



Nuclear Chronology

1930s

1932 . . . Physicist James Chadwick discovers the neutron, a previously unrecognized particle in the atomic nucleus.

1933 . . . Physicist Leó Szilárd conceives the idea of a nuclear chain reaction while crossing a London street.

1938 . . . A team of scientists led by Otto Hahn, Lise Meitner, and Fritz Strassmann conducts the first successful nuclear fission experiment in Berlin.

Aug 39 . . . Albert Einstein sends a letter to President Roosevelt informing him of the German atomic research program and the potential for a bomb. The letter prompts Roosevelt to form a special committee to investigate the military implications of atomic research.

1940s

13 Aug 42 . . . Manhattan Project is initiated.

2 Dec 42 . . . First self-sustaining nuclear reaction occurs at University of Chicago.

Mar 43 . . . Los Alamos National Laboratory (LANL), responsible for nuclear explosive design, is established in New Mexico.

Jul 45 . . . Z-Division of Los Alamos, the forerunner of Sandia National Laboratories (SNL), is established in New Mexico in conjunction with LANL. It served as the ordnance design, testing, and assembly arm of Los Alamos.

6 Aug 45 . . . Little Boy is dropped on Hiroshima.

9 Aug 45 . . . Fat Man is dropped on Nagasaki.

21 Mar 46 . . . Continental Air Forces is re-designated the Strategic Air Command (SAC). SAC is initially headquartered at Andrews Air Force Base then later is moved to Offutt Air Force Base in November 1948.

14 Jun 46 . . . U.S. presents the Baruch Plan, which calls for placing all atomic resources of the world, including the U.S. arsenal, under the ownership or control of an independent international authority. Soviet objections over verification measures deadlock negotiations.

20 Jul 46 . . . Atomic Energy Act of 1946, which transfers military control of nuclear weapons development activities to civilian Atomic Energy Commission (AEC), passes Congress.

1947 . . . National Security Act of 1947 sets policy concerning the military's access to classified nuclear information and the control of atomic matters by civilians.

1947 . . . Mound Plant, responsible for explosive components of nuclear weapons, is established in Ohio. Y-12 Plant (Oak Ridge), responsible for nuclear explosive assembly, is established in Tennessee.

1 Jan 47 . . . Armed Forces Special Weapons Project (AFSWP) is established to assume responsibility for all military service functions of Manhattan Project. The services are authorized to participate in weapons development in coordination with AEC.

17 Jan 47 . . . Secretaries of War and Navy approve Military Liaison Committee (MLC) Charter, establishing membership at six -- three members each from the Navy and Army.

1948 . . . Z-Division's growth prompts its designation as Sandia Laboratory, a separate branch of Los Alamos.

1948 . . . Kansas City Plant, responsible for fuzing and firing sub-assemblies, is established in Missouri.

1948 . . . B4 nuclear warhead is fielded.

26 Mar 48 . . . Revisions to the MLC Charter make the chairmanship a SecDef appointed position and membership composed of delegates from each military department.

Apr-May 48 . . . AEC is directed to build Atomic Bomb Stockpile.

16 Sep 48 . . . President Truman signs NSC-30, "United States Policy on Atomic Warfare," which states that "the decision as to the employment of atomic weapons in the event of war is to be made by the Chief Executive."

Mid-1949 . . . Nuclear capable B-29s are deployed to the U.K.

4 Apr 49 . . . North Atlantic Treaty Organization (NATO) is established.

May 49 . . . MLC Chairman is made a presidential appointment.

29 Aug 49 . . . The Soviet Union explodes its first atomic weapon, JOE-1, which has a yield of 22 kilotons.

1950s

1950 . . . NSC-68 document calls for the U.S. to maintain strategic superiority over the Soviet Union. It states that “the Soviet nuclear threat is more immediate than had previously been estimated.”

31 Jan 50 . . . President Truman approves development of the hydrogen bomb.

25 Jun 50 . . . Korean War begins.

1951 . . . Rocky Flats Plant, responsible for gas boost systems and nuclear system parts, is established in Colorado. Pantex Plant, responsible for high-explosives parts and final weapon assembly, is established in Texas.

17 Jan 51 . . . Deputy to the Secretary of Defense for Atomic Energy is established. SecDef memo designates MLC Chairman as Deputy and as “Coordinator and Staff Advisor for atomic energy matters.”

1952 . . . Lawrence Livermore National Laboratory (LLNL), responsible for nuclear explosive design, is established in California.

1952 . . . W9 280mm Artillery-Fired Atomic Projectile (AFAP) nuclear warhead is fielded.

10 Sep 52 . . . Presidential approval of National Security Council Study, “Agreed Concepts Regarding Atomic Weapons,” transfers to DoD custody all Outside Continental United States (OCONUS) weapons and any number of Continental United States (CONUS) weapons required to assure operational flexibility and military readiness. Custody of the remainder of the stockpile is maintained by the AEC.

3 Oct 52 . . . Great Britain explodes its first atomic weapon.

1 Nov 52 . . . The U.S. detonates its first thermonuclear device.

1953 . . . Savannah River Plant, responsible for tritium and plutonium production, is established in South Carolina.

1953 . . . After the armistice in Korea, Secretary of State states that the U.S. has moved the means of delivering nuclear weapons into the Korean theater. He also states that the Chinese are aware of this.

13 Apr 53 . . . Assistant to the Secretary of Defense (Atomic Energy) (ATSD(AE)) position is established.

12 Aug 53 . . . The Soviet Union detonates its first thermonuclear device.

Oct 53 . . . President Eisenhower approves NSC-162/2, the “New Look” strategy. It recommends reductions in conventional forces and increased dependence on the strategic nuclear deterrent forces.

8 Dec 53 . . . President Eisenhower's "Atoms For Peace" speech outlines the establishment of the International Atomic Energy Agency (IAEA) to maintain custody of specified amounts of fissionable material and to devise peaceful uses for it.

1954 . . . DoD-AEC agreement establishes relations and relative responsibilities between the two organizations, regarding nuclear matters.

1954 . . . Mk-12 warhead is introduced. It is the first warhead small enough for practical use as a missile warhead.

21 Jan 54 . . . USS Nautilus (SSN 571), the first nuclear powered submarine, is launched. The Nautilus remains in service until it is decommissioned on 3 Mar 80.

16 Sep 55 . . . First SLBM is launched from a Soviet Zulu IV-class submarine. The SS-1B missile had an 80-mile range and had to be launched from the surface. Only two missiles were carried per submarine.

22 Nov 55 . . . The Soviet Union detonates its first thermonuclear weaponized device with a 1.6 Mt yield.

1956 . . . Weapon design improvements allow for sealed pit weapons to be introduced into the U.S. nuclear weapons stockpile.

4 May 56 . . . DoD-AEC Memorandum of Understanding (MOU) provides for transfer of weapons in AEC custody to DoD custody upon declaration of Defense Emergency or similar emergency condition, regarding nuclear matters.

1957 . . . Joint DoD/AEC nuclear weapons safety system/safety study process is institutionalized and accident reporting system is adopted.

23 May 1957 . . . NATO Military Council (MC) 14/2 adopts "Massive Retaliation" as NATO nuclear strategy. It is also known as the "trip-wire" strategy. Major Soviet aggression would quickly precipitate a massive nuclear response.

19 Sep 57 . . . U.S. conducts first contained underground nuclear test.

Oct 57 . . . Strategic Air Command begins 24-hour alert for some of its bombers to guard against a Soviet surprise attack.

4 Oct 57 . . . Sputnik is launched into orbit by a Soviet SS-6.

Dec 57 . . . NATO MC requests President Eisenhower to authorize use of non-U.S. forces in nuclear strike role.

1958 . . . Pinellas Plant, responsible for neutron generators, ceramic parts, power supplies, and lightning arrester connectors, is established in Florida.

Apr 58 . . . U.K. tests its first thermonuclear weapon.

3 Jul 1958 . . . U.S-U.K. Mutual Defense Agreement signed.

Sep 58 . . . U.S. publicly considers the use of atomic weapons to defend the Formosa islands of Quemoy and Matsu from the Communist Chinese.

31 Oct 58 . . . U.S., U.K., and USSR begin talks on a Comprehensive Test Ban (CTB); U.S. and U.K. begin a one-year moratorium on testing, which the USSR joins a few days later.

1959 . . . Strategic Air Command adopts 24-hour-a-day airborne alert for some of its nuclear-armed B-52 bombers to prevent a disarming attack by the Soviets.

1959 . . . The Environmental Sensing Device (ESD), which protects against inadvertent/accidental nuclear detonation from human error and/or equipment malfunctions, is developed.

