In between 1946 and 1958, the United States exploded 67 nuclear weapons on Bikini and Enewetak in the Marshall Islands. The total yield of these tests is equal to exploding one and a half Hiroshima size bombs every day for twelve years.

The March 1, 1954 hydrogen test, code named Bravo, was the most powerful and harmful of the Marshall Island nuclear tests. Bravo was one thousand times as powerful as the nuclear explosion at Hiroshima.

Bravo caused radioactive fallout to cover the People and Lands of my home. The day of Bravo, March 1, 1954, was my mother's eighth birthday. Like all the residents of Rongelap, my mother was exposed to radiation. The fallout caused radiation burns to all the residents of Rongelap.

Since that time, my mother has had thyroid surgery. All the Rongelapese who were children at the time of the Bravo explosion have had thyroid surgery.

To read the full text, please visit: http://www.wagingpeace.org/articles/2005/08/18_ralphtink-outside-the-bomb.htm.

SIR JOSEPH ROTBLAT: A LEGACY OF PEACE (1908 - 2005) by David Krieger

Joseph Rotblat was one of the great men of the 20th century. He was a man of science and peace. Born in Warsaw, Poland in 1908, he was one of those rare individuals who, like Rosa Parks or Nelson Mandela, comes to an intersection with history and courageously forges a new path. In Joseph's case, the intersection with history arrived in 1944 while he was working on the Manhattan Project, the US project to develop an atomic bomb.

Joseph had worked as a scientist toward the creation of an atomic weapon, first in the UK at the University of Liverpool and then at Los Alamos, New Mexico. When he learned in late 1944 that Germany would not succeed in developing an atomic bomb, he believed there was no longer reason to continue work on creating a US bomb. For him, there was only one reason to create an atomic weapon, and that was to deter the German use of such a weapon during World War II. If the Germans would not have an atomic weapon, then there was no reason for the Allies to have one. Joseph was the only scientist to leave the Manhattan Project on moral grounds.

To read the full article, please visit: http://www.wagingpeace.org/articles/2005/09/01_krieger_sir-joseph-rotblat.htm.

ROOTS AND SHOOTS DAY OF PEACE

On Saturday, 24 September 2005, Roots & Shoots groups around the world will celebrate the Roots & Shoots Day of Peace, in honor of the United Nations International Day of Peace. Members of Roots & Shoots, the Jane Goodall Institute's humanitarian and environmental program for youth, express their desire for peace by flying giant peace dove puppets, participating in peace parades, and spreading their commitment to peace in their communities as a
celebration of promoting peace and understanding all around the world. For more information and ideas for Roots & Shoots Day of Peace and instructions on how to make the giant peace dove puppets, please visit www.jane-goodall.org/peace-day.

Non-Proliferation

COOK ISLANDS RATIFIES NUCLEAR TEST BAN TREATY

On 8 September 2005, the Comprehensive Test Ban Treaty Organization announced that the Cook Islands has ratified the Comprehensive Nuclear Test Ban Treaty, making the country the 122nd nation to ratify the treaty. To date, CTBT has 33 of the 44 ratifications needed to bring the treaty into force. The US and China still have not ratified the treaty.

In related news, in August, Egypt rejected the International Atomic Energy Agency's request for the country to sign the CTBT. According to Egyptian Foreign Minister Ahmed Aboul Gheit, "Egypt's ratification of the (test ban) treaty is linked to the extent of developments that may occur in regional and international circumstances, including the possibility that Israel may join the [Nuclear Nonproliferation Treaty]."


Proliferation

PENTAGON REVISES NUCLEAR STRIKE DOCTRINE

The Pentagon's Joint Chiefs of Staff have drafted a revised doctrine for the use of nuclear weapons that envisions commanders requesting presidential approval to use them to preempt an attack by a nation or a terrorist group using weapons of mass destruction. The draft also includes the option of using nuclear arms to destroy known enemy stockpiles of nuclear, biological or chemical weapons.

The draft doctrine, which has not yet been finally approved by Defense Secretary Donald H. Rumsfeld, would update rules and procedures governing use of nuclear weapons to reflect a preemption strategy first announced by the Bush White House in its Nuclear Posture Review that was leaked to the media in January 2002. The strategy was outlined in more detail at the time in classified national security directives. At a White House briefing in 2003, a spokesman said the US would "respond with overwhelming force" to the use of weapons of mass destruction against the United States, its forces or allies, and said "all options" would be available to the president.

The new draft doctrine, entitled "Doctrine for Joint Nuclear Operations" and dated 15 March 2005, would provide authoritative guidance for commanders to request presidential approval for using nuclear weapons, and represents the Pentagon's first attempt to revise procedures to reflect the Bush preemption doctrine. A previous version, completed in 1995 during the Clinton administration, contains no mention of using nuclear weapons preemptively or specifically against threats from weapons of mass destruction.

Written under the direction of Air Force Gen. Richard B. Myers, chairman of the Joint Chiefs of Staff, the draft document is unclassified and available online at http://www.globalsecurity.org/wmd/library/policy/dod/jp3_12fc2.pdf.

According to Navy Commander Dawn Cutler, it is expected to be signed within a few weeks by Air Force Lt. Gen. Norton A. Schwartz, director of the Joint Staff. Meanwhile, the draft is going through final coordination with the military services, the combatant commanders, Pentagon legal authorities and Rumsfeld's office.

A "summary of changes" included in the draft identifies differences from the 1995 doctrine, and says the new document "revises the discussion of nuclear weapons use across the range of military operations." The first example for potential nuclear weapon use listed in the draft doctrine is against an enemy that is using "or intending to use WMD" against US or allied, multinational military forces or civilian populations. Another scenario for a possible nuclear preemptive strike is in case of an "imminent attack from adversary biological weapons that only effects from nuclear weapons can safely destroy."

That and other provisions in the document appear to refer to nuclear initiatives proposed by the administration that Congress has thus far declined to fully support. For example, last year, Congress refused to fund research toward development of nuclear weapons that could destroy biological or chemical weapons materials without dispersing them into the atmosphere.

The draft document also envisions the use of nuclear weapons for "attacks on adversary installations including WMD, deep, hardened bunkers containing chemical or biological weapons." However, Congress last year cut the funding for a study to determine the viability of the Robust Nuclear Earth Penetrator warhead (RNEP) - also known as the so-called "bunker buster" - that the Pentagon has claimed it needs to attack hardened, deeply buried weapons sites.

