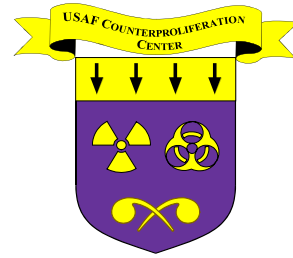


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# CPC OUTREACH JOURNAL



*Air University*

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Washington Post  
December 5, 2001  
Pg. 12

## Technology Of 'Dirty Bomb' Simple, But Not The Execution

By Guy Gugliotta, Washington Post Staff Writer

Finding enough radioactive material to make a "dirty bomb" might be relatively easy, experts say, but the effects of such a weapon could never remotely approach those of a nuclear explosion.

"The nuclear device is a weapon of mass destruction," said nuclear scientist Siegfried Hecker, former director of the Los Alamos National Laboratory. "Dirty bombs are weapons of mass disruption, in terms of frightening people, the cleanup and the potential economic consequences."

Interest in dirty bombs has deepened recently among U.S. intelligence officials because of mounting evidence that Osama bin Laden and his al Qaeda network may be developing expertise in building them.

But Homeland Security Director Tom Ridge said yesterday that U.S. authorities had no information that bin Laden had made such a weapon. Ridge added that the Bush administration's latest anti-terrorist alert had nothing to do with the threat of a dirty bomb. Sources have told The Washington Post that concerns about al Qaeda's nuclear capabilities had played a role in the alert.

The technology to make the bomb is relatively simple: Find some radioactive material, wrap it around a core of ordinary high explosive and detonate it so that contamination spreads over the widest possible area.

This is not a nuclear explosion. That occurs when two subcritical masses of highly processed radioactive material are thrust suddenly together, triggering a violent chain reaction and release of energy.

Blast effects and heat from a nuclear device can flatten city blocks and kill thousands of people; the only blast from a dirty bomb is provided by the explosive.

Still, while fatalities may be light, a dirty bomb can cause a higher incidence of cancer in local residents even decades after the attack, and more immediately, provokes the same psychology of fear as a chemical or bioweapons threat. In that respect, Hecker said, a dirty bomb "would have an instant terrorist effect."

But the bomb-maker must always contend with a Catch-22, for the more powerful the radiation source, the more dangerous it is to handle. The weaker the source, the less damage the weapon will cause.

"The dirtiest spent fuel is from a nuclear reactor," said Lisbeth Gronlund, senior staff scientist of the Union of Concerned Scientists. "It is very radioactive, and one reason to consider it proliferation-resistant is that the dose you get from stealing it would kill you pretty quickly."

Even if the thief is prepared to die, making bombs from "hot" radioactive material and getting them to the target present dangers. "How do you figure out how much you need?" asked Tom Cochrane, nuclear program director for the Natural Resources Defense Council. "And how do you transport it?"

The alternative is to pick a weaker radiation source. That means using plutonium or enriched uranium, which give off "alpha" particles that cannot penetrate the human body from outside, unlike the "gamma" particles or neutron radiation common in spent fuel waste or cobalt-60.

If the terrorist chooses alpha, then the plutonium must be milled fine, like anthrax spores, because the only way it can hurt humans is through inhalation, Cochrane said. This adds another requirement for technical expertise. But as long as the maker can deal with the radioactivity, detonating the device is as easy as triggering a bomb in a car or arming it from the air.

Damage could be problematic, experts say. In October, the nonprofit National Council on Radiation Protection and Measurements estimated that contamination would spread over "only a small area of a few city blocks."

The International Physicians for the Prevention of Nuclear War argued that a plutonium dirty bomb would have almost no immediate health consequences, and even though it could lead to cancer years after the attack, the effects "would probably not be dramatic."

Still, the terrorist group that used a dirty bomb would garner immense prestige among its peers, said British political scientist Gavin Cameron in a paper prepared last month for the International Atomic Energy Association, and "the mere fact of being nuclear would almost certainly ensure that it had a considerable impact on the public's imagination and fear."

## Loose Nukes

### *Enough nuclear material is missing worldwide to make a 'dirty' bomb. Where is it? What is being done to prevent its use by terrorists?*

By Peter Grier, Staff writer

Jamal Ahmad Al-Fadl said his role in the prospective purchase of nuclear material began with a call from a senior Al Qaeda official. A man in Khartoum, Sudan, supposedly had uranium for sale. At the time, Mr. al-Fadl was an operative in Al Qaeda's terrorist army. His job: Check out the deal.

So in late 1993 or early 1994, he met with the first contact, then another, and then another, like a job applicant passing through corporate departments. Along the way, he noticed that at least one of them appeared to have been high in the Sudanese government at some point.

Finally, one morning al-Fadl drove with two men to a house north of the city. They disappeared for a moment, and then came back with a large bag, from which they pulled a cylinder two or three feet tall. They handed him a piece of paper covered with English words al-Fadl couldn't read. He recognized one phrase: "South Africa."

The demonstration phase of the sales pitch over, al-Fadl and his contacts returned to Khartoum in their jeep. He took the paper to an Al Qaeda boss.

Osama bin Laden's operatives were impressed, or at least satisfied. They told Al-Fadl to pass the word that they would pay the cylinder's \$1.5 million asking price. Then they gave him \$10,000 and took over the deal themselves.

"You did great job, we going to check it, and everything be fine," Al-Fadl said he was told.

This story of nuclear shopping was offered as an aside by Al-Fadl during his testimony earlier this year in the trial of Al Qaeda associates accused of bombing US embassies in East Africa in 1998. Is it a tall tale? Maybe. Al-Fadl, a self-described Al Qaeda turncoat, is far from an unimpeachable source.

Al-Fadl also said he didn't know whether this transaction ever went through. The "uranium" in the cylinder might have been a worthless prop in a radiological scam.

But its details ring true to many nuclear experts. And the larger point is indisputable: The shadow army of terrorism, the force responsible for the deadliest day on American soil since Antietam, is trying, methodically, patiently, to acquire the most powerful weapon known to man.

The US and its allies have known that intellectually for a long time. But after seeing jetliners turned into cruise missiles, perhaps the West better understands what that really means. Among Sept. 11's effects may be a phase-shift in imaginations. Few can doubt that if Mohammad Atta had access to a nuclear bomb, he would have used it.

Once throw-weights and basing modes and other aspects of strategic weaponry were the crucial issues of US nuclear security. Now patching the holes in Russia's makeshift fissile material protections may be more important. Does bin Laden have the bomb? Is Iraq enriching uranium? How secure are Pakistan's nukes?

"And so we find ourselves, at the dawn of the new century, in a new arms race," said former Sen. Sam Nunn of Georgia in a recent speech. "Terrorists are racing to get weapons of mass destruction. We ought to be racing to stop them."

#### **New terrorists, new lapses**

The old expert consensus used to be that terrorist groups were not terribly serious about getting nuclear weapons.

They might try chemical or biological attack, but not nukes: They are highly dangerous, extremely expensive, and difficult to acquire. And their horror would overwhelm the essentially political nature of terrorist acts. Through history, most terrorists have wanted to maximize publicity - not casualties.

That judgment had already begun to change before the events of this fall. The rise of a new generation of terrorists, their goals unclear, their commitment total, their address unknown, saw to that.

A state such as Iraq is dangerous enough. But at least the US has some understanding of its weapons programs. A nation has assets and infrastructure that presumably even a leader such as Saddam Hussein might be loath to expose to US retaliatory attack.

Al Qaeda and its ilk are different. "The problem is, we can't target them like states," says Kimberly McCloud, a researcher at the Center for Nonproliferation Studies, Monterey Institute of International Studies.

Then add new opportunity to this equation. It's possible that South Africa could be the source of weapons material. Pakistan might be a proliferation danger, too, considering it is a nuclear-capable state with long-standing Taliban ties.

But it is Russia and the former republics of the Soviet Union that are the "Home Depot" of fissile material, in the words of one expert. The collapse of the Soviet Union threw its nuclear programs into a chaos from which they have yet to completely recover.

With the fall of the Berlin Wall, the closed cities where the USSR's nuclear weapons were produced changed from islands of prosperity to sinkholes of poverty. The human misery this created - especially in the early years - led some scientists to attempt desperate actions. In 1992, a large group of ballistic-missile experts from the closed city of Miass tried to reach North Korea, apparently to work in Pyongyang's intercontinental-ballistic-missile projects. Authorities caught them as they sat in a plane at Moscow's Sheremetievo-2 airport, waiting to take off.

Russian authorities insist that their estimated 30,000 actual nuclear warheads have remained under adequate control at all times. But the same cannot be said for its military and civilian fissile material.

Over decades, the Soviet Union produced enough highly enriched uranium (HEU) and plutonium to produce some 70,000 nuclear weapons. This was scattered at perhaps 100 sites throughout the territory of the former USSR. In the early '90s, some research sites were protected by nothing but padlocks and weeds. Dedicated scientists at times had to improvise defenses. When civil war broke out in the former republic of Georgia in 1992, scientists at one institute in Tbilisi took turns guarding 10 kilograms of weapons-grade HEU with sticks and garden rakes.

Much of this material was later moved to Britain for safekeeping. A cache of similar uranium elsewhere in the former republic met a different fate. In 1993, scientists at the Sukhumi research center in the Abkhazia region of Georgia piled cinder blocks around a building containing 2 kilograms of HEU, and fled oncoming fighting. A Russian team entered the abandoned building four years later, and found the material gone.

The Abkhazia affair remains the only confirmed case of missing weapons-grade fissile material in the world. To this day, no one knows where this HEU is. "It may be in the hands of the Abkhaz separatists, or it may have been stolen by or sold to others," says Matthew Bunn, of Harvard's Project on Managing the Atom.

Overall, there have been 14 confirmed, significant cases of trafficking in fissile material from the former Soviet Union, according to the Monterey Institute of International Studies.

The good news is that most of the cases date to the early and mid-'90s, before Russia stabilized and a US effort to help guard its material took off.

The bad news is that there may be more significant cases the world doesn't know about. Most of the confirmed incidents took place in Europe or what used to be the western USSR. Yet a glance at a map shows that southern Russia, and the former republics of Uzbekistan, Tajikistan, etc., are the logical place for a Middle Eastern group such as Al Qaeda to go nuke shopping.

The US has been involved in cooperative programs with Russia to control its loose nuclear weapons and material for years. Since 1991, US money has paid for the deactivation of more than 5,000 Russian nuclear warheads. It has provided security equipment for dozens of facilities, helped construct a secure storage facility for fissile material, and paid for science and technology centers intended to provide ex-weapons scientists the means to work on civilian research.

"These programs have made tremendous progress," notes Jon Wolfsthal, an associate in the non-proliferation project at the Carnegie Endowment for International Peace.

But much more may need to be done. Almost half of Russia's fissile material is stored in facilities that have not received US-funded protection upgrades. Russia continues to add to its stockpile of plutonium - not for military purposes, but because the reactors that produce the material also produce desperately needed electricity.

Earlier this year, a Department of Energy advisory group headed by former US Sen. Howard Baker and former White House counsel Lloyd Cutler surveyed the US effort - and found it wanting. The programs need a broader mandate, and they need more money, concluded the group.

"The most urgent unmet national security threat to the United States today is the danger that weapons of mass destruction or weapons-usable material in Russia could be stolen or sold to terrorists or hostile nation-states," concluded the Baker/Cutler study.

That was written before Sept. 11.

### **Al Qaeda and the black market**

There is one point about Al Qaeda's nuclear program on which most experts agree: It does not yet have an actual atomic weapon. If it did, the chances are it would have exploded by now.

It's less certain whether the group has any radioactive material at all. Al Qaeda has been a player in fissile-material markets for years, according to intelligence reports.

In the early '90s, it allegedly scoured Kazakhstan for USSR-era material, in the belief that the high percentage of Muslims in this former Soviet republic might open doors. Apparently, the group came up empty.

Since then, Al Qaeda may have been snared by its share of scams. They were dealing, after all, in a back alley of world commerce that makes drug-dealing look both honest and inexpensive.

At least once, Al Qaeda operatives have been offered low-grade uranium reactor fuel unsuitable for weapons use without further enrichment. Along with other potential buyers, Al Qaeda also may have fallen for the widespread "red mercury" fraud. Clever criminals pitch this element as a crucial component of the Soviet weapons program.

"In the case of Al Qaida, the 'red mercury' turned out to be radioactive rubbish," concluded Gavin Cameron, a professor of politics at Britain's University of Salford, in a paper on terrorist nuclear-proliferation activities.

