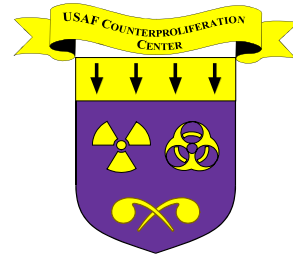


#275

17 July 2003

USAF COUNTERPROLIFERATION CENTER

# CPC OUTREACH JOURNAL



*Air University*

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## **Nuclear Material in Transit Vulnerable to Attack**

*Fri July 11, 2003 10:11 AM ET*

By Louis Charbonneau

VIENNA (Reuters) - Despite stepped-up security after September 11, 2001, countries remain ill prepared to deal with attacks on nuclear materials in transit, participants at a United Nations conference said. The U.N. International Atomic Energy Agency (IAEA) says radioactive materials ranging from harmless medical supplies to weapons-grade plutonium account for less than two percent of all goods transported by land, 10 percent by air and one percent by sea.

But the volumes are still huge. The cargo carrier DHL boasts on a company brochure that it transports five tons of radioactive material per week on 113 aircraft to 40 destinations around the globe.

While acknowledging there was reason for some concern about the security risks of transporting nuclear materials, IAEA chief Mohamed ElBaradei told a week-long conference on the issue that international regulations and industry practice have "an excellent safety record."

"Over several decades of transporting radioactive material, there has not been an in-transit accident with serious human health, economic or environmental consequences," he said.

But John H. Large, a consultant on nuclear issues hired by the environmental group Greenpeace, said current emergency plans would only work for "unintelligent accidents."

"What they haven't prepared for is an intelligent terrorist attack where they know the vulnerabilities of your emergency plan," Large told Reuters on the sidelines of the conference.

For example, he said it would be easy to take a rocket-propelled grenade and shoot it at a standard transport vehicle loaded with radioactive fuel. The result could be disastrous for the local population. "If you're going to ship nuclear materials from one place to another, you have to go through populated areas," Large said. "You have to bring the risk to population."

#### IMPROVEMENT

An IAEA official told Reuters on condition of anonymity that the September 11 attacks on the United States made clear there was "room for improvement" in tackling the threat of an attack or hijacking of nuclear material in transit. Despite the wake-up call on September 11, governments and the shipping industry have done little to improve the situation.

"There've been a lot of nice words, but not much has been done," said Large.

Coastal states such as Ireland, Peru and New Zealand are especially worried that countries like the United States and Britain do not inform them of all their nuclear shipments.

The coastal countries complain they cannot protect themselves against attacks or prepare for accidents involving ships carrying nuclear materials at sea.

But Peter Brazel of the Nuclear Safety Section of Ireland's Department of the Environment told Reuters that the United States and other shipping countries did not want to disclose all nuclear shipments because they see that as a security risk.

<http://asia.reuters.com/newsArticle.jhtml?type=topNews&storyID=3075232>

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New York Times

July 15, 2003

Pg. 1

## North Korea Says It Has Made Fuel For Atom Bombs

By David E. Sanger

WASHINGTON, July 14 — North Korean officials told the Bush administration last week that they had finished producing enough plutonium to make a half-dozen nuclear bombs, and that they intended to move ahead quickly to turn the material into weapons, senior American officials said today.

The new declaration set off a scramble in American intelligence agencies — under fire for their assessment of Iraq's nuclear capability — to determine if the North Korean government of Kim Jong Il was bluffing or had succeeded in producing the material undetected.

Officials said today that the answer was unclear. A preliminary set of atmospheric tests for the presence of a gas given off as nuclear waste is reprocessed into plutonium is the best indicator the United States has from one of the world's most closed nations. The most recent tests suggested that nuclear work has accelerated, but the results were inconclusive. More test results are expected at the end of this week.

"It's the mirror image of the Iraq problem," one official said. "We spent years looking for evidence Iraq was lying when it said it didn't have a nuclear program. Now North Korea says it's about to go nuclear, and everyone is trying to figure out whether they've finally done it, or if it's the big lie."

North Korea boasted in April that it was working to convert its 8,000 spent nuclear fuel rods into weapons-grade plutonium. The rods had been held under seal by international inspectors until the inspectors were expelled from the country on Dec. 31. Several months ago, American spy satellites saw the rods being hauled away from a storage shed, though it is unclear where they were taken.

North Korea's latest declaration, if true, would pose a direct challenge to President Bush, who said two months ago that a nuclear-armed North Korea "will not be tolerated."

Mr. Bush will be faced with difficult choices. Early this year, he decided it was too risky to take military action against the the North's main nuclear reprocessing plant, at Yongbyon, even before the reprocessing started. Now, though, the Pentagon may be asked to revisit the military options that Mr. Bush has always said are a last resort. But the president must also decide whether to negotiate with the North — under its implicit nuclear threat — or hold fast to his insistence that any talks must include other regional nations, and that nuclear blackmail would be met with increasingly harsh sanctions.

In the months since the spent nuclear fuel rods were transported to an unknown location, North Korea has regularly escalated its claims. First, it said it needed a "strong physical deterrent" to protect itself against invasion by the United States. Then, after the Iraq war, it said it needed a "nuclear deterrent."

But intelligence agencies have scant evidence that North Korea has produced enough plutonium to build a nuclear weapon, officials said. As recently as two weeks ago, American intelligence officials told South Korea and Japan that they believed that, at most, only a few hundred rods had been converted into weapons-usable material. Then they warned that the North was experimenting with the conventional explosives needed to ignite a nuclear explosion — further evidence of intent to produce weapons.

The C.I.A. believes that North Korea may have produced two nuclear weapons in the early 1990's, but the evidence is in dispute. In any event, officials say the ability to produce a half-dozen more would greatly increase the North's leverage: it could conduct a nuclear test, store a few weapons and threaten to sell any leftover plutonium.

The North's latest declaration came on Tuesday in New York, during an unannounced meeting between North Korean diplomats at the United Nations and Jack Pritchard, a State Department official who handles North Korea issues.

"They went into new territory," said one official familiar with the meeting. The North Korean diplomats read a statement from Pyongyang declaring that the reprocessing of the rods, a chemical process that the North perfected in the late 1980's after receiving considerable foreign help, had been completed on June 30.

The North Koreans then said weapons production was beginning. "They didn't say how long it would take, and they didn't threaten to sell anything," a senior official said.

The State Department spokesman, Richard A. Boucher, said today that "North Korea has made a variety of claims" in the past, some false.

"We've always said that we will look at all of the available information, not just what they happen to claim or say at any given moment," he said.

Despite the effort to play down the news — Mr. Bush's aides have refused to call the Korea situation a "crisis," fearing that would play into Mr. Kim's strategy — there is a debate in the administration about North Korea's intentions.

Some see last week's declaration as a negotiating ploy. They believe that North Korea has been frustrated by Mr. Bush's refusal to engage in one-on-one negotiations, insisting instead that China, Japan and South Korea act as partners in finding a regional solution. Mr. Bush's real motivation for resisting bilateral talks, his aides say, is that he fears that Asian nations will press the United States to reach some kind of deal similar to the one the Clinton administration signed — a "freeze" on nuclear activity in return for aid.

Other officials believe that Mr. Kim's government has simply decided that it can make both Washington and its Asian neighbors accept North Korea as a new nuclear power.

"There's a body of thought that they are just getting everybody accustomed to the idea," a senior administration official said. "So when they say one day, 'We've gone nuclear,' it's no shock."

<http://www.nytimes.com/2003/07/15/international/asia/15KORE.html>

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Washington Post

July 15, 2003

Pg. 14

## **U.S., N. Korea Drifting Toward War, Perry Warns**

*Former Defense Secretary Says Standoff Increases Risk of Terrorists Obtaining Nuclear Device*

By Thomas E. Ricks and Glenn Kessler, Washington Post Staff Writers

Former defense secretary William Perry warned that the United States and North Korea are drifting toward war, perhaps as early as this year, in an increasingly dangerous standoff that also could result in terrorists being able to purchase a North Korean nuclear device and plant it in a U.S. city.

"I think we are losing control" of the situation, said Perry, who believes North Korea soon will have enough nuclear warheads to begin exploding them in tests and exporting them to terrorists and other U.S. adversaries. "The nuclear program now underway in North Korea poses an imminent danger of nuclear weapons being detonated in American cities," he said in an interview.

Perry added that he reached his conclusions after extensive conversations with senior Bush administration officials, South Korean President Roh Moo Hyun and senior officials in China.

After weeks of debate, President Bush and his senior foreign policy advisers this week are expected to meet to resolve the administration's next step in the crisis over North Korea's nuclear programs. Officials have discussed how sharply to ratchet up the pressure, and how to react to a series of possible North Korean provocations, including nuclear tests.