The new draft doctrine explains that despite the end of the Cold War, proliferation of weapons of mass destruction "raises the danger of nuclear weapons use." It says that there are "about thirty nations with WMD programs" along with "non-state actors [terrorists] either independently or as sponsored by an adversarial state."

To meet that situation, the document says that "responsible security planning requires preparation for threats that are
possible, though perhaps unlikely today." To deter the use of weapons of mass destruction against the United States, the draft doctrine says preparations must be made to use nuclear weapons and show determination to use them "if necessary to prevent or retaliate against WMD use."

The draft says that to deter a potential adversary from using such weapons, that adversary's leadership must "believe the United States has both the ability and will to pre-empt or retaliate promptly with responses that are credible and effective." The draft also notes that US policy in the past has "repeatedly rejected calls for adoption of 'no first use' policy of nuclear weapons since this policy could undermine deterrence."

On 10 September, Representative Ellen Tauscher (D-California), a member of the House Armed Services Committee who has been a leading opponent of the RNEP program, said the draft was "apparently a follow-through on their nuclear posture review and they seem to bypass the idea that Congress had doubts about the program." She added that members "certainly don't want the administration to move forward with a [nuclear] preemption policy" without hearings, closed door if necessary. A spokesman for Senator John W. Warner (R-Virginia), chairman of the Senate Armed Services Committee, said on 10 September that his committee has not yet received a copy of the draft doctrine.

Hans M. Kristensen, a consultant to the Natural Resources Defense Council, who discovered the document on the Pentagon Web site, said that it "emphasizes the need for a robust nuclear arsenal ready to strike on short notice including new missions." Kristensen, who has specialized for more than a decade in nuclear weapons research, said a final version of the doctrine was due in August but has not yet appeared. According to Kristensen, "This doctrine does not deliver on the Bush administration pledge of a reduced role for nuclear weapons. It provides justification for contentious concepts not proven and implies the need for RNEP."

One reason for the delay may be concern about raising publicly the possibility of preemptive use of nuclear weapons, or concern that it might interfere with attempts to persuade Congress to finance the RNEP and other specialized nuclear weapons in the Fiscal Year 2006 budget.

In April 2005, Secretary of Defense Rumsfeld appeared before the Senate Armed Services Committee to request funding for RNEP. He said the money was for research and not to begin production on any particular warhead. According to Rumsfeld, "The only thing we have is very large, very dirty, big nuclear weapons. It seems to me studying it [the RNEP] makes all the sense in the world."


GLOBAL NUCLEAR STOCKPILES COULD CREATE 300,000 BOMBS

According to the latest scientific assessment of countries' nuclear stockpiles published on 7 September 2005 by the Institute for Science and International Security (ISIS), the world has made enough explosives for more than 300,000 nuclear bombs.

Stores of plutonium are growing, and there are new dangers from two lesser-known nuclear explosives, neptunium-237 and americium. Experts are worried that terrorists could steal enough to trigger a nuclear catastrophe. Nuclear stores in Europe and Japan could also be vulnerable to theft.

The updated global nuclear inventory reveals that there were 1830 tons of plutonium in 35 countries at the end of 2003. That is enough to make 225,000 nuclear bombs. And according to the ISIS report, the total amount of plutonium, which is created in nuclear reactors, is increasing by 70 tons per year. Most of it is combined with radioactive waste in spent fuel, and is hence relatively difficult to access.

In the report, ISIS points out that 238 tons have been extracted by reprocessing plants, and that this total is expected to rise to 286 tons by 2010. The largest stockpile - 90 tons - will be owned by the UK, followed by Japan(62 tons), Russia (50), France (48) and Germany (27).

According to ISIS President David Albright, efforts to reduce these stockpiles by blending the plutonium into mixed oxide (MOX) fuel for power reactors are "not going well." World stores of highly enriched uranium, however, are on the decline, though there were still 1900 tons in more than 50 countries, which is enough for over 75,000 bombs.
The ISIS report also highlights the risks from neptunium-237 and americium, which declassified information from the US government suggests can be made into bombs. At the end of 2003, there were more than 140 tons of the two materials in 32 countries. If separated from other wastes, that would be enough for 5,000 weapons.

The estimates of nuclear stockpiles made by ISIS are widely regarded as amongst the most authoritative available. For more information, visit: [http://www.isis-online.org/](http://www.isis-online.org/).


**TRITIUM RODS SENT TO SAVANNAH RIVER SITE**

The US Department of Energy (DOE) has confirmed that the Savannah River Site (SRS) in South Carolina has received its first shipment of nuclear rods containing tritium, a radioactive gas key to nuclear weapons. The special rods underwent the nuclear radiation process in a civilian reactor, thus clearly demonstrating that commercial nuclear power reactors can indeed be used as an integral part of a nuclear weapons program.

According to Tom Clements, an independent nuclear consultant, "This whole program sends out a dangerous signal internationally - that it's acceptable to produce nuclear weapons materials in commercial reactors. At a time when concerns about proliferation of nuclear materials are rising, the US should not be engaged in a program that affirms the nuclear weapons-nuclear power connection. While the US wags a finger at Iran for the perceived risks of its nuclear power program it is silently demonstrating that nuclear power programs do indeed present an obvious proliferation risk."

The shipment was received in late August or early September and is now stored in the K-Area site of the now-closed K-Reactor (where weapons plutonium is being stored).

The Tritium Producing Burnable Absorber Rods (TPBARs) were irradiated in the Tennessee Valley Authority's Watts Bar reactor and were shipped to SRS after a period of cooling. The DOE anticipates extracting the tritium in July 2007, if the new Tritium Extraction Facility (TEF) becomes operational. TEF is the now undergoing start-up testing and, as of early August, the DOE said that the "base-line" cost of the facility was $506 million. TEF and other tritium handling facilities are located adjacent to the H-Canyon reprocessing plant at SRS. Existing tritium facilities at SRS, locally known as "The Bomb Plant," receive and recharge tritium canisters removed from nuclear weapons.

Tritium, a radioactive gas which boosts the explosive power of fission weapons and is used in thermonuclear weapons, has a half-life of 12.5 years, thus requiring its replenishment. No emergency need for the material has been publicly demonstrated by the DOE, calling into question the basis for the program. Given continued nuclear weapons dismantlement there is no need for new tritium, though the DOE and the Pentagon likely want to at least demonstrate production and extraction capabilities even if the program ends up operating far below capacity.