Al Qaeda may have been gullible, but at least the group was subtle. Contrast their approach with that of the apocalyptic Japanese religious group Aum Shinrikyo, whose members were responsible for the release of sarin nerve gas in five Tokyo subway trains on March 20, 1995.

In the early 1990s, Aum actively recruited adherents from Russia's nuclear design facilities, as well as student physicists from Moscow State University. It purchased property in Australia from which it planned to mine natural uranium for enrichment - an arduous task beyond the resources of most nations. In 1993, Aum representatives sought a meeting with then-Russian Energy Minister Viktor Mikhailov for the express purpose of discussing the purchase of a nuclear warhead. (The meeting was denied.)

But Al Qaeda's and Aum Shinrikyo's nuclear dealings share at least two similarities that experts find worrisome.

One is ample funding. At the height of its influence, Aum had an estimated net worth of \$1 billion, obtained largely from co-opting the assets of its members. Al Qaeda's operations have bin Laden's personal fortune - inherited from his construction-magnate father - as seed funds.

The second similarity is persistence. Following Aum's path, Al Qaeda has apparently mounted a multinational, many-leveled effort to enter the nuclear club. In recent years, there has been a steady trickle of reports from experts in Europe and the Middle East who say they have been contacted by bin Laden associates and asked for help obtaining fissile material.

Last year, a Bulgarian businessman said he had met bin Laden himself, and had been offered a role in a complex deal to transship nuclear waste to Afghanistan via Bulgaria. This month, Gul Nazir, head of organic chemistry at Kabul University, said he had turned down offers from Taliban delegations to provide substances that could be used to help make chemical weapons and mine uranium.

Then there's the curious case of Sultan Bashiruddin Mahmood. An architect of Pakistan's nuclear program, he has traveled back and forth between Pakistan and Afghanistan in recent years, allegedly to advise the Taliban on the construction of food-processing plants.

At least one expert believes a radiological attack of a sort was part of Al Qaeda's original plan for Sept. 11. In a speech delivered to a meeting of the International Atomic Energy Agency, in early November, Mr. Cameron of the University of Salford said that it is likely that the target of the hijacked United Airlines Flight 93 was a US nuclear facility.

The hijackers' intentions are essentially unknowable, he admits, because they were stormed by heroic passengers, leading to the plane's crash in rural Pennsylvania. But the plane made a sharp turn near the Pittsburgh area, and rapidly lost height, before the passengers acted. Combined with unspecific FBI warnings about threats to power plants, this evidence may point to the terrorists' intended destination.

"It now appears that one of three nuclear reactors in southern Pennsylvania - Three Mile Island, Peach Bottom, or Hope Creek, Salem - may have been the real target," Cameron told the IAEA.

### **When scientists conspire**

On Dec. 18, 1998, an official of Russia's successor agency to the KGB, the Federal Security Service (FSB), said that agents under his command had broken up a conspiracy by employees of a major nuclear facility in the Chelyabinsk region to steal 18.5 kilograms of weapons-usable material. If it had gone through, the theft would have caused "significant damage to the [Russian] state," local media quoted FSB Maj. Gen. Valeriy Tretyakov as saying.

In the US, experts reeled.

Chelyabinsk is home to some of Russia's most important nuclear facilities, including a nuclear-weapons assembly and disassembly plant at Trekhgorny, and a weapons-design lab at Snezhinsk. If a group of insiders at one of these sensitive sites had decided to steal fissile material - well, that would be a highly serious matter. Furthermore, the material involved was apparently not some useless radioactive slurry. It was weapons-usable - meaning 18.5 kilograms might be enough to make an entire nuclear weapon.

This incident is not included on most lists of the most important nuclear trafficking incidents, for the simple reason that it was quashed in its initial phases. But it remains one of the most troubling apparent cases of attempted proliferation of all - because it matches almost exactly the US nightmare scenario for a fissile-material theft.

It wasn't ancient history. It occurred in 1998, after many facilities in the region had received US money for protection upgrades. It involved lots of stuff. And it involved a conspiracy of the knowledgeable.

"Multiple insiders are the hardest thing for any security system to address," says Mr. Bunn of the Managing the Atom project.

Consider the ramifications. Russia has a "three-man rule" in regard to its nuclear weapons. Individuals are forbidden from working alone on warheads, as are twosomes.

But if two scientists are in cahoots, they might be able to overpower the third. To guard against this, security might have to institute a four-man, or even five-man rule. Perimeter guards might need to be doubled. The cost and complexity of protection systems escalates exponentially.

And what would be the genesis of such a conspiracy? Perhaps a group of disillusioned scientists or guards would try such a thing on their own, but that may be unlikely, given the difficulties of marketing the stuff. It's more likely that such a theft might come in response to an enticing overture. Such as Saddam Hussein, perhaps, offering enough money for everyone in the group to buy a South Seas island.

"What I worry about is state intelligence agencies contacting these people," says Scott Parrish, an analyst at the Center for Nonproliferation Studies at the Monterey Institute.

If the Chelyabinsk conspiracy is the No. 1 worrisome incidence of potential trafficking in nuclear material, the Prague seizure might be judged No. 2.

In December 1994, an anonymous tip led Czech police to a marked car. In it, they found 2.7 kilograms of HEU enriched to 87.7 percent. The amount and purity of the recovered material was highly troubling. Worse, in two instances in 1995, Czech authorities recovered small amounts of additional HEU that appeared to be from the same source.

This suggests that there is a stock of weapons-grade HEU out there, of unknown quantity, in unknown hands.

New worries about so-called "dirty bombs," conventional explosives used to spread deadly radioactive material over a wide area, are also making some incidents of trafficking seem important in retrospect.

Earlier this year, for instance, the Russian news agency Itar-Tass reported the seizure of 5 kilograms of cesium 137 from Chechen rebels, who were allegedly loading the material into mortar shells. Most experts do not consider this incident confirmed, but the Chechens have threatened to use radiological material before. And cesium 137 is nasty stuff. Its radiation was the cause of many of the fatalities associated with the Soviet-era explosion of the Chernobyl nuclear plant.

In fact, once worries about dirty bombs multiply, the potential sources of dangerous material rapidly multiply as well. Radioactive material is used in many medical and industrial applications. Eastern Europe and the nations of the former Soviet Union even used trace amounts of plutonium in smoke detectors. "I used to joke that if Saddam Hussein placed an order in Russia for 500 million smoke detectors, we should get worried," says Dr. Parrish of the Monterey Institute.

### **What the U.S. is doing**

Preventing a nuclear terrorist attack on the US will require a comprehensive effort far into the future, say US officials. It will be one part - arguably the most important part - of the overall commitment to homeland defense. More narrowly, it may necessitate redoubled cooperation with the most likely source of loose nukes in the world: Russia. Warming relations between President Bush and his Russian counterpart, Vladimir Putin, today offer a window of opportunity for such an intensification, say its advocates.

There is a decent foundation of mutual effort to build on. Initiated by Sen. Richard Lugar (R) of Indiana and former Sen. Sam Nunn (D) of Georgia in 1991, the Cooperative Threat Reduction (CTR) program has grown into a \$1 billion-plus effort overseen on the US side by the Departments of Energy, State, and Defense.

"These programs have achieved impressive results for a relatively minor investment," says Stephen LaMontagne, a nuclear analyst at the Council for a Livable World Education Fund.

CTR funds pay for the destruction and dismantling of Russian ballistic missiles and submarines, for instance. Last year, \$57 million of US funds went toward completion of the first wing of the Mayak Fissile Material Storage Facility, which will ultimately have the capacity to protect 6,250 dismantled warheads.

The Department of Energy's Material Protection, Control, and Accounting program has so far improved physical security at 13 Russian Navy nuclear sites and 24 civilian nuclear installations. But there are some 58 more Russian nuclear sites that need security upgrades, according to DOE figures. A program to blend HEU down into less dangerous civilian reactor fuel is moving slowly. Efforts to replace three Russian nuclear reactors that produce both desperately needed energy and plutonium have stalled in a swirl of politics.

And the Bush administration, in its first crack at drawing up a national-security budget, has slashed the funding of much of the non-proliferation effort. Bush's budget took \$100 million out of the Department of Energy's side of the effort, alone.

The needs, according to the Secretary of Energy's advisory board task force headed by Mr. Baker and Mr. Cutler, include: a real strategic plan; a high-level position within the White House devoted to the issue, perhaps within the National Security Council; more money, and more urgency. Concludes the report: "There is a clear and present danger to the international community as well as to American lives and liberties."

### **Timeline of nuclear security**

Nov. 9, 1989 -- East Germany opens the Berlin Wall, signaling the collapse of communism in Eastern Europe.

July 31, 1991 -- US and the Soviet Union sign the Strategic Arms Reduction Treaty, or START I. It cuts the number of nuclear weapons in each country's arsenal. Is effective as of December 1994.

Dec. 8, 1991 -- The Slavic republics of Russia, Ukraine, and Byelorussia declare the Soviet Union dead and establish a new 'commonwealth.' Later in the month, Soviet President Mikhail Gorbachev resigns, and the country's legislature votes the Soviet Union out of existence.

October 1992-- Congress establishes the Cooperative Threat Reduction program - the largest US effort to secure or destroy weapons of mass destruction from the former Soviet Union.

Nov. 27, 1992 -- The European Community, Japan, Russia, and the US establish the International Science and Technology Center, in Moscow, to employ weapons researchers from the former USSR in civilian science projects.

Jan. 3, 1993 -- US and Russia sign START II, a treaty that calls for further reductions in nuclear weapons. It is not yet in force.

Feb. 18, 1993 -- Under the Highly Enriched Uranium Purchase Agreement ('Megatons to Megawatts' program), the US agrees to buy 500 tons of HEU from Russia over 20 years. The US will dilute it to low-enriched uranium and sell it as fuel for nuclear-power plants.

Jan. 14, 1994 -- US, Russia, and the Ukraine sign a trilateral statement that commits the Ukraine to rid itself of nuclear weapons and to transfer specified warheads to Russia over a 10-month period.

Sept. 24, 1996 -- The US, Britain, China, France, Russia, and 50 other nations sign the Comprehensive Nuclear Test-Ban Treaty, which prohibits all nuclear explosions. As of August 2001, 79 nations had approved the treaty, but 82, including the US, have signed but not ratified it.

May 11, 1998 -- India announces it has conducted a series of successful underground nuclear tests, the country's first in 24 years. The event breaks an international de facto moratorium on nuclear testing. Later in the month, Pakistan announces that it has also exploded nuclear devices.

May 20, 2000 -- At a Nuclear Non-Proliferation Treaty review conference, more than 185 signatories approve Thirteen Practical Steps. The measures outline how the treaty's nuclear-disarmament provision can be implemented. For the first time, nuclear-weapons countries commit to eliminating their arsenals.

June 4, 2000 -- President Clinton and Russian President Vladimir Putin agree to set up a joint warning center for the exchange of information on missile launches. They also provide for the safe disposal of 68 metric tons of weapons-grade plutonium.

Fall/winter 2000 -- For fiscal year 2001, \$1.5 billion is earmarked for nonproliferation programs run by the Departments of Defense, Energy, and State. The Bush administration's budget request for nonproliferation programs in fiscal 2002 drops slightly to \$1.4 billion.

Jan. 10, 2001 -- An expert panel urges the US to spend \$30 billion over the next decade to help Russia secure its nuclear materials. That stockpile poses 'the most urgent unmet national-security threat' facing the US, the panel reports.

*Sources: Center for Nonproliferation Studies, Monterey Institute of International Studies; Council for a Livable World Education Fund; The Associated Press*

### **Trafficking of nuclear material: significant incidents**

1. Oct. 9, 1992 -- Russian police intercept 1.5 kilograms of highly enriched uranium at the train station in Podolsk. A worker at the Luch Scientific Production Association in the same city had taken the material.

2. May 1993 -- Approximately 100 grams of highly enriched uranium are discovered in a bank vault in Vilnius, Lithuania. The cache, originally from the Institute of Physics and Power Engineering in Obninsk, Russia, is embedded in a shipment of 4 metric tons of beryllium.

3. July 29, 1993 -- Russian security forces arrest two naval servicemen before they can smuggle 1.8 kilograms of highly enriched uranium out of the country. The servicemen stole the material from a storage facility on the naval base in Andreeva Guba, Russia.

4. March 1994 -- Russian agents in St. Petersburg arrest three people attempting to sell about 3 kilograms of highly enriched uranium. The material likely came from a machine-building plant in Elektrostal, Russia. Not much corroborating evidence of the incident is available.

