

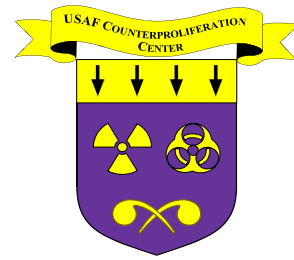
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USAF COUNTERPROLIFERATION CENTER

CPC OUTREACH JOURNAL

*Air University
Air War College
Maxwell AFB, Alabama*



Welcome to the CPC Outreach Journal. As part of USAF Counterproliferation Center's mission to counter weapons of mass destruction through education and research, we're providing our government and civilian community a source for timely counterproliferation information. This information includes articles, papers and other documents addressing issues pertinent to US military response options for dealing with nuclear, biological and chemical threats and attacks. It's our hope this information resource will help enhance your counterproliferation issue awareness.

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Anniston (AL) Star
September 6, 2001
Pg. B1

Shelby Discusses Preparedness Program

Senator takes concerns to secretary of defense

By Amy Sieckmann, Star Washington Correspondent

WASHINGTON -- U.S. Sen. Richard Shelby took concerns about Anniston's chemical demilitarization program to the secretary of defense Wednesday.

As he testified before a Senate appropriations defense subcommittee, Secretary of Defense Donald Rumsfeld fielded questions about Anniston's Chemical Stockpile Emergency Preparedness Program, or CSEPP.

Although Rumsfeld's direct answers were not available through Shelby's office or the public affairs office of the secretary of defense, Shelby did say he was pleased with Rumsfeld's response.

"I recognize progress has been made and the program is headed in a new direction," Shelby said. "I remain cautiously optimistic."

In his questions, Shelby noted that major issues such as F-22s and missile defense tend to dominate most defense discussions, but that the chemical demilitarization program is equally important.

Shelby referred to a recent report from the General Accounting Office pointing out that the local community is not prepared for a chemical weapons accident and the quickly approaching burn date in Alabama.

"We have a facility in Alabama, and I can't wait until the last round is destroyed on the depot, but I am very concerned about where this program is right now in Alabama," Shelby said. "As the person with the ultimate responsibility for the program, I would like for you to share your thoughts with me about where the chemical demilitarization program is as a whole and take a moment or two to comment on the health of the CSEPP program." Shelby also questioned Rumsfeld about the role of helicopters in upcoming battles. He stressed the increasing likelihood of urban fighting, and therefore the apparent need for helicopters, when he asked Rumsfeld what part they will play in helping each service to execute future missions.

The senator also wanted to know what reforms can be made to promise significant cost savings within the Department of Defense and what initiatives are under way to implement that reform.

These questions come at a time when Congress is reviewing the effects of the economic slowdown and at the same time facing pressure to pass appropriations bills that increase the Department of Defense's budget from \$310.5 billion to \$328.9 billion, according to June figures.

Dayton Daily News
September 6, 2001

Battelle Exec Denies Anthrax Report

By Timothy R. Gaffney and Dale Dempsey, Dayton Daily News

The Pentagon has not asked Columbus-based Battelle Memorial Institute to develop a deadlier strain of anthrax-causing germs to test biological warfare defenses, but its West Jefferson laboratory is a likely candidate for such work, a Battelle executive said Wednesday.

Gregory Frank, executive vice president for government contracts, denied a report in Tuesday's New York Times that the Pentagon has selected Battelle's Madison County site to genetically engineer a new strain of the bacterium that causes anthrax.

But he said it's one of a few U.S. facilities capable of doing the work, and Battelle will consider bidding on it if the government puts out a request.

"If the government asks us to do it, we will evaluate it like any other project the government asks us to do. We are aware the government has this requirement," Frank said.

The New York Times said the Pentagon wants to test the vaccine now being given to U.S. troops against the more dangerous bug to find out if it would protect them from a new one developed by Russian scientists.

"We have done work for the last decade (at West Jefferson) evaluating medical countermeasures for chemical and biological agents," Frank said. "So we have people that have the expertise, we have the ability to work with those agents, and we have done so in the past."

Frank said the West Jefferson site is "one of the few places in the U.S. that has the experience in working with anthrax and other agents. The government will probably turn to Battelle because we're one of the few people out there that has this expertise, outside the government itself."

The newspaper also reported Battelle tested a CIA-built device to measure the "dissemination characteristics" of a Russian biological bomb and its performance under "different atmospheric conditions." The tests used a "benign" substance instead of anthrax, according to the report.

Frank would not confirm or deny the tests.

"I cannot get into that. What I can say (is) anything Battelle does, we would never, and have never, done any open-air testing with anything. I mean, that's inconceivable," he said.

"Anything that Battelle has ever done is done in strict safety and environmental compliance with all the laws we have to comply with. In all the years that we've operated those facilities, we've never had a release and never had an exposure to any of our workers," he said.