Perry is the most prominent member of a growing number of national security experts and Korea specialists who are expressing deep concern about the direction of U.S. policy toward Pyongyang. As President Bill Clinton's defense secretary, he oversaw preparation for airstrikes on North Korean nuclear facilities in 1994, an attack that was never carried out. He has remained deeply involved in Korean policy issues and is widely respected in national security circles, especially among senior military officers. They credit him with playing a key role in developing the U.S. high-tech arsenal of cruise missiles and stealth aircraft and also with righting the Pentagon after the short, turbulent term of Les Aspin, Clinton's first defense chief.

Only last winter Perry publicly argued that the North Korea problem was controllable. Now, he said, he has grown to doubt that. "It was manageable six months ago if we did the right things," he said. "But we haven't done the right things."

He added: "I have held off public criticism to this point because I had hoped that the administration was going to act on this problem, and that public criticism might be counterproductive. But time is running out, and each month the problem gets more dangerous."

Since the crisis over North Korea's nuclear ambitions erupted last October, when officials in Pyongyang disclosed they had a secret program to enrich uranium, the Bush administration has sought to pressure the regime into giving up its nuclear programs without offering inducements or entering into negotiations. Administration officials -- who came into office highly skeptical of the Clinton administration's 1994 deal that froze North Korea's nuclear programs -- have sought to enlist Japan, South Korea and China to join in isolating North Korea, and have begun laying the groundwork for a maritime campaign to shut down North Korea's narcotics and weapons smuggling operations. North Korea has insisted on direct bilateral negotiations with Washington, although officials briefly participated in trilateral talks with China and the United States, and over the months it has taken increasingly provocative steps. It ousted international inspectors, restarted a shuttered nuclear facility and appears to have reprocessed at least a few hundred of 8,000 spent fuel rods that can provide plutonium for weapons. The spent fuel would give North Korea enough nuclear material to build two to three nuclear bombs within a few months, doubling the estimated size of its arsenal.

Officials at the Pentagon, State Department and White House declined to respond to Perry's criticism on the record. But speaking anonymously, administration officials vehemently disagreed with his analysis, saying they have succeeded in building a multilateral consensus that North Korea's nuclear program is unacceptable, leaving Pyongyang increasingly isolated.

The administration has no intention of rewarding North Korea for giving up its weapons, officials said, adding that the new effort to target North Korea's illegal sources of revenue will only further weaken North Korea.

The administration policy toward North Korea, however, has been characterized by fierce disputes among senior policymakers, which officials privately acknowledge have hampered the administration's response. "There is an ongoing search for consensus within the administration itself," said Nicholas Eberstadt of the American Enterprise Institute. "The lack of a consensus to a significant extent has prevented U.S. policy from unfolding."

Even one administration official conceded that there had been some "pushing and shoving" among Bush officials, but maintained there is now an understanding of where Bush wants to go with the policy.

In a two-hour interview in his office at Stanford University, Perry said that after conversations with several senior administration officials from different areas of the government, he is persuaded that the Korea policy is in disarray. Showing some emotion, the usually reserved Perry said at one point, "I'm damned if I can figure out what the policy is."

Nor, having had extensive contacts with Asian leaders, does Perry believe that the multilateral diplomatic approach is working. "I see no evidence of that," he said. "The diplomatic track, as nearly as I can discern, is inconsequential."

From his discussions, Perry has concluded the president simply won't enter into genuine talks with Pyongyang's Stalinist government. "My theory is the reason we don't have a policy on this, and we aren't negotiating, is the president himself," Perry said. "I think he has come to the conclusion that Kim Jong Il is evil and loathsome and it is immoral to negotiate with him."

The immediate cause of concern, Perry said, is that North Korea appears to have begun reprocessing the spent fuel rods. "I have thought for some months that if the North Koreans moved toward processing, then we are on a path toward war," he said.

Perry's comments, while unusually blunt from a former senior policymaker, reflect an increasing consensus among other specialists that the administration, distracted by Iraq, has allowed the North Korean crisis to spiral out of control.

"I'm not sure where our policy is going," said retired Army Gen. Robert W. Cassi, a former U.S. commander in Korea. But, he added, "I don't know if I would be as doomsday as Bill Perry is at this juncture," in part, because he believes a diplomatic solution is still possible.

James M. Bodner, a former top policy official at the Clinton-era Pentagon, said that the Bush administration essentially has a policy of ignoring North Korea as much as possible. The trouble, he said, is that it doesn't have time on its side, because North Korea's moves are likely soon to begin altering the politics of East Asia in a way that undermines U.S. interests in the region.

Even some specialists who support Bush administration policy think the situation is moving toward confrontation. "I think it will be enormously significant" if North Korea tests a nuclear warhead this year, said Paul Bracken, a Yale University expert on Asian nuclear issues. "It'll force the administration to take action -- surgical strikes, perhaps." Eberstadt described the current situation as "sitzkrieg," saying neither side has made its most obvious move. In North Korea's case, that would be detonating an underground nuclear device, he said, while for the United States it would be to organize an international program of maritime interdiction -- a kind of loose embargo -- to shut down dangerous North Korean exports, including missile sales.

Perry argued that an interdiction strategy "would be provocative, but it would not be effective" in preventing the sale of nuclear material. "You don't need a ship to transport a core of plutonium that is smaller than a basketball," he said.

Rather than escalate in this way, Perry said, the administration should engage in "coercive diplomacy," which he explained as, "You have to offer something, but you have to have an iron fist behind your offer." He didn't specify what should be offered, but others have suggested that North Korea would like economic aid, trade deals, diplomatic recognition or a nonaggression pact.

<http://www.washingtonpost.com/wp-dyn/articles/A56019-2003Jul14.html>

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Washington Times

July 15, 2003

Pg. 13

## **Expert Doubts Nuclear Advance**

By Stewart Stogel, The Washington Times

NEW YORK — A former United Nations nuclear weapons inspector who has visited North Korea's main nuclear complex says he doubts recent reports that the communist state has reprocessed all of its 8,000 spent fuel rods.

If that major step toward producing plutonium, which is used to make atom bombs, has indeed been taken, "there is a risk that personnel and parts of the reprocessing facility could have been exposed to hazardous amounts of radiation," said the inspector, who asked not to be named.

"It could be done if [the North Koreans] used shortcuts and wanted to risk [nuclear] contamination," he said.

Separately, Chinese President Hu Jintao sent a letter directly to North Korean leader Kim Jong-il, sparking fresh speculation that Beijing is pushing the secretive North to drop its objections to multilateral talks over its nuclear programs.

A special envoy sent by Mr. Hu delivered the message, the North's official KCNA news agency reported early today. Contents of the unusual letter were not disclosed, but China's Xinhua news agency reported that the envoy and Mr. Kim had "an in-depth discussion of issues of mutual concern."

The North has demanded direct bilateral talks with Washington over its nuclear programs, but the Bush administration has held out for a larger negotiation involving South Korea, Japan, China and possibly Russia.

South Korean media over the weekend quoted officials in Seoul as saying that the North told the United States in a July 8 meeting in New York that it had completed reprocessing all the spent rods. Later reports said there was no evidence it happened.

The State Department yesterday confirmed that the meeting in New York took place but declined to say whether such an assertion was made.

Also over the weekend, Japanese media quoted U.S. sources as saying that krypton, a byproduct of reprocessing, was detected near the nuclear plant at Yongbyon.

In March, North Korea said it had begun reprocessing the rods after reopening the Yongbyon complex earlier this year. In October, it admitted to having a secret uranium-enrichment program, in violation of a 1994 nuclear deal with the United States, known as the Agreed Framework.

The Bush administration has said that not every claim Pyongyang makes should be taken at face value, because there are no international inspectors currently in the North.

But the administration has warned that reprocessing the fuel rods would be a very serious development.

Meanwhile, the president of the U.N. Security Council said yesterday that Pyongyang has complained that the United States is committing hostile acts against it by pushing for a council measure condemning the North's nuclear program.

The council president for July, Spain's U.N. ambassador, Inocencio Arias, said North Korean Ambassador Pak Gil-yon delivered the message in a July 2 meeting.

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

<http://www.washtimes.com/world/20030714-105645-2892r.htm>

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Christian Science Monitor

July 15, 2003

Pg. 1

## **Should They Have Known Better? Well, Yes And No.**

*Prewar intelligence draws growing scrutiny over accuracy and spin.*

By Peter Grier and Faye Bowers, Staff writers of The Christian Science Monitor

WASHINGTON – Two months after the United States seized control of Iraq, it appears that the threat of Iraqi weapons of mass destruction was far less dire than portrayed in White House prewar estimates.

President Bush's now-retracted assertion that Saddam Hussein's regime had tried to buy African uranium for its nuclear program is just one of the claims that in hindsight appear dodgy, or exaggerated.