The production of the tritium in Watts Bar is the first production of tritium since the K-Reactor at SRS was shut down in 1988. A large protest movement, led in large part by Greenpeace, was successfully mounted to prevent the aging reactor's restart. Then Secretary of Energy James Watkins eventually halted the K-Reactor restart due to safety questions and lack of need for tritium given the large stockpile of material.


**Nuclear Insanity**

**JFK ADMINISTRATION CONSIDERED NUCLEAR ATTACK ON CHINA**

Declassified tapes released from the John F. Kennedy administration feature a conversation among the 38th president and his aides regarding a potential nuclear attack on China.

On the tapes, Defense Secretary Robert S. McNamara says that nuclear weapons would be necessary "to carry out that commitment against any substantial Chinese attack [on India].” JFK says in response, "We will defend India.” However, it is unclear if he is advocating using nuclear weapons.

McNamara, now an avowed nuclear abolitionist, told the New York Times he was unable to recall the conversation, "but it is probably correct.”
The conversation refers to the China-India War of 1962, in which China attacked India after failing to reach political accommodation on disputed territory along the Himalayan border. After advancing deep into India, Chinese troops withdrew, and the country declared a unilateral cease fire in November 1962. Kennedy and his aides discussed the possibility of a nuclear attack in light of the possibility that China would attack for a second time.


### RADIOACTIVE Waste Removed from Frozen RADIOACTIVE Pond

A radioactive pond in Oak Ridge, Tennessee that has remained frozen for seven years was recently unfrozen and excavated. Contamination in the pond was removed to the Department of Energy's (DOE) Oak Ridge landfill 10 miles away.

A project of the Oak Ridge National Laboratory, the pond was frozen in 1998 to prevent stored nuclear wastes on the lab grounds from escaping and damaging the surrounding environment. Nuclear wastes from the facility's old test reactor were originally stored in the 30-foot-deep plot in the 1950s, and it was backfilled with clay and other materials and capped with asphalt about 20 years ago. Contamination began to threaten to leak into nearby streams, so officials decided to freeze the soil and groundwater in a 30-foot-deep plot.


### Radiological Survey Group Finds Plutonium 'Hot Spots' in Rocky Flats

The Tennessee based Oak Ridge Institute for Science and Education (ORISE), an independent radiological survey group, has found "hot spots" of plutonium across portions of the former Rocky Flats nuclear weapons site in Colorado. Kaiser-Hill Co., the cleanup contractor for the Department of Energy (DOE), maintains the "hot spots" have been remediated.

The discovery is expected to raise questions about DOE's plan to finish cleanup operations at Rocky Flats later this year and then transform the site into a wildlife refuge. ORISE was hired by the DOE to review the cleanup, which Kaiser-Hill Co. plans to complete by 31 October.

ORISE Director Eric Abelquist said in an interview that his team recently found "a dozen or so" plutonium hot spots across two areas that they surveyed inch-by-inch with handheld scanners. Abelquist said the "hot spots" were "three to five times" more radioactive than the threshold in the Rocky Flats Cleanup Agreement, which governs remediation of the site. The "hot spots" were found within the site's former "industrial area," which would not be part of the wildlife refuge.

According to Abelquist, the discoveries "may be indicative" of hot spots in other parts of the 6,200-acre site. According to Inside Energy Extra, the DOE has, in fact, recently found a "hot spot" in the site's "buffer zone," where the public will eventually be granted access. A Kaiser-Hill Co. spokesman took issue with ORISE's findings, saying the cleanup agreement allows Kaiser-Hill Co. to "average" contamination levels over a given area. He also said the hot spots that ORISE found do not constitute a public health threat. According to the Kaiser-Hill Co. spokesman, "We've met our commitments [and] we stand behind our work. This is going to be an extremely protective cleanup."


### Dutch Twice Abandoned Plans to Prosecute A.Q. Khan at CIA Insistence

On 9 August 2005, Ruud Lubbers, the former Prime Minister of the Netherlands, said that the US Central Intelligence Agency asked his country to forgo prosecution of former top Pakistani nuclear scientist Abdul Qadeer Khan in the 1970s and 1980s for allegedly making illegal nuclear transfers from a Dutch company for which he worked. According to Lubbers, "The American intelligence applied one of their common tactics. They said, 'Give us all the information and don't arrest him, let the man go. We'll follow him and uncover more details.' I doubted it was the right course to let him go to get more information." Lubbers was prime minister of the Netherlands from 1982-1994.


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**Nuclear Insecurity**

### Pentagon Stages Nuclear Terrorism Simulation

On 21 August 2005, Virginia's Fort Monroe-based Joint Task Force-Civil Support led a drill in Washington DC to simulate the effects of a terrorist attack using an improvised nuclear bomb. The drill involved thousands of civilians, military personnel, and both local and federal officials.

The bomb was "detonated" in Charleston, South Carolina, killing 10,000, injuring 30,000, and exposing as many as 100,000 people to serious levels of radiation. This was one of many similar simulations scheduled to take place nationwide in coming months and will focus on 15 other scenarios involving nuclear attacks carried out by terrorists.

FORGOTTEN RADIOACTIVE MATERIAL FOUND IN SOUTHEAST ASIA

Unsecured radioactive materials have been discovered in two unidentified Southeast Asian countries. According to the Associated Press, researchers from Australia, which is part of an initiative to secure radioactive materials used in medicine and industry, discovered the material. The Australian Nuclear Science and Technology Organization has been working with the involved countries to secure the material.

According to Ron Cameron, the organization’s operations chief, “These were sources that were no longer in use and nobody seemed to own. We’re now working with them (the countries) to either send them back to the manufacturers or send them to a secure location.”

Cameron said that defunct private companies that used radioactive materials sometimes “don’t look after their source properly.” According to Cameron, the material could be used to make a radiological “dirty bomb.” However, Cameron said, “It is more likely that terrorists would steal a source rather than just come across one that [has] been abandoned or forgotten.”