Besides its military work, Battelle has developed such products as the office copier, which was the beginning of Xerox, the compact disk and product code markers. But for decades it has been heavily involved in government research.

As much as 80 percent of the work the institute does comes from government contracts. In more recent years Battelle has been trying to move more toward the private sector, commercializing its inventions and spinning off companies, according to Tom McClain, the company's vice president for communications.

"We are looking for technological spinoffs," McClain said.

Currently it has developed technology in the areas of pulmonary therapy and fiber optics, which have become independent companies in the Columbus area.

McClain estimated that Battelle's work is now 70 percent government and 30 percent industrial.

Battelle has done work for Wright-Patterson Air Force Base in the areas of avionics, electrical systems and computers, McClain said.

The institute was created in 1924 from a \$1.5 million gift from the estate of Gordon Battelle, the son of a Columbus steel baron. It has always been a not-for-profit firm dedicated to applied scientific research.

In 1944, it took an idea for dry copying by inventor Chester Carlson and created what would become Xerox. The royalties from the Xerox patents created a \$350 million revenue stream that allowed Battelle to greatly expand its research projects.

In the early 1970s, the Internal Revenue Service and the Ohio Attorney General's Office reviewed its tax-exempt status. Battelle agreed to give away \$80 million of its investment portfolio and became a not-for-profit, tax-paying entity.

Shortly thereafter, the institute brought on Ron Paul, a former physicist for General Electric, who focused on winning lucrative government contracts. It manages four labs for the Department of Energy.

Presently, Battelle handles as many as 5,000 contracts. It has 7,500 employees worldwide.

Weapons research has been a part of its activity since the late 1930s. It played a part in the effort to build the atomic bomb during World War II, working with uranium metallurgy. It has worked on armor plating for tanks and has a hazardous materials facility near its Columbus headquarters.

"The government comes to us because we have specific expertise in scientific and environmental areas and that expertise is world class," McClain said.

Columbus (OH) Dispatch

September 5, 2001

Battelle's Laboratories Key To Germ-Warfare Research

By David Lore, Dispatch Science Reporter

Battelle's biological-warfare programs have expanded in recent years, raising questions about whether the research is strictly defensive, as required by U.S. treaty commitments.

As many as 800 Battelle employees are involved in chemical- and biological-warfare research at the institute's laboratories on King Avenue and in West Jefferson, said Gregory Frank, executive vice president for government contracts.

That compares with fewer than 500 in 1998.

Nearly a third of the employees are involved in research to defend against biological attacks, Frank said. The rest work with chemical weapons.

Much of Battelle's role has been to improve the anthrax vaccine being given to most U.S. military personnel.

Pentagon officials confirmed yesterday that the Defense Intelligence Agency wants to develop small amounts of a potentially more- potent variant of the bacterium that causes deadly anthrax.

"We plan to proceed" after internal legal reviews have been completed and Congress has been informed, said Victoria Clarke, spokeswoman for Defense Secretary Donald H. Rumsfeld.

Anthrax is a likely biological-warfare agent because it's easy to make and carry and kills at least 80 percent of those who inhale the spores.

Battelle is a consultant to the vaccine manufacturer, BioPort of Lansing, Mich., and is doing animal testing at West Jefferson for the Centers for Disease Control and Prevention to determine whether the six-shot series can be reduced.

However, Frank denied a report in yesterday's New York Times that the Defense Intelligence Agency has chosen the West Jefferson lab to attempt to genetically engineer the enhanced anthrax microbe.

"That would probably be done at West Jefferson, but it's not been approved for the government," he said.

Frank also said there is no plan to move the biological programs to the \$22 million laboratory. Battelle announced last week that it will build a center for chemical- and biological-warfare programs in Maryland near the Army's Aberdeen Proving Ground.

Clarke said the purpose of developing a new strain of anthrax is strictly defensive: to ensure that an effective vaccine is available should a biological weapon be used against American troops.

After Russian scientists said in a 1997 article in the British journal *Vaccine* that a new strain of anthrax existed, the U.S. government asked for a sample to test. But it never received it, Clarke said.

"We have a vaccine that works against all the known anthrax strains," she said yesterday. "What we want to do is make sure we are prepared for any surprises, we're prepared for anything that might happen that might be a threat."

Dr. Ken Alibek, a former Soviet expert on biological weapons before he defected in 1992, said he expects Battelle to be involved in U.S. research on a new anthrax strain.

"From at least what I know, they would be involved significantly," Alibek said.

He worked for Battelle during 1998-99 and now is vice president of Hadron in Washington, another Pentagon contractor for biological defenses.

Alibek and Clarke said the Defense Intelligence Agency's proposal would not violate the Biological Weapons Convention against developing biological weapons.

"No, I don't see this as crossing the line," Alibek said. "But it comes very, very, very close."