Among other allegations for which no evidence has been found are that Iraq had an active, ongoing production line of chemical and biological weapons; that the Hussein regime retained 20 ballistic missiles capable of reaching as far as Cyprus; and that Iraqi forces had some chemical and biological weapons that could be deployed within 45 minutes.

It's important to remember that prior to the war many analysts around the world believed that Iraq had bad proliferation intentions. Evidence unearthed after the 1991 Gulf War proved as much.

The mistake of the Bush administration and its ally Britain may have been in shearing off the "perhaps" and "maybe" qualifiers from their statements, and in misrepresenting the certainty of the inherently ambiguous practice of intelligence analysis. "One key lesson of the Iraq war is ... that it is dangerous to over-politicize intelligence and to not provide a picture of the threat and reasons for warfighting that is not qualified to some extent," concludes a recent analysis by Anthony Cordesman, a military expert at the Center for Strategic and International Studies here. As US forces continue to conduct a sweep of suspected WMD sites and search for key personnel thought to be involved in Mr. Hussein's weapons programs, more evidence is likely to surface. For that reason it is today virtually impossible to judge any of the administration's prewar statements completely wrong, or completely right, analysts say.

Take the retracted assertion of Hussein's attempt to buy uranium in Africa. The White House has said it now believes the intelligence behind this is false. But the British government - where the statement originated - continues to claim that it is true, saying there are other bits of intelligence on the matter to which the US is not privy.

That being said, the nuclear area in particular is one where rhetoric ran high before the war. Vice President Dick Cheney said at one point that Hussein "is absolutely devoted to nuclear weapons."

National Security Adviser Condoleezza Rice said that aluminum tubes purchased by the Hussein regime "could only really be used for centrifuges" to enrich fissile material for weapons.

To date, US forces have uncovered scant evidence of an ongoing nuclear program in Iraq - unlike 12 years ago, when the world was shocked to discover how far Iraq had progressed in nuclear bomb design. Since the war it has also become clear that the usefulness of those tubes for nuclear work is a subject of much dispute - even within the US intelligence community. "Going down the list of administration ... distortions, one has to talk about first and foremost the nuclear threat being hyped," said Greg Thielmann, a former State Department intelligence analyst, at an Arms Control Association briefing last week.

On chemical and biological weapons, prewar rhetoric was similarly blunt. On March 17 in his address to the nation, Mr. Bush said, "Intelligence gathered by this and other governments leaves no doubt that the Iraqi regime continues to possess and conceal some of the most lethal weapons ever devised."

Officials talked of massive stockpiles of nerve gas, mustard gas, and anthrax. US, British, and Australian troops have now visited over 230 suspected biological or chemical sites and have found neither stockpiles nor production equipment. "They have not found any evidence of any prohibited activities at any of these sites," noted Joseph Cirincione, director of the nonproliferation project at the Carnegie Endowment for International Peace, at the arms-control briefing.

Secretary of State Colin Powell, in his briefing to the United Nations, also talked about unmanned aerial vehicles that might have been intended for use as poison sprayers, and Scud missiles and warheads tipped with biological or chemical weapons being moved about Iraq.

"No sign of these missiles or warheads has been found," says Mr. Cirincione.

In Britain, Prime Minister Tony Blair's government published a dossier last year which charged that Hussein had chemical or biological weapons ready for deployment within 45 minutes of an order. That statement turned out to be based on a single intelligence source of doubtful reliability. "The claims made in the September dossier are unlikely to be dispelled unless more evidence of Iraq's weapons of mass destruction programs comes to light," a cross-party Parliamentary committee recently concluded.

In their defense administration officials have been vehemently denying that they misled the public on purpose, while pointing out that their general thesis - that Hussein was a ruthless killer eager to obtain the worst weapons possible - was widely held in the West.

That's true, says an Australian intelligence analyst who resigned his post over what he felt was exaggerated prewar rhetoric. But officials never told the public about what a shadow-game intelligence analysis is, about how it is an informed guess, and the start, not the end, of policy debate. "We've seen that time and time again over many months in regard to Iraq," says Andrew Wilkie, a former senior analyst at the Australian Office of National Assessments.

<http://www.csmonitor.com/2003/0715/p01s03-usfp.html>

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Washington Times

July 16, 2003

Pg. 13

## **U.N. Agency Sees No Crisis With Missing Uranium**

By Stewart Stogel and Sharon Behn, The Washington Times

The U.N.'s nuclear-watchdog group advised the Security Council yesterday that nuclear compounds missing from Iraq's southern nuclear-storage facility have been mostly recovered and that material still missing is not a proliferation concern.

The International Atomic Energy Agency report, which was to be released in Vienna, Austria, today, should ease concerns raised by widespread reports of missing nuclear materials after looters broke into the Tuwaitha facility when Iraqi troops fled the area during the war.

U.N. sources said the report was vetted by the Pentagon before it was sent to New York, suggesting some portions may have been edited.

The report notes that some 22 pounds of missing uranium compounds "could have been dispersed" as looters trashed the warehouse.

The agency said some 200 containers in the storage facility were emptied, scattering the uranium across the floor, and that many containers were missing altogether.

But the quantity and type of uranium dispersed "are not sensitive from a proliferation point of view," emphasized the IAEA director-general's report, dated Monday.

Nevertheless, the director-general requested that the U.S.-led Coalition Provisional Authority in Iraq "make every effort to recover this dispersed material" and return it under seal to the Location C Nuclear Material Storage Facility under IAEA safeguards.

The IAEA inspection of the Tuwaita Location C facility — whose inventory comprised low-enriched, natural and depleted uranium — took place from June 7 to June 23 with logistical support provided by the CPA.

According to the IAEA report, the nuclear material was housed in two buildings. One contained a variety of uranium oxides and uranium chlorides and yellowcake. The second building held yellowcake and ammonium diurate (ADU) waste.

IAEA inspectors found that seals affixed to the buildings in December 2002 had been torn off.

Most of the ruin was in the first building, where many containers were missing. Others were emptied and "a large floor area" was covered by the contents.

The IAEA reported that its inspection team recovered and repackaged the material on the floor, and said that many of the missing containers were subsequently recovered.

Yellowcake — a bright-yellow industrial mix of various uranium oxides — missing from a drum was also recovered along with two containers of ADU waste in the second building.

According to the Federation of American Scientists, the roughly 22 pounds of uranium compounds that could have been dispersed in the upheaval would likely have very low radioactivity and would not be useful in making a so-called "dirty" bomb.

"It is more dangerous because it is a toxic metal, like lead. You would not want to ingest it," said Jaime Yassif, with the federation's Strategic Security Project. "It would be an environmental concern if it contaminated water supplies.

"The reason people are concerned about uranium is because if it is highly enriched it could be used in a nuclear weapon. But if the IAEA is saying it is not a proliferation concern, it is very unlikely it is highly enriched uranium."

The report said the still-missing compounds could be explained if a few grams of natural uranium remained stuck on the walls or bottom folds of each of the roughly 200 containers emptied by the looters.

<http://www.washtimes.com/world/20030715-114916-7705r.htm>

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Washington Post

July 16, 2003

Pg. 2

## Questions On Missile Defense Plans

Scientists' Report Questions Technology's Effectiveness

By Bradley Graham, Washington Post Staff Writer

An extensive study by a national group of scientists raised serious doubts yesterday about the likely effectiveness of some weapons that President Bush is pursuing in his drive to develop a system for defending the United States against ballistic missile attack.

The study, by a 12-member group under the American Physical Society, the largest U.S. association of physicists, focused on a category of weapons intended to knock down enemy missiles soon after launch in their "boost phase." It concluded that while the boost-phase approach might provide some defense against longer-burning liquid-fueled missiles, such a system would push the limits of what is technically possible. Even more critically, the study found, boost-phase weapons would likely prove entirely ineffective against faster, solid-fueled missiles that potential adversaries -- notably, North Korea and Iran -- are projected by U.S. intelligence analysts to possess within the next 10 to 15 years.

The study did not deal with the central part of Bush's program -- a plan to install land-based interceptors in Alaska and California that would soar into space and obliterate enemy warheads arcing through their "midcourse phase" of flight. But Pentagon officials have acknowledged limitations to this scheme and spoken of the need to supplement it eventually with boost-phase weapons.

Delivering its findings in a 400-page report, the APS study group stopped short of calling the administration's expanded work on boost-phase technologies a waste of money. At a news conference in Washington, group members declined to be drawn out on the implications of their analysis, saying the purpose of their nearly three-year study had been simply to address technical issues.

"We just wanted to bring the facts forward," said Daniel Kleppner, a physics professor at the Massachusetts Institute of Technology and co-chair of the study group.