5. May 10, 1994 -- As police in Tengen, Germany, investigate a businessman, they stumble upon about 6 grams of plutonium in his apartment. Its source is unconfirmed but is thought to possibly be a Soviet weapons lab at Arzamas-16, Russia.
6. June 1994 -- A naval officer at the Sevmorput Shipyard in Russia notifies authorities after a fellow officer asks about potential customers for nuclear material. The tip leads to the piecing together of a case involving two other officers and 4.5 kilograms of highly enriched uranium that had been stolen from the shipyard in 1993.
7. June 13, 1994 -- Undercover police in Landshut, Germany, act as potential customers in a sting operation involving the trade of 800 milligrams of highly enriched uranium. The material likely came from the Obninsk, Russia, institute. A Slovakian trader was convicted in the case.
8. Aug. 10, 1994 -- Undercover German police act as potential customers in a sting operation involving the trafficking of 560 grams of mixed oxide fuel and more than 360 grams of plutonium. The material, which likely came from the Obninsk, Russia, institute, was intercepted on a flight from Moscow to Munich. A Colombian national and two Spaniards were arrested.
9. Dec. 14, 1994 -- An anonymous tip to Czech police indicates that highly enriched uranium is in a parked car in Prague. Police arrest a Russian trader, a Czech physicist, and a Belarusian. The 2.7 kilograms of material are likely from the Obninsk, Russia, institute.
10. June 8, 1995 -- In a Moscow sting operation, Russian agents arrest three people trying to sell 1.7 kilograms of highly enriched uranium. One of the suspects is a worker in Elektrostal, Russia, where the material originated.
11. December 1997 -- A Russian inspection team visits the I.N. Vekua Physics and Technology Institute in Sukhumi, Georgia, which had been closed as a result of the Abkhazia-Georgia conflict. About 2 kilograms of highly enriched uranium that had been counted in a 1992 inventory are missing. The material has not been recovered.
12. Dec. 17, 1998 -- A Russian agency reports that it thwarted an attempt by workers at a nuclear facility in the Chelyabinsk Oblast region of Russia to steal 18.5 kilograms of uranium.
13. May 29, 1999 -- Bulgarian customs officers in Dunav Most discover 10 grams of highly enriched uranium hidden in a car crossing into Turkey. The driver says he obtained the material in Moldova, although authorities haven't determined the source.
14. April 19, 2000 -- Police in Batumi, Georgia, arrest four residents and seize 920 grams of highly enriched uranium. Its source is unknown.

*Source: Center for Nonproliferation Studies, Monterey Institute of International Studies*

New York Times  
December 5, 2001

## **Safety Of Nuclear Plants Again Raises Concerns**

By Matthew L. Wald

BRATTLEBORO, Vt., Dec. 4 — Some people here never liked the Vermont Yankee nuclear plant, worrying about accidents and radioactive waste. Others always thought it was a reliable, cheap and clean source of electricity. Over 30 years of arguing, they had mostly run out of new things to say and bored the general public with their arguments. But that was before Sept. 11.

Now discussions about Vermont Yankee, and other reactors around the Northeast, are drawing big crowds. There were 600 people here on Monday night, in the auditorium of Brattleboro Union High School, not counting the 20 federal, state and local officials on stage to answer their questions. They were at it for four hours, and a while longer in the parking lot.

"This is a small town, in a small state," said Representative Bernard Sanders, who convened the meeting, marveling at the turnout. "People are very, very concerned."

Last month there were hearings near the Pilgrim plant, in Plymouth, Mass.; the Seabrook plant, in the New Hampshire town of the same name; and the undamaged reactor at Three Mile Island, near Harrisburg, Pa. There was also a hearing near the Maine Yankee plant, in Wiscasset, Me., which was shut down five years ago, but where radioactive spent fuel is still stored. Next week in White Plains, a committee of the Westchester County Board of Legislators plans a hearing on whether to revoke approval of the emergency plan for the Indian Point reactors. A hearing about the dangers of spent fuel is planned for the Shearon Harris plant in North Carolina. "Sept. 11 has been the biggest challenge to nuclear power since Chernobyl," said David Lochbaum, a nuclear engineer at the Union of Concerned Scientists, a nonprofit group that frequent criticizes government oversight of



nuclear safety. "Congressmen who have had very little interest in nuclear power in the five years I've been at U.C.S. are suddenly competing with each other to examine security issues at the plants."

Although it is not clear how seriously local governments or members of Congress can threaten the future of licensed reactors, the industry hardly welcomes the discussion.

Until Sept. 11, the outlook for the nation's 103 nuclear power plants was improving. The years since the 1986 accident at Chernobyl have been mostly quiet, with no significant unusual radiation releases in the United States, and rising reliability. Reactors were beginning to look more attractive given the increasing demand for electricity. Several have recently won 20-year extensions on their 40-year licenses, and others have met the first challenge of deregulation of the electricity business, having sold at prices higher than analysts expected.

But since Sept. 11, public officials have mused publicly about whether a nuclear plant would withstand the crash of a jet any better than the World Trade Center did, and the technology's opponents have found a wider audience. "We have handed our enemies a radiological weapon, a target of opportunity," said Ned Childs, one of dozens of people who spoke at the hearing last night. Mr. Childs lives in Dummerston, Vt., 10 miles from the plant in Vernon. State officials have voiced the same concern. Kate O'Conner, chairwoman of the Vermont Terrorist Task Force, said Sept. 11 had prompted Gov. Howard Dean, who is a doctor, to seek a stockpile of a drug to protect the public against radiation-induced thyroid cancer, something that has been debated nationwide for 20 years.

The industry does not relish the attention. At the Nuclear Energy Institute in Washington, Angelina Howard, a spokeswoman for the industry's trade group, said some people in New York and New England had always shown "skittishness" about nuclear power. But elsewhere, she said, there were anecdotal reports that more tourists were stopping by the visitor centers at the plants, or at least those centers that were still open after Sept. 11.

"When the public has a concern and they go look into it, usually they come off feeling better about it," she said. Opinion polls commissioned by her organization show growing approval of nuclear power since Sept. 11, Ms. Howard said.

The Nuclear Regulatory Commission has defended the design of the plants. Hubert J. Miller, the commission's administrator for the Northeast, said that while Vermont Yankee's designers did not have an attack by a Boeing 767 in mind when they designed it, the building is "very robust," and that nuclear plants are among the strongest buildings of any kind.

Defending Vermont Yankee's security preparations is somewhat harder. On Aug. 23, it was the plant's turn for a mock attack by federal agents playing terrorists, and the evaluators found so many deficiencies that they graded the plant "yellow," in a grading system that runs green, white, yellow and red. It was the lowest grade in the industry. But Mr. Miller said the problems had been corrected.

At the town meeting, calls for conservation and renewable energy drew applause, although this being Vermont, at the mention of windmills, one strong voice shouted, "They're bird killers."

Ross Barkhurst, the chief executive of the Vermont Yankee Nuclear Power Corporation, stood his ground on reasons of safety and economics. Speaking of wind power, he said: "As long as we have the ability to compete, bring it on. Right now my best friend is the renewable energy we have in the state — it costs about two and a half times what mine does."

Public officials here and elsewhere have described the risk of terrorist attack on a reactor, especially by big planes, as remote, though some members of the public doubt the government's ability to pick what the next target might be.

"I know the opinion of many of you is that the best thing to do is not to have a plant down here," said Edward von Turkovich, the director of Vermont Emergency Management, to loud applause. But he added, "We're going to coexist with a plant. The best thing to do is to have a plan in place."

Government Executive

December 2001

## **Behind In The Biowar**

***History's deadliest weapons are making a comeback, and the public health system is far from ready to deal with them.***

By Katherine McIntire Peters

When a group of Mongol invaders besieged a Genoese trading colony on the Black Sea in 1346, they devised an ingenious way to clear the city. They lobbed the corpses of plague victims over the city walls, unleashing

destruction far beyond the range of their catapults. The Genoese lucky enough to escape by sea to Sicily brought the deadly plague bacteria with them. Before the decade ended, the Black Death, which had already ravaged China and the Middle East, swept across Europe, killing as much as half the population.

When historians look back on the emergence of inhalation anthrax as a weapon in the fall of 2001, they won't see an anomaly, but rather the continuation of a pattern. The history of warfare and the history of disease are intertwined. A century after the Black Death ravaged Europe, smallpox, spread innocently at first but later with deliberation, played a pivotal role in the European conquest of the New World, killing 80 percent of the indigenous population in some areas. During World War II, Japan used biological weapons against a dozen Chinese cities, killing an estimated 10,000 people.

Anthony Cordesman, an expert on terrorism and biological warfare at the Center for Strategic and International Studies in Washington, says the anthrax attacks on Americans that started in October shouldn't be particularly surprising. "It's certainly dramatic that we've come under biological attack for the first time. It's dramatic that it has been sustained and that the targeting has been well-chosen and sequential, so that there has been a steady cumulative buildup in the impact. But it's difficult to say some new threshold has been crossed."

What is clear, Cordesman says, is that the United States is not well prepared to deal with the consequences of terrorism involving biological agents. "This isn't a contingency anymore, it's a reality. We have to plan for that and we have to have a serious defense and response capability. That's very different from dealing with this as something that might happen."

The daunting nature of defending against and coping with a germ attack is obvious. In early October, after a Florida man died of anthrax and it became clear that others in New York and Washington had been exposed to the deadly bacteria, government officials were caught off guard by the overwhelming demands of the outbreak. The news media and the public had an insatiable appetite for information, and when government officials couldn't provide it, plenty of "experts" were standing by to fill the gap. The result was a proliferation of conflicting and often erroneous information, some of it put out by government officials themselves. Laboratory scientists began operating around the clock in a valiant effort to keep pace with the growing demand for anthrax tests. Doctors prescribed antibiotics for thousands of Americans, sometimes as much to ease panic as to protect against the threat of anthrax.

Adding significantly to the stress and confusion was the fact that much of what officials thought they knew about how anthrax is spread and how it affects human health was based on research done years ago under very different circumstances. The infection of photo editor Robert Stevens in Florida was the first case of inhalation anthrax in the United States in 25 years. Health and Human Services Secretary Tommy Thompson publicly declared the case was "isolated," and speculated that Stevens had contracted it drinking from a stream—information that quickly proved false. Likewise, just days before two postal workers in Washington died of the disease, experts at the Centers for Disease Control and Prevention said that anthrax spores found in a letter to Senate Majority Leader Tom Daschle, D-S.D., posed so little threat to postal workers they did not need to be tested for the disease.

Retired Gen. Dennis Reimer, former chief of staff of the Army and now the director of the Oklahoma City Memorial Institute for the Prevention of Terrorism, says the learning curve is steep when it comes to bioterrorism, and public officials need to be very careful about what they present as fact. "The American people will stay with the government while [officials] are working their way through some tough problems, if we say we don't know the answer yet. Where you start to get into trouble is where you say one thing and it turns out to be another. This whole thing about communicating with the American people is a very big issue. The challenge the government faces is how do you communicate the seriousness of the event without causing panic. We haven't had a lot of experience with that."

But as shocked and outraged as government officials are over the anthrax threat, many privately say the situation could have been much worse. As awful as anthrax is, it is not contagious. If it is diagnosed early enough, it is treatable. Many experts fear the future will bring far worse incidents of bioterrorism, and they worry that federal agencies, state and local health officials and ordinary Americans won't be prepared.

### **Growing Threat**

Biological agents—the bacteria, viruses and toxins that are the building blocks of disease—have a long and uneven history as weapons. They are notoriously deadly, potentially more so than nuclear weapons. They are relatively easy to obtain—hundreds of laboratories around the world have inventories of deadly pathogens. And compared to other weapons designed to kill masses of people, biological weapons are inexpensive to produce. But they are difficult to deploy reliably. Stabilizing biological agents and deploying them covertly, without endangering the perpetrator, requires expertise not widely held.

In the early 20th century, many nations began extensive experiments with biological weapons. The United States was a relative latecomer to the field and didn't begin serious research on germ warfare until the middle of World War II. The potential to inflict damage on an adversary was obvious; less clear was how to protect one's own troops

from disease while spreading it among the enemy. Because the technical challenges of deploying biological weapons on the battlefield were so great, the prevailing attitude among American war planners was that the military value of these weapons was marginal. In addition, the fact that nations were engineering ways to deliberately spread diseases while scientists around the world were devoting their lives to wiping out some of the same diseases became increasingly untenable among many world leaders.

