date of entry into force of the treaty. (*See Nov. 17, 1995*)

**1993 — MARCH-SEPTEMBER
PROBLEMS ON THE FLANKS**

In part due to increasing tensions in Chechnya, Russia begins asking for greater leniency over its flank requirements under the CFE treaty. In March, Russian Defense Minister Pavel Grachev argues that the changed geo-strategic situation suggests a need to revise the CFE Treaty flank zone limits. He claims that, "Owing to changes in the situation, new quotas are required: It will be necessary to relocate weapons from one district to another, while preserving the overall agreed level."

More formal confirmation of this desire comes at the end of September. On September 17, Russian President Boris Yeltsin sends a letter to the heads of state of the other parties to the CFE Treaty outlining Russia's reasons for seeking to lift the flank ceiling. On September 28, at the Joint Consultative Group (JCG) in Vienna, Russia formally proposes suspension of the flank ceilings. This issue continues to simmer until the CFE Review Conference in 1996. (*See Sept. 20, 1995*)

**1993 — MAY 24-26
NGO LAND MINE CONFERENCE**

The first Non-Governmental Organizations (NGO) International Conference on Land Mines is held in London. It brings together 50 representatives from 50 different NGOs to consult on an international campaign to ban land mines. (*See May 3, 1996*)

**1994 — NOVEMBER 28
VIENNA DOCUMENT 1994/GLOBAL EXCHANGE OF MILITARY INFORMATION**

The CSCE adopts the Vienna Document 1994 (VD94) and the Global Exchange of Military Information (GEMI). Developed by the FSC, VD94 supersedes VD92 and includes the following new CSBMs:

- Mandatory reports of information on defense planning including defense policy and doctrine, force planning, and budget projections through the next five years, to be reported in an Annual Information Exchange.
- Military contacts and cooperation to be expanded, including visits to naval bases, contacts between military units, and joint academic publications.

Under GEMI, a transparency measure which expands the categories of information exchanged by CSCE members, states agree to submit data on all their armed forces, including technical data, command structures, major weapons holdings and the strength and location of troops.

1995 — SEPTEMBER 20
NATO OFFER ON THE FLANKS

NATO offers to resolve the CFE flank issue by removing certain oblasts (administrative districts) from the flank zone and applying the existing CFE equipment limits to a smaller area. (*See Nov. 17, 1995*)

1995 — OCTOBER 13
PROTOCOL ON BLINDING LASER WEAPONS

The first review conference of the States Parties to the CCW adds a fourth protocol to the Convention. This declares that laser weapons specifically designed to cause permanent blindness may not be used or transferred. This protocol comes into force on July 30, 1998, six months after being ratified by 20 countries. Protocol IV is ratified by Russia on September 9, 1999 and has yet to be ratified by the United States. (*See May 3, 1996*)

1995 — NOVEMBER 17
COMPLETION OF CFE REDUCTIONS

Equipment reductions are completed under the CFE Treaty and its limits take full effect. The United States announces that an agreement in principle has been reached to resolve the CFE flank issue. (*May 15-31, 1996*)

1995 — NOVEMBER 21
DAYTON ACCORDS

During a meeting in Dayton, Ohio, under the leadership of the United States, the General Framework Agreement for Peace in Bosnia and Herzegovina is initialed by the Republics of Bosnia and Herzegovina, of Croatia and of Yugoslavia. Annexes 1-A and 1-B of the agreement provide for settlement of military and regional stabilization issues. Annex 1-B obliges all parties to begin negotiations within 30 days to agree on numerical limits, along the lines of the CFE Treaty, on holdings of tanks, artillery, ACVs, combat aircraft and attack helicopters. (*See June 14, 1996*)

1995 — DECEMBER 31
RUSSIA FAILS TO DESTROY EQUIPMENT MOVED BEYOND THE URALS

Russia fails to fulfill its June 14, 1991 pledge to destroy by this date 14,500 items of heavy military equipment moved out of the ATTU prior to signature of the CFE Treaty.