Missiles and Missile Defense

INDIA, PAKISTAN AGREE ON BALLISTIC MISSILE TEST NOTIFICATION

During discussions on nuclear confidence building measures, Indian and Pakistani officials agreed to Pre-Notification of Flight Testing of Ballistic Missiles. The agreement, reached on 6 August 2005, requires each state to notify the other before flight testing a ballistic missile in order to reduce the risk of accidental or unauthorized use of a nuclear weapon. The two states also agreed to establish direct telephone links between top bureaucrats in their Foreign Ministries.

In a counterproductive move that revealed a lax commitment to nuclear confidence building, Pakistan test fired Babur, its first nuclear-capable cruise missile, on 11 August without notifying India. Pakistani officials argued that notification of cruise missile tests is not required under the 6 August agreement.

Pakistan’s Babur nuclear-capable cruise missile has a range of 310 miles (500 kilometers) and represents a significant technological and military achievement. The test was conducted on President Musharraf’s 62nd birthday. Musharraf called the test “a gift to the nation.”

In related news, the United Kingdom announced on 11 August that it would ease nuclear restrictions on India and Pakistan. The relaxed sanctions allow India and Pakistan to import dual-use items from the Nuclear Suppliers Group on a "case-by-case" basis. Equipment must be directed to facilities operated under International Atomic Energy Agency supervision and safeguards. Applications for other items, including those restricted by WMD end-use controls, will also be evaluated.


KAZAKHSTAN JOINS HAGUE CODE OF CONDUCT AGAINST MISSILE PROLIFERATION

On 11 August 2005, Kazakhstan joined the Hague Code of Conduct against Ballistic Missile Proliferation (HCOC). The HCOC is aimed at bolstering efforts to curb and delegitimize ballistic missile proliferation worldwide and to supplement the Missile Technology Control Regime (MTCR). More than 110 countries have joined the HCOC since November 2002. Kazakhstan today does not possess any ballistic missiles.

In related Central Asian news, five former Soviet republics are preparing a treaty that will establish a Central Asian nuclear weapon-free zone, which will ban the development, acquisition or possession of nuclear weapons within Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan. In a symbolic ceremony, the Kazakh city of Semipalatinsk, where about 500 Soviet nuclear devices were tested, is expected to host the signing of the treaty later this year.


RUSSIA, CHINA CONDUCT MAJOR MILITARY EXERCISES

Russian President Vladimir Putin participated in the country’s Northern Fleet military exercises which began on 16 August 2005. On the first day of the exercises, Putin, reportedly in the pilot's seat, flew to the Barents Sea in a Tu-160 heavy bomber. In mid-flight, an air-launched cruise missile was test fired from Putin's bomber.

On 17 August, Russia tested its RSM-54 (NATO: SS-N-23, Skiff) submarine launched ballistic missile from the Yekaterinburg nuclear powered submarine in the Barents Sea. The missile carried dummy nuclear warheads over 5,000 miles (8,050 kilometers) and impacted at the Kura test range on the eastern Kamchatka peninsula. Russian President Putin watched the launch from a naval cruiser in the Barents region. The SS-N-23 has been in service since 1986. Although the missile is capable of delivering 10 warheads only a four warhead version has ever entered into production. Russia announced plans to conduct an additional ten missile tests over the next year.
Following Russia’s Northern Fleet exercises, Russian and Chinese military exercises began on 18 August near Vladivostok, the headquarters for Russia’s Pacific Fleet. Paratroopers, air force, army, marines and navy units took part in the massive exercises which concluded in the Yellow Sea region. Officially the joint war games were described as preparation for anti-terror/anti-separatist missions; unofficially the war games were recognized as a clear message to US hegemony.


**US DEACTIVATES PEACEKEEPER MISSILES, BOLSTERS MINUTEMAN 3**

In September 2005, the US Peacekeeper missile will be completely deactivated. A deactivation celebration is scheduled for 20 September at F.E. Warren Air Force Base in Wyoming, home to the squadron of 50 Peacekeeper missiles. The Peacekeeper was initially deployed in 1986. The Strategic Arms Reduction Treaty II (START II) originally called for the deactivation by September 2003.

When the Peacekeeper is fully deactivated, the Minuteman 3 intercontinental ballistic missile (ICBM) will become the only land-based ICBM in the Nuclear Triad. Currently 500 Minuteman 3 missiles are deployed around the country and although capable of delivering three independent reentry vehicles, START II restricts the Minuteman 3 to a single reentry vehicle configuration.

In order to extend the life of the Minuteman 3, the Defense Department is replacing the missile's guidance systems, remanufacturing the rocket motors and replacing standby power systems. On 25 August, the US tested an unarmed Minuteman 3. The test monitored the Safety Enhanced Reentry Vehicle program (SERV). The missile was fired from Vandenberg Air Force Base on the central coast of California, traveled 4,200 miles, and struck a target in the Kwajalein Missile Range in the western chain of the Marshall Islands. Two more Minuteman 3 test launches are slated for September 2005.


**NORTH KOREA RESTARTS YONGBYON NUCLEAR REACTOR**

US satellites monitoring the Korean peninsula detected steam coming out of a boiler connected to a building at North Korea’s Yongbyon nuclear reactor complex. On 21 August 2005, Asahi Shimbun, a Japanese news bureau, quoted an unnamed US official involved in the six-party negotiations as saying, "It can only be concluded that North Korea has put in new nuclear fuel rods and has restarted the nuclear reactor.”

On 18 April 2005, North Korea shut down its five-megawatt Yongbyon nuclear reactor and began removing the fuel rods. Officials around the world feared this signaled the country’s intention to extract plutonium from the spent fuel for use in nuclear weapons. These fears were confirmed on 11 May 2005 when a North Korean official spokesman told the Korean Central News Agency that the North "is continuously taking measures necessary to increase its nuclear arsenal for defense purposes." Furthermore, North Korea’s ambassador to the UN, Han Sang-ryol, said shutting the reactor to extract spent fuel rods for weapons processing will increase the North’s nuclear deterrent.

This isn't the first time the North has declared its work on a nuclear deterrent. In mid-2003, after withdrawing from the nuclear Non-Proliferation Treaty (NPT) in January 2003, North Korean officials announced they had completed the extraction of weapons-grade plutonium from spent nuclear fuel rods.