11 Mar 59 . . . All “operational” nuclear weapons are released to the military under President Eisenhower’s direction.

30 Jul 59 . . . U.K. announces it will not resume testing as long as CTB negotiations continue.

26 Aug 59 . . . U.S. announces it will extend moratorium until end of the year.

28 Aug 59 . . . USSR announces it will not resume testing as long as U.S. and U.K. do not test.

Sep 59 . . . First SSG (diesel-electric powered, cruise missile equipped submarine) patrols begin in the North Pacific. Submarines patrols armed with the Regulus missile (cruise missile with a nuclear warhead) would continue through 1964.

1960s

1960 . . . W47 Polaris A1/A2 SLBM is fielded.

Feb 60 . . . France tests its first nuclear weapon, the AN-11.

Jul 60 . . . U.S. conducts its first submerged SLBM launch of Polaris A1

1961 . . . President Kennedy begins strategy of “Flexible Response,” which is designed to maximize conventional military options while maintaining a robust nuclear capability.

1961 . . . W38 Titan I/Atlas E/F Intercontinental Ballistic Missile (ICBM), and B43 strategic and tactical bombs are fielded.

3 Feb 61 . . . SAC Airborne Command Post (Looking Glass) is ordered on around-the-clock airborne alert. Looking Glass remains airborne until 24 Jul 90.

1 Apr 61 . . . First Single Integrated Operational Plan (SIOP) is approved for FY 1962.

18 Apr 61 . . . First complete CTB draft treaty tabled by U.S. and U.K is rejected by the Soviet Union.

23 Jul 61 . . . Antarctic Treaty enters into force

13 Aug 61 . . . The Berlin border between East and West Berlin is closed and barriers are built, constituting the "Berlin Wall."

30 Aug 61 . . . USSR announces it will resume testing, citing French test and the Berlin Crisis.

1 Sep 61 . . . Soviet nuclear weapons are tested, breaking the moratorium that had been in place for two years.

1 Sep 61 . . . U.S. resumes underground nuclear testing.

26 Sep 61 . . . Arms Control and Disarmament Agency (ACDA) is established pursuant to Congressional action.

30 Oct 61 . . . USSR conducts largest nuclear test with 57 megaton device, the largest ever detonated.

1962 . . . The Athens Guidelines establish goals for political consultation regarding use of U.S. nuclear weapons in NATO.

1962 . . . W59 Minuteman Y1 and W53 Titan II ICBMs are fielded.

25 Apr 62 . . . U.S. resumes nuclear testing in the atmosphere.

6 Jun 62 . . . NSAM-160 establishes requirements for Permissive Action Links (PALs) to be placed on land-based nuclear weapons in Europe.

Mid-1962 . . . Two-man rule is established for all nuclear weapons operations.

Oct 62 . . . Soviet Union secretly deploys intermediate-range ballistic missiles to Cuba.

14 Oct 62 . . . U.S. reconnaissance planes detect the construction of Soviet missile launch facilities in Cuba, setting in motion the Cuban Missile Crisis.

28 Oct 62 . . . Soviet Premier Khrushchev notifies U.S. President Kennedy that the missiles in Cuba will be withdrawn.

1963 . . . W48 155mm AFAP, W50 Pershing 1A Surface-to-Surface Missile (SSM), and W56 Minuteman II ICBM are fielded.

1963 . . . U.S. IRBMs are removed from Europe.

20 Jun 63 . . . The Memorandum of Understanding Between the U.S. and USSR Regarding the Establishment of a Direct Communications Link, or “Hot Line,” is signed, providing for reliable direct communication to reduce the dangers of accident or miscalculation.

5 Aug 63 . . . Limited Test Ban Treaty (LTBT) is signed, banning nuclear tests in the atmosphere, in outer space, and underwater.

Nov 63 . . . NSAM establishes the requirement to conduct nuclear weapon safety studies.

1964 . . . W58 Polaris A3 Submarine-Launched Ballistic Missile (SLBM) is fielded.

17 Aug 64 . . . Secretary of Defense announces the U.S. has a 4-1 superiority over the Soviet Union in heavy bombers and ICBMs.

15 Oct 64 . . . The People’s Republic of China explodes its first atomic weapon.

1966 . . . B61 strategic and tactical bombs are fielded.

1967 . . . U.S. conducts a successful demonstration of the warhead-reentry vehicle at Sandia National Laboratories.

27 Jan 67 . . . Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies is signed, banning nuclear weapons or other weapons of mass destruction in space.

14 Feb 67 . . . Treaty for the Prohibition of Nuclear Weapons in Latin America, known as the Treaty of Tlatelolco, is signed.

May 67 . . . Soviet Navy commissions its first large-capacity SSBN, the Yankee class. Each Yankee is armed with 16 SS-N-6 SLBMs.

1 Jun 67 . . . China conducts its first thermonuclear test.

16 Jan 1968 . . . NATO MC 14/3 establishes “Flexible Response” as the basis of Alliance nuclear deterrence policy.

Jun 68 . . . The first British SSBN, HMS Resolution (SSBN-01), is deployed with POLARIS A3P on its first operational patrol.

1 Jul 68 . . . Treaty on the Non-Proliferation of Nuclear Weapons (NPT) is signed. In the treaty, the U.S.,

USSR, and U.K. agree not to transfer nuclear weapons or related technology to non-nuclear states; non-nuclear signatories agree to accept IAEA safeguards on their peaceful nuclear activities to prevent diversion to weapons uses. The nuclear weapon-possessing signatories also agree to assist non-nuclear weapons states in developing their civilian nuclear programs and “to pursue negotiations in good faith on effective measures relating to the cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control.”

24 Aug 68 . . . France conducts its first thermonuclear test.

1970s

1970 . . . W62 Minuteman III ICBM and W68 Poseidon C3 SLBM are fielded.

11 Feb 71 . . . Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Seabed and the Ocean Floor and in the Subsoil Thereof, the Seabed Treaty, is signed.

8 May 71 . . . U.S. ratifies Protocol II of the Treaty of Tlatelolco.

30 Sep 71 . . . Agreement on Measures to Reduce the Risk of Outbreak of Nuclear War, i.e., Accident Measures Agreement, is signed, committing the U.S. and USSR to improve safeguards against accidental or unauthorized nuclear weapons use, to develop arrangements for mutual notification should a risk of war arise from such incidents, and to notify the other party of missile launches in their direction.

Dec 71 . . . French SSBN, *Le Redoutable*, armed with 16 M4 SLBMs, becomes operational.

1972 . . . W69 Short-Range Attack Missile (SRAM) Air-to-Surface Missile (ASM) is fielded.

26 May 72 . . . The Strategic Arms Limitation Treaty (SALT I) Interim Agreement and the Anti-Ballistic Missile (ABM) Treaty are signed, limiting the pace of the strategic nuclear weapons competition between the U.S. and the USSR for a period of five years pending more comprehensive negotiations on force limitations. The ABM Treaty defines ABM systems as those, which “counter strategic ballistic missiles or their elements in flight trajectory” and limits the U.S. and the USSR to two ABM deployment areas (one around the national capital and one around an ICBM launch area).

1973 . . . W70 Lance SSM is fielded.

22 Jun 73 . . . Agreement Between the U.S. and the USSR on the Prevention of Nuclear War is signed/entered into force. The Agreement commits the two nations to make the objectives of their policies the removal of the danger of nuclear war and of the use of nuclear weapons.

1974 . . . The Energy Reorganization Act of 1974 replaces the AEC with the Nuclear Regulatory Commission (NRC) and establishes the Energy Research and Development Agency (ERDA).

17 Jan 74 . . . National Security Decision Memorandum (NSDM)-242 sets forth policy for planning the use of nuclear weapons. Known as the “Schlesinger Doctrine,” selective counter-force targeting options are discussed.

18 May 74 . . . India conducts its first atomic test explosion.

3 Jul 74 . . . Threshold Test Ban Treaty (TTBT) and ABM Treaty Protocol signed. TTBT limits U.S. and USSR nuclear tests to 150 kilotons. The ABM Treaty Protocol reduces the number of allowable U.S. and Soviet ABM sites from two to one (the U.S. dismantles its single site at Grand Forks, North Dakota in 1976).

28 May 76 . . . The Treaty Between the U.S. and USSR on Underground Nuclear Explosions for Peaceful Purposes, or Peaceful Nuclear Explosions Treaty (PNET), is signed, covering nuclear explosions conducted at other than declared test sites for peaceful purposes, e.g., excavations.

24 Dec 76 . . . “Memorandum of Agreement between DoD and ERDA for Temporary Storage of U.S. ERDA Shipments at Military Installations” is signed, establishing Safe Havens.

19 Jan 77 . . . ATSD(AE) is designated chairman of Steering Group on Survivability and Security of Theater Nuclear Forces.