But the group's lengthy critique is certain to complicate administration efforts to win congressional support for boost-phase systems, on which Bush planned to spend nearly \$1 billion in 2004 out of a total \$9.1 billion proposed budget for missile defense. Appropriations committees in both chambers of Congress already have voted to slash by half or more a Bush request for \$301 million to begin developing land- or sea-based boost-phase interceptors. Another boost-phase program known as the Airborne Laser, which involves mounting a laser in a Boeing 747 jetliner and zapping missiles, is further along in development and expected to receive the \$626 million that Bush has sought for it. But weight problems and other technical glitches have bedeviled the program and forced delays in the first intercept attempt, now scheduled for 2005.

The Pentagon's Missile Defense Agency issued a statement yesterday saying agency officials had not "had an opportunity to digest" the APS study but remained "confident" about the administration's course. "We continue to believe that boost-phase technology has great potential for playing a vital role in a layered missile defense," the statement said.

Boost phase refers to the first three or four minutes after launch in which a missile's burners remain lit. It offers several targeting advantages: flaming plumes make the missiles easier to detect by overhead satellites; the missiles have yet to reach their top speed; and decoys that can foil midcourse intercepts have not had time to be released. But the APS report warned that developing a reliable boost-phase missile defense "would be a major undertaking likely to require a decade or more to complete." It said interceptor rockets would have to be "substantially" faster and larger than any developed so far. They also would need to be very agile to deal with the evasive maneuvers and inherently unpredictable acceleration of missiles after launch, the report said.

Further, to stand any chance of catching up with an enemy missile, the interceptors would need to be positioned generally within 400 to 1,000 kilometers -- 240 to 600 miles -- of an enemy's launch pad. And after detecting a launch, U.S. authorities would have only about half-a-minute to decide whether to fire, risking confusion between peaceful space launches and missile attacks, the report said.

Putting interceptors on satellites would avoid geographic constraints but would confront severe problems, the study found. For one thing, 1,000 or more interceptors would be needed to ensure availability, and to get enough satellites into space, U.S. launch rates would have to rise five or 10 times over current annual levels, the study said.

<http://www.washingtonpost.com/wp-dyn/articles/A61235-2003Jul15.html>

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Washington Times

July 16, 2003

Pg. 8

## **N. Korea Nukes Still 'Serious' Issue To U.S.**

By Bill Gertz, The Washington Times

North Korea's nuclear activities, including its repeated claims to be reprocessing stored nuclear-fuel rods, remain a "serious problem" for the United States, Bush administration officials said yesterday.

Larry Di Rita, the senior Pentagon spokesman, told reporters that the combination of North Korea's nuclear weapons and its missile and weapons exports is a major danger.

"It's a serious circumstance," he said.

Pyongyang has said it has a nuclear-arms program and the Pentagon believes the hermit Stalinist state possesses nuclear weapons, Mr. Di Rita said.

"So that's serious, and North Korea is the world's worst proliferator of ballistic-missile technology. So that's a pretty deadly combination," he said in a meeting with reporters at the Pentagon.

Asked about intelligence reports indicating that North Korea has begun reprocessing spent fuel rods that were supposed to be kept in storage under a 1994 U.S.-North Korea agreement, Mr. Di Rita declined to discuss intelligence matters.

Still, "the North Koreans themselves are telling us that they've reprocessed it," he said, noting recent press reports.

"When they told us they had nuclear weapons, they meant it, and I'm not in a position to characterize the intelligence assessment of what the North Koreans are telling us, but certainly what they've told us in the past have been worth paying attention to."

Mr. Di Rita said the Bush administration is exploring "all diplomatic possibilities" for dealing with North Korea's nuclear program and its weapons proliferation.

At the State Department, spokesman Richard Boucher said North Korea's international isolation is growing as a result of its nuclear ambitions.

"The entire world has said it's unacceptable for North Korea to develop nuclear weapons," he said.

Mr. Di Rita said recent North Korean declarations about having nuclear weapons, and the rejection of international controls on its nuclear program have lent credibility to claims of reprocessing the fuel rods.

"I can only say that of late it has been important that when the North Koreans speak, it's worth paying close attention to," he said.

Reprocessing the 8,000 fuel rods has been viewed by intelligence officials as a key indicator of North Korea's drive to abrogate the 1994 agreement, which was supposed to have frozen Pyongyang's nuclear-weapons program in exchange for international assistance to build nuclear power-generating stations.

Asked if the problem is drifting toward conflict, Mr. Di Rita said, "Let me just say the situation with North Korea is a serious situation and it's something that we should take seriously. It's a problem not just for the United States, but a problem for the world.

"This is a country that proliferates technology and violates the kind of treaties that it has signed ... It's a country that has sent ballistic-missile technology to a lot of bad places. It's a country that, if it felt it were in its interest, would sell nuclear technology if it determined that," he said.

U.S. officials have said North Korea first informed the United States that it had nearly completed reprocessing the stored fuel rods during talks in Beijing in April.

The statement, made by North Korean official Li Gun, prompted the CIA to review its intelligence on the North Korean reprocessing of stored fuel rods.

The Washington Times reported on July 4 that the CIA now believes some spent-fuel reprocessing is under way in North Korea.

Then last week, North Korean officials informed U.S. officials at the United Nations that Pyongyang had completed reprocessing of the fuel rods.

A U.S. official said yesterday that intelligence agencies have not been able to verify the North Korean reprocessing claims.

"It's a situation that bears watching," the official said on the condition of anonymity. "Obviously, this is one area where the North Koreans believe they have some leverage" in talks with the United States.

<http://www.washtimes.com/national/20030715-114852-3553r.htm>

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London Daily Telegraph

July 16, 2003

## **Iran's Nuclear Quest 'Irreversible In 18 Months'**

By Anton La Guardia, Diplomatic Editor

Iran's nuclear programme could become "irreversible" unless it is stopped within the next 18 months, senior Israeli diplomatic sources said yesterday.

Israel has long accused Teheran of sponsoring radical Islamist groups across the region but now its concern appears to be focusing more sharply on Iran's nuclear programme. "Within a year or a year and a half, the situation will become irreversible," said the well-placed Israeli source.

Western intelligence officials have estimated that Iran is still a few years away from producing a nuclear bomb.

Israel believes, though, that construction of a uranium enrichment plant at Natanz is the critical point, after which Teheran's nuclear programme would become self-sufficient.

Israel famously bombed Iraq's Osirak reactor in 1981 to prevent Saddam Hussein from obtaining nuclear weapons in an operation that has become the model for America's new doctrine of "preventive action".

Should Iran complete the Natanz plant, both Israel and the United States might feel compelled to take military action.

For the moment, the United States and the European Union are trying to exert concerted pressure on Teheran to sign up to a system of intrusive inspections by the International Atomic Energy Agency.

Iran says the Natanz enrichment plant, the existence of which was only revealed in the past year, is intended to produce low-enriched uranium for civilian reactors.

But the West fears that this could be quickly switched to production of highly-enriched uranium for nuclear weapons.

Iran would have the ability to "break out" quickly from nuclear power to nuclear weapons. "Once the Iranians have completed the plant, that would give them the capability to produce weapons-grade uranium. They will have crossed

a critical threshold," said Dr Gary Samore, an expert on weapons proliferation at the International Institute for Strategic Studies.

"The Iranians could not do it immediately because it is likely to be spotted by inspectors. But the Iranians could withdraw from the Non-Proliferation Treaty, convert the plant within a few months and then legally produce highly-enriched uranium."

A day after Tony Blair hosted a private dinner for Ariel Sharon, Israeli officials said Iran was high on the Israeli prime minister's list of concerns.

British officials did not say whether they shared the Israeli assessment of the threat from Iran. "We are not in the business of announcing when the Iranians might have a bomb," said one diplomat.

The visit by Mr Sharon was meant to mark a reconciliation with Mr Blair after months of tension caused by British pressure to push ahead with an international peace plan known as the "road map".

British officials said that over dinner at Downing Street the two men "agreed to disagree" on key issues, such as Mr Sharon's demand that European countries cut off all contact with Yasser Arafat, the Palestinian leader.

[http://www.telegraph.co.uk/news/main.jhtml?xml=/news/2003/07/16/wiran16.xml&sSheet=/portal/2003/07/16/ixportal.html&secureRefresh=true&\\_requestid=55557](http://www.telegraph.co.uk/news/main.jhtml?xml=/news/2003/07/16/wiran16.xml&sSheet=/portal/2003/07/16/ixportal.html&secureRefresh=true&_requestid=55557)

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Bulletin of the Atomic Scientists

July/August 2003

Pg. 30

## Just Like Old Times

*Russia's old Cold Warriors couldn't be happier with their country's new nuclear weapons plans.*

By Paul Webster

Moscow, May 24, 2002: It was the kind of event news editors love: The presidents of the two greatest nuclear powers—mortal enemies for decades, but now sworn to peace—were meeting to lay down their weapons. Amidst the gilt-splashed splendor of the Kremlin Palace, peace was breaking out, all on a fine spring day. Then, as the ink dried on the Strategic Offensive Reduction Treaty (also known as "SORT," but usually referred to as the Moscow Treaty), President George W. Bush gave reporters the headline: "This treaty liquidates the Cold War legacy of nuclear hostility between our countries," delivering on a promise he had made two weeks earlier to "put behind us the Cold War once and for all." Moments later, Bush's statement was being typed into teleprompters and printers around the world.