1996 — MAY 3
PROTOCOL II OF CCW AMENDED

In light of the worldwide campaign calling for a land mine ban the States Parties to the CCW act to amend Protocol II of the Convention, which applies to land mines, booby traps and other explosive devices. The amendment toughens land mine restrictions and extends them to non-international armed conflicts. The protocol comes into force on December 3, 1998, six months after being ratified by 20

countries. The amended protocol is ratified by the United States on May 24, 1999 but has not to date been ratified by Russia. (*See June 7, 1996*)

1996 — MAY 15-31 FIRST CFE REVIEW CONFERENCE

The parties to the CFE Treaty hold the first Review Conference. Since signature, the CFE parties have eliminated over 58,000 pieces of treaty-related equipment, have reduced their armed forces by 1.2 million persons (CFE 1A), and conducted over 2,500 inspections to insure compliance with the treaty.

The first CFE Treaty Review Conference resolves the flank issue as well as the question of Russian equipment moved out of the ATTU. Russia agrees to freeze its level of tanks, ACVs, and artillery in the original geographic area of the flank zone and to reduce those forces by May 31, 1999. In addition, by removing some oblasts from the original flank zone, a new, smaller zone is created which will be governed by the original numerical flank limits.

Russia also recommit itself to eliminate by the year 2000 the undestroyed balance of the equipment that had been moved east of the Urals prior to treaty signature. (*See June 1, 1991*) At the same time, the parties to the treaty agree to ease the procedures for destroying that equipment by including “the influence of atmospheric factors.” Russia agrees to accept inspection of representative examples of equipment that it claims to be disabled in that manner. (*See Feb. 17, 1997*)

1996 — JUNE 7 OAS LAND MINE RESOLUTION

The Organization of American States (OAS) adopts a resolution that sets as its goal “the global elimination of antipersonnel land mines and conversion of the Western Hemisphere into an antipersonnel-land mine-free zone.” The resolution calls on member states to declare moratoriums on the production, use and transfer of antipersonnel mines and to become parties to the CCW. (*See Oct. 3-5, 1996*)

1996 — JUNE 14 AGREEMENT ON SUB-REGIONAL ARMS CONTROL

The Republic of Croatia, the Federal Republic of Yugoslavia (FRY), the Federation of Bosnia and Herzegovina, and the Republic of Serbia sign the Agreement on Sub-Regional Arms Control, limiting each State Party’s holdings in the five CFE weapons classes (tanks, ACVs, artillery, combat aircraft, and helicopters) and establishing a two phase, 16-month reduction period. The parties agree to annual data exchanges regarding holdings and to accept inspections to ensure compliance with the treaty.

The agreement will come under threat later as FRY twice suspends its implementation of the accord. On March 31, 1999, it informs OSCE of a temporary suspension, claiming that the NATO air strikes which began on March 24, made the necessary inspections of Yugoslav armed forces impossible. It takes around six months before FRY rejoins the agreement. Then, on May 25, 2000, FRY suspends participation again in protest of U.S.-led efforts to internationally isolate the Milosevic leadership. By the end of 2000, with Milosevic overthrown on October 6, and the country reaccepted into the interna-

tional arena, FRY is once again back in the arms control regime and chairs the October 31-November 2, 2000 Review Conference of the agreement.

**1996 — OCTOBER 3-5
OTTAWA CONFERENCE**

An International Strategy Conference “Towards a Global Ban on Anti-Personnel Mines” is held in Ottawa, Canada with 74 countries attending (50 participating, 24 as observers). In the final declaration, agreed to by the 50 participating nations, it is recognized that “urgent action on the part of the international community to ban and eliminate this type of weapon” is required. Canada sets an ambitious agenda by announcing that it is prepared to hold a treaty-signing conference for a total ban in December 1997. (*See Dec. 10, 1996*)

**1996 — DECEMBER 10
UNITED NATIONS LAND MINE RESOLUTION**

The U.N. General Assembly agrees on a resolution calling for “an effective, legally binding international agreement to ban the use, stockpiling, production and transfer of antipersonnel land mines with a view to completing the negotiation as soon as possible.” The resolution is supported by 155 countries, no country votes against it and only 10 abstain (Belarus, China, Cuba, Israel, North and South Korea, Pakistan, Russia, Syria and Turkey). (*See Dec. 3-4, 1997*)