On 25 August 2005, Chinese officials defended North Korea's move to resume operations at the Yongbyon site. Zhang Yan, a Chinese Foreign Ministry official and director-general of the ministry's arms control department, said, "According to relevant rules of the Non-Proliferation Treaty (NPT), a country could enjoy certain rights if it assumes due obligations...In this sense, if a country joins the treaty and accepts the supervision of safety guarantee by the International Atomic Energy Agency (IAEA), it has the right to use nuclear power peacefully."
Although not a member of the official six-party negotiations, Thailand's Foreign Minister, Kantathi Suphamongkhon, suggested that North Korea would be willing to return to the NPT, dismantle its weapons programs, and allow the IAEA to step in as long as there were security assurances among all parties.


**Yucca Mountain Regulations Changed; Public Safety Compromised**

On 9 August 2005, the US Environmental Protection Agency (EPA) proposed a number of amendments to the public health and environmental radiation protection standards for the nuclear waste repository at Yucca Mountain, Nevada. The proposal, which will become final after a public comment period, will establish a two-tier standard that limits the maximum level of radiation exposure for the first 10,000 years to no more than 15 millirems of radiation a year, and sets a 350 millirem limit for the 10,000 to one million year period.

According to the Institute for Energy and Environmental Research (IEER), the proposed rule for radiation doses to future generations would overturn all established principles of public health protection. The 350 millirem per year dose limit beyond 10,000 years is three-and-a-half times the maximum limit allowed to the public from any human activity (other than medical radiation).

The amendments were drafted in response to the July 2004 US Court of Appeals ruling, which found that EPA radiation protection standards violated section 801 (a) of the Energy Policy Act of 1992. Section 801 (a) requires the EPA to develop safety standards for the disposal of nuclear waste at Yucca Mountain based upon and consistent with recommendations made by the National Academy of Sciences (NAS).

NAS recommendations, published in the 1995 report "Technical Bases for Yucca Mountain Standards" recommend that compliance with safety standards be measured at the time of peak risk, "within the limits imposed by the long-term stability of the geologic environment, which is on the order of one million years."

In analyzing the NAS recommendations, the EPA concluded it is impossible to make reliable estimates of the repository's performance over a one million-year timeframe. Additionally, the EPA assumed discretionary decision-making authority and decided not to adopt, without exception, NAS findings and recommendations. The July 2004 Appeals Court ruling made clear the EPA acted outside its authority in dismissing NAS recommendations.

The EPA will hold four public information hearings about the future of Yucca Mountain in Nevada and Washington, DC.

The information sessions will provide the public an informal opportunity to learn about the proposed standards for Yucca Mountain and talk with EPA staff. As of 6 September the public sessions are scheduled as follows:

- Monday, October 3, late afternoon and evening at the Amargosa Valley Community Center in Amargosa Valley.
- Tuesday, October 4, late afternoon and evening in Las Vegas.
- Tuesday, October 5, late morning, if necessary, in Las Vegas.
- Tuesday, October 11, afternoon, in Washington, DC.

The public comment period is open until 21 October 2005. For more details and to learn how to make comments on the proposed amendments visit: http://www.epa.gov/radiation/yucca/comments.htm.


**Radioactive Leak and Faulty Emergency Coolant Systems Shut Down Two Japanese Reactors**

In apparently unrelated incidents, the Number One and Five reactors at the Fukushima plant in Okhuma, Fukushima Prefecture, were shut down for unscheduled maintenance. Tokyo Electric Power Company (TEPCO) began shut-down procedures on 11 August 2005 at the Number One reactor in order to inspect the leakage of highly radioactive tritium. Officials have not announced where the leak originated from and it is unknown when the reactor will be restarted. On 22 August 2005, TEPCO shut down the Number Five reactor at the Fukushima plant because of suspected problems with the generator's emergency coolant system.


**Energy Bill "Encourages Expansion of Nuclear Energy"**

On 8 August 2005, President Bush signed the Energy Policy Act of 2005. According to the Washington Post, "The nuclear industry is among the biggest beneficiaries of the bill." The Bill encourages nuclear energy research and development, and renews the Nuclear Power 2010 Partnership. The Bill provides incentives for the first six new reactors to be built, including loan guarantees, production tax credits, and risk protection for new and existing reactors.
The Nuclear Power 2010 Partnership is an initiative between the Department of Energy (DOE) and the Nation's electric utility industry. The goal of this partnership is to enable a new US nuclear power plant to be built and brought on-line by the end of the decade. The government and the private sector will work together to explore sites that could host new nuclear plants, explore ways to streamline the licensing process and conduct research on advanced nuclear technologies.

Nuclear Energy Provisions in the Energy Bill include:

- Up to $2 billion in standby support provisions to offset the financial impact of delays beyond the industry's control that might occur during construction and during the start of operation for the first six new nuclear reactors;
- A production tax credit of 1.8 cents per kilowatt-hour, but no more than $125 million a year, for the first 6,000 megawatt-hours from new nuclear power plants for the first eight years of their operation;
- $1.25 billion in funds for a prototype Next Generation Nuclear Plant project at the Idaho National Laboratory; and,
- Funding for the Advanced Fuel Cycle Initiative.


**BUSH ADMINISTRATION APPROVES NUCLEAR WASTE DUMP ON GOSHUTE LAND**

On 9 September 2005, the Bush administration approved a controversal $3.1 billion plan for a massive temporary radioactive-waste dump on the Goshute Indian reservation in Utah - a victory for nuclear power interests. A private firm and the sovereign Skull Valley Band of Goshute Indians struck up the agreement for the repository, so the plan has evaded the kind of public review and political debate that's kept the proposed nuclear-waste dump at Nevada's Yucca Mountain in stasis. The Utah facility could come online by 2007, and could ultimately hold about 40,000 tons of spent nuclear reactor fuel. The poverty-stricken Goshutes are themselves divided over the plan: some see it as a great moneymaker, but at least one faction says it will dishonor sacred sites and obliterate the tribe's culture. Utah Governor Jon Huntsman Jr. (R) says the state will sue to stop the dump from being built, and environmental groups stand firmly behind him.


**Nuclear Legacy**

**NUCLEAR CLEAN-UP BILL JUMPS TO $1 TRILLION**

According to the International Atomic Energy Agency (IAEA), $1 Trillion needs to be spent globally on nuclear clean-up. According to the IAEA, the next five years, between 2006 and 2010, will be the busiest period, with even more clean-up contracts expected than in 2031-2035 and 2036-2040, when the bulk of the decommissioning of the world's nuclear power plants to take place. The next five years will see double the amount of contracts coming up compared with the past five years.