Quotable though Bush's words were, not everyone was convinced by them. For one thing, the end of the Cold War had been announced several times before. And for another, it was difficult to know what to make of the treaty. Many analysts pointed out that although the Moscow Treaty would eventually reduce the number of "operationally deployed" strategic nuclear weapons from about 6,000 in each country to between 1,700 and 2,200, the warheads would not actually be destroyed, just put in storage. Nor did the treaty say anything about the two countries' vast numbers of tactical weapons. Analysts were also concerned that its disarmament provisions would not come into full effect until the day it expired, December 31, 2012.

But most reporters accepted Bush's history-in-the-making script. After all, as with most pronouncements on history, only time would tell.

### **Rebuilding forces**

A year later, it's still too soon to say with any certainty what history's verdict will be. But a mass of discouraging news coming out of Russia suggests that the end of the Cold War has been postponed. Over the past 14 months, the Russian news media have been reporting on what looks like a major renewal of the Russian nuclear weapons enterprise. By all accounts, after a decade of post-Soviet confusion, retrenchment, and rumors of disarmament, 2002 was the year Russia's Cold Warriors got back to business as usual.

The Kremlin started signaling renewal even before the treaty was signed. Speaking to Russian reporters two months before the presidents met in Moscow, Defense Minister Sergei Ivanov warned that Russia would follow the U.S. lead, storing rather than destroying decommissioned weapons.

Days later, Russia announced plans to modernize all 15 of its Tupolev-160 bombers, which are capable of carrying a dozen 200-kiloton nuclear-tipped cruise missiles on intercontinental missions. It also emerged that three new Tu-160s were being built. Then, on April 11, only six weeks before the summit, Vladimir Simonov, the general director of the Russian military's Agency for Control Systems, told Izvestia that Russian President Vladimir Putin wanted work to resume on the Soviet missile defense systems that were abandoned after the Anti-Ballistic Missile (ABM)

Treaty was signed in 1972. "The main task today," Simonov said, "is to get the stagnating enterprises and scientific research institutes involved in anti-missile defense back on their feet."

Barely three weeks after Bush signed the Moscow Treaty, the United States allowed the ABM Treaty to expire. The Kremlin immediately announced that it was pulling out of START II, a nuclear arms reduction treaty signed in 1993. According to Ivanov, abandoning START II would give Russia "much more flexibility in building and planning its strategic nuclear forces."

A week later, on a visit to the Novaya Zemlya nuclear test site in the Arctic, Ivanov affirmed that Russia, like the United States, would continue to perform non-nuclear, but nuclear stockpile-related experiments, 132 of which Russia had already conducted since it ratified the Comprehensive Test Ban Treaty in April 2000. Then, in August, on a visit to an intercontinental ballistic missile (ICBM) facility deep in the Ural Mountains, Ivanov pushed the message of continuity a little further: Russia's "nuclear triad" of land-, sea-, and air-based nuclear weapons would remain central to Russian defense, he said, with "priority attention" focused on land-based weapons. Reforms to these forces had assured their future to 2016, he said, and "We are currently thinking of what we will have in 2015-2020."

At the same time, Strategic Missile Forces commander Col. Gen. Nikolai Solovtsov predicted that substantial numbers of heavy ballistic missiles that had been slated for destruction would remain in the arsenal. "Prolonging the operation of heavy missiles will be achieved by rearranging the missiles themselves and their combat infrastructure," Solovtsov told Dmitry Litovkin, military correspondent for the government-owned RIA-Novosti news agency. "Funding for this has been included in state arms procurement for 2003."

Three months later, Solovtsov appeared on Russian television to confirm Putin's reversal of a key disarmament decision. The rail-based nuclear arsenal, the centerpiece of Russia's Cold War nuclear legacy, would be retained, not retired.

Days later, Moscow's Cold Warriors conducted war games, with Russian air, sea, and ground forces simultaneously launching mock ICBM and cruise missile attacks on targets across Russia. The games came hard on the heels of Russian missile interceptor tests conducted in September.

### **How much money?**

In mid-October, liberal politicians in Russia's parliament, the Duma, achieved a crucial breakthrough: For the first time in Russian history, they forced the government to disclose the defense budget. A flood of news reports followed, each delivering deeper insight into Russia's Cold War revival. Alexei Kudrin, Russia's deputy prime minister, delivered the first big news: The defense budget had increased by 33 percent from 2002 to 2003, with weapons budgets jumping to \$1.67 billion, he said in October, and weapons development budgets to \$1.37 billion. (By the time the Cabinet approved the budget on January 15, the combined figure had risen to \$3.45 billion, an additional 8 percent.)

Gen. Andrei Nikolayev, the head of the Duma's defense committee (and someone with rare knowledge of previous years' secret budgets), added further details: Since 1999, Russia's defense budget has quadrupled in ruble terms and for 2003 reached the equivalent of \$10.9 billion, he said. Then, after noting that 35 percent of the 2003 defense budget is allocated to weapons development and purchases, Nikolayev revealed that, in future defense budgets, weapons development and procurement would rise to 60 percent.

Next to discuss the weapons budget was Vladislav Putilin, deputy minister for trade and economic development. He confirmed that the rearmament budget for 2003 had increased 33.4 percent, and said breakdowns of this number are secret. He told reporters that the increases were all part of Putin's "National Security Concept," introduced in 2000, which emphasized Russia's need to have "nuclear forces that are capable of guaranteeing the infliction of the desired extent of damage against any aggressor state or coalition of states in any conditions and circumstances"-a policy in keeping with Russia's 1993 renunciation of the Soviet policy against the first use of nuclear weapons.

Trying to get more detailed information on Russian weapons development budgets is forbidden. As Pavel Felgenhauer, a former military officer turned Moscow defense analyst says, "The actual number, specification, and price per unit of weapons to be procured is a state secret. The nature of military R&D programs, the number of such programs financed by the government, and any specifics regarding how much money is allocated to each project, are also closely guarded state secrets."

And asking questions about military R&D isn't just forbidden, it's dangerous. The head of Russia's Federal Security Service (FSB), Nikolay Patrushev, said that when the CIA attempted to obtain classified information about Russia's advanced weapons programs last year, the effort was thwarted, with a U.S. embassy employee thrown out of the country. "We have prevented a heavy blow from being delivered to Russia's defense capabilities and security," Patrushev said. He then added that a Russian involved in the affair was sentenced to 14 years in a maximum security prison.

Igor Sutyagin, another Russian accused of helping Western intelligence find information about Russian forces, is awaiting trial, imprisoned for more than three years under conditions described by human rights observers as gruesome.

On February 19, Moscow City Court gave Russian arms researcher Anatoly Babkin, accused of passing information to American businessman Edmond Pope, an eight-year suspended sentence. Babkin, 72, says his confession was obtained under duress. His trial had been repeatedly delayed due to his health problems.

Despite the secrecy surrounding Russian nuclear weapons development, in December dozens of senior researchers from Russia's top weapons labs arrived at the Moscow Hyatt for a three-day conference organized by the Washington-based Center for Defense Information and the Russian Ministry of Atomic Energy's Institute of Strategic Stability, titled "Confidence Building in the Nuclear Sphere and Problems of Strategic Stability." Without providing more detail, several top researchers confirmed that significant funds had recently been allocated to Russian nuclear weapons research.

Speaking to a mixed audience- Russian weapons researchers, delegates from U.S. non-governmental organizations, and U.S. State and Energy Department officials-Russia's top nuclear weapons bureaucrat, Alexander Getmanets, the deputy minister of atomic energy responsible for nuclear weapons development, summarized the events that led up to renewed nuclear weapons research:

"Last January the United States proclaimed a new doctrine on weapons development with focus on new weapons, at the same time NATO is expanding to the borders of Russia, while the United States leaves itself the option of quick restitution of weapons from storage, all the while developing the ABM system and new offensive nuclear potential. This all raises questions."

#### **Just like the old days**

Russia's reinvigorated nuclear weapons development may be mostly driven by concerns about U.S. nuclear plans, but economic motives probably figure in as well. A study from Moscow's Institute for the Economy in Transition released in late October 2001 notes that Putin believes that military R&D should be the centerpiece of federal science policy. "A realization of this policy can be seen in the growing expenditures by the government on defense-related R&D," adding that "a noticeable redistribution of resources from the civilian sector of the economy to the defense sector is occurring."

That's the best news Russia's Cold Warriors have heard in a long time. Officials from the Nizhny Novgorod region, home to Sarov, Russia's main nuclear weapons development center, boasted in late January that funding for military producers in their region had jumped 60 percent in 2002.