4 Aug 77 . . . Department of Energy Organization Act establishes the DOE, and confers upon the DOE the responsibilities of ERDA.

21 Sep 77 . . . The fifteen principal nuclear supplier countries establish common standards for safeguards and other conditions of nuclear supply and call for restraint in the export of sensitive nuclear facilities and materials.

1978 . . . W76 Trident I C4 SLBM is fielded.

12 Jun 78 . . . U.S. declares that it “will not use nuclear weapons against non-nuclear weapons states party to the NPT or any comparable internationally binding commitment not to acquire nuclear explosive devices, except in the case of an attack on the United States, its territories, armed forces, or its allies, by such a state allied to a nuclear-weapons state or associated with a nuclear-weapons state in carrying out or sustaining the attack.”

1979 . . . The Starbird Study recommends the integration of nuclear weapon acquisition into the DoD weapon system acquisition process to assure more effective use of total DoD/DOE resources and to strengthen dual-agency oversight of nuclear weapon safety, security, and control issues.

1979 . . . China begins flight tests of its first ICBM, the DF-5.

1979 . . . W78 Minuteman III ICBM is fielded.

28 Mar 79 . . . Accident at Three Mile Island nuclear power plant raises public concerns over safety issues relating to nuclear power.

18 Jun 79 . . . SALT II Treaty is signed, establishing equal aggregate limits on the number of U.S. and Soviet strategic nuclear delivery vehicles and on the number of MIRVed ballistic missile launchers and cruise missile-equipped heavy bombers, in addition to other constraints on strategic nuclear forces. SALT II did not enter into force.

12 Dec 79 . . . NATO forms the “Dual-Track Decision,” agreement, which deploys new Longer-Range Intermediate-range Nuclear Forces (LRINF) while simultaneously pursuing negotiations with the USSR on INF arms control. Another aspect of the decision is to unilaterally withdraw 1000 warheads from NATO.

1980s

17 Jan 80 . . . A signed SecDef letter designates ATSD(AE) as responsible for safety, security, and survivability of the current stockpile and for all matters relating to research, evaluation, and modernization of the nuclear weapons program.

3 Mar 80 . . . Convention on the Physical Protection of Nuclear Material is signed, providing for specified levels of physical protection during international transport of nuclear material and establishing a framework for cooperation in the protection, recovery, and return of stolen nuclear material.

25 Jul 80 . . . Presidential Directive (PD) 59 sets forth the “Countervailing Strategy,” integrating strategic nuclear force acquisition and employment doctrine into the SIOP and defining options for striking at Soviet command centers in the event of war.

Fall 80 . . . Preliminary U.S. and Soviet discussions on INF begin.

1981 . . . DoD and DOE sign MOU defining procedures for the conduct of stockpile confidence nuclear performance tests as part of the overall process of assuring the viability of the nuclear weapons stockpile.

1981 . . . W80-1 Air-Launched Cruise Missile (ALCM) is fielded.

7 Jun 81 . . . Israel bombs Iraq's Osirak nuclear reactor.

12 Aug 81 . . . President Reagan announces that 8-inch AFAP and Lance missiles will be fitted with Enhanced Radiation warheads.

Nov 81 . . . First U.S. Ohio class SSBN is commissioned.

1982 . . . NATO Senior Level Weapons Protection Group (SLWPG) is established. ATSD(AE) is designated chairman.

1983 . . . W84 Ground-Launched Cruise Missile (GLCM) and W85 Pershing II SSM are fielded.

23 Mar 83 . . . President Reagan unveils the Strategic Defense Initiative (SDI) program, designed to protect the U.S. and its allies from attack by Soviet strategic nuclear weapons.

27 Oct 83 . . . The “Montebello Decision” by the NATO Nuclear Planning Group (NPG) agrees to new nuclear weapon ceiling for European-based weapons, which includes the withdrawal of 1,400 nuclear weapons from Europe under the assumption that the resulting stockpile will be modernized.

1984 . . . In a DoD-DOE SDI Memorandum of Agreement (MOA), the MLC is identified as Point of Contact (POC) for matters relating to military application of atomic weapons/energy. It also suggests that the Chairman, MLC should be a member of a SDI DoD/DOE Steering Committee, along with Director, SDI Office and Deputy Secretary of Energy.

1985 . . . W80-0 Tomahawk SLCM is fielded.

6 Aug 85 . . . The South Pacific Forum opens the Treaty of Rarotonga for signatures. The Treaty is currently in force.

1985-86 . . . Blue Ribbon Task Group (BRTG) examines procedures used by DoD and DOE in establishing requirements and providing resources for the research, development, testing, production, surveillance, and retirement of nuclear weapons.

1986 . . . W87 Peacekeeper ICBM is fielded.

27 Feb 86 . . . Non-Strategic Nuclear Forces (NSNF) Survivability Steering Group is established under new DoD Directive 3150.3. ATSD(AE) designated as Chairman.

26 Apr 86 . . . Accident at Chernobyl nuclear power plant leads to significant environmental release of radiation and international concern.

Oct 86 . . . Goldwater-Nichols DoD Reorganization Act, which grew out of the Packard Commission study on defense acquisition management and incorporated several of its recommendations, calls for establishing an Undersecretary of Defense for Acquisition and Technology (USD (A&T)), reorganization of the flow of military information between the CJCS and CINCs and other acquisition-related reforms.

Oct 86 . . . U.S. President Reagan and Soviet General Secretary Gorbachev meet in Reykjavik and discuss proposals that would eliminate all ballistic missiles, and possibly all nuclear weapons, within 10 years. The discussions end in a disagreement over the status of the SDI program.

14 Nov 86 . . . National Defense Authorization Act for Fiscal Year 1987 dissolves the MLC and replaces it with the Nuclear Weapons Council (NWC). The ATSD(AE) is designated as its Staff Director.

18 Nov 86 . . . Project Officers Group (POG) for Nuclear Weapons Use Control Systems is established. It provides a joint DoD/DOE forum to review and make recommendations for application of nuclear weapons use control measures that best integrate policy, technology, procedures, and requirements.

1987 . . . Nuclear Weapon Council Standing Committee (NWCSC), chaired by ATSD(AE), is established to execute NWC responsibilities.

15 Sep 87 . . . Nuclear Risk Reduction Centers Agreement is signed between the U.S. and USSR, establishing Nuclear Risk Reduction Centers in their respective capitals with communications links to supplement existing means of communication between the governments on nuclear weapons-related incidents and developments.

8 Dec 87 . . . The Treaty Between the U.S and the USSR on the Elimination of Their Intermediate-Range and Shorter-Range Missiles, the INF Treaty, is signed. Negotiated between Fall 80 and Dec 87, this treaty enters into force 1 June 88, and requires the elimination of all U.S. and Soviet ground-launched ballistic and cruise missiles with ranges between 500 and 5500 kilometers. The treaty is the first arms control agreement to eliminate an entire class of weapons and to incorporate an extensive monitoring and verification regime including intrusive measures.

20 May 88 . . . Weapon Security and Survivability System (WS3) eligibility is approved for NATO infrastructure funds in compliance with congressional direction.

1989 . . . W88 Trident II D5 SLBM is fielded.

30 May 89 . . . NATO Summit concludes with an agreement among NATO members that Short-range Nuclear Forces (SNF) negotiations should begin once Conventional Forces in Europe (CFE) treaty implementation is underway. NATO adopts the “Comprehensive Concept,” stating that sub-strategic nuclear weapons will remain necessary, but at reduced levels, for purely deterrent purposes rather than to offset conventional inequality.

20 Sep 89 . . . DoD-DOE MOA establishes the Nuclear Weapon Council Weapons Surety Committee (NWCWSC).

20 Sep 89 . . . DoD-DOE establishes an Interagency Agreement on the temporary storage of DOE shipments at military installations. ATSD(AE) granted authority to act for DoD in matters relating to providing layover, storage, and protection of Transportation Safeguards Division (TSD) convoys at designated DoD installations throughout CONUS.

9 Nov 89 . . . The Berlin Wall is opened.

1990s

May 90 . . . At the NATO NPG Meeting, Allies call for a comprehensive review of NATO's nuclear strategy. The NPG agrees “that there is a diminishing need for nuclear systems of the shortest range.”

3 May 90 . . . President Bush cancels the Follow-On to Lance program and further modernization of nuclear artillery shells deployed in Europe and calls for SNF negotiations after a CFE Treaty is signed.

1 Jun 90 . . . At the Washington Summit, Presidents Bush and Gorbachev complete new TTBT and PNET verification protocols.

5-6 Jul 90 . . . NATO's London Declaration on a Transformed North Atlantic Alliance calls for a revised NATO strategy making nuclear forces “weapons of last resort” and negotiations between the United

States and the Soviet Union on the reduction of short-range forces to begin shortly after a CFE agreement is signed.