The $1 Trillion global clean-up bill will no doubt prove extraordinarily costly for taxpayers and a bonanza for the nascent nuclear contracting industry. Thanks to its cold war nuclear program, the US will have at least $400bn in decommissioning contracts. The biggest winners are likely to be US companies such as Bechtel, Lockheed Martin, KBR, Fluor, Washington Group and CH2M Hill.

Bob Churchill, managing director of the UK's Amec nuclear business, "A lot of people thought nuclear was a dying industry, but what we are seeing at the moment is the re-birth of a young industry that's been rallying the old skills and focusing its joint efforts on clean up. US firms certainly have an edge over the UK companies because they've been operating under a contracting system for 10 years." In August, the UK's nuclear clean-up bill jumped to $56 billion pounds (US $100 billion), or 6% of the global total.

The former Soviet Union comes a close second as the biggest market after the US. The IAEA estimates the mess left by Russia and China's respective nuclear program at an underestimated $200 billion each. Ukraine, Belarus and Kazakhstan are now free from nuclear weapons, but in Russia there's still considerable work to do. The notorious Andreevna Bay in Russia's Arctic Murmansk Region still has more than 100 decaying nuclear submarines, which constitute one of the world's most dangerous environmental hazards.

Still more immediate is Ukraine's Chernobyl reactor. The concrete coffin hastily constructed to contain it after the 1986 accident is unstable. Given that only about 5% of the fuel escaped 20 years ago, a collapse could cause greater damage than the original disaster.

For now, politics can still clinch deals. US firms tend to win US-funded contracts, wherever they are in the world. Once other countries follow a similar model, the leaders will be the companies that develop their own specialist technologies.


**IDAHO APPROVES PU-238 PRODUCTION PLAN**

On 29 August 2005, Idaho's state government gave some-what tepid support to a Department of Energy (DOE) proposal to begin producing plutonium-238 for NASA and national security agencies at a proposed $300 million facility at the Idaho National Laboratory (INL) compound.
However, state Governor Dirk Kempthorne called for the Bush administration to spell out a plan to transfer the highly radioactive waste created at INL to disposal sites out of state, while also asking the DOE to permit independent monitoring of air emissions and workplace safety at the facility.

The US government plans to consolidate US production of Plutonium-238 “space batteries” from various other facilities in the US nuclear complex to INL, starting in 2010. The plan entails the manufacture of 11 pounds of the substance per year for 35 years.

Many Idaho residents vehemently oppose the plan, citing fears regarding increased cancer deaths among local residents, radioactive contamination of the environment, and the potential for Idaho to become a terrorist target given the new Plutonium-238 production.

Plutonium-238 is not used for nuclear weapons, but it is a very powerful heat source popularly used to power space missions. According to nuclearfiles.org, Pu-238 is "100 times more radioactive than the more common plutonium-239."

The last time the US produced plutonium-238 was during the mid-'90s, at the Savannah River Site in South Carolina.


Government Accountability Office Criticizes DOE Plutonium Disposal Process

On 23 August 2005, the US Government Accountability Office (GAO) issued a report calling on the Department of Energy (DOE) to enact a plan to consolidate its storage of plutonium stocks. In particular, the report recommends moving the stocks to the Savannah River Site (SRS) in South Carolina and improving the monitoring systems for storage containers at SRS to forestall plutonium leaks after the material is shipped.

About 50 metric tons of plutonium no longer needed by the US nuclear weapons program is currently being stored at the Hanford plant in Washington state, the Los Alamos National Laboratory in New Mexico, the Rocky Flats Environmental Technology Site in Colorado, the Lawrence Livermore National Laboratory in California and at Savannah River Site. A 2002 federal mandate requires the DOE to develop a plan to store the material at the SRS until (and if) the department receives approval to ship it permanently to the planned Yucca Mountain nuclear waste repository.

Among its litany of complaints, the GAO condemns the department for failing to fulfill its commitment to this effort: The DOE has yet to develop a plan to convert plutonium into a form that can be stored at the SRS facility, and Savannah is not equipped to store the Hanford plutonium, which is still in the form of 12-foot nuclear rods. The GAO report finds that Savannah's safety systems cannot properly monitor storage containers.

The report further urges the DOE to address "the storage, monitoring, and security capabilities of all of DOE's sites currently storing plutonium. Furthermore, the strategy should analyze the environmental impact, national security implications, costs, and schedules to safely consolidate, store, and eventually dispose of DOE's plutonium at existing facilities and/or at a new storage facility constructed at one of its sites."

Former Greenpeace International senior advisor Tom Clements lambasted the DOE for its failure to develop a plan. According to Clements, "The report affirm[s] what many in the public have long pointed out - that DOE has no comprehensive plan to manage, consolidate or dispose of plutonium. But Congress is very late in beginning serious oversight of this program. It has already been a decade since the program to dispose of surplus weapons plutonium began and DOE still hasn't developed a workable plan to handle this deadly material. Lack of such a plan, which should have been developed years ago, means a tremendous waste of taxpayer money and a continued threat to public health and safety."


LANL Ships Plutonium to Waste Isolation Plant

Fourteen drums containing weapons-grade plutonium were finally shipped from Los Alamos National Laboratory (LANL) to the Waste Isolation Pilot Project (WIPP) in Carlsbad, New Mexico on 28 July 2005. The shipment of Plutonium-239, the only nuclear material currently eligible for shipment under federal standards, was the first reduction in LANL's inventory of sealed radioactive materials in over two years.

The waste drums were shipped to WIPP inside the TRU-PACT-II container, a steel-coated spherical capsule that is 10x8 feet in diameter. About 100 total drums of Pu-239 are currently stored at LANL, which has reached its storage capacity and has even sent some radioactive materials to the Nevada Test Site for temporary storage in recent months.

LANL's storage of the materials is part of a federal project to collect unwanted or abandoned plutonium sources from around the country. The project dates to 1979 and involves collecting plutonium from a variety of commercial, industrial, and medical applications. For example, heart pacemakers used plutonium sources for long-term power needs in the 1970s. There are still 300-400 Pu-239 sources in use throughout the country that will need to be recovered eventually.

**LANL Worker Contaminates Sites in Four States**

A Los Alamos National Laboratory (LANL) employee, who mishandled a hazardous radioactive substance, has caused contamination in four different states, according to an official lab release and documents obtained by the Project on Government Oversight (POGO).