On December 13, 2002, in an article marking the first anniversary of President Bush's announcement of the U.S. decision to pull out of the ABM Treaty, RIA-Novosti's Dmitry Litovkin described the "asymmetrical measures" Russia had decided to take in response to the U.S. development of missile defenses and new nuclear weapons: "Until the United States withdrew from the ABM Treaty," Litovkin wrote, "Moscow had been intending to completely eliminate by 2007 the grouping of 154 'heavy' R-36 Voevoda missiles [SS-18s] with 10 independently targetable warheads, capable of penetrating any missile defense system. Now it has been decided to keep them in combat service until 2012-2015."

Litovkin added that the plan to eliminate Russia's rail-mobile missile systems, which carry SS-24s with multiple warheads, has been suspended. He also pointed out that the new silo-based strategic missile, the Topol-M, could be made to carry multiple warheads.

Russia's interest in renewing Soviet missile defense efforts is another part of "our undeclared, but genuinely asymmetrical response to President George Bush's decision to withdraw from the 1972 ABM Treaty," Litovkin said.

#### **Not such great friends?**

As many Russian news reports have suggested, Russia's push back into missile defense development in 2002 triggered a whole new set of U.S.-Russia tensions, revealing far more wariness than might be expected between friends who had just kissed the Cold War goodbye. When the Pentagon invited Russian researchers to watch interceptor rocket tests in November, see the Patriot system in action, and visit the future site of the missile defense installation at Fort Greely, Alaska, the Russians declined.

Russian specialists are highly skeptical about any U.S.-Russian cooperative efforts on missile defense, according to Litovkin. More than anything else, he says, Russian missile defense officials worry that technical cooperation will put the United States ahead without any benefit accruing to Russia. In January, when U.S. Amb. Alexander Vershbow praised Russian missile defense technologies, Col. Gen. Yuri Baluyevsky, the first deputy chief of the General Staff, warned reporters Russia would keep its technology to itself unless the United States was willing to help Russian industry. "The Americans would like to establish direct contacts with our industries to get a 'product' they need, and forget about [what those industries might need]." Speaking on television on January 23, Putin said

Russia could go it alone on missile defense. "We have our own vision," he said, adding that missile defense was a "very important and essential field linked directly to the country's defense."

Late last year, Solovtsov announced that a new regiment of SS-27 Topol-M missiles, the latest Russian ICBMs equipped with advanced electronic systems designed to penetrate missile defenses, would be installed in the year ahead. Then, to kick off 2003, Fleet Adm. Vladimir Kuroedov, commander of the Russian Navy, announced that a restructured navy will emphasize new nuclear submarines. Kuroedov told Krasnaya Zvezda that 10 new submarines were launched between 1992 and 1997, and that one additional Typhoon-class strategic nuclear submarine was recommissioned after repairs were completed in 2002.

Earlier in the year, Adm. Viktor Kravchenko, chief of the navy's General Headquarters, had revealed long-range plans for a fleet of 12 strategic nuclear subs, down from the 26 still in service (although at severely constrained operational capacity)-similar to U.S. plans to keep 14 of its strategic missile subs in service despite Bush's promise that the Cold War was behind us.

Meanwhile, Russia's work on a new, fifth-generation submarine accelerated, with the first ship scheduled to enter service in 2007. Igor Kudrik, a Russian naval analyst with Norway's Bellona Foundation, says the funds for this first ship are fully committed, and that work on others of its class will begin in 2010. Work on a new submarine-launched intercontinental missile, the preeminent Cold War weapon, also got under way in 2002 at Moscow's Institute of Thermo-Equipment (MIT), where the Pioneer, Topol, and Topol-M missiles were designed. In 2001 the navy ordered 40 new sea-launched ballistic missiles, the first new order in a decade.

Last year saw a return to Cold War norms at Rosborexport, Russia's principal weapons exporter. Year-end figures released in February showed Russian arms exports jumped 27 percent, to \$4.7 billion in 2002. Hammering home the message of continuity with a key Cold War client, February also saw Russia reveal that it was having discussions with India about the leasing of Tu-22 bombers (designed for nuclear attack), as well as the leasing of Akula nuclear submarines. China and North Korea bought Russian weapons, and Iran and Syria remained key export markets for Russian nuclear technology. Russian companies pursued \$40 billion worth of contracts in Iraq.

By the beginning of 2003, even Vershbow, the U.S. ambassador to Russia, seemed to disregard the Moscow Treaty. In a speech to the Russian Academy of Sciences on January 17, he listed important recent developments marking a "convergence of interests" in U.S.-Russian relations, but left the treaty off the list. When he did mention it in passing, Vershbow suggested that a "remarkable, if little noticed, political declaration"-a "framework for a long-term U.S.-Russia partnership," also signed last May-may prove "more important and revolutionary than the Moscow Treaty."

While the United States downgrades the treaty's Cold War closure status, the Kremlin seems to see it as a license for Cold War renewal. After Russian politicians ratified the treaty in late May, President Putin bluntly disclosed work on new nuclear weapons. Next, Russian forces staged a series of widely reported simulated nuclear attacks on U.S. and British forces.

As Vershbow knows better than most, for Putin-a phlegmatic, taciturn, and masterfully discreet man, actions speak louder than words. Perhaps that's why he has never suggested that the Moscow Treaty marks an end to the Cold War. His lips pursed noticeably when Bush made that claim last May. And since then, the Kremlin has left it to the Russian press to do the talking.

*Paul Webster, a journalist who has reported on nuclear issues in Canada, France, Russia, Ukraine, and the United States, is currently based in Moscow.*

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## **Saddam tested deadly weapons on humans, accounts say**

**Paul Salopek**

Chicago Tribune

Jul. 16, 2003 07:05 AM

BA'QUBAH, Iraq - What haunts the former Iraqi intelligence officer most about the men he helped kill in 1987 wasn't their numbed silence or their defeated gazes. It was the strange cloud that seemed to come from nowhere, the cloud that killed them.

It was misty white, he said, and it blossomed above the gulch near the Iranian border where he and his security men had deposited 10 truckloads of political prisoners. Hours later, waiting at a nearby roadblock, he watched the trucks return. They were piled with dead bodies. Civilian technicians accompanying the grim convoy angrily ordered him to keep his distance.

"That's when I realized this was no ordinary execution," said the officer, a retired colonel with the Iraqi Second

Army Corps who spoke on condition of anonymity. "The government was using prisoners to test its chemical weapons."

U.S. forces have failed to find chemical or biological weapons in Iraq, frustrating a Bush administration that had argued war was necessary to eliminate Saddam Hussein's alleged stockpiles of weapons of mass destruction. But there is no doubt that Saddam had used such weapons in the past, including the gassing of Kurdish villages in the 1980s.

Now reports are surfacing that Saddam used human subjects to test the weapons. Senior intelligence officers, weapons engineers and the families of alleged testing victims are stepping forward to describe one of the darkest crimes the old regime inflicted on its people.

The U.S. civil administration in Iraq takes such reports seriously enough to include them in its overall war crimes investigations of Saddam's rule.

A mass grave filled with hundreds of remains from the alleged 1987 nerve gas test, recently discovered near the central Iraqi town of Ba'qubah, was examined two weeks ago by American forensic experts. So far, the results have proved negative for chemical weapons.

"We know that certain chemical agents will linger in buried clothing for four years, but maybe not much longer," said Sandy Hodgkinson, the director of the coalition's Human Rights Office in Baghdad.

"We also know that there are as many as 300,000 victims of Hussein's repression buried in mass graves all over Iraq," Hodgkinson said. "So sorting through them all for evidence of chemical or biological weapons use is going to be an enormous task."

Moreover, she added, a clear picture of Iraq's human testing program will likely be muddied by Saddam's use of weapons of mass destruction in wars against his own citizens. At least 40 Kurdish villages were gassed during ethnic uprisings in the 1980s, she said.

By contrast, the numbers of Iraqis killed as guinea pigs in sinister experiments to perfect such weaponry is likely to be far smaller.

Still, interviews with former intelligence officials and U.N. documents obtained by the Chicago Tribune suggest that scores of hapless prisoners may have been sacrificed to such secret testing in Iraq. And the evidence stretches back decades, to the earliest days of rule by Iraq's Baath Party.

"Everyone knows it started back in 1972, even before Hussein took power," said a senior chemical weapons engineer who worked for seven years at the Al-Muthanna State Establishment, a notorious weapons lab that U.S. planes bombed to rubble in the 1991 Persian Gulf war.

According to the engineer, who like many of those closely involved in Iraq's weapons programs refused to be identified by name, prisoners jailed at the Al-Sha'emiya Prison southeast of Baghdad were selected by the Internal Security Directorate - the forerunner of Saddam's dreaded secret police - for crude experiments with home-brewed mustard gas.