3 Oct 90 . . . Germany is reunified.

Dec 90 . . . Drell Panel Report to House Armed Services Committee addresses nuclear weapons safety and makes recommendations, including the formation of Red Teams and a Joint Advisory Committee.

7 Dec 90 . . . Kazakhstan announces a ban on nuclear tests at Semipalatinsk.

11 Dec 90 . . . TTB and PNE Treaties enter into force.

18 Jan 91 . . . In Persian Gulf War, a U.S. Patriot missile intercepts an Iraqi SCUD missile -- the first time in the history of warfare that one missile has intercepted another missile.

29 Jan 91 . . . President Bush redirects SDI program to defend against limited attacks.

11 Feb 91 . . . Soviet President Gorbachev notifies Eastern European leaders that the Warsaw Treaty Organization will disband as a military alliance on 1 April 91.

Mar 91 . . . U.S. victory in the Gulf War suspends Iraqi attempts to develop a nuclear weapon. A month later, UN Security Council Resolution 687 establishes the UN Special Commission on Iraq to monitor the elimination of Iraq's weapons of mass destruction and means of delivery.

27 Mar 91 . . . U.S. withdraws the last of its INF missiles from Europe.

24 Apr 91 . . . The SecDef, in response to a request by the Senate Armed Services Committee, directs "an independent and objective top-to-bottom review of current fail-safe procedures."

31 Jul 91 . . . The Strategic Arms Reduction Treaty (START I) is signed, limiting the U.S. and USSR to 6000 accountable nuclear warheads and 1600 delivery vehicles each.

19 Aug 91 . . . A group of Soviet leaders take over control of government from President Gorbachev. The coup fails two days later, but its aftermath -- the dissolution of the USSR -- raises concern regarding the disposition, control and safety of nuclear weapons located outside Russia.

29 Aug 91 . . . Kazakhstan closes Semipalatinsk.

27 Sep 91 . . . President Bush announces the first of two Presidential Nuclear Initiatives (PNIs) that include: eliminating ground-launched theater nuclear weapons; removing tactical nuclear weapons from all surface ships, attack submarines, and land-based naval aircraft bases; taking strategic bombers off alert; taking the ICBMs scheduled for deactivation under START off alert; terminating the development of a mobile Peacekeeper ICBM rail garrison system and other mobile portions of the small ICBM program; terminating SRAM-II; and establishing a Strategic Command under which all elements of the U.S. strategic deterrent will be assigned. Additionally, the President calls for an early agreement to mutually eliminate MIRVed ICBMs from the U.S. and USSR inventories.

5 Oct 91 . . . President Gorbachev responds to 27 Sept 91 Bush initiatives with the following proposals: eliminating all Soviet nuclear artillery munitions, nuclear warheads for tactical missiles, and nuclear mines; withdrawing all tactical nuclear weapons from surface ships, multi-purpose submarines, central storage bases; storing nuclear weapons for land-based aviation in central storage bases; eliminating a portion of naval tactical weapons; proposing to totally eliminate navy tactical nuclear weapons on a reciprocal basis; removing all strategic bombers from day-to-day alert; and taking 503 ICBMs off alert status. President Gorbachev declares a unilateral moratorium on nuclear testing for one year.

18 Oct 91 . . . In an NPG communiqué, NATO ministers state that “there is no longer any requirement for nuclear, ground-launched, short-range ballistic missiles and artillery” and agree to greatly reduce nuclear air-delivered bombs.

26 Oct 91 . . . President Yeltsin issues a decree suspending nuclear tests in Russian Federation for one year.

7-8 Nov 91 . . . NATO leaders adopt “The New Alliance Strategic Concept” in a Rome meeting, noting the improved prospects for conventional defense and that future use of nuclear weapons appears to be remote.

Dec 91 . . . North and South Korea reach agreements on nuclear weapons and other security issues, aiming to remove nuclear weapons from the peninsula and preclude the development and production of nuclear weapons by either state. The following month, North Korea agrees to open its nuclear facilities to IAEA inspections.

8 Dec 91 . . . Russia, Belarus, and Ukraine form the Commonwealth of Independent States (CIS) and agree to dissolve the Soviet Union. Subsequently, nine other former republics (all but the Baltic states) join. Despite an agreement to keep the nuclear weapons of the USSR under a centralized command, the move raises concerns in the West over the possibility of nuclear proliferation in a chaotic political atmosphere.

12 Dec 91 . . . Under the “Nunn-Lugar Act (Public Law 102-228),” Congress approves an aid package to the former Soviet Republics, \$400 million of which is to be used to aid in the safe, secure dismantlement of nuclear, biological, and chemical weapons, including strategic delivery vehicles.

16 Dec 91 . . . At a DOE news conference, the Secretary of Energy announces the decision of the Bush Administration to reconfigure the U.S. nuclear weapons complex. Plants in Florida and Ohio will close, the Rocky Flats Plant will no longer manufacture nuclear bomb materials, and the National Laboratories will assume some responsibilities of those plants designated for closure.

27 Dec 91 . . . President Gorbachev turns over the control codes for Soviet nuclear weapons to officials of the Russian Federation.

23 Jan 92 . . . DoD announces that the U.S. will begin to follow a policy under which the development process for new nuclear weapon systems will be interrupted after the construction and testing of prototypes, rather than continuing into full production.

29 Jan 92 . . . In his State of the Union Address, President Bush calls for reductions in the U.S. and CIS strategic inventories to 4700 nuclear weapons, including the elimination of land-based MIRVed ICBMs, and announces additional defense cutbacks and program cancellations. The next day, President Yeltsin responds to Bush's initiatives with a call for inventories to be reduced to 2500 weapons each.

8 Feb 92 . . . Pakistan publicly admits its capability to produce a nuclear weapon.

Mar 92 . . . Secretaries of Defense and Energy sign charter establishing the Joint (DoD-DOE) Advisory Committee on Nuclear Weapons Surety to report to and advise the SecDef, SECENERGY and NWC on nuclear weapons systems surety matters.

9 Mar 92 . . . China accedes to the NPT.

24 Mar 92 . . . The Open Skies Agreement is signed by the Conference on Security and Cooperation in Europe (CSCE) states to open their territories for overflights to facilitate the verification of arms control treaties.

8 Apr 92 . . . France initiates a unilateral moratorium on nuclear testing for the rest of the year.

May 92 . . . Russian officials announce all tactical nuclear weapons of the former USSR (including Ukraine) have been consolidated in Russia.

1 Jun 92 . . . U.S. Strategic Air Command (SAC) becomes U.S. Strategic Command (STRATCOM), bringing, for the first time in U.S. history, the planning, targeting, and wartime employment of strategic forces under the control of a single commander (day to day training, equipping, and maintenance responsibilities for its forces remain with the services).

16-17 Jun 92 . . . At the Washington Summit, President Bush and President Yeltsin agree to pursue a treaty that will limit each nation to no more than 3500 warheads and eliminate all MIRVed ICBMs, paving the way for negotiations to begin on a START II Treaty.

2 Jul 92 . . . President Bush announces that the worldwide withdrawal of all U.S ground- and sea-launched tactical nuclear weapons is complete.

23 Sep 92 . . . U.S. conducts its last underground nuclear test.

Oct 92 . . . Fail-safe and Risk Reduction (FARR) Study, an independent, comprehensive review of DoD nuclear command and control systems, is completed.

2 Oct 92 . . . President Bush signs the FY93 Energy and Water Appropriations Bill, which includes legislation that imposes a nine month moratorium on nuclear tests, permits no more than five tests per year for safety and reliability purposes, and requires the President to take steps toward achieving a multilateral ban on all nuclear weapon tests by 30 September 1996.

19 Oct 92 . . . Russia extends its moratorium on testing to 1 July 1993.

3 Jan 93 . . . The START II Treaty is signed, pledging the U.S. and USSR to further reduce strategic offensive arms by eliminating all MIRVed ICBMs (including all “heavy” ICBMs) and reducing the overall total of warheads attributed to strategic delivery systems for each side to between 3000 and 3500. START II never enters into force.

13 Jan 93 . . . France announces an indefinite extension of its testing moratorium.

12 Mar 93 . . . North Korea, in response to the IAEA request for special inspections, announces its intention to withdraw from the NPT.

24 Mar 93 . . . South African President De Klerk announces that his nation had built six atomic weapons, but had dismantled them in 1990.

11 Jun 93 . . . Following a round of negotiations with the United States, North Korea suspends its decision to withdraw from NPT.

3 Jul 93 . . . President Clinton extends the U.S. test moratorium and initiates the Stockpile Stewardship Program (SSP).

22 Jul 93 . . . Belarus accedes to the NPT.

4 Oct 93 . . . China conducts an underground nuclear test, breaking the worldwide moratorium that had lasted a year. China continues to conduct nuclear tests until 1996.