Amid growing doubts, President Richard Nixon ended the U.S. germ warfare program in 1969. Then, in 1972, the United States and the Soviet Union, along with more than 100 other nations, signed the Biological Weapons Convention. Signatories agreed to end their germ warfare programs, although they retained the right to continue research into defensive measures against such weapons. The United States destroyed its stockpile, along with most, if not all signatories, except for the Soviet Union. The Soviets, U.S. officials later learned, continued their germ warfare program with a vengeance, developing tons of anthrax and the bacteria that cause botulism, plague and other deadly diseases, even loading some agents into missiles aimed at American cities.

U.S. intelligence agencies learned of the germ warfare program in the late 1970s, but the full scale of the program was not known until 1992, when Ken Alibek, its deputy director, defected to the United States. Alibek's claims about the extent of the Soviet program were so shocking that some military and intelligence personnel believed he was exaggerating. As U.S. officials began to substantiate Alibek's statements through scientific exchange programs in the 1990s, the reality began to sink in—the United States' defensive capabilities were no match for the germs engineered by the Soviets.

Military officials were already worried about Iraq's biowarfare program, however. In the buildup to the Persian Gulf War it became painfully clear to military commanders that U.S. and allied troops were vulnerable to a germ attack from Iraq. Taking out Iraqi President Saddam Hussein's crop-dusting fleet—Iraq was believed to have tested how to spread anthrax with crop dusters—was a top priority in the early air strikes of the war.

In 1999, Alibek published *Biohazard* (Random House Inc., New York), a detailed account of Soviet successes in engineering antibiotic-resistant versions of some of the world's oldest, deadliest diseases, including anthrax, smallpox and viruses causing hemorrhagic fever. Today, Alibek is researching ways to boost the immune system to defend the body against infectious disease. In October, he signed a contract with the National Institutes of Health to conduct cellular research that could lead to defenses against anthrax.

"I cannot unmake the weapons I manufactured or undo the research I authorized as scientific chief of the Soviet Union's biological weapons program," Alibek says. "I do what I can to mitigate their effects." But many of Alibek's former colleagues are believed to be working in Iraq, Syria and other of what the State Department calls "nations of concern." The collapse of the Soviet Union put thousands of germ warfare scientists out of work, dozens of whom are believed to be actively involved in foreign weapons programs.

### **Unheeded Warnings**

"Ken Alibek warned us two years ago that America was not taking the bioterrorism threat seriously," says Curt Weldon, R-Pa., a senior member of the House Armed Services Committee. Weldon has long advocated programs to boost preparedness against unconventional threats, but he acknowledges that part of the reason federal programs have been inadequate and poorly managed is lack of leadership on the part of Congress.

"Today in Congress there are over 26 separate committees and subcommittees that oversee funding for homeland defense—all with separate jurisdictions. We must change that. We must coordinate that and modify the way we oversee the spending of tax dollars so that [local officials] have a clear way of obtaining resources to implement the required actions to deal with the threat," Weldon says.

A number of laws and presidential directives in recent years have attempted to strengthen defenses against the proliferation and use of nuclear, chemical and biological weapons of mass destruction and boost the nation's preparedness to deal with the aftermath of an attack. In 1996, Congress passed the Defense Against Weapons of Mass Destruction Act, which required the Defense Department to train local and state officials most likely to be first to respond to such an attack. The same year, Congress passed the Antiterrorism and Effective Death Penalty Act, which authorized the attorney general to provide training and equipment for improving the capabilities of metropolitan fire and emergency service departments to respond to terrorist attacks. The two laws increased the federal role in ensuring state and local preparedness, but to many officials, they also increased confusion about division of responsibilities among levels of government at a time when the threat of bioterrorism was becoming increasingly apparent.

Long before anthrax started showing up in mail rooms across the country, federal officials understood that the risk to civilians of a biological attack was as great or greater than the risk to military personnel. In a July 1997 interview with Government Executive, David Franz, who was then commander of the U.S. Army Medical Research Institute of Infectious Diseases at Fort Detrick, Md., said battlefield threats are easier to defend against than terrorist attacks against civilians, especially those involving biological weapons. "The opportunity to prepare for a specific terrorist

incident will be extremely rare—much like preparing for an emerging disease outbreak. Unless we happen to have excellent intelligence, we can only be prepared to respond after the fact," Franz said.

The Army institute is the only facility in the United States where medical research is conducted to develop drugs and vaccines that can counter the use of biological agents that have been engineered for use as weapons. But despite the growing biological threat and the institute's critical role in medical research, its funding and staff have been cut by nearly one-third over the past decade, even as anti-terrorism programs proliferated across the federal government as a result of the 1996 legislation.

A number of studies have shown that federal bioterrorism training programs are redundant, poorly coordinated among departments, and confusing to state and local officials. Amy Smithson, a chemical and biological warfare expert at the Henry L. Stimson Center, a national security think tank in Washington, says the federal role has been counterproductive. "Dozens of federal entities have been fiercely competing for the missions and money associated with the unconventional terrorism response, an unfortunate circumstance that has resulted in redundant capabilities, wasteful spending and, at the local level, confusion as to which agency would spearhead the federal component of a response," Smithson says.

In "Ataxia: The Chemical and Biological Terrorism Threat and the U.S. Response," an October 2000 report co-written by Smithson, she writes that the federal government's lack of preparedness for dealing with bioterrorism is inexcusable: "The minute the U.S. government had knowledge that another nation had not only weaponized contagious biological agents . . . but also had a doctrinal concept of attacking an opponent's civilian populace, then it was incumbent upon Washington to throw U.S. biodefense programming into high gear to safeguard the health of soldiers and civilians alike.

"Confirmation of the U.S. government's intelligence about the Soviet biowarfare program began with high-level defections in the late 1980s and early 1990s, yet Washington did not escalate efforts to develop new licensed vaccines and stockpile existing vaccines until 1996 and 1998, respectively. Nor did the government make any move to resuscitate the country's long-neglected disease surveillance system until 1998," Smithson wrote.

Federal preparedness programs are a "fractured mess," Smithson wrote. Federal agencies seem more intent on securing larger budgets than in devising coherent, integrated plans to defend against and respond to a terrorist attack, she says. "An absurdly small slice of the funding pie has made it beyond the Beltway."

### **Health Care Crisis**

Nowhere are the gaps more apparent than in the public health system, which operates more like a loose collection of like-minded organizations than an integrated system. The challenge posed by bioterrorism is that it is highly unlikely an attack will be perceived at the time it happens. Instead, people will start getting sick and begin seeking care from their private physicians or local hospitals and clinics. A pattern of illness may not become apparent for weeks. If the disease is contagious, it would likely spread exponentially, eventually overwhelming the local medical system.

That's what happened during two recent national exercises designed to test the health care system's response to a biological attack. An exercise in June 2000 simulated the release of plague in Denver, while another exercise a year later simulated the release of smallpox in several cities. The results were clear: In both cases the medical system collapsed, the public lost faith in government officials and the disease spread like wildfire.

Reimer helped plan the smallpox exercise, called Dark Winter. He says it was designed to test the range of issues officials would face—such as how to legally quarantine people across different jurisdictions, how to distribute a limited number of antibiotics and vaccines, and how to keep public order in the face of mass hysteria. Some exercise participants estimated that the hypothetical outbreak would have resulted in 1 million deaths.

"It was a worst-case scenario to force people to deal with some of the policy decisions they would have to deal with if smallpox was introduced," Reimer says. But it doesn't take a worst-case scenario to see serious gaps in health care.

The nation's response to annual bouts of influenza offers a clear warning to those concerned about preparedness for terrorists wielding infectious disease as a weapon. The flu is predictable and vaccine is widely available prior to the onset of flu season. Nonetheless, 20,000 Americans die annually as the result of flu, and flu season nearly always stresses hospitals beyond their capacity. For years, health care officials have been warning of the possible emergence of a more deadly flu virus for which vaccine will be ineffective—something akin to the 1918 influenza pandemic that killed 20 million people worldwide, including 550,000 Americans—in which case hospitals couldn't come close to caring for all those who would come down with the disease.

It's also instructive to consider the outbreak of West Nile Virus in New York City in 1999. Local, state and federal laboratories were overwhelmed for months while they were inundated with requests for tissue analyses of hundreds of ailing patients, who were experiencing swelling of the brain, disorientation and other unusual symptoms. At the same time, hundreds of birds were dying across the city—they were carrying the West Nile Virus, it turned out,

although it took months for officials to recognize the link. What was worse, more than 20 patients were admitted to metropolitan hospitals before one doctor reported the strange outbreak to the city's public health department. After New York public health officials notified the Centers for Disease Control and Prevention in Atlanta, the CDC initially misidentified the disease, which is common in the Middle East and Africa, but had never been seen in North America. Given that the outbreak occurred in New York City, which has what is widely believed to be one of the best public health systems in the country, officials elsewhere worried about how they would have fared in a similar situation.

According to the General Accounting Office, the CDC received only \$155 million for bioterrorism preparedness programs in 2000—out of a federal counterterrorism budget of nearly \$10 billion. About \$40 million of CDC's budget was awarded to state and local health departments for surveillance, epidemiology, laboratory work and communications programs. Officials agree that much more is needed if public health officials are to recognize and identify disease outbreaks soon after they occur.

Dr. Tara O'Toole, deputy director of the Center for Civilian Biodefense Studies at Johns Hopkins University, told an audience at the Center for Strategic and International Studies in August that the nation's 5,000 hospitals are poorly equipped to handle even relatively minor disease outbreaks. During flu season in 1999, for instance, three-quarters of the Los Angeles emergency rooms were so full for 10 days they had to re-route ambulances to other facilities. The Maryland Secretary of Health found that Baltimore, home to two major medical centers and medical schools, could not handle even 100 people needing to be put on ventilators overnight.

The fact that authority for public health is vested in the states poses a serious problem in the event of a bioterrorist attack, said O'Toole. "CDC has to be invited in to do anything in the states, although CDC certainly has the expertise that we would want to use in the event of an epidemic," she said. "State and local health care departments are not necessarily well-glued together either, and there is a big disconnect between the public health system and the medical system. Doctors do not think to call their local public health officer when they find an infectious disease." What's more, few physicians are trained to diagnose the pathogens thought to be most likely used as bioweapons. "Most American doctors have not seen anthrax or smallpox or pneumonic plague," she said.

The conventional wisdom is that only one in 10 cases of infectious disease is reported to public health officials. Even when doctors think to call their local health department, there might not be anybody there, she said. "People in public health departments do not have beepers; they do not have computers on their desks for the most part. When there was an outbreak of Cryptosporidiosis, [an intestinal infection caused by a parasite] in Milwaukee a few years ago that eventually sickened 400,000 people, the Milwaukee Health Department did not have one fax machine. They had to walk down the hall and borrow one, ironically, from the Office of Economic Development," O'Toole says. All things considered, public officials handled October's anthrax outbreak pretty well, says Cordesman. But the situation highlighted the weaknesses of the bioterrorism response system.

"We were warned again and again by public health officials that the system was inadequate and that they'd have to improvise and that there were many areas where we simply didn't know what to do and we'd run out of resources very quickly," says Cordesman. "We've spent a long time slowly weakening the public health system, and we ended up paying for it."

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## **Missile Defense Successful In Test**

### ***Technology viable, conservatives say***

By Jeffrey T. Kuhner, The Washington Times

A leading conservative group yesterday praised the Bush administration's successful missile-defense test, saying it shows that the technology is available to build a national shield against nuclear attacks from rogue nations.

The U.S. military announced it completed its third successful missile-defense test on Monday, knocking a dummy warhead out of space more than 100 miles over the South Pacific.

Monday night's "U.S. missile test is part of President Bush's stated goal of building a missile-defense shield to protect against the launch of ballistic missiles from rogue nations, such as North Korea, Iran, Iraq, Syria and terror groups who either have weapons of mass destruction and can attack the United States, or have the ability to produce

or acquire them and the appropriate launch capability," David Keene, chairman of the American Conservative Union, said in a statement yesterday.

"The success of [Monday's] test, when combined with the other two successful tests, reconfirm the viability of comprehensive missile defense, which has taken on a new meaning of urgency since the attacks of September 11th." The successful test means the Pentagon can move on to more complex trials of the missile-defense system, which the Pentagon says is necessary "to deter the growing threat of ballistic missiles carrying weapons of mass destruction."