Traces of the substance Americium-241 have been found in his own home in New Mexico, in homes in Colorado and Kansas, where the employee visited, and at a Pennsylvania laboratory where the employee apparently shipped a FedEx package.

LANL doctors are monitoring the employee's health and that of five other lab workers who may have been contaminated. The doctors have reported no ill effects thus far. The contamination was originally found in the employee's work space, car and in several locations inside his home, in addition to contamination on his skin and clothing.

LANL investigators originally reported on the incident in a 27 July 2005 press release, but POGO uncovered a more extensive internal report by lab officials that was released on 8 August.

POGO spokeswoman Beth Daley told the San Francisco Chronicle, "The package could have contaminated Federal Express workers and other packages. Surprisingly, it took Los Alamos two full days after it discovered the initial contamination incident to notify (the Pennsylvania laboratory) that it was in possession of an unmarked radioactive package." Daley added that LANL's response shows that "it's absolutely essential for our state and for the country for us to have those contracts back."

Schwarzenegger was accompanied on his 19 August tour by UC President Robert Dynes (a former Livermore lab physicist), UC Berkeley Chancellor Robert Birgeneau, and Berkeley lab director Steven Chu (a Nobel laureate). During the tour, Schwarzenegger spoke with lab scientists and toured the Advanced Light Source facility.

Also during the tour, scientists reportedly touted the application of nanoscience in creating solar energy technology, faster computers, better drugs, and more high-tech jobs in California. "It was absolutely incredible the things they're doing in there," Schwarzenegger said.

**Source:** Hoffman, Ian, "Schwarzenegger Backs UC Bid for Nuclear Laboratories," Inside Bay Area, 20 August 2005.

**HANFORD WHISTLEBLOWERS WIN $4.7 MILLION**

On 2 September 2005, a jury in Yakima, Washington determined that 11 former pipefitters at the Hanford nuclear site were fired for speaking up about safety concerns in 1997 and awarded them $4.7 million. In 1999, the workers brought the suit against Fluor Federal Services, a contractor at the Hanford nuclear site.

In 1997, seven pipefitters at Hanford complained when they were told to install a valve rated for 1,975 pounds per square inch for a test of radioactive waste pipes that would need to withstand 2,235 pounds per square inch. The crew was laid off, but a settlement was reached that required Fluor Federal Services to rehire them. However, foremen on the job were told they would have to lay off seven other pipefitters to bring the first seven back. The lawsuit was filed by five of the original seven, plus six of those who were subsequently laid off.

The plaintiffs in the case received awards ranging from $89,700 to more than $553,000. All but one sought damages for emotional distress. Flour now has 30 days to file an appeal.

The valve that was to have been installed was located in Hanford's so-called tank farms, which hold 53 million gallons of highly radioactive waste left from Cold War-era nuclear weapons production. Some of the 177 aging underground tanks are known to have leaked, threatening groundwater and the Columbia River less than 10 miles away.

**Source:** Dininny, Shannon, "Jury Awards $4.7 Million to Hanford Whistleblowers," Associated Press, 2 September 2005.
HANFORD WORKERS EVACUATED AFTER POSSIBLE RADIOACTIVE LEAK

The Department of Energy (DOE) ordered workers to evacuate the Hanford nuclear weapons plant on 24 August 2005 after a "brown absorbent material" escaped from a 55-gallon drum at the site’s 200 West area landfill. However, no radiological contamination was detected in a subsequent survey of the area.

Workers had been digging through containers of waste that had been buried for years at the site. Workers were ordered to take cover at a safe building nearby after the release of the "absorbent material," where they were examined and found to be not contaminated.

The 55-gallon drum from which the leak occurred contained another drum, which held a small amount of radioactive material. The inner drum was not believed to have leaked. The absorbent material apparently leaked from the outer drum.


FOUNDATION ACTIVITIES

YOUNG LEADERS DEVELOP PLAN TO WORK TOWARD A NUCLEAR-FREE WORLD

From 15-21 August 2005, the Nuclear Age Peace Foundation hosted a gathering of 50 young leaders, policy experts and veteran activists in Santa Barbara, California to discuss issues and develop action plans around nuclear disarmament, the social and environmental justice implications of the nuclear fuel cycle, including uranium mining and indigenous peoples, the role of universities in nuclear weapons production, alternatives to nuclear energy, and toxic waste disposal. Titled "Think Outside the Bomb," the conference was organized by the Nuclear Age Peace Foundation with assistance from the Institute for Energy and Environmental Research (Maryland), Western States Legal Foundation (California), Women’s Action for New Directions (Georgia), Educators for Social Responsibility (New York), Nuclear Information and Resource Service (Washington, DC), American Friends Service Committee (Hawaii), and other nongovernmental organizations.

Participants ranged from 15 to 29 years of age and hailed from 17 states, including California, Massachusetts, New Hampshire, Texas, Illinois, Washington State, Washington DC, as well as from the Marshall Islands and Kazakhstan. Participants came from diverse ethnic backgrounds, fields of study and career aspirations.

Inspired by the need for a new generation of leaders working toward a nuclear-free world, the participants agreed to establish a diverse network of individuals and organizations for the purpose of communication, interaction, support, and to collect and disseminate resources. The youth participants crafted a collective "Principles of Unity," which states in part, "The continued research, development, manufacture, testing, use and threat of use of nuclear weapons violate international law and basic human rights to life, dignity and security. Nuclear weapons disable functional diplomacy and prevent the establishment of a just peace. The only way to halt this vicious cycle is to devalue and delegitimize the role of nuclear weapons in national security policies. Nuclear weapons must be abolished."


FOUNDATION PARTICIPATES IN COMMEMORATING THE 60TH ANNIVERSARY OF THE BOMBINGS OF HIROSHIMA AND NAGASAKI

Foundation staff were busy this year in helping commemorate the 60th anniversaries of the US atomic bombings of Hiroshima and Nagasaki. On 6 August, the anniversary of the US atomic bombing of Hiroshima, Foundation President David Krieger gave a keynote speech at a commemoration event at Los Alamos National Laboratory on "Confronting Nuclear Weapons." Carah Ong, Director of the Washington, DC office, spoke at a series of events in Australia commemorating the anniversary year. She was also instrumental in helping to coordinate the national program around the August 6 & 9 National Days of Remembrance and Action.