Dec 93 . . . The Clinton Administration eliminates the SDI program, in favor of tactical defense research and development under the Ballistic Missile Defense Organization (BMDO).

Jan 94 . . . The United States, Russia, and Ukraine sign the “trilateral agreement” under which Ukraine agrees to transfer all former Soviet strategic nuclear warheads on its territory to Russia for dismantlement, in exchange for financial assistance and security assurances from the U.S., U.K. and Russia.

Jan 94 . . . The Clinton Administration announces four objectives of the Stockpile Stewardship Program: (1) assure confidence that the stockpile is safe, secure, reliable, and flexible without underground testing; (2) provide the ability to respond to continuing and evolving nuclear threats; (3) enable a reduction in the size of the production infrastructure and its environmental impact; (4) assure availability of special nuclear materials and tritium.

Jan 94 . . . Negotiations on a Comprehensive Test Ban Treaty (CTBT) begin at the Conference on Disarmament in Geneva.

14 Feb 94 . . . Kazakhstan accedes to the NPT.

Mar 94 . . . The NWCSC and NWCWSC combine to form the Nuclear Weapons Council Standing & Safety Committee (NWCSSC).

14 Mar 94 . . . President Clinton announces the extension of the U.S. testing moratorium through September 1995.

Spring 94 . . . North Korea's nuclear program leads to a confrontation with the U.S.

Sep 94 . . . President Clinton approves the Nuclear Posture Review (NPR), which codifies a U.S. policy of “lead and hedge” toward nuclear weapon reductions.

Oct 94 . . . The U.S. and North Korea settle a dispute over the latter’s nuclear program and establish the Agreed Framework, under which North Korea agrees to freeze its nuclear program and dismantle all facilities of proliferation concern in return for receiving two light water reactors and other energy-related assistance, as well as security assurances.

Oct 94 . . . President Clinton agrees to accelerate the dismantlement of nuclear weapons agreed to under START II.

5 Dec 94 . . . Ukraine accedes to the NPT.

30 Jan 95 . . . U. S. National Security Advisor announces the U.S. will continue its current testing moratorium until a CTBT enters into force, assuming a CTBT is completed by September 96. Also announces the U.S. will retract its proposal for a special “right to withdraw” from a CTBT 10 years after entry into force, noting the President considers maintenance of a safe and reliable nuclear stockpile to be of supreme national interest.

4 Apr 95 . . . Britain announces plans to retire all of its free-fall nuclear bombs by 1998, deciding to maintain a nuclear stockpile composed entirely of submarine-launched strategic and tactical missiles.

5 Apr 95 . . . President Clinton reaffirms 1978 U.S. declaration on negative security assurances.

25 Apr 95 . . . Kazakhstan completes repatriation of its nuclear stockpile, making it the first of the three non-Russian former Soviet nations party to START I to be declared “nuclear free.”

11 May 95 . . . NPT Review and Extension Conference concludes. The NPT is indefinitely extended and the parties adopt a set of “Principles and Objectives for Nuclear Nonproliferation and Disarmament,” which includes, among other things, the goal of a CTBT “no later than 1996.”

1 Aug 95 . . . JASON group releases a study that concludes the U.S. can maintain a safe and reliable nuclear stockpile without testing, as long as it engages in a program of Science-Based Stockpile Stewardship.

11 Aug 95 . . . President Clinton announces the U.S. will pursue a zero-yield CTBT. He also announces establishment of a new annual reporting and certification requirement, which examines the safety and reliability of the warheads in the stockpile and assesses whether to recommend to the President the need to conduct an underground nuclear test.

5 Sep 95 . . . France begins a series of eight (later reduced to six) nuclear tests in the South Pacific, the first being conducted at Mururoa Atoll.

Oct 95 . . . DOE announces plans to conduct a series of six subcritical tests at Nevada Test Site (NTS) -- 2 in 96, 4 in 97.

Nov 95 . . . The U.S. Army's role in nuclear weapons is reduced when the last retired Army warhead is turned over to the DOE Pantex Plant for dismantlement.

4 Dec 95 . . . Defense Nuclear Agency re-organizes under War Fighter Plans.

11 Jan 96 . . . Dual Revalidation Program is initiated.

26 Jan 96 . . . The U.S. Senate gives its advice and consent to ratification to START II, stipulating that the Treaty will not be binding on the U.S. until it is ratified by Russia and enters into force, and that the Administration will not initiate drawdowns below START I levels without first consulting the Senate.

27 Jan 96 . . . France conducts a sixth nuclear test. Two days later, French President Chirac announces the early conclusion of this series of nuclear testing and an end to all future tests.

10 Feb 96 . . . President Clinton signs the FY 96 Defense Authorization Act (PL104-106). One provision of the bill changes the title of the ATSD(AE) to Assistant to the Secretary of Defense (Nuclear & Chemical & Biological Programs) (ATSD(NCB)). Title change occurs on 4 Mar 1996.

25 Mar 96 . . . France, the U.K., and the U.S. accede to the South Pacific Nuclear Free Zone.

11 Apr 96 . . . African Nuclear-Weapon-Free-Zone Treaty opened for signature. U.S., U.K., France, and China sign Protocols to the Treaty.

1 Jun 96 . . . Ukraine announces that the last of former Soviet strategic nuclear warheads on its territory have been transferred to Russia.

4 Jun 96 . . . U.S. and France reach agreement on nuclear cooperation to enhance safety and reliability of nuclear weapons.

8 Jun 96 . . . China conducts a nuclear test and announces it will test one more device before beginning a moratorium and joining the CTBT.

8 Jul 96 . . . The International Court of Justice issues its ruling on the legality of use or threatened use of nuclear weapons, unanimously agreeing that any use or threat of use would have to comply with those provisions of the UN Charter which prohibit the use of force except in cases of self-defense. However, the majority of the judges decide that there is no current international law that universally prohibits the threat or use of nuclear weapons.

29 Jul 96 . . . China conducts its last nuclear test.

16 Sep 96 . . . France deactivates its 18 S3D nuclear missiles, eliminating the land-based portion of its nuclear arsenal.

24 Sep 96 . . . CTBT opens for signature. As of 23 March 1999, 152 states (including the U.S., five other nuclear weapon states and Israel) are signatories.

23 Nov 96 . . . Russia announces the last of its strategic nuclear warheads have been transferred out of Belarus.

10 Dec 96 . . . NATO announces it has “no intention, no plan, and no reason to deploy nuclear weapons on the territory of new members...”

19 Dec 96 . . . DOE announces plans to downsize the nuclear weapons complex by reducing the missions of the Y-12, Pantex, and Kansas City facilities and by shrinking the workforce of the entire weapons complex by 10-15%.

17 Jan 97 . . . The Secretary of Energy signs a Record of Decision, implementing the Final Environmental Impact Statement for the Continued Operations of the Pantex Plant and Associated Storage of Nuclear Weapons Components. This maintains the plant’s weapon dismantlement mission and authorizes increased on-site interim storage of plutonium components.

Feb 97 . . . The Secretary of Defense and the Acting Secretary of Energy approve the first NWC Report on Stockpile Certification and forward the Certification Memorandum to the President.

24 Feb 97 . . . Commander-in-Chief, Strategic Command (CINCSTRAT) announces that B61 nuclear bomb has been successfully modified to enable it to destroy underground targets.

11 Mar 97 . . . DOE approves start of construction for National Ignition Facility (NIF).

21 Mar 97 . . . Presidents Clinton and Yeltsin reach agreement at the Helsinki Summit on several arms control issues, namely an agreement to begin negotiations on a START III agreement (aimed at reducing strategic nuclear warheads on each side to 2,000 - 2,500) once START II has entered into force.

1 Apr 97 . . . The first six B-2 bombers are assigned to nuclear roles.

9 Apr 97 . . . The B53-1 is retired.

15 May 97 . . . The Congressionally-mandated DoD Quadrennial Defense Review is completed; it concludes that the policy and strategy to maintain U.S. nuclear forces is still correct, and the START I force posture (18 Trident SSBNs, 50 Peacekeeper ICBMs, 500 Minuteman II ICBMs, 71 B-52H bombers, and 21 B-2 bombers) is needed and will be maintained at its current budget until ratification of START II by the Russian Duma.

15 May 97 . . . The IAEA Board of Governors approves a new “Model Protocol” stipulating important changes to the IAEA nuclear safeguards regime. The strengthened safeguards verification system will focus on three elements: (1) increased access to information about a state’s nuclear activities; (2)

broader access to nuclear sites and other locations; and (3) maximum use of new and available detection technologies.