However, many liberal Democrat critics say the tests are too expensive and tightly rigged, arguing that long-range missiles are a minor threat. Supporters of missile defense, including President Bush, say rogue nations could develop and target long-range missiles at the United States.

An interceptor missile launched from Kwajalein Atoll in the Marshall Islands collided with the dummy warhead at about 10:30 p.m. EST, the military said. The test was similar to a successful one in July.

Poor weather and high winds had blocked the test launch on Saturday and Sunday and delayed Monday's missile launch from Vandenberg Air Force Base, Calif., for nearly an hour.

A modified Minuteman II missile took off from Vandenberg at 9:59 p.m. EST, the military said. Instead of explosives, its warhead carried sensors to track its progress during the test.

The dummy warhead also carried a large balloon to be jettisoned in an attempt to trick the interceptor — a tactic that the interceptor in this test successfully ignored.

After 22 minutes, the interceptor missile was launched from Kwajalein Atoll in the South Pacific. That missile carried a "kill vehicle" that homed in on the dummy warhead to collide at 15,000 mph and obliterate it in space.

Monday's test was the fifth in the missile-defense program. Two out of the four previous tests have been successful. Each test costs about \$100 million.

Critics charge that because the interceptor got precise location information from the dummy warhead before its launch, it is not only a waste of taxpayer dollars, but it is unreliable and ineffective as well.

This is disputed by missile-defense supporters, who say that those opposed to the administration's proposal are seeking to use the issue for partisan advantage and are ignoring that the successful tests prove the technology works.

"The three successful tests underscore the fallacy of the liberals' argument that the necessary technology doesn't work or exist. These partisans would rather attack the president's policy than ensure the safety and security of Americans," Mr. Keene said.

He added: "This is not the time for political posturing. It's time to protect America."

*This article is based in part on wire service reports.*

Washington Times

December 5, 2001

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## **Envoy Aims To 'Help' Biological-Warfare Pact Review**

By Nicholas Kravev, The Washington Times

The United States yesterday began the last round of intensive negotiations with allies and other major powers on measures to strengthen a 1972 treaty banning biological warfare, but an agreement was hardly in sight.

John Bolton, undersecretary of state for international security and arms control, arrived in Geneva for the second time since the start of a Biological Weapons Convention (BWC) review conference on Nov. 19 to bolster the U.S. delegation's bargaining power, a U.S. official said.

"He will do whatever he can to help," the official said, declining to predict the outcome of the conference, which ends on Friday.

Another official said the negotiations are now down to minute details spread over more than 100 pages, but there are no guarantees that they will be successful.

"This conference could still fail and that would send out a bad message," a European diplomat told the Reuters news agency. "We really need something that shows we are able to act."

The Bush administration has much more at stake in Geneva than the future of the nearly-30-year-old treaty. Its rejection in July of a widely supported protocol to enforce the BWC through on-site inspections put it at odds with most of its allies and fueled accusations of U.S. unilateralism.

The European Union has been trying to break a deadlock between the United States and some developing countries, which want sweeping revisions to the existing treaty, including firmer commitments on the transfer of technology to the developing world.

A State Department official said that some countries "have an interest in weakening and abolishing multilateral export controls," but added, "We are not going to water down our approach to get a least-common-denominator agreement."

One U.S. position that has provoked strong disagreement between Washington and most other participants deals with the future of the so-called "ad hoc group," which spent six years working on the July protocol. The United States has proposed ending the group's mandate.

The Bush administration, which had already abandoned the Kyoto agreement on climate change and threatened to scrap the 1972 Anti-Ballistic Missile Treaty banning missile defenses, called the BWC protocol "unworkable" and said the regime it proposed would threaten U.S. military and trade secrets while allowing "rogue states" such as Iran and Iraq to "cheat."

But after the recent anthrax attacks in the United States, which have infected 17 persons and killed five, the administration prepared its own proposal that would commit the BWC's 144 signatories to criminalizing biological-weapons activities on their territories.

In a Nov. 1 statement, President Bush called for "strict national criminal legislation against prohibited bioweapons activities, with strong extradition requirements" and "sound national oversight mechanisms for the security and genetic engineering of pathogenic organisms."

He also proposed "an effective United Nations procedure for investigating suspicious outbreaks or allegations of biological-weapons use," as well as a code of ethical conduct for biologic scientists and "responsible conduct in the study, use, modification and shipment of pathogenic organisms."

The response of the European and other allies with whom Washington shared its ideas before the Geneva conference was hardly enthusiastic, administration officials and experts said. There was a consensus, they said, that the U.S. draft is a good first step, but it doesn't legally bind all parties to international standards.

The United States would like to see its proposals become part of a declaration adopted at the end of the three-week-long conference, which takes place every five years. But the differences with most other countries are still too large, diplomats said.

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December 5, 2001  
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## **Metro Drill Testing Response To Attack**

### ***Exercise Is Transit System's First to Address Chemical or Biological Assault***

By Lyndsey Layton, Washington Post Staff Writer

Emergency workers, police, transit employees and federal officials were scheduled to test the District's ability to handle a chemical or biological attack in the Metro during an early morning drill today.

The exercise, beginning shortly after the subway system's closure at midnight, was to take place inside Smithsonian station and involve about 100 people.

Metro regularly holds fire and emergency drills, but this was the first time the transit system practiced for a biological or chemical attack. It drew the interest of several federal agencies, including the Departments of Transportation, Justice and Energy.

Since 1999, federal scientists have been developing and experimenting with chemical sensors in two downtown Metro stations under a \$7.5 million program known as PROTECT. While chemical sensors have military applications, this is the first project to try to adapt the technology to a subway environment.

To develop the sensors in two stations, meteorologists and other scientists from Argonne, Sandia and Lawrence Livermore national laboratories studied how air moves through the subway and how trains, heat and humidity affect air flow. The scientists have also been examining how chemicals spread after they're released on a moving train, as opposed to inside a station, and how those chemicals can be released through air exhaust systems into the streets above.

Last night's drill didn't include a test of the sensors. Instead, it focused on human response -- the way squads of Metro employees and hazardous materials workers handled the scenario, Metro Police Chief Barry McDevitt said.

Sources familiar with PROTECT said the sensors have performed so well in recent tests that they may be available for purchase by other subway systems in 2002.

Their only failing is the fact that while they can detect the presence of a harmful chemical, such as sarin gas, they cannot yet detect biological agents, such as anthrax. It could take a couple of years before the sensors are sophisticated enough to notice biological weapons, officials said.

Metro is asking the federal government for \$81 million to expand the experimental program and install sensors in all 47 underground stations. The House approved \$15 million for the project in a defense appropriations bill, and Metro received another \$10 million from the White House for beefed-up security in the aftermath of Sept. 11. It is unclear where the rest of the money will come from.

If it expands the sensors to all underground stations, Metro would become the world's first subway with sensors that can detect a biological or chemical attack. Not even the Tokyo subway system, the site of a sarin gas attack that killed 12 people in 1995, has developed technology that can detect a chemical or biological release.

Experts say transit systems make attractive terrorism targets: They are public and are used by thousands daily, and passengers are strangers -- allowing attackers a measure of anonymity. And because subways are based on fast travel, package searches, metal detectors and other security checkpoints are obstacles that few passengers would tolerate.

Forty percent of terrorist attacks worldwide in 1998 were against transportation targets, with a growing number against bus and rail systems, Federal Transit Administrator Jennifer Dorn told senators in October.

Arkansas Democrat-Gazette

December 3, 2001

Pg. B1

## **Neutralize Weapons In Arsenal, Group Says**

By Emmett George, Arkansas Democrat-Gazette

PINE BLUFF -- A coalition of incineration opponents is trying to persuade the U.S. Army to abandon its plans to burn chemical weapons at the Pine Bluff Arsenal for an experimental chemical neutralization process.

Craig Williams, national spokesman for the Berea, Ky.-based Chemical Weapons Working Group, says neutralizing weapons is faster and safer than burning them.

Williams said the Army's incineration projects will take seven to 15 years to complete, compared to five to six years for neutralization.

"They have only a 50 percent chance of disposing of the weapons by February 2010," Williams said last week.

"Basically what that means is in 10 years you'll still have chemical warfare agent in your community."

In light of the Sept. 11 terrorist attacks, Williams said, "We need to look at this thing based on the level of risk the agent poses to the community."

The coalition's Arkansas members include Pine Bluff for Safe Disposal, Women's Action for New Directions, the Arkansas Fairness Council, the Arkansas Public Policy Panel and the Arkansas Sierra Club.

The coalition advocates chemical neutralization of weapons. The process involves the low-pressure, low-temperature chemical breakdown of chemical agents.

Neutralants, such as sodium hydroxide or sodium chloride, are mixed with the agent, and the byproducts can be treated at commercially-operated biotreatment plants.

Components such as rocket containers, shelling casings and fuses can be melted down and recycled.

Incineration requires temperatures of 1,000 degrees to 2,700 degrees.

Randy Long, project manager for the Pine Bluff Chemical Weapons Disposal Facility, said the arsenal is on track to complete the destruction of the munitions by May 2008.

"The project is 74 percent complete," Long said. "The only proven technology is the one we have now."

Switching to neutralization "wouldn't speed things up, and it wouldn't be safer," Long said.

Changing technology also would drive up the estimated \$ 660 million cost of the project, he said.

The incinerators are being built by the Washington Demilitarization Co. of Philadelphia.

Williams said his projections are based on a recent Department of Defense's Acquisition Board report and that of the board's own independent review committee -- the Cost Assessment Improvement Group -- which expressed "a 50 percent confidence" that destruction can be completed by 2010.

In October, the Army revised its projections for disposal by 2007 to early 2008.



The Army is under a congressional mandate and an international treaty deadline to destroy the nation's entire stockpile of chemical weapons at eight sites across the country by 2007.

"I believe that the most expeditious route available is incineration," Long said. "Ultimately it [neutralization] will add costs to the overall program because you would have to add to the system we have now."

Williams, however, insists the time saved would offset the cost of "retro-fitting" the system to neutralize the agent. He estimated the cost of operating the incinerators at about \$ 300,000 a day.

Long said if the new technology is adopted, Army officials would have to ask Congress for more funding.

U.S. Rep. Mike Ross, D-Prescott, was traveling Friday and could not be reached for comment. But Courtney Crouch, Ross' press secretary, said Ross seems satisfied that the Army is making progress.

"Obviously, the Army has taken greater precautions and has stepped up security since Sept. 11," Crouch said.

Williams has written to President Bush and members of Congress, urging them to act "quickly and decisively" to adopt neutralization technology.

He said he plans to meet with top Army officials before the end of the year to discuss the proposal.

The Pine Bluff facility will be the fourth incinerator plant built in the U.S. since 1996. Other incinerators were built in Tooele, Utah; Umatilla, Oregon; and Anniston, Ala.

The Pine Bluff Arsenal stockpile includes 3,321,180 items or 30,600 tons of munitions. Among these are M55 rockets containing GB nerve agent and VX agent, VX-filled mines, and containers of HT-blister agent.

New York Times  
December 5, 2001

## **Likeness Seen Between Anthrax Sent To Senators And To Florida**

By Andrew C. Revkin and Dana Canedy

Two months after the death of Robert Stevens, the first of the nation's anthrax victims, new tests at his Florida workplace reveal a pattern of pervasive contamination that mystifies investigators.

The test results, issued by the Environmental Protection Agency last week, show that anthrax spores spread throughout the three-story office building in Boca Raton that is the headquarters of American Media Inc., a tabloid publisher. Spores ended up not just in the mailroom and on Mr. Stevens's keyboard, but also in such out-of-the-way places as atop a room divider and computer monitors and in a nook between banks of shelves.

Officials involved in the effort said they were surprised by how far the material had spread. Such findings point to an extremely dangerous kind of anthrax preparation, with small particles that can easily float in the air, officials and experts said.

Because of this pervasiveness and the fact that the anthrax infected the lungs of Mr. Stevens and another worker, Ernesto Blanco, some officials and anthrax experts say it appears to have behaved very much like the anthrax shed by letters mailed later to two senators.

Investigators have repeatedly said there was something particularly deadly about the spores sent in letters to Senator Tom Daschle and Senator Patrick J. Leahy. The spores have been tied to the deaths of two postal workers in Washington, and investigators say cross-contamination from the letters may be responsible for the most recent anthrax deaths, of a woman in the Bronx and a woman in Connecticut.