On 9 August, the 60th anniversary of the US atomic bombing of Nagasaki, the Foundation held its 11th Annual Sadako Peace Day commemoration. The ceremony took place at Sadako Peace Garden, a natural garden inaugurated in 1995 on the 50th anniversaries of the US atomic bombings. The event included a talk by Dr. James Yamazaki, a noted pediatrician who headed up the US Atomic Bomb Casualty Commission’s lab in Nagasaki following the bombing. Music and poetry added to the reflective mood. To learn more about this year’s Sadako Peace Day ceremony, including the poems that were shared, visit http://www.wagingpeace.org/menu/programs/public-events/sadako-peace-day/2005-sadako-peace-day/index.htm.
FOUNDATION TO HOST 22nd ANNUAL EVENING FOR PEACE

On 29 October, the Nuclear Age Peace Foundation will hold its 22nd Annual Evening for Peace. This year, we will present Daniel Ellsberg with our Distinguished Peace Leadership Award for his strong and courageous stances against war, militarism and nuclear weapons. He has played a pivotal role in promoting governmental accountability and transparency as it relates to US foreign policy. We will also present the Honorable Douglas Roche, O.C. with a Lifetime Achievement Award for his steadfast commitment as chair of the Middle Powers Initiative to a nuclear weapons-free world. The event will take place in Santa Barbara, California. For information on tickets and to make reservations, please call the Foundation at (805) 965-3443.

Resources

BAD TO THE BONE


THE US NUCLEAR WEAPONS PRODUCTION COMPLEX IN THE YEAR 2005

The Alliance for Nuclear Accountability has released an updated map of the US nuclear weapons production complex. The map summarizes the type of weapons research and design conducted at each location as well as contact information for groups neighboring each complex working for arms control and disarmament. The map is available as a PDF download from http://www.ananuclear.org/Map2005final.pdf.

ADHERENCE TO AND COMPLIANCE WITH ARMS CONTROL, NONPROLIFERATION, AND DISARMAMENT AGREEMENTS AND COMMITMENTS

On 30 August 2005, the US State Department’s Bureau of Verification and Compliance released a new report entitled “Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments.” The report provides and assessment of US adherence to obligations it has undertaken as well as an assessment of the adherence of other nations to similar arms control, nonproliferation and disarmament obligations. The report is available as a PDF download at: http://www.state.gov/documents/organization/52113.pdf.

NUCLEAR WASTE: BETTER PERFORMANCE REPORTING NEEDED TO ASSESS DOE’S

On 29 July 2005, the Government Accountability Office released “Nuclear Waste: Better Performance Reporting Needed to Assess DOE’s Ability to Achieve the Goals of the Accelerated Cleanup Program.” The report reviews the progress the Department of Energy (DOE) has made under its accelerated cleanup program, the likelihood the DOE will achieve its estimated $50 billion in cost reductions and whether the DOE’s performance reporting allows for a full understanding of progress towards achieving the accelerated cleanup goals. The full report is available as a PDF download from http://www.gao.gov/new.items/d05764.pdf.

CHINA SECURITY: OPENING THE DEBATE ON US-CHINA NUCLEAR RELATIONS


SECURING US NUCLEAR MATERIALS: DOE NEEDS TO TAKE ACTION TO SAFELY CONSOLIDATE PLUTONIUM

On 20 July 2005, the Government Accountability Office released "Securing US Nuclear Materials." The report examines the Department of Energy’s (DOE) ability to consolidate about 50 metric tons of plutonium at the Savannah River Site (SRS) and the DOE’s capacity to monitor plutonium storage containers. The full report is available as a PDF download from http://www.gao.gov/new.items/d05665.pdf.

CHERNOBYL’S LEGACY: HEALTH, ENVIRONMENTAL AND SOCIO-ECONOMIC IMPACTS

On 5 September 2005, the Chernobyl Forum released "Chernobyl’s Legacy: Health, Environmental and Socio-Economic Impacts." The report is a compilation of the latest research on how much death, disease and economic fallout resulted from the Chernobyl accident. The Chernobyl Forum is made up of 8 UN specialized agencies, including the International Atomic Energy Agency (IAEA), World Health Organization (WHO), and the United Nations Development Programme (UNDP). The report is available at http://www.iaea.org/NewsCenter/Focus/Chernobyl/index.shtml.
"It has always been hoped that the atomic bombing of Hiroshima and Nagasaki stand as constant reminders of why preventing the further use and proliferation of such weapons - and why nuclear disarmament leading to a nuclear weapon-free world - is of utmost importance for the survival of humankind and planet Earth...Let us renew today...the promise to the peoples of the world to spare no effort to work collectively to reduce and eliminate nuclear weapons."

Mohamed ElBaradei, Director General of the International Atomic Energy Agency
Remarks made in Vienna in commemoration of the bombings of Hiroshima and Nagasaki
5 August 2005

“Our biggest challenge, and our biggest failing, is on nuclear non-proliferation and disarmament. Twice this year - at the NPT review conference, and now at this Summit - we have allowed posturing to get in the way of results. This is inexcusable. Weapons of mass destruction pose a grave danger to us all, particularly in a world threatened by terrorists with global ambitions and no inhibitions. We must pick up the pieces in order to renew negotiations on this vital issue, and we should support the efforts Norway has been making to find a basis for doing so.”

Kofi Annan, Secretary General of the United Nations
Remarks made at the 2005 World Summit in New York
14 September 2005

To read the full text of Annan's remarks, please visit: http://www.un.org/webcast/summit2005/statements/sg.htm

“We're running out of non-WMD-equipped adversaries."

Michael Vickers, of the Center for Strategic and Budgetary Assessments
Speaking on the future threats US Marines might face at an American Enterprise Institute conference
18 August 2005

“There is a consensus among the public and a consensus among the elite that in the 21st century, Iran will become the regional superpower, partly based on a technological push toward developing nuclear technology.”

Vladimir Orlov, director of the Russian Political Research Center
Remarks made at a RIA Novosti press conference
6 September 2005

"I'm the one who presented it on behalf of the United States to the world, and (it) will always be a part of my record. It was painful. It's painful now."

Former US Secretary of State Colin Powell
Speaking on his 2003 presentation to the UN Security Council on prewar Iraq's alleged WMD programs
September 2005

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