**1997 — JANUARY 20
OPENING OF RUSSIA-NATO CHARTER NEGOTIATIONS**

NATO Secretary General Solano and Russian Foreign Minister Yevgeny Primakov open negotiations on a possible charter to establish a special relationship between the two sides. (*See May 27, 1997*)

**1997 — FEBRUARY 17
AGREEMENT ON BASIC ELEMENTS FOR ADAPTING CFE**

A high-level task force reaches agreement on the basic elements for adaptation of the CFE Treaty – a process which is necessary due to the extensive political, military and geographic changes in Eastern Europe and the former Soviet Union. The group proposes revising the treaty’s current structure of limitations by:

- Abolishing the current group structure
- Eliminating the use of nested zones

The group recommends no increase in the total numbers of treaty-limited equipment (TLE) within the Treaty’s area of application nor any change in the provision of the Flank Agreement of May 31, 1996. (*See Nov. 19, 1999*)

1997 — MAY 27

NATO-RUSSIA FOUNDING ACT

President Clinton and the leaders of the other NATO nations, joined by President Yeltsin, sign the Founding Act on Mutual Relations, Cooperation, and Security between NATO and the Russian Federation. The NATO-Russia Founding Act, a politically binding agreement (i.e., not a treaty) calls for creation of a NATO-Russia Joint Council that is intended to “provide a mechanism for consultations, coordination, and, to the maximum extent possible, where appropriate, for joint decisions and joint action with respect to security issues of common concern.”

The Founding Act does not give Russia any veto power over NATO decision-making or action. In the document NATO reiterates that it has no plans to deploy substantial numbers of NATO combat forces on the territory of the new members.

1997 — JULY 8

NATO EXPANSION TO THE CZECH REPUBLIC, HUNGARY AND POLAND

At the Madrid NATO summit, Alliance leaders invite the Czech Republic, Hungary and Poland to join NATO. A statement from the heads of the three invited nations express their “deepest satisfaction” with the decision and declares the expansion an “historic decision paving the way to a more stable and secure Europe.” NATO also considers Romania and Slovenia for possible accession but the United States successfully argues to delay such a move.

The invitation to the three nations is made against a background of Russian opposition, as Foreign Minister Yevgeny Primakov complains “the moving of NATO’s military infrastructure closer to Russia’s territory worsens both the purely military and geopolitical situations.” (*See April 30, 1998*)

1997 — DECEMBER 3-4

OTTAWA LAND MINE CONVENTION

One hundred and twenty one States sign the Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on Their Destruction in Ottawa, Canada. The treaty enters into force on March 1, 1999 and countries have 10 years to destroy their stockpiles. Notable non-signatories of the treaty include the United States, China and Russia. Washington pledges to sign by 2006 if it can identify and field “suitable alternatives” to replace its antipersonnel land mines. (*See Dec. 10, 1997 and May 15, 1998*)

1997 — DECEMBER 10

NOBEL PEACE PRIZE AWARD

The 1997 Nobel Peace Prize is awarded to the International Campaign to Ban Landmines (ICBL) and its coordinator, Jody Williams.

1998 — APRIL 30**U.S. SENATE APPROVES NATO EXPANSION**

The Senate approves NATO's eastward expansion to the Czech Republic, Hungary and Poland by a vote of 80-19. Several senators worry that the move will damage relations with Russia. For example, Sen. Dale Bumpers (D-AR) asserts, "We are forcing them to rely more and more heavily on nuclear weapons. And the more you rely on nuclear weapons, the lower the hair trigger for nuclear war." Reflecting such concerns, Sen. John Warner (R-VA) tables an amendment asking for a three-year moratorium on future enlargement after the 1999 accession of the first three candidates. This is defeated 59-41. (*See March 12, 1999*)

1998 — MAY 15**U.S. POSITION ON LANDMINES**

In a May 15 letter to Sen. Patrick Leahy (D-VT), National Security Advisor Sandy Berger sets out the U.S. government's position on land mines:

- The United States will destroy by 1999 all of its non-self-destructing antipersonnel land mines, except those needed for Korea.
- The United States will end the use of all antipersonnel land mines (APLs) outside Korea by 2003, including those that self-destruct.
- The United States will sign the Ottawa Convention by 2006 if efforts succeed to identify and field suitable alternatives to U.S. antipersonnel land mines and mixed antitank systems by then.