27 May 97 . . . NATO-Russia Founding Act is signed. In it, “the member States of NATO reiterate that they have no intention, no plan, and no reason to deploy nuclear weapons on the territory of new members, nor any need to change any aspect of NATO’s nuclear posture or nuclear policy -- and do not foresee any future need to do so.”

29 May 97 . . . Ground is broken for construction of the National Ignition Facility at Lawrence Livermore National Laboratory.

2 Jul 97 . . . The U.S. conducts its first “subcritical” experiment at the Nevada Test Site, named Rebound.

7 Jul 97 . . . NATO extends invitations to Poland, Hungary, and the Czech Republic to join the alliance.

22 Sept 97 . . . President Clinton submits the CTBT to the Senate for its advice and consent to ratification.

Nov 97 . . . President Clinton issues Presidential Decision Directive 60 (PDD-60) containing new guidelines for the employment of U.S. nuclear weapons, removing the requirements contained in NSDD-13 that the military must be prepared to win a protracted nuclear war.

4 Nov 97 . . . After visiting Russian nuclear facilities, CINCSTRAT announces that “the Russians have a program which is ensuring the safe, secure processes involved regarding nuclear weapons,” and that the two countries have agreed to begin brief exchanges of personnel to better monitor each other’s nuclear security arrangements in operation.

10 Nov 97 . . . The Defense Secretary announces reorganization of the DoD. The reorganization plan calls for the following: consolidation of DTSA, OSIA and DSWA into one super-agency designed to monitor treaty compliance; elimination of the ATSD(NCB) and reassigning its responsibilities to the DDRE; and placing the NSS and Field Command, DSWA within STRATCOM.

7 Apr 98 . . . France and the UK become the first nuclear powers to ratify the CTBT, which bans all nuclear weapons test explosions. The treaty was opened for signature on 24 September 1996.

30 Apr 98 . . . The U.S. Senate formally approves the plan to expand NATO to include Hungary, Poland, and the Czech Republic by a vote of 80-19.

11 May 98 . . . India conducts three underground nuclear tests, the nation’s first since 1974.

13 May 98 . . . India conducts two more sub-kiloton nuclear tests. The tests have been carried out to generate additional data for improved computer simulation of designs and for attaining the capability to carry out subcritical experiments, if considered necessary.

28 May 98 . . . Pakistan conducts five underground nuclear tests, its first nuclear detonations.

30 May 98 . . . Pakistan detonates another underground nuclear device.

16 Jun 98 . . . North Korea declares it will continue to develop, test, and export ballistic missiles, officially acknowledging a clandestine weapons trade.

31 Aug 98 . . . North Korea tests a three-stage ballistic missile, the Taepo Dong 1.

18 Sep 98 . . . Brazil accedes to the NPT. As of 3 December 1998, 185 states have signed the treaty.

2 Oct 98 . . . The Pentagon announces the establishment of a new \$1.9 billion annual budget for the Defense Threat Reduction Agency (DTRA), which will take on the responsibilities of the On-Site Inspection Agency (OSIA), the Defense Special Weapons Agency (DSWA), and the Defense Technical Security Agency (DTSA).

Nov 98 . . . The National Domestic Preparedness Office (NDPO) is opened. The NDPO mission is to coordinate all Federal efforts to assist State and local First Responders with the planning, training, equipment, and exercise necessary to respond to a conventional or non-conventional weapon of mass destruction (WMD) incident.

4 Dec 98 . . . The Defense Science Board Task Force on Nuclear Deterrence urges the Clinton Administration to improve U.S. DoD/DOE nuclear weapons programs in the face of Russia's large arsenal and the growing Chinese strategic force.

22 Dec 98 . . . The Secretary of Energy selects the Savannah River Site as the preferred site for building and operating a pit disassembly and conversion facility.

27 Dec 98 . . . Russia announces the new single-warhead, Topol-M ICBM, will be placed on combat duty.

21 Jan 99 . . . SecDef states that a national defense missile system is needed to respond to a growing missile threat from North Korea and other nations. The Clinton administration pledges \$6.6 billion over five years for this system.

1 Mar 99 . . . The Commission on Maintaining United States Nuclear Weapons Expertise releases its final report (the Chiles Report) to the Congress and Secretary of Energy, recommending twelve changes to assure that critical, well-qualified personnel are available to execute the Stockpile Stewardship Program.

18 Mar 99 . . . Congress approves the Missile Defense Bill, which states that the U.S. will deploy, as soon as it is technologically possible, an effective national missile defense system capable of defending the territory of the United States against limited ballistic missile attack.

11 Apr 99 . . . India tests an upgraded version of its Agni nuclear-capable intermediate-range ballistic missile.

13 Apr 99 . . . In response to India test, Pakistan test fires a ballistic missile, the Ghauri II, capable of carrying a nuclear warhead.

May 99 . . . The United States is allowed to inspect a suspected nuclear-weapons complex at Kumchangri in North Korea. The inspection produces no evidence that the site is being used to produce weapons.

June 99 . . . The THAAD upper-tier missile defense system performs its first successful intercept test of a ballistic re-entry vehicle.

13 Sep 99 . . . North Korea agrees to freeze its missile testing program, clearing the way for improved relations with the United States and its key Asian allies.

17 Sep 99 . . . The BMDO and the U.S. Army conduct a second successful test flight of a Patriot Advanced Capability (PAC-3) missile. The PAC-3 missile is a high-velocity, hit-to-kill missile and is the next generation Patriot missile.

30 Sep 99 . . . Workers at a Japanese nuclear plant accidentally set off a nuclear-fission chain reaction at a uranium processing plant about 75 miles northeast of Tokyo, exposing an unknown number of nearby residents to low levels of radiation.

2 Oct 99 . . . The BMDO successfully completes the first test involving a planned intercept of an ICBM. A modified Minuteman ICBM target vehicle is intercepted by a prototype NMD interceptor.

13 Oct 99 . . . The U.S. Senate rejects the Comprehensive Test Ban Treaty 51 to 48.

20 Oct 99 . . . Russia test-launches a 25-year-old ballistic missile in a series of trials aimed at insuring its outdated arsenal will be safe if its lifespan is extended.

3 Nov 99 . . . Russia announces that it tested a short-range interceptor missile for its anti-ballistic missile system in what appeared to be a symbolic warning to the U.S. not to go ahead with the national missile defense system under consideration.

Dec 99 . . . Secretary of Energy announces the results of a comprehensive internal "30 Day Review" of the Stockpile Stewardship Program (SSP), which concludes that the program is sound and developing the science, technology, and production capabilities needed to maintain the long-term safety, security, and reliability of the nation's existing nuclear weapons without underground nuclear testing.

10 Dec 99 . . . Los Alamos National Laboratory nuclear physicist Wen Ho Lee, a central figure in the U.S. government's Chinese espionage investigation, is arrested and charged with 59 counts of mishandling classified information and violating secrecy provisions of the Atomic Energy Act.

13 Dec 99 . . . The Russian Duma postpones its long-awaited debate on ratification of the START II treaty, signed in 1993 by Russia and the United States.

14 Dec 99 . . . Russia launches a new strategic missile, the Topol-M ICBM, and the Russian military declares that fitting multiple warheads to the Topol-M would be part of Moscow's response if the United States walks out of the Anti-Ballistic Missile Treaty.

16 Dec 99 . . . A U.S.-led consortium signs a \$4.6 billion contract to build two nuclear reactors in North Korea, as part of a 1994 deal under which North Korea agreed to freeze its suspected nuclear weapons program.

2000s

2000 . . . The National Nuclear Security Administration is established as a separately organized agency within the Department of Energy responsible for the management and security of the nation's nuclear weapons, nuclear nonproliferation, and naval reactor programs.

11 Jan 00 . . . Acting President Vladimir Putin approves Russia's new national security concept, which calls for a lowering of the threshold for using nuclear weapons to counter what it sees as a growing military threat.

7 Feb 00 . . . The Clinton Administration agrees to give Russia an additional \$100 million to safeguard nuclear materials and to conduct research in return for Russia's promise to stop making plutonium from civilian reactor fuel, and to end its transfers of nuclear technology to Iran.

10 Feb 00 . . . DOE Stockpile Stewardship Program (SSP) scientists at Lawrence Livermore National Laboratory conduct the first-ever, three-dimensional computer simulation of a nuclear trigger explosion on the laboratory's IBM Pacific Blue supercomputer.

23 Apr 00 . . . President-elect Vladimir Putin signs a decree formally approving Russia's new military doctrine, which envisages the possible first use of nuclear weapons by Russia to deter a mass conventional attack.

14 Dec 00 . . . Russia and the United States sign an agreement to end inspections of each other's missile assembly plants, which began under the INF treaty.