The strain of anthrax in all the incidents is identical, and now, with the test results from Florida, there are at least some hints that the material sent there was equally dangerous and possibly identically prepared, investigators said. But other contamination discovered in the American Media building conflicts with this interpretation. Investigators said that some sites found to be contaminated closely traced the routes taken by people making regular rounds from the first-floor mailroom up stairs and elevators to dozens of desks and cabinets. Spores presumably were stirred up and transported as mail was sorted and delivered. These findings point to a less-dangerous preparation with spores that do not linger in the air but fall where they are released.

These conflicting results have some investigators pondering the notion that more than one letter was sent to American Media.

But whatever ended up there, it was able to kill Mr. Stevens, 63, a photo editor, and nearly kill Mr. Blanco, 73, who worked in the mailroom. Both men developed the inhalation form of anthrax.

The new findings present a completely different picture of the contamination in the building than was developed after tests in the early stages of the investigation. Those tests, restricted to air vents on the first floor, where Mr. Blanco and Mr. Stevens worked, showed no spores, leading environmental officials to say it was unlikely that anthrax was widely dispersed.

But the full battery of tests found a much different situation. From Oct. 20 to Nov. 8, hazardous-materials teams working for the E.P.A. took 462 samples inside the quarantined building from surfaces, air filters, vacuum-cleaner bags and other spots. A total of 84 places were found to be contaminated.

In the end, two months into the oldest component of the anthrax investigation, frustrations predominate. "We still don't have a letter, we still have a death, and a lot of anthrax that was there," said a federal law enforcement official. "Could the material have moved on its own, could it be carried on a person or float through the air?" mused the official, who spoke on condition of anonymity and said the answer could be all of the above.

The strain of anthrax in all the incidents is identical, and now, with the test results from Florida, there are at least some hints that the material sent there was equally dangerous and possibly identically prepared, investigators said. American Media said, meanwhile, that it was not any closer to figuring out why it was targeted for a bioterrorism attack in the first place.

The one thing that is clear is that at least one tainted letter came to one of the company's tabloids, The National Enquirer.

This became evident after testing was done of all the post offices that served the area and spores were found leading through the post office that served Lantana, Fla., where The Enquirer had been located until about a year ago.

A clear trail of spores led through that post office to the one for Boca Raton. Spores were also found in a van that Mr. Blanco used to carry mail to the building and all around the mailroom on the first floor.

And the only other employee who was shown by testing to have been exposed to anthrax was another mailroom worker, Stephanie Daley, 36. She never became ill.

Other frustrations were simmering at American Media as well. Company representatives said they were irked by what they said was a lack of willingness on the part of state and federal officials to help with the cleanup of the building.

"I find it a little bewildering," said Michael Kahane, general counsel for the company. "You have this building that is pervasively tainted with anthrax and that the government declares a public health threat, then they close it. Then they do testing and give it back to you and say 'Now you need to go out and hire a private contractor to clean it up.'"

Later this week, most of the 400 American Media employees who were put on 60-day courses of the antibiotic Cipro will come to the end of their regimen.

Many already abandoned the medication, some employees said, because of unpleasant side effects and a growing sense that the threat was behind them.

"We're all off Cipro now," said an editorial employee who spoke on condition of anonymity.

Tim O'Connor, a spokesman for the Palm Beach County Health Department, said that the mass administration of Cipro proved to be the right decision.

"Originally we were all figuring that it would be isolated to an office or a little area just in the mail room and Stevens's desk," he said. "The fact that they found it everywhere means there's a good chance that someone else would've gotten sick if we hadn't taken these steps."

**Tuesday December 4 9:25 PM ET**

## **AMA: Further Smallpox Study Needed**

*By PAUL ELIAS, Associated Press Writer*

SAN FRANCISCO (AP) - The American Medical Association on Tuesday refused to endorse smallpox vaccinations for all Americans, rejecting calls from doctors who say the disease could be used as a biological weapon.

Instead, the 538 delegates attending the AMA's annual winter meeting in San Francisco voted overwhelmingly to continue studying the possible repercussions of such a mass inoculation.

"We do not yet know that the bad guys have the smallpox virus," said Dr. Ron Davis, a public health expert from Detroit and a member of the AMA's 16-member board of trustees. "There are huge, complex issues involved and due deliberation is needed."

Some doctors said they worry the vaccine itself could kill as many as 300 people if the entire U.S. population were vaccinated. There's also disagreement about whether those already inoculated would need another vaccination to prevent a smallpox infection.

Babies younger than 1 and people with weakened immune systems couldn't withstand smallpox vaccinations, doctors said.

A nationwide smallpox vaccination program was discontinued in 1972, and the disease was eradicated worldwide by 1980. Two smallpox virus samples remain - one in the United States and the other in Russia. Concerns about security at the Russian lab have been exacerbated by the recent anthrax cases.

Smallpox is contagious, and roughly 30 percent of those who contract it die.

Last week, the Centers for Disease Control and Prevention ([news](#) - [web sites](#)) issued a report recommending that no vaccinations should be given unless an outbreak occurs.

The CDC recommended a technique called "ring vaccination," in which only healthy people around a smallpox victim would receive the vaccine.

[http://dailynews.yahoo.com/h/ap/20011204/hl/smallpox\\_vaccination\\_2.html](http://dailynews.yahoo.com/h/ap/20011204/hl/smallpox_vaccination_2.html)

## Feds Urged on Anthrax Responses

*By John Heilprin*

Associated Press Writer

Tuesday, December 4, 2001; 4:40 PM

WASHINGTON — Foam and liquids work on heavy equipment, gas on paper and electronics.

These are just two of the lessons emerging from the anthrax cleanup as the government learns to improvise.

"We are quite literally writing the book as we go along," Christie Whitman, the Environmental Protection Agency administrator, said Tuesday. "Each event has to be thoroughly analyzed as a separate case."

No registered pesticides are approved for use against anthrax, for example. So since October, the EPA has used special provisions in the law to approve two pesticides for treating anthrax spores: an aqueous solution of chlorine dioxide and a foam used to treat anthrax-contaminated surfaces.

Whitman said that under "emergency conditions," the EPA can allow a new use of a previously registered pesticide or use of an unregistered pesticide if the agency has enough data to make a finding that it probably would be safe.

"The tools in our toolbox are growing rapidly," she said.

At a hearing Tuesday, several senators including Environment Committee Chairman James Jeffords, I-Vt., told Whitman the government must improve quickly its ability to provide consistent information and more centralized leadership.

"After all, we are the test case," Jeffords said. "No prior attempt has ever been made to remediate a biologically contaminated building."

As the lead agency for cleaning up biological and chemical contamination, the EPA oversees the elaborate operation that officials hope will result in reopening the Hart Senate Office Building by early next year.

It first had to figure out how to spread chlorine dioxide gas safely into Senate Majority Leader Tom Daschle's office suite, never before done in the United States. Laboratory results from the fumigation last weekend are expected by the end of this week.

Whitman said she expects to spend as much as \$20 million on killing the recent spate of anthrax spores from intentional releases. So far, she said, the EPA has spent \$7.5 million to clean up Senate buildings and help decontaminate other facilities.

The EPA is called in to decontaminate a facility or help local and state officials after a finding by the federal Centers for Disease Control and Prevention that the site is a threat to human health.

Sen. George Voinovich, R-Ohio, agreed with Jeffords that information on decontamination has been "spotty, at best." He and his staff initially were told their offices in Hart were safe, Voinovich said, even after the news that potentially lethal anthrax bacteria escaped Oct. 15 from a letter opened by an aide to Daschle.

"I have personally been very frustrated with the quality and reliability of the information regarding the anthrax contamination here in Washington, including the cleanup efforts," he said.

One of the problems is a lack of historic scientific data that would indicate the best way to eliminate spores from an office building or to disinfect a sorting machine, said Dr. Patrick Meehan, the CDC's director of emergency and environmental health services.

"For many of the cleanup methods being used to kill anthrax spores, we will not know their effectiveness until we go through the process," Meehan said.

Even though the toxic decontaminating gas is a potential hazard for cleanup workers, fumigation is the best method in "heavily contaminated areas" such as Daschle's suite or the Brentwood postal facility, which handled anthrax-tainted letters sent to Capitol Hill in October, Meehan said.

"It is unlikely that any cleaning strategy will kill every spore," he said. "However, the EPA should be able to clean and retest to the point where we all are comfortable that spores have been killed or removed" from common surfaces used by most people.

<http://www.washingtonpost.com/wp-dyn/articles/A56620-2001Dec4.html>

Wall Street Journal

December 6, 2001

## **U.S. War Against Terrorism Could Fuel Tensions In Korea**

By John Larkin, Staff Reporter of The Wall Street Journal

SEOUL, South Korea -- The Bush administration's moves to link North Korea to its war on terror are stoking fears of renewed hostilities on the Korean Peninsula.

Late last month, U.S. Undersecretary of State for Arms Control and International Security John Bolton jolted the two Koreas by describing Pyongyang's biological-weapons program as the world's most dangerous after Iraq's. North Korean leader Kim Jong Il's government has taken steps since the Sept. 11 attacks on the U.S. to distance the Communist country from global terrorists such those in Osama bin Laden's al Qaeda network. His regime has both denounced the assaults on New York and Washington and vowed to sign United Nations-backed antiterrorism bills. But Washington appears unconvinced. "North Korea likely has the capability to produce sufficient quantities of biological agents for military purposes," Mr. Bolton told a meeting of the Biological Weapons Convention in Geneva. Days later, President Bush moved to link Pyongyang's missiles and biological/chemical agents to his broader war on terror, saying: "Part of the war on terror is to deny terrorists weapons."

South Korean officials endorse Washington's sentiments. But some senior officials in Seoul fear that too uncompromising a stance by the Bush administration on Pyongyang's weapons of mass destruction could deal a fatal blow to President Kim Dae Jung's efforts to engage the North.

Mr. Kim has used much of his time in office to try and build a political detente with Pyongyang, succeeding last year in staging the first-ever summit of the two Koreas. Some of his aides have said they hoped a peace declaration could be signed ending 50 years of Cold War hostilities between the two countries.

Some South Korea officials fear Washington's recent rhetoric will provoke a security crisis like that of 1993-94, when North Korea's refusal to allow inspections of its nuclear facilities brought it to a tense standoff with the U.S. Washington's stance has "created unnecessary concern not only for the South Korean public but also in North Korea that the Korean Peninsula can be a battleground again," said a senior South Korean Foreign Ministry official. Bush "is not sensitive to North Korea's possible responses," the official said.

Grouping North Korea with Iraq -- a possible target in the second stage of the war on terror -- has reinforced perceptions in Seoul that the Bush administration is not seriously interested in supporting President Kim's dialogue with Pyongyang. At a U.S.-South Korean summit in March, Mr. Bush ditched the conciliatory tone adopted by former President Bill Clinton and expressed distrust toward the North Korean leader. Pyongyang promptly froze dialogue with the U.S., and its dealings with South Korea have since been fitful at best.

Inside The Pentagon

December 6, 2001

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## **Rumsfeld Seeks To Create Civilian Posts For Intel, Homeland Security**

Defense Secretary Donald Rumsfeld last week asked Congress to give him the authority to create two new, senior-level civilian positions aimed at strengthening his hand in the war against terrorism: an under secretary of defense for homeland security and another under secretary for intelligence.

"Since the attacks of Sept. 11, we have engaged in an extensive review of our operations to determine if we are best organized and arranged to conduct a sustained campaign against terrorism," Rumsfeld writes in a Nov. 26 letter to the chairman and ranking minority member of the Senate Armed Services Committee. "As a partial result of our efforts, it is becoming clear that we are likely to need reorganization in two principal areas: intelligence and homeland security."

The defense secretary needs Congress to approve the creation of appointed positions, and Rumsfeld asked the senators to include such authority in the ongoing defense conference with the House over the fiscal year 2002 defense authorization bill.

In the letter, obtained by Inside the Pentagon, Rumsfeld tells the lawmakers he recognizes there may be reluctance to establish the new positions without much explanation. He said "there are many details to be examined" in an "accelerated review" aimed at determining "how best to transition from our current structure to a future one in which intelligence and homeland security receive the level of attention they merit."

Neither the intelligence community nor the defense establishment was well prepared for the kind of terrorist attacks perpetrated against New York and Washington on Sept. 11, which the U.S. government blames on Osama bin Laden's al Qaeda network.

Rumsfeld says the answer is not to grow the Pentagon bureaucracy but to change it. "It is not my intention . . . that the overall size of [the Office of the Secretary of Defense] would grow, so we will find organizational offsets to account for two new under secretaries," he writes. "We expect this task will be completed in time for us to request, in our [fiscal year] 2003 budget submission, additional statutory authority that may be needed."