1998 — JUNE 11**EUROPEAN UNION (EU) CODE OF CONDUCT**

Foreign Ministers of the 15 European Union (EU) member states adopt an EU Code of Conduct for arms sales. Under the Code, eight criteria are listed for judging exports including human rights concerns and considerations of peace and stability. While the Code aims to set "high common standards for the management of and restraint in arms exports from the EU," it is not legally binding and the final decision rests with the national government involved.

1998 — OCTOBER 31**WEST AFRICAN ARMS MORATORIUM**

In Abuja, Nigeria, the 16 Heads of State in the Economic Community of West Africa (ECOWAS) sign the declaration of a Moratorium on the Importation, Exportation and Manufacture of Small Arms and Light Weapons in West Africa. In doing so, West Africa becomes the first – and thus far only – region in the world to announce a halt to light arms procurement.

The Moratorium enters into force on November 1, 1998 and is renewable after three years.

**1999 — MARCH 12
FORMAL EXPANSION OF NATO**

In a ceremony at the Truman Presidential Library in Independence, Missouri, the Czech Republic, Hungary and Poland formally join NATO. This brings the number of alliance countries to 19. On March 16, the national flags of the three new members are raised at a ceremony at NATO headquarters, Brussels.

**1999 — MARCH 24-JUNE 9
NATO'S KOSOVO CAMPAIGN**

NATO air strikes against Yugoslavia commence after the Serbian government refuses to sign U.S.-drafted peace accords for Kosovo. U.S. President Bill Clinton tells reporters, "We and our NATO allies have taken this action after extensive and repeated efforts to obtain a peaceful solution to the crisis in Kosovo."

The campaign that follows sees NATO undertaking offensive military action for the first time without explicit Security Council approval. This sparks considerable debate about NATO's future role and heightens tensions with Russia after the enlargement of the Alliance. (*See April 23-25, 1999*)

On June 9, 1999 NATO and Yugoslav officials initial a Military Technical Agreement to govern Serb withdrawal from Kosovo and the next day NATO bombing is suspended.

**1999 — APRIL 23-25
NATO 1999 STRATEGIC CONCEPT**

During its 50th anniversary summit in Washington, NATO adopts a new Strategic Concept in response to the "profound political and security developments" since the end of the Cold War. Against the background of NATO's Balkan war, the Concept looks to expand the Alliance's options for conventional operations:

- In order to "safeguard common security interests" NATO members must be willing "to contribute to effective conflict prevention and to engage actively in crisis response operations," even when this is beyond Alliance territory. This new commitment is "exemplified in the Balkans."
- The 1991 statement that NATO is "purely defensive in purpose: none of its weapons will ever be used except in self-defense" is dropped from the 1999 Concept.

**1999 — MAY 3-7
FIRST CONFERENCE OF STATES PARTIES TO THE OTTAWA LAND MINE CONVENTION**

In Maputo, Mozambique, representatives from 96 signatories of the Ottawa Convention gather for the First Conference of the States Parties. In the May 7 final declaration, the States Parties and signatories reaffirm an "unwavering commitment to the total eradication of an insidious instrument of war and terror: antipersonnel mines." They also call on "those who continue to use, develop, produce, otherwise acquire, stockpile, retain and transfer these weapons: cease now, and join us in this task." (*See Sept. 11-15, 2000*)

1999 — JUNE 7**OAS TRANSPARENCY ACCORD**

Nineteen countries, including the United States, sign the Inter-American Convention on Transparency in Conventional Weapons Acquisitions at the 29th Regular Session of the OAS General Assembly in Guatemala City, Guatemala. Unlike the U.N. arms register, which states report to on a voluntary basis, the Inter-American Convention requires mandatory annual reports from the State Parties of their weapons imports and exports. In addition, parties are to provide notification of acquisitions “no later than 90 days after incorporation of imported conventional weapons into the inventory of the armed forces.”