16 Dec 00 . . . Russia and the United States sign an agreement aimed at preventing accidental missile launches by either country, by expanding a joint warning center.

17 Jan 01 . . . India tests the Agni-2, an intermediate-range ballistic missile capable of carrying nuclear warheads and hitting anywhere in Pakistan, as well as parts of western China.

22 Jul 01 . . . Presidents Bush and Russian President Putin agree at Genoa's G8 meeting to work towards a disarmament framework that would reduce nuclear weapons on both sides, while allowing the U.S. to build a missile defense shield.

11 Sep 01 . . . The Pentagon and the World Trade Center are the targets of a terrorist attack.

Dec 01 . . . The DoD completes the second Nuclear Posture Review, which considers the new security environment, establishes a new relationship with Russia, and introduces the New Triad with a reduced, capabilities-based force.

14 Dec 01 . . . President Bush announces that the United States will withdraw from the ABM Treaty.

Jan 02 . . . The Ballistic Missile Defense Office (BMDO) becomes the Missile Defense Agency (MDA).

25 Jan 02 . . . India successfully test-fires the newest version of a surface-to-surface missile, the Agni II, capable of carrying a nuclear warhead and having a range of up to 420 miles.

24 May 02 . . . President Bush and President Vladimir Putin of Russia sign the Treaty of Moscow, which commits both sides to reduce their nuclear arsenals of operationally-deployed strategic nuclear warheads to between 1,700 and 2,200 by the end of 2012.

13 Jun 02 . . . The United States withdraws from the Anti-Ballistic Missile Treaty.

Jul 02 . . . The results of the Federal Advisory's Committee's End-to-End Review of the Nuclear Command and Control System (NCCS) are released.

10 Jan 03 . . . North Korea withdraws from the Non-Proliferation Treaty.

29 Jan 03 . . . Energy Secretary Spencer Abraham proposes a 30 percent increase to \$1.3 billion for nonproliferation programs assisting Russia secure its nuclear material.

19 Dec 03 . . . Libya halts its "unconventional" weapons program.

6 Mar 03 . . . The U.S. Senate unanimously approves the Moscow Treaty with Russia.

10 Apr 03 . . . North Korea's withdrawal from the Nuclear Non-Proliferation Treaty becomes official under Article X of the treaty.

22 Apr 03 . . . U.S. officials announce that Los Alamos National Laboratory had resumed production of plutonium pits for nuclear weapons for the first time in 14 years.

30 Oct 03 . . . The Director of the IAEA warns that between 35–40 countries possess the capability to build nuclear weapons.

19 Dec 03 . . . Libyan leader Muammar Al Qadhafi agrees to "disclose and dismantle" all WMD programs and to "immediately and unconditionally" allow international inspections.

6 Jan 04 . . . Libya ratifies the CTBT.

4 Feb 04 . . . Abdul Qadeer Khan signs a confession admitting that he provided Iran, North Korea and Libya with the designs and technology to produce the fuel for nuclear weapons over the last 15 years.

2005 . . . DPRK announces it has nuclear weapons.

1 Apr 05 . . . Los Alamos National Laboratory initiates the process of updating the W76 warhead towards refurbishing the aging weapon by 2007.

May 05 . . . The Reliable Replacement Warhead (RRW) Project Officers Group and the Technology Coordinating Committee are established.

19 Sep 05 Final Peacekeeper ICBM is decommissioned at F. E. Warren Air Force Base, WY.

7 Oct 05 . . . The last of some 62,000 waste shipments departs Rocky Flats, Colorado; signaling the end of a massive 10-year cleanup effort at the former nuclear weapons facility.

8 Sep 06 . . . The Central Asian Nuclear-Weapon-Free Zone treaty is signed.

8 Oct 06 . . . Seismic detectors record a large explosion inside North Korea, which is followed by an announcement by North Korea's leader Kim Jong-il that his country had successfully detonated a nuclear weapon.

26 Oct 06 . . . The U.S Senate eliminates research funding for the Robust Nuclear Earth Penetrator in the FY 2006 Energy and Water Development Appropriations bill.

4 Dec 06 . . . British Prime Minister Tony Blair presents his plan to upgrade Britain's nuclear arsenal by creating a new fleet of submarines.

18 Dec 06 . . . Six-Party (U.S., North Korea, China, Korea, Russia and Japan) Talks resumed in Beijing, but suspended within five days without any beneficial agreement.

4 Jan 07 . . . Henry Kissinger, George P. Schultz, William J. Perry, and Sam Nunn co-author the article "A World Free of Nuclear Weapons" with urging the U.S. government to lead the world in achieving the goals of the Nuclear Non-Proliferation Treaty.

2 Mar 07 . . . NNSA announces that the Nuclear Weapons Council approved a design for a joint NNSA and U.S. Navy program to provide a replacement warhead for a portion of the nation's sea-based nuclear weapons

31 Jul 07 . . . The first application in 30 years to build a new U.S. nuclear power plant was filed with the Nuclear Regulatory Commission.

29 Aug 07 . . . Six AGM-129 ACM cruise missiles were mistakenly loaded on a United States Air Force B-52H heavy bomber at Minot AFB and transported to Barksdale AFB.

6 Sep 07 . . . Israel conducts an air-strike of a suspected Syrian nuclear facility in Al-Kibar.

2008 . . . The United States and the United Kingdom celebrate the 50th anniversary of the Mutual Defense Agreement.

25 Mar 08 . . . Pentagon officials announce that the U.S. military has regained control of four non-nuclear nose cone assemblies for a Minuteman missile mistakenly sent to Taiwan in 2006.

27 Jun 08 . . . North Korea submits a 60-page declaration covering its capabilities in nuclear power and nuclear weapons, and destroys the cooling tower at its Yongbyon nuclear complex.

Jul 08 . . . 600 tons of yellowcake removed from Tuwaitha, Iraq.

31 Oct 08 . . . The United States and the Czech Republic sign an agreement outlining terms for deploying a new missile-tracking radar station on Czech territory.

1 Nov 08 . . . The U.S. Air Force establishes the new Air Staff office at the Pentagon to oversee and integrate the service's nuclear weapons policy.

15 Dec 08 . . . The Congressional Commission on the Strategic Posture of the United States issues an Interim Report.

16 Dec 08 . . . The NNSA plans to reduce U.S. nuclear weapons facilities to five sites instead of seven.

30 Dec 08 . . . President George W. Bush signs the instrument of ratification for the Additional Protocol to the U.S. Safeguards Agreement with the International Atomic Energy Agency.

21 Mar 09 . . . The Central Asian Nuclear-Weapon-Free Zone (CANWFZ) Treaty enters into force.

1 Apr 09 . . . U.S. President Barack Obama and Russian President Dmitri Medvedev release a joint statement agreeing to start new talks on reducing their nuclear stockpiles.

4 Apr 09 . . . The North Atlantic Treaty Organization meets in Strasbourg, France for its 60th anniversary celebration.

5 Apr 09 . . . President Obama makes remarks on a world without nuclear weapons at Hradcany Square in Prague, Czech Republic.

4-15 May 09 . . . The third and final preparatory committee for the 2010 Treaty on the Non-Proliferation of Nuclear Weapons (NPT) review conference was held in New York.

6 May 09 . . . The Congressional Commission on the Strategic Posture of the United States issues its final report.

25 May 09 . . . North Korea performs second nuclear test and launches ballistic missiles.

6 Jul 09 . . . President Obama and President Medvedev release a Joint Understanding for the START Follow-on Treaty.

15 Jul 09 . . . The African Nuclear-Weapon-Free-Zone Treaty (Pelindaba Treaty) enters into force.

Sep 09 . . . Existence of an Iranian nuclear facility at Qom is revealed by the IAEA.

24 Sep 09 . . . The United Nations Security Council Summit on Nuclear Nonproliferation and Nuclear Disarmament unanimously adopts UNSC resolution 1887 to work towards a world free of nuclear weapons.

24 Sep 09 . . . CTBTO Article XIV Conference commences. The United States participated in discussions after a 10-year absence from the biannual conferences, and U.S. Secretary of State Hillary Clinton reaffirmed the United States' commitment to ratify the CTBT.

5 Dec 09 . . . The 1991 Strategic Arms Reduction (START) Treaty expires without a formal successor or binding interim agreement in place. The United States and Russia issued a Joint Statement the day before START's expiration pledging to continue to work together in the spirit of the treaty.

2010s

Jan 10 . . . Iran announces production of 20 g of HEU.

6 Apr 10 . . . The United States releases the 2010 Nuclear Posture Review.

8 Apr 10 . . . U.S. President Barack Obama and Russian President Dmitri Medvedev sign the New START agreement to replace the expired Strategic Arms Reduction Treaty.