The White House is expected to submit its FY-03 budget request to Congress early next year.

In an interesting twist, Rumsfeld acknowledges the request for the new intelligence position would appear to conflict with an earlier recommendation to create an under secretary for space and intelligence, made by a commission on space that he chaired before becoming defense secretary. Both congressional chambers included in their defense authorization bills provisions creating the new space and intelligence slot.

"Quite apart from the findings of the Space Commission, though, the experiences of the terrorism campaign to date highlight a need to consolidate intelligence activities within the department," Rumsfeld writes.

-- *Elaine M. Grossman*

Washington Post  
December 6, 2001  
Pg. 36

## **Nuclear Warhead Arsenal Trimmed**

### ***U.S., Russia Meet START I Deadline of Cuts to 6,000 Weapons Each or Fewer***

By Walter Pincus, Washington Post Staff Writer

Hailing a "milestone in dismantling the legacy of the Cold War," Secretary of State Colin L. Powell announced yesterday that the United States and Russia have met a deadline for reducing strategic nuclear forces to no more than 6,000 warheads on each side.

The deadline was contained in the first Strategic Arms Reduction Treaty, or START I, which was signed by U.S. and Soviet leaders in 1991 and went into effect in 1994.

Powell noted that when the START negotiations began in 1983, each side had more than 10,000 strategic warheads deployed on land-based missiles, bombers and submarines. He added that further reductions are planned in accordance with the Nov. 13 summit in Crawford, Tex., where President Bush said the United States would reduce to between 1,700 and 2,200 strategic warheads over the next 10 years and Russian President Vladimir Putin promised corresponding cuts.

In Moscow, Foreign Ministry spokesman Aleksandr Yakovenko marked the date with a terse statement that "Russia has completely fulfilled its commitments under the Strategic Arms Reduction Treaty, START I."

Neither country mentioned the START II treaty signed in 1993 by President George H.W. Bush and Russian President Boris Yeltsin. That pact, which called for reducing the number of warheads to between 3,000 and 3,500,

apparently has been set aside by the current Bush administration in favor of deeper reductions without written agreement.

Daryl G. Kimball, executive director of the Arms Control Association, noted that START I permitted each side to store, rather than destroy, the warheads it removed from missile silos, bombers and submarines. Thus, he said, during the Clinton administration the United States accumulated 4,500 excess warheads as a "hedge" in case quick rebuilding of the arsenal was needed.

Hans M. Kristensen, a nuclear weapons specialist and senior program officer with the Nautilus Institute in California, noted in a recent article that Bush's additional warhead reductions would increase that "hedge." Before START I, he wrote, only 5 percent of the U.S. strategic stockpile was inactive. If the "hedging" practice continues, the reserve could equal or exceed the number of warheads deployed.

In a related matter, the Senate Appropriations Committee yesterday voted to cut \$46 million from the administration's request for the so-called Nunn-Lugar program that finances the reduction of Russian nuclear weapon systems and helps provide security for dismantled warheads. The administration had sought \$403 million for next year, an amount \$40 million below the fiscal 2001 level.

Inside The Pentagon

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## **Defense Officials Close To Naming New Homeland Security Command**

Defense Secretary Donald Rumsfeld and his top aides will soon unveil their plan for centralizing military responsibilities for homeland security, according to Pentagon officials. An announcement, expected in the next few weeks, will follow more than two months of intense debate among civilian and uniformed officials over how best to reorganize command arrangements in the wake of the Sept. 11 terrorist attacks on New York and Washington. As those attacks played out, North American Aerospace Defense Command in Colorado Springs, CO, quickly assumed a lead role in providing fighter aircraft for combat air patrol over more than 30 U.S. cities and in monitoring the skies for potential new threats (Inside the Pentagon, Sept. 13, p1).

But NORAD's charter is limited to defense against air and space threats to the United States and Canada. Handling land or maritime threats to the United States falls to U.S. Joint Forces Command, based in Norfolk, VA.

Rumsfeld and his military advisers agree it makes sense to consolidate command over all homeland security at a single headquarters. The defense secretary is also taking steps to establish two new, high-level Pentagon civilian posts to strengthen his hand in the ongoing war on terrorism: an under secretary for homeland security and another under secretary for intelligence.

But on the military side of the equation, it remains unclear if NORAD or JFCOM will be assigned an expanded mission to handle all manner of threats to the United States (ITP, Sept. 20, p1). Alternatively, a new homeland security command may be built from the ground up.

The Joint Staff has defined homeland security as essentially deterring, defending against, preparing for, and responding to threats or aggression toward U.S. territory, population and infrastructure, according to sources. A component of homeland security is also managing the consequences of any such acts of aggression.

All the services except the Army recently "voted" in the Joint Chiefs of Staff secret meeting room, or "tank," to recommend that a brand new command -- apart from either NORAD or JFCOM -- be created to take control over homeland security, according to Pentagon sources. Many in the Army favor naming JFCOM as the homeland security lead, but even some officials in that service are warming to the notion of a new command as well, according to Army sources.

Options grew out of a Joint Staff working group made up of O-6 level colonels and captains, led by the Joint Staff's J-5 directorate for strategic plans and policy, that has studied the issue for several weeks, defense sources said. The deliberations have included the creation of a tabletop exercise to explore various homeland defense scenarios, according to one Pentagon official.

A final decision on the matter will be made as part of a new Unified Command Plan, a document under two-year review that lays out military command over operating forces, Pentagon sources said.

"Our security has changed a lot" in the past decade, said retired Gen. Merrill McPeak, a former Air Force chief of staff, in a Dec. 3 interview. "Our command structure has not."

Creating a homeland security command from scratch offers several advantages, proponents say. Perhaps chief among them is that the command would have homeland security as its sole mission from the outset, unclouded by pre-existing responsibilities that could draw away attention. A new, dedicated command could "focus like a laser beam" on this important and complex mission, said one Pentagon official this week.

Another advantage might be that a start-up command's chief and headquarters could be based in the Washington, DC, area, proximate to the Pentagon and the Cabinet-level homeland security director.

Some officers downplay geographic considerations in an age of computer messages and teleconferences. But others say the amount of coordination required between the military services, Joint Staff, Office of the Secretary of Defense and several federal agencies on preventing and responding to attacks demands that the new uniformed homeland security chief reside in the nation's capital.

Another factor favoring a new command may be that despite the strengths JFCOM or NORAD would bring to an expanded mission, either one would have to change in significant ways if it were put in charge of all homeland security.

Those favoring NORAD say it brings to the mission long experience in tracking air and missile threats to the United States, and its command and control and surveillance assets are unparalleled. The command, currently led by Air Force Gen. Ed Eberhart, quickly assumed its homeland security role against airborne threats in the minutes and hours that followed the no-notice attacks of Sept. 11. But NORAD's command over forces excludes ground or maritime units, and taking on that new responsibility without any prior organizational experience could detract from its ability to perform the mission, some sources say.

In contrast, JFCOM has operational control over more than 80 percent of the air, ground and naval forces based in the United States. Unlike NORAD, JFCOM has experience as "force provider" across all the services and is staffed with a more eclectic mix of Army, Navy, Air Force and Marine Corps personnel. JFCOM is located on the Atlantic coast of Virginia nearby three of the service-led component commands, and is a short plane or helicopter ride from Washington.

But some worry that JFCOM lacks all the command and control available to NORAD. Although NORAD could be named a "supporting" command to JFCOM on homeland security matters if the latter were to take the lead, one official says that could lay the groundwork for a weakened response in a time of crisis. NORAD's "efficiency and connectivity" to a sophisticated command and control network "is the essence of success" in undertaking this complicated mission, said one military official, interviewed last week. "Unity of command is a good thing," and NORAD's command network should not be duplicated elsewhere, either at JFCOM or a brand new command, this official said.

"I don't think anyone [at JFCOM] intends to duplicate anything that resides somewhere else," responded another defense official this week. NORAD's vast surveillance and command and control network will prove vital but could be utilized in support of a separate homeland defense command. "We do that all the time," said this official, noting how one command acts in support of another in countless military operations.

Another concern would be that adding the lead responsibility for homeland security to the roster of other JFCOM duties would overburden the command, and priorities could become jumbled. Already the JFCOM chief is dual-hatted as supreme allied commander-Atlantic and the chief of military experimentation for future warfighting concepts, says retired Marine Corps Lt. Gen. Paul Van Riper. JFCOM should be given the lead for homeland security and retain its evolving experimentation role, but the NATO duties in the Atlantic region are a "distracter" and should be reassigned to a Navy admiral apart from JFCOM, said Van Riper, interviewed Dec. 4.

"There should be no seams," agreed an Army consultant, speaking last week on condition of anonymity. "JFCOM being dual-hatted as SACLANT doesn't make sense any more."

Without the Atlantic responsibilities, the Unified Command Plan -- or UCP -- would still require changes if JFCOM is to have effective control over all U.S. security. The remaining 20 percent or so of U.S.-based forces outside JFCOM's control are naval units on the Pacific coast, which come under U.S. Pacific Command. If an enemy ship launched cruise missiles from the Pacific into the heartland of America, whose responsibility would it be to defend? Although the answer has remained unclear for years, the existing division of labor has proved to be an "insurmountable" problem for centralizing control over homeland forces in past debates over the UCP, notes Van Riper. But he says new arrangements could be made that allow for a more unified homeland security mission once leaders commit to it.

JFCOM appears to be positioning itself to take on more homeland security responsibilities. The command recently established a "homeland security directorate" headed by an Army two-star general and supported by a 90-person staff, according to Capt. John Carman, JFCOM's director of public affairs. JFCOM is also the command to which

the Joint Task Force for Civil Support reports when military forces are used to augment civilian authorities in responding to local events involving weapons of mass destruction, Carman said in a written statement provided to ITP.

The spokesman played up JFCOM's location as a plus in its existing homeland security role in leading land and naval defense. "The proximity to Washington, DC, has been a real advantage for interagency coordination," Carman said. He added that "the ongoing decision process to determine permanent military homeland security responsibilities has included inputs from all involved U.S. military commands, including JFCOM," but noted that "details of that submission are not releasable."

Similarly, NORAD's spokesman declined to offer details on what its own strengths and weaknesses might be, were it given the lead for homeland security. "We understand the secretary of defense and the president of the United States are gathering information about the best manner to provide for homeland defense of the United States," said Col. Mike Perini, NORAD's director of public affairs, in a written statement. "We have provided our input into that process, and stand ready to execute every mission and task assigned."

He added, "As far as NORAD or any other command actively campaigning for the mission, we would emphasize to your readers that the UCP coordination process -- among all the unified commands and services -- has been both cooperative and professional." Perini declined to elaborate on his reference to "campaigning" by NORAD or other commands.

If Rumsfeld opts to create a new homeland security command from scratch, he may seek to trim the operating command bureaucracy elsewhere, officials say. Perhaps a likely candidate for the cutting ax is U.S. Southern Command, whose principal mission is undertaking counternarcotics missions, defense sources said.

Early on in his role as defense secretary, Rumsfeld expressed skepticism about the effectiveness of the military's war on drugs. And, in what may be a telling sign, Rumsfeld has not yet replaced Gen. Peter Pace as SOUTHCOM commander since the Marine Corps officer became the vice chairman of the Joint Chiefs of Staff on Oct. 1.

Defense insiders say to watch for the creation of a possible "Americas Command" with responsibility across the United States, Canada and Mexico for protecting the continent. Under this option, such a command might subsume some or all of both SOUTHCOM and JFCOM, and take as its primary focus safeguarding the U.S. homeland against attack.

One facet also under debate is whether such a command would be focused solely on external defense, or would also defend against domestic terror threats as well, sources said. Central to this debate is the 1878 Posse Comitatus Act, which limits the federal government's ability to use the military for domestic purposes. Sen. John Warner (R-VA), the ranking minority member of the Senate Armed Services Committee, is leading an effort to revise the law so the military could be used more broadly in homeland defense missions.

If the Pentagon decides to stand up a brand new command, it could take a couple years before the new headquarters is fully operating, military officials say. In the interim, JFCOM or NORAD could be named the lead on an acting basis, according to these sources.

McPeak said he'd support disbanding SOUTHCOM, and either creating a new command in its place or expanding JFCOM's responsibilities for homeland security. But, he said, "we should see if we could do it without creating any new commander, and maybe even reduce the number of commands in the process."