"My colleagues were trying out dosages and recording the prisoners' reactions," he said, hastening to add that he only used rabbits in his experiments. "The facilities were crude - just some brick laboratories inside the prison." Today, the Al-Sha'emiya Prison is occupied by hundreds of impoverished Shiite squatters. If any tangible evidence of human testing labs existed, it is long gone. Looters even have ripped out the steel bars from jail cells to sell as scrap.

But the report of the early mustard gas experiments on prisoners matches a chronology the Iraqis have given to United Nations.

"In late 1972, Iraq decided to acquire the capability to obtain WMDs - chemical, biological, and nuclear," said Richard Spertzel, one of hundreds of U.N. weapons inspectors who scoured Iraq for Saddam's banned weapons in the 1990s. "That is according to Iraq's own statements and fits data we obtained."

Throughout their frustrating years of cat-and-mouse searches, the U.N. inspection teams stumbled across several chilling clues that hinted at human testing projects in Iraq.

According to Spertzel, inspectors found two "aerosol test chambers" discarded in rubbish heaps outside Al-Muthanna and Salman Pak, Saddam's two main WMD laboratories. The chambers were human-sized, and were designed to test chemical and biological agents, Spertzel said. The Iraqis said they were used on donkeys.

In an unrelated case, inspectors went to Salman Pak in 1994 to investigate a series of mysterious trenches that had been dug at night and hastily refilled by the Iraqis during the gulf war. Officials told Spertzel the holes contained bodies.

"I rather suspected these might have been Kuwaiti POWs," he said. "But they might have been test subjects."

The Iraqis blocked access to the site, claiming it was "holy," Spertzel said. The government later flooded the area with water from the Tigris River.

The most compelling case involved alleged biological weapons tests carried out on Shiite political prisoners by a

mysterious Unit 2100, a U.N. inspection team document shows.

According to the document, at least 50 prisoners from Abu Gharib prison west of Baghdad were rounded up in 1995 and sent to a secret testing facility in Al-Haditha, a remote community in Iraq's western desert.

"Unit 2100 was subordinate directly to the Ministry for Military Industry ... which was headed by Saddam's son-in-law, Hussein Kamil," states the document, which is based on intelligence supplied by a senior Iraqi defector.

"The unit conducted experiments on human subjects using chemical and biological warfare agents," the document goes on. "Prisoners who were sent to Unit 2100 did not return."

U.N. experts who tried to inspect the prison's records in 1998 were delayed by guards. When they finally were allowed to enter, a U.N. source familiar with the incident said, all the key records were missing. The entire U.N. monitoring operation was shut down by the Iraqis shortly thereafter.

"There were rumors of these things all the time, but it was very dangerous to discuss them," said Ziad Abed Al-Hamid, a retired Iraqi air force colonel who believes his father-in-law was among the prisoners at Abu Gharib used as a guinea pig.

Al-Hamid said his relative, an army colonel named Adnan Abbas, was officially condemned to death anyway for criticizing Saddam. But when the family pulled strings with the military for the body to be returned, it arrived without the usual bullet hole in the head.

"He didn't have a mark on him, nothing," Al-Hamid recalled bitterly. "We were told not to touch him. We were told to bury him as fast as possible."

As for the Iraqi army intelligence officer who claims to have witnessed the test gassing of hundreds of prisoners at an open-air site in the desert near Jalula, on the Iranian border, he asserted that the bodies he saw also were unmarked.

"It was like they were asleep," he said with lingering awe.

Informed that the Americans had probed the mass grave of the alleged chemical test victims and turned up nothing, the officer seemed unfazed. Instead, he produced a colleague, a lieutenant in the Iraqi Second Army Corps that purportedly oversaw the operation, who confirmed the broad outlines of his story.

"The Americans," the officer insisted, "have a lot more digging to do."

Hodgkinson, the U.S. human rights official, said her teams would be looking elsewhere.

The pace of forensic exhumations would pick up in the fall, she said, after cooler weather made for the safer handling of chemical residues in the soil.

Tribune correspondent Stephen J. Hedges in Washington contributed to this report.

<http://www.azcentral.com/news/articles/0716IraqWeapons16-ON.html>

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## Food Scientists to Assess Bioterrorism Risk

By REUTERS

Filed at 1:57 p.m. ET

WASHINGTON (Reuters) - The Food and Drug Administration said Tuesday it hired the Institute of Food Technologists to evaluate ways food processors can prevent or reduce the risk of deliberate contamination.

The review by the industry food scientists group will look at chemical treatments, temperature controls and technology that could help protect the nation's food supply from attack, the FDA said.

"The Institute of Food Technologists review will focus on preventive controls and research needs that might be used for eliminating or reducing the risk of an intentional act of terrorism or contamination for high and medium risk combinations of various food commodities and agents," the FDA said in a statement.

The review, which will be kept secret, will be completed by June 2004, the FDA said.

Earlier this year, a General Accounting Office report said the federal government did not know how safe the food supply was from possible sabotage and the FDA and the U.S. Agriculture Department lacked authority to require food companies to adopt stricter security measures.

In May, the FDA proposed new regulations ordering food companies to keep more records to help track foods involved in any future emergencies or terrorism-related contamination. The agency also plans to require advance information of food import shipments to intercept any contaminated products.

The United States has more than 57,000 food processors and 1.2 million food retailers. The entire U.S. food and agricultural industry is a \$200 billion annual business.

<http://www.nytimes.com/reuters/news/news-food-safety.html>



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## Experts Question Bioterror Detection Gear

Wed Jul 16, 3:27 PM ET

By *DAVID B. CARUSO*, Associated Press Writer

PHILADELPHIA - At secret locations in at least 31 cities, the government has deployed devices that scour the air for deadly agents like anthrax and smallpox with hopes of sniffing out bioterrorism. But the effort has been viewed with skepticism.

Some security experts said the system is unlikely to catch a bioterrorism attack in time to save many lives. And they said it is powerless to spot an attack in an enclosed area, like an airport terminal or subway line, and unable to detect attacks unless they are big enough to scatter over several blocks.

"If you saw planes going over and releasing major clouds of this stuff, there's a chance that people would get suspicious a long time before anybody checked the filters," said Jacqueline Cattani, director of the Center for Biological Defense at the University of South Florida.

The sensors have been in place since early spring, and while the government won't say exactly where, regional health officials confirmed the list includes Philadelphia, New York, Washington, San Diego, Boston, Chicago, San Francisco and St. Louis.

The White House in January said the "Biowatch" monitoring system would cost about \$1 million annually per city. In participating cities, filters within the machines are removed daily and immediately analyzed for spores and chemicals that could have been dumped from a plane or building and left to drift in the air.

If an attack was close enough to a sensor, authorities could know about it within 12 hours, according to Bob Bostock, homeland security chief for the Environmental Protection Agency ([news](#) - [web sites](#)). That is much faster than it would take people exposed to anthrax to develop symptoms, he said.

"The main advantage of having a system like Biowatch is that prior to it being rolled out, the only real way to tell if a biological agent had been released was to see if people started turning up sick or worse," Bostock said. "By knowing in advance that a contaminant has been released, you can start treating it before symptoms develop."

Much about the system is being kept secret; The government won't say who makes the detectors, how much they cost, or what they look like. Officials also won't say which labs are analyzing the detectors' filters, other than to say that some are operated by state health departments.

If a filter tests positive for a particle, scientists can estimate where it came from, based on its physical properties, Bostock said.

The system, though, has plenty of critics.

Calvin Chue, a researcher at the Center for Civilian Biodefense Strategies at Johns Hopkins University, said the cost of testing and replacing the filters daily will be high and the probability of spotting a contaminant low. He also said the results will be difficult to confirm, especially in polluted cities or places where natural organisms found in the air can give false-positive results.

Researchers who studied what would happen if someone dropped 2.2 pounds of anthrax from a tall building in New York said the sensors could save lives, but only if officials detected an attack immediately and instantly began distributing medication.

Stanford Business School professor Lawrence Wein said in that scenario, the number of dead could be cut from 120,000 to 70,000 if sensors detected an attack within six hours. He said deaths could be cut to 50,000 if the government allowed people to stockpile antidotes ahead of time.

Bostock, of the EPA, wouldn't discuss how the detectors have performed so far, but he said the monitors have neither detected an attack, nor produced the type of false-positive reading that triggers an emergency response.

"We have a high degree of confidence in the results we have been getting," he said.

The EPA, he noted, has used similar sensors to monitor air pollution for decades.

"It's not like, with a sensor like this, you have to have one on every street corner," he said. "We have quite a bit of experience in terms of how things move in the air."