12-13 Apr 10 . . . U.S. President Barack Obama hosts a Nuclear Security Summit with the heads of states from 47 nations. The summit focused mainly on the threat of nuclear terrorism and the need to secure loose nuclear material.

3-28 May 10 . . . The 2010 Review Conference of the Parties to the Treaty on the Nonproliferation of Nuclear Weapons is held at the United Nations headquarters in New York.

Jun 10 . . . Reports surface that Myanmar is seeking to develop a clandestine nuclear program with the intent to produce a nuclear bomb.

Oct 10 ... UK releases its 2010 Strategic Defence and Security Review, announcing it would reduce its requirement for operationally-available nuclear warheads from fewer than 160 to no more than 120, and reduce its overall nuclear warhead stockpile ceiling from not more than 225 to not more than 180 by the mid-2020s.

22 Dec 10 . . . The U.S. Senate ratifies the New START.

2011 . . . ATSD(NCB) re-designated as ASD(NCB).

2011 . . . Long Range Strike (B-21) Bomber program initiated.

2011 . . . Columbia class (SSBN(X)) ballistic missile submarine program initiated.

5 Feb 11 . . . U.S. Secretary of State Hillary Clinton and Russian Foreign Minister Sergei Lavrov exchange the New START instruments of ratification; the treaty comes into effect.

7 Mar 11 . . . George Shultz, William Perry, Henry Kissinger, and Sam Nunn publish an op-ed calling for the creation of a safer and more comprehensive form of deterrence in the post-Cold War world.

11 Mar 11 . . . Following a major earthquake, a 15-metre tsunami disabled the power supply and cooling of three Fukushima Daiichi reactors, causing a nuclear accident.

2012 . . . B61-12 Life Extension Program initiated.

26-27 Mar 12 . . . The 2012 Nuclear Security Summit is held in Seoul, SK. In addition to the 47 countries that participated in the Washington Summit, six new countries – Azerbaijan, Denmark, Gabon, Hungary, Lithuania, and Romania – joined the Seoul Summit. The 2012 Summit directed efforts at three main issues: cooperative measures to combat the threat of nuclear terrorism; protection of nuclear materials and related facilities; and prevention of illicit trafficking of nuclear materials.

2013 . . . The United States retires Tomahawk nuclear submarine-launched cruise missile.

12 Feb 13 . . . DPRK claims to have successfully detonated miniaturized nuclear device (3rd Test).

24-25 Mar 14 . . . The third Nuclear Security Summit held in The Hague from March 24-25, 2014 assembled leaders from 53 unique countries and four international organizations to discuss three key objectives: 1) strengthening the global nuclear security architecture to bolster accountability measures imposed on states and to prevent nuclear procurement by terrorists; 2) elevating the importance of cooperation between governments and nuclear industry; and 3) developing a concrete and actionable plan for implementing objectives enunciated (but not yet enacted) through the Seoul Communiqué and Washington Work Plan.

29 Jul

14 . . . The United States declares Russia in violation of the INF Treaty.

Sep 14 . . . SSBN 4000th Patrol Ceremony held in Kings Bay Georgia.

17 Oct 14 . . . India test launches a nuclear-capable cruise missile.

14 Nov 14 . . . Secretary of Defense Chuck Hagel announces the results of the Nuclear Enterprise Review during a press briefing at the Pentagon stating the review found systemic problems based on a lack of focus and resources. “America’s nuclear deterrent remains safe, secure and effective,” Hagel assured, stating the DOD has been taking action on the challenges over the past several months. “The nuclear mission plays a critical role in ensuring the nation's safety. No other enterprise we have is more important.”

Dec 2014 . . . India begins sea trials for the ballistic missile submarine INS Arihant.

14 Jul 15 . . . The P5+1 (China, France, Germany, Russia, the United Kingdom, and the United States), the European Union (EU), and Iran reached a Joint Comprehensive Plan of Action (JCPOA) to ensure that

Iran's nuclear program will be exclusively peaceful. The JCPOA came into effect October 18, 2015 and January 16, 2016, marked Implementation Day of the JCPOA.

Jan 16 . . . China conducts first SSBN patrol.

26 Jan 16 . . . DPRK claims to test a "miniaturized" hydrogen bomb (4th test).

31 Mar - 1 Apr 16 . . . The fourth and final Nuclear Security Summit held in Washington, DC. Previous Summits have resulted in concrete improvements in the security of nuclear materials and stronger international institutions that support nuclear security. Recognizing that the international community cannot risk a nuclear terrorist attack, the final Nuclear Security Summit continued discussions on the evolving threat and addressed steps that can be taken together to minimize the use of highly-enriched uranium, secure vulnerable materials, counter nuclear smuggling and deter, detect, and disrupt attempts at nuclear terrorism.

Apr 16 . . . Pakistan conducts longest nuclear-capable ballistic missile test to date (>1,700 miles)

Aug 16 . . . Long Range Standoff (LRSO) cruise missile program initiated.

Aug 16 . . . Ground Based Strategic Deterrent (GBSD) program initiated.

24 Aug 16 . . . DPRK tests SLBM

9 Sep 16 . . . DPRK conducts "higher level" nuclear warhead test causing 5.3-magnitude tremor (5th test).

4 Jan 17 . . . Columbia class ballistic missile submarine granted successful Milestone B approval.

8 Jan 17 . . . Pakistan conducts 1st nuclear capable SLCM launch.

25 Jan 17 . . . Pakistan conducts 1st MIRV'd ballistic missile launch.

Sep 17 . . . The United States meets New START central limits.

3 Sep 17 . . . DPRK claims to test hydrogen bomb (6th test).

23 Sep 17 . . . Iran tests new ballistic missile reportedly capable of carrying multiple warheads.

2018 . . . The United States and the United Kingdom celebrate the 60th anniversary of the Mutual Defense Agreement.

Feb 18 . . . New START Treaty central limits come into force.

2 Feb 18 . . . The United States releases its 2018 Nuclear Posture Review.

1 Mar 18 . . . President Putin outlined development of strategic nuclear-capable weapons including the Sarmat ICBM; two hypersonic missiles, the Kinzhal ALBM and the Avangard glide vehicle; a nuclear-powered unmanned underwater vehicle; and a nuclear-powered cruise missile.

8 May 18 . . . U.S. announces withdrawal from JCPOA, stating it failed to protect America's national security interests. Subsequently, the United States re-imposed sanctions targeted at critical sectors of Iran's economy, such as energy, petrochemical, and financial sectors.

12 Jun 18 . . . U.S. President Donald Trump meets with North Korean leader Kim Jong Un in Singapore in the first summit between the sitting leaders of the two countries. Trump and Kim sign a joint declaration agreeing to "establish new US-DPRK relations."

20 Aug 18 . . . The IAEA annual report on the application of safeguards in North Korea states that the "continuation and further development of the DPRK's nuclear programme and related statements by the DPRK are a cause for grave concern."

2 Feb 19 . . . U.S. suspends its obligations under the INF Treaty and provides formal notice the United States would withdraw from the treaty in six months due to the Russian Federation's failure to return to full and verifiable compliance with the Treaty.

4 May 19 . . . President Putin signs executive order suspending Russia's compliance with the INF Treaty and on 3 July, 2019 signed it into law.

2 Aug 19 . . . United States officially withdraws from the INF Treaty.

2020s

4 Feb 20 ... U.S. announces the Navy has fielded the W76-2 low-yield SLBM warhead. The 2018 Nuclear Posture Review identified a requirement to "modify a small number of submarine-launched ballistic missile warheads" to provide the United States a prompt, more survivable low-yield strategic weapon to strengthen deterrence.

22 Nov 20 . . . United States formally withdraws from the Open Skies Treaty.

22 Jan 21 ... The Treaty on the Prohibition of Nuclear Weapons (TPNW) enters into force following deposit of the 50th instrument of ratification. The United States has not signed the TPNW.

26 Jan 21 . . . U.S. President Joe Biden and Russian President Vladimir Putin agree to work urgently to complete the extension of the New START treaty by Feb 5. This would extend the treaty through 4 Feb 2026.

10 Feb 21 . . . Pakistan test-fires a short range surface-to-surface ballistic missile.

Mar 21 ... UK releases its Integrated Review, which announced that the UK would move to an overall nuclear weapon stockpile of no more than 260 warheads—an increase from its previous ceiling of 225 and its goal of not more than 180 by the mid-2020s—in recognition of the evolving security environment and developing range of threats.

7 Jun 21 . . . Russian President Vladimir Putin signs bill withdrawing Russia from the Open Skies Treaty.

16 Jun 21 . . . U.S. President Joe Biden and Russian President Vladimir Putin issue joint statement reiterating their commitment to strategic stability and announced plans to resume strategic stability talks.