1999 — NOVEMBER 19**CFE TREATY ADAPTION AGREEMENT**

The United States, Russia and 28 other nations sign an Agreement on Adaption for the CFE Treaty. Several main changes are made to the original Treaty to give it renewed relevance in the post Cold War world:

- Due to the collapse of the Warsaw Pact on April 1, 1991 and the subsequent 1997 offer of NATO membership to the former WTO states of Poland, Hungary and the Czech Republic, the original bloc structure of the Treaty is clearly obsolete. Thus the adaption agreement replaces the Treaty’s defunct alliance-wide “group” ceilings for NATO and the WTO with more focused “national” limits.
- The zone structure of the original Treaty is replaced by territorial limits, which place ceilings on the total amount of TLE – both national and foreign-stationed – any country can have within its borders. Poland, Hungary and the Czech Republic agree to set their territorial limits at a level equal to their national limits to assuage Russian fears that NATO expansion may lead to a massive transfer of forces and equipment closer to the Russian border.
- The adaption agreement retains limits on the ground TLE Russia can deploy in its northern and southern flanks. Nonetheless, it does grant Russia additional flexibility in this controversial area as the size of the flank zone is reduced and Russia’s armored combat vehicle allowance within it is increased.

The adaption agreement is widely welcomed but concerns persist over Russia’s involvement in Chechnya and how this will continue to affect its flank pledges. With this in mind, President Clinton says he will not submit the agreement to the Senate for ratification until Russian forces in the North Caucasus “have in fact been reduced to the flank levels set forth in the adapted treaty.” (*See Nov. 19, 2000*)

2000 — SEPTEMBER 11-15**SECOND CONFERENCE OF STATES PARTIES TO THE OTTAWA LAND MINE CONVENTION**

The Second Conference of Ottawa States Parties meets in Geneva, Switzerland to further discuss implementation of the Convention. The final report is presented on September 18 and concludes:

- That much has been achieved as “over 20 States Parties have completed destruction of stock-

piled antipersonnel mines and a further 23 States Parties are in the process of destroying stockpiles ... and approximately \$250 million has been allocated by donors over the past year to address the global land mine problem.”

- That “much work remains.” According to ICBL estimates at least 250 million antipersonnel landmines are still stockpiled throughout the world and only about 25 to 30 million of these are in Ottawa signatory states.

2000 — NOVEMBER 19 PUTIN FLANK PLEDGE

Putin reiterates Russia’s pledge to adhere to the renegotiated CFE flank limits after the Chechen conflict has ended.

2001 — JULY 9-20 UNITED NATIONS CONFERENCE ON THE ILLICIT TRADE IN SMALL ARMS AND LIGHT WEAPONS

In New York, at the United Nations Conference on the Illicit Trade in Small Arms and Light Weapons in All its Aspects, over 140 nations agreed on a Program of Action, a political declaration outlining steps that participating governments can take at the national, regional, and international levels to tackle the global problem of the proliferation and misuse of small arms and light weapons. The accord calls on governments to require arms manufacturers to compile records on small arms sales, to mark weapons to help trace their origin, to destroy surplus stocks, and to criminalize the illegal production, possession, stockpiling and trade in small arms.

The United States had from the beginning of the Conference made it clear that it would not support any document which included restrictions on the legal trade and manufacture, civilian possession or the sale to entities other than governments of small arms and light weapons.

2001 — SEPTEMBER 11 TERRORIST ATTACK ON THE UNITED STATES

Terrorists, using hijacked commercial airliners as suicide bombers, destroy the World Trade Center in New York City and heavily damage the Pentagon in Washington, D.C.

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