[http://story.news.yahoo.com/news?tmpl=story&u=/ap/20030716/ap\\_on\\_re\\_us/bioterrorism\\_detectors\\_2](http://story.news.yahoo.com/news?tmpl=story&u=/ap/20030716/ap_on_re_us/bioterrorism_detectors_2)

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Philadelphia Inquirer  
July 17, 2003

## Senators OK Millions For Nuclear Arms Work

*A subcommittee granted all \$68 million Bush wants. In a surprise, the House had made cuts.*

By H. Josef Hebert, Associated Press

WASHINGTON - A Senate subcommittee gave its support yesterday to development of "bunker busting" nuclear warheads and research into other advanced nuclear-weapons technology, days after the House voted to cut financing for the same programs.

The Senate panel refused to cut any of the \$68 million the Bush administration requested for the programs, which critics have argued would lead to development of a new generation of nuclear weapons and increase the likelihood of global nuclear proliferation.

Sen. Pete V. Domenici (R., N.M.), chairman of the Appropriations subcommittee dealing with nuclear programs, said that he expected further attempts on the Senate floor to cut money for the programs but that he was confident the degree of cuts being pursued in the House "won't stand" when a final spending bill is written.

The nuclear programs are part of a \$27.3 billion spending bill for the Energy Department and various other programs that Domenici's panel advanced for consideration, likely later this week, by the full Appropriations Committee.

On Tuesday, the House counterpart panel advanced its own version of the spending legislation after Republican lawmakers, to the surprise of the Energy Department, cut most of the \$68 million for the administration's advanced nuclear-weapons research effort.

Domenici said he was shocked by the level of cuts in the House.

The Senate bill includes all \$15 million the administration has requested to study the development of an earth-penetrating nuclear warhead known as a bunker-buster; \$6 million in early research into "mini-nukes" of less than 5 kilotons (about one-third the size of the Hiroshima bomb); and \$25 million to shorten the lead time necessary to resume underground nuclear-bomb testing from 36 months to 18 months.

The Senate bill also would provide all \$22 million sought by the Energy Department to continue environmental studies for a manufacturing plant to make plutonium triggers for the existing nuclear arsenal. The department has said such a plant is needed to ensure adequate supplies of the plutonium triggers for the aging warhead arsenal.

The House spending bill would cut financing for the plutonium trigger plant in half, and cut the bunker-buster money by two-thirds, while eliminating the other financing.

No effort was made yesterday in the Senate to cut spending for the programs. But Sen. Dianne Feinstein (D., Calif.) said she would try to get the money eliminated once the bill gets to the Senate floor.

<http://www.philly.com/mld/inquirer/news/nation/6319340.htm>

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Washington Post

July 17, 2003

Pg. 3

## Focus On Smallpox Threat Revived

*Experts Say Immunization Program Is Crucial to Homeland Security*

By Ceci Connolly, Washington Post Staff Writer

National security experts inside and outside the Bush administration, fearing the president's smallpox immunization program is all but dead, have begun a major public relations campaign to inject new life into a project they describe as vital to homeland protection.

In a series of interviews and published articles, Pentagon officials, conservative thinkers and a few public health officials argue that without a sizable network of inoculated health care workers, the United States remains ill-equipped to respond to a smallpox attack. And, they contend, anxiety about the dangerous side effects of the vaccine should be quelled by the success of the military in immunizing nearly a half-million personnel with few serious complications.

"Our goal at this point should be to meet [President Bush's] plan and to vaccinate the number of people originally targeted in the health care community of between 400,000 and 500,000," said William Winkenwerder Jr., assistant secretary of defense for health affairs. "I would certainly be more comfortable if we had that number of civilians prepared to respond."

At the Centers for Disease Control and Prevention in Atlanta, Director Julie L. Gerberding said she hopes to unveil a strategy soon to "reaffirm the importance of the smallpox program because of the dreaded consequences" of an attack. The agency plans to distribute \$100 million to states to step up vaccinations.

But even some supporters of the Bush policy say the opportunity to vaccinate millions before an attack has been missed, with the effort plagued by mixed messages, safety fears and the lack of evidence that Saddam Hussein possessed stocks of the deadly virus.

"People are now back in dumb-and-happy mode," said Tara O'Toole, director of the Center for Civilian Biodefense Strategies at Johns Hopkins University. Gone, she said, is the sense of urgency that people felt last winter "when we were going into Iraq, and the possibility of a smallpox attack was seen as much more plausible."

Seven months after the president announced he was resuming smallpox inoculations, after a 30-year hiatus, as part of the effort to protect the United States against biological attacks, the program is in danger of virtually vanishing. In recent months, top officials such as Bush, Vice President Cheney and Homeland Security Secretary Tom Ridge have rarely mentioned the threat of a smallpox attack or the need to vaccinate millions of emergency responders. Neither has Senate Majority Leader Bill Frist (R-Tenn.) or Surgeon General Richard H. Carmona, although both were immunized in front of cameras to publicize the effort in March.

With few exceptions, state and local health departments have shifted their attention to more immediate concerns, such as severe acute respiratory syndrome (SARS), West Nile virus and back-to-school shots. And two respected groups -- the Institute of Medicine and the CDC's Advisory Committee on Immunization Practices -- have called for a halt to smallpox vaccinations, citing concerns about heart complications related to the vaccine.

To date, fewer than 40,000 public health and hospital employees have been immunized. And despite Bush's promise to make vaccine shots available to the general public this summer, Gerberding said yesterday that a new vaccine will not be ready for another year. Nearly 50,000 doses of smallpox vaccine have been discarded because the opened vials had passed their expiration dates.

All of that frightens William Bicknell and Kenneth Bloem, two smallpox experts who drafted a position paper for the libertarian Cato Institute warning that the United States has not done enough to prepare.

"We should be well on our way to protecting the nation's civilian population by vaccinating up to 10 million health, emergency and public safety workers. However, we are stalled," the pair wrote. "We call on CDC to do a far better job in publicizing the safety of vaccination for healthy adults and we call on the Bush administration to revitalize our preparations for a smallpox bioterrorist event."

The sharpest criticism of the vaccination campaign has been that Bush and his deputies failed to articulate -- and continually reinforce -- a rationale for using a vaccine known for its side effects. Though she is well-versed and plugged-in, even O'Toole said: "To this day, I don't know what the purpose was."

Some now fret that Bush's declaration that hostilities in Iraq have ended left the mistaken impression there is no longer a threat.

"We know that the former Soviet Union had large quantities of weaponized smallpox or smallpox that could be used in an offensive manner," Winkenwerder said. "All of those stores are not accounted for, to our knowledge."

He and Army Col. John D. Grabenstein, a physician overseeing Pentagon vaccinations, published an article in the Journal of the American Medical Association detailing the results of the military program in an attempt to encourage participation in the civilian program.

"It is our hope and desire that in relating our experience to the broad general public the point can be made that what we accomplished can be accomplished by others in the civilian sector," he said. "There is nothing unique in what we did."

The CDC calculated last year that it would take 1.25 million immunized health workers to run enough emergency clinics to immunize the U.S. population within 10 days in the event of an attack. Yale University professor Edward Kaplan said he has seen no evidence the country is near that capability.

"If you believe it's a serious threat -- and plenty of credible folks do believe it is a threat -- then it makes sense to be ready to push the button" on mass immunization, Kaplan said. "We are not in a position to respond rapidly if we have to."

Michael T. Osterholm, director of the University of Minnesota's Center for Infectious Disease Research and Policy, said that he would prefer to have the 1.25 million health workers immunized in advance but that it would "not be a major crisis" if officials spent the first day of an outbreak doing that.

Gerberding said she feels frustrated by the emphasis on the small number of people immunized so far. She said the CDC has not been given credit for its accomplishments, including purchasing 150 million doses of vaccine, educating and training the medical community, upgrading state laboratories, expanding hospital capabilities and overseeing emergency drills.

"Can we stand up clinics across the country tomorrow to immunize our nation in 10 days? No," she acknowledged. Still, we "have made enormous progress."

Ultimately, Gerberding said, it is up to the states to decide how they will prepare for terrorism, including a possible smallpox attack.

That helps explain the wide variation in inoculation rates across the country. Some states, such as Arizona and Nevada, have immunized fewer than 50 people, while Tennessee has immunized 2,500.

Washington state initially estimated that it would vaccinate 7,000 medical personnel, said Health Secretary Mary C. Selecky, who is president of the Association of State and Territorial Health Officials. But concerns over liability and reports of heart complications in some vaccine recipients dampened enthusiasm, and just 543 have been immunized. She said she has shifted her strategy to identifying people who are ready and willing to be immunized at the first report of a smallpox case.

Florida Health Secretary John O. Agwunobi pushed hard to recruit a corps of 3,900 immunized medical workers spread evenly across all 67 counties -- and he hopes to continue.

"We are working on the premise the threat remains," he said. "We're open for business."

<http://www.washingtonpost.com/wp-dyn/articles/A2647-2003Jul16.html>

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