McPeak noted that while Air Force chief, he made some headway in consolidating and reducing command headquarters. But such efforts are difficult absent cataclysmic events like the recent terrorist attacks. "Nothing gets changed because furniture gets bought, things get hardened, and it takes dynamite," McPeak said.

-- *Elaine M. Grossman*

New York Times  
December 7, 2001

## **Pentagon Presses For A Radiation Drug**

By Andrew Pollack

Amid concerns that Middle Eastern terrorists might have procured radioactive weapons, the Defense Department is pressing for approval of a novel drug that could help protect people from radiation.

As fears of terrorism grow, the drug, known as 5-androstenediol, is receiving increased scrutiny along with other experimental treatments and drugs already on the market. The National Cancer Institute, the Department of Defense and the Department of Energy have invited leading radiation experts to a workshop in Bethesda, Md., on Dec. 17 and 18 to review approaches for protecting people from radiation.



The drug is a steroid hormone that appears to strengthen the immune system. It was developed by Dr. Roger M. Loria, a professor at Virginia Commonwealth University, and rights to it are held by Hollis-Eden Pharmaceuticals (news/quote) of San Diego.

"This is an area that hasn't gotten a whole lot of attention," said Dr. John E. Moulder, professor of radiation oncology at the Medical College of Wisconsin. "Working on trying to cure patients of cancer gets you more headlines than working on treating people for nuclear accidents that you hope will never occur."

So far, the Hollis-Eden drug has been tested as a radiation protectant only in mice. In one test, an injection protected 70 percent of mice from a level of radiation that killed all the mice in the control group.

Dr. Thomas M. Seed, leader for radiation casualty management at the Armed Forces Radiobiology Research Institute in Bethesda, said the drug was his institute's leading candidate for something to give to soldiers in advance of possible radiation exposure. Such a drug would also be useful for civilians, including people responding to an accident at a nuclear power plant, he said.

Since it would be unethical to expose people to large doses of radiation to test the drug's effectiveness, Dr. Seed said he hoped the Food and Drug Administration would approve it under a new rule allowing tests on monkeys or other animals.

American officials have said there is little evidence that Osama bin Laden has obtained nuclear weapons. But some experts have said terrorists might try to make a so-called radiological bomb by combining conventional explosives with radioactive material like spent nuclear fuel.

Hollis-Eden has been testing a drug similar to androstenediol as a treatment for AIDS, the idea being to stimulate the patient's own immune system to fight the virus.

For defense use, the drug is aimed mainly at preventing death from intense radiation in the short term by restoring various kinds of infection-fighting immune system cells. Radiation can kill the immune system, leaving victims vulnerable to potentially fatal infections.

Some radiation experts were cautious, saying the Pentagon, hoping to have soldiers function in a nuclear war, had tried many such compounds without success. In some cases the protection afforded was not enough, and some drugs seemed to protect animals but caused bad side effects in people.

The Hollis-Eden drug could have other problems, too. It needs to be injected, which can take time in an emergency. And it would probably not be possible to know of exposure in advance of a terrorist attack.

In addition, Dr. Fred Mettler, chairman of radiology at the University of New Mexico, said that just solving the immune system problems might not be enough because people could still die months later from other types of radiation-induced damage, such as to the lungs.

Dr. David J. Grdina, professor of radiation oncology at the University of Chicago, said it was more important to develop drugs that protect people against cancer from radiation than against the immediate lethal effects. More people are likely to be exposed to sublethal doses of radiation while cleaning up or standing guard at the site of a radioactive attack than might be exposed to lethal doses in the attack itself, he said.

The Nuclear Regulatory Commission is moving toward stockpiling millions of potassium iodide pills to prevent thyroid cancer in those exposed to radioactive iodide if a nuclear power plant was attacked.

Dr. Grdina is trying to use a drug called amifostine to prevent cancer from radiation. The drug, sold as Ethyol by MedImmune Inc. (news/quote) of Gaithersburg, Md., is already approved to protect the salivary glands from radiation therapy used to treat head and neck cancer.

Dr. Moulder has found that two drugs for high blood pressure, ACE (news/quote) inhibitors and A2 blockers, protect animals from the kidney failure and lung damage that can occur months after radiation.

Wall Street Journal

December 7, 2001

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## Washington Wire

... BIOHACK ATTACK? Some speculate a "biohacker" -- the equivalent of a computer hacker seeking thrills rather than impact -- could be behind anthrax letters. Derya Unutmaz, an immunologist at Vanderbilt Medical Center in Nashville, Tenn., who maintains the biohackers.com Web site, will change the name to biodecoder.com because of the "negative image of the name hacker."

--Gerald F. Seib

Washington Times  
December 7, 2001  
Pg. 9

## **Inside The Ring**

By Bill Gertz and Rowan Scarborough

### **Chinese nuclear 'event'**

U.S. intelligence agencies have detected new efforts by China on strategic nuclear weapons. The latest evidence comes in intelligence reports that China conducted a nuclear weapons-related experiment at the remote Lop Nur test facility in western Xinjiang province.

The latest nuclear weapons test was an "event" last month that produced no detectable nuclear yield or blast, officials said. It followed several similar tests that were reported in classified intelligence reports in July.

The Chinese conducted three nuclear weapons-related tests at Lop Nur in June and July. Preparations were spotted by U.S. intelligence imagery.

The tests are part of China's aggressive strategic nuclear weapons buildup that includes two new road-mobile intercontinental ballistic missiles, the DF-31 and the DF-41, and a new class of ballistic missile submarines outfitted with JL-2 missiles — a naval version of the DF-31.

New York Times  
December 7, 2001

## **Russia Says It Foiled Illegal Sale Of Weapons-Grade Uranium**

By The Associated Press

MOSCOW, Dec. 6 — The police have arrested seven men accused of trying to sell more than two pounds of highly enriched weapons-grade uranium, Russian television reported today.

The seven, arrested in the town of Balashikha, just southeast of Moscow, were trying to sell a capsule containing uranium 235 for \$30,000, NTV television reported. The suspects were charged with illegal handling of nuclear materials, it said.

If confirmed, the seizure would be the first acknowledged case of theft of weapons-grade material in Russia.

In the economic turmoil after the collapse of the Soviet Union, the Russian police have regularly seized nuclear materials stolen by people who tried to sell them for profit. But all involved low-active uranium unfit for the manufacture of nuclear weapons.

Russian officials have repeatedly said that no weapons-grade nuclear materials have been stolen.

The report said the suspects were believed to belong to the Balashikha criminal gang.

The police arrested some of the suspects as they were trying to sell the material at a roadside cafe, and they said those suspects led them to another suspect who kept the uranium in his house. The police report did not give the date of the arrest or provide other details.

A duty officer at the Balashikha police station said he was aware of the case, but gave no details, saying the Federal Security Service — the domestic successor to the Soviet K.G.B. — was handling the investigation.

A spokesman at the Interior Ministry in Moscow, which is in charge of the Russian police force, also referred questions to the security service, where a duty officer refused to comment on the case.

The NTV report featured videotape of the roadside cafe where several of the suspects were arrested, and a local police headquarters. It did not show any officials who could confirm the arrest.

NTV also interviewed Nikolai Shingarev, a spokesman for the Nuclear Power Ministry, who said there were several plants in and around Moscow where such material could be obtained. Weapons-grade uranium is sometimes used in research reactors.

Alexander Koldobsky, a senior researcher at the Moscow Engineering and Physical Institute, told NTV that the quantity of uranium reportedly seized would be insufficient to make a nuclear weapon.

New York Times  
December 7, 2001

## **Mail At Federal Reserve Tests Positive For Anthrax, But Cause Is Still Unclear**

By Richard W. Stevenson and David Johnston

WASHINGTON, Dec. 6 — A batch of mail delivered to the Federal Reserve on Wednesday tested positive for anthrax today, the central bank said, raising further concern about cross-contamination among letters in the postal system or the possibility of new anthrax letters.

The discovery became public as law enforcement officials said that the anthrax-contaminated letter sent to Senator Patrick J. Leahy was identical in its language to the anthrax letter mailed to Senator Tom Daschle, the majority leader.

Federal Reserve officials said a small bin containing 100 to 150 letters had tested positive when it was subjected to routine screening in a trailer that was set up outside the central bank's headquarters to handle mail after the first reports of anthrax-laden letters this fall.

The officials said the mail was delivered to the Fed on Wednesday. They said they did not know which letter in the bin might contain anthrax or whether any letters were similar to those received by other government officials, including Senators Daschle and Leahy.

In a news release, the Fed described the test as preliminary and said further tests would be conducted to confirm the finding. In a conference call with reporters tonight, a representative of the company hired by the Fed to screen its mail said the test sometimes gave a false positive reading for anthrax but that this result did not appear to be in error. The representative, Mark Brown, an industrial hygienist for Applied Environmental of Reston, Va., said the test had been conducted several times and been positive each time.

One postal official cautioned tonight against rushing to a conclusion on whether the mail contained anthrax, saying there had been several cases in which mail that at first tested positive turned out to be not contaminated.

"We've been down this road quite a few times with the preliminary test," said the official, Daniel Mihalko, a spokesman for the Postal Inspection Service. "Let's hope this is a false alarm."

Federal Reserve officials said the batch of mail that had tested positive had been handled by three employees at the Fed and by three outside contractors, all of whom were wearing protective suits for the routine screening.

Michelle Smith, a spokeswoman for the Fed, said the employees were meeting with their doctors to decide whether testing or antibiotics were necessary.

Ms. Smith said that Alan Greenspan, the Federal Reserve chairman, and other agency officials had been informed of the test late this afternoon. She said that because the mail had never entered the Fed's headquarters, no one there was being tested or given antibiotics.

She said the Fed had decided to cancel a public board meeting scheduled for Friday. But Fed officials said the central bank would otherwise be open for business as usual, and they planned to go ahead with a meeting of the interest rate committee on Tuesday.

Fed officials said they had notified the Federal Bureau of Investigation after the positive test. They said the agency had asked the Fed and Applied Environmental to continue testing the suspicious mail and, if the tests continued to be positive, to set aside any letters found to contain anthrax. F.B.I. officials would not comment tonight.

There has not been a confirmed case of a new anthrax-contaminated letter since Nov. 16, when officials discovered the letter to Mr. Leahy postmarked Oct. 9. But officials have traced at least one letter that appeared to have been cross-contaminated at the mail-sorting operation in Trenton, N.J.

Mr. Brown of Applied Environmental said the preliminary testing of the mail at the Fed did not give any indication of whether anthrax was present in trace amounts or larger quantities. He said no powder was visible in the bin holding the letters.

Earlier today, investigators provided an update on the anthrax-contaminated letter to Mr. Leahy, Democrat of Vermont, which was removed on Wednesday from its envelope by forensic scientists at an Army biomedical research laboratory in Fort Detrick, Md.

Scientists are expected to conduct a series of tests on the envelope and letter to Mr. Leahy and on the powder found inside, which officials said appeared to be the same lethal form of anthrax sent to Mr. Daschle, Democrat of South Dakota.

"Investigators are hopeful that the results of those tests — expected in the coming days and weeks — will yield clues which will bring us closer to identifying who is responsible for the anthrax attacks," the Federal Bureau of Investigation said in a statement posted on its Web site.

The Leahy and Daschle letters appeared to be photocopies of the same letter. They contained the same phrases, like "You die now," "We have this anthrax" and "You can not stop us," and conclude with "Allah is great."

The Leahy letter was addressed in the same handwritten block lettering found on three other anthrax letters, the one to Mr. Daschle and ones to NBC News and The New York Post. Each of the four was postmarked at the Trenton postal center. Investigators said they were certain that the same person wrote all four.

Dear Readers, I surfed the Congressional Research Service Reports web site below and I've included hyperlinks for a few reports I located. I used keywords "nuclear, biological and chemical" in the Quick Search block. Jo Ann  
<http://www.cnie.org/NLE/CRS/>

CRS Report for Congress

## **Nuclear, Biological, and Chemical Weapons and Missiles: The Current Situation and Trends**

<http://www.cnie.org/NLE/CRSreports/risk/rsk-70.pdf>

CRS Report for Congress

## **North Korea's Nuclear Weapons Program**

<http://www.cnie.org/nle/crsreports/international/inter-80.pdf>

CRS Report for Congress

## **Nuclear Weapons in Russia: Safety, Security, and Control Issues**

<http://www.cnie.org/NLE/CRSreports/international/inter-64.pdf>

CRS Report for Congress

## **Nuclear Nonproliferation Issues**

<http://www.cnie.org/NLE/CRSreports/risk/rsk-71.pdf>