Mary Elizabeth Hoinkes, who was general counsel of the Arms Control and Disarmament Agency from 1994 to '99, disputed that the experiment falls within the limits of the 1972 treaty. She said that interpretation is a "gross misrepresentation" that "risks doing serious violence" to an accord the United States has long championed.

Clarke said that the experiment would involve small quantities of a new anthrax strain, although she could not say how much.

The work would be part of Project Jefferson, an unclassified, congressionally mandated program managed by Battelle "to assist the intelligence community in preventing a technological surprise in the world of biological warfare," said Lt. Cmdr. James Brook, a spokesman for the Defense Intelligence Agency.

Although Project Jefferson's existence is unclassified, its specific tasks are secret, Brook said.

Battelle officials said that classification made it impossible to comment in detail on the anthrax engineering or an earlier Central Intelligence Agency project at West Jefferson to replicate some Soviet- era, biological-bomb components.

The Times said the purpose was to study how well the bomb could disperse biological agents under varying atmospheric conditions.

Alibek said he considers Battelle a major player in the military's biological-weapons defensive effort.

"The U.S. is not involved in actual biological-warfare work in developing actual weapons," he said. "But when you do defensive work and start modeling or mimicking actual weapons, you come into very sensitive areas."

This can lead to charges abroad that the United States is developing offensive weapons, especially if details are kept secret, he said.

"The Russians yesterday immediately published (the Times article) on the Internet as information that the U.S. is developing biological weapons," Alibek said.

Information from the Associated Press and The New York Times was used in this story.

Washington Times

September 7, 2001

Embassy Row

Anti-Terrorism Partners

By James Morrison

The United States and India have a common enemy in the fight against terrorism, the U.S. ambassador to India said yesterday.

"The international terrorist Osama bin Laden calls for a holy war against America and India in the same breath," Ambassador Robert Blackwill told business leaders in Bombay.

"Societies like ours that are based on freedom, tolerance and rule of law are a constant repudiation of those who pursue political objectives through fanaticism, hatred and the murder of innocents."

The United States accuses bin Laden of planning the 1998 bombings of the U.S. embassies in Kenya and Tanzania, while India accuses the Saudi exile of training Muslim rebels opposed to Indian rule in Kashmir.

The new U.S. ambassador, who is on a tour of India, also congratulated India for its cooperation with the United States in an anti-terrorism campaign.

"Our collaboration ranges from exchanging and analyzing a variety of sensitive information to interdicting terrorists and their networks." Mr. Blackwill told a meeting of the Indo-American Chamber of Commerce and Indo-American Society.

He also called on India to work with Pakistan to resolve the dispute over Kashmir, according to reports from Bombay.

"The Bush administration is willing to be helpful, but we are convinced that this is an issue that only India and Pakistan can work out between them, taking into account the wishes of the Kashmiri people," he said.

Mr. Blackwill arrived in Bombay after visiting the site of a major earthquake that leveled parts of the western Indian state of Gujarat eight months ago.

He announced that the United States would provide \$8 million for reconstruction projects on top of the \$13 million already contributed to relief efforts.

Los Angeles Times
September 9, 2001

Patriot Missile, Even Improved, Still Trails Controversy

By Paul Richter, Times Staff Writer

WASHINGTON -- From its first fiery launch 10 years ago during the Persian Gulf War, the Patriot antimissile system has been tailed by controversy.

To admirers it was the hero "Scud buster" that shielded U.S. troops from Iraqi missiles; to critics, a hyped hardware that missed far more warheads than it destroyed.

This month, the first units of a new Patriot missile will be delivered from an Arkansas assembly plant to an Army air defense battalion at Ft. Bliss, Texas. The new system has won wide praise for its ability to protect troops from short-range missiles, and some defense officials say that after half a century of research it is America's first effective antimissile system. Yet on the larger missile defense issue--whether the United States should spend billions on a system to protect the entire country from longer-range missiles--it is already clear that the new Patriot will be no less controversial than the old.

Advocates already offer it as proof that the Pentagon can succeed at the much more challenging job of dealing with high-speed, long-range missiles. Critics, likewise, hold it out as evidence that such an effort will be considerably more costly, difficult and time-consuming than advocates admit.

In fact, the 36-year effort to develop an effective Patriot "shows both," said James M. Lindsay, a Brookings Institution expert and former National Security Council aide. "That's why both sides point to it as a symbol."

All sides agree that the new Patriot Advanced Capability 3 (PAC-3) will fill one of the most urgent needs of the U.S. military.

Short-range missiles like the Scud are now in the arsenals of about two dozen countries. They are wildly inaccurate, but with a range of a few hundred miles, the missiles could cripple U.S. military operations with strikes on troops, ports, air bases and allied cities.

In the Persian Gulf War, 28 U.S. soldiers died and 99 were injured when a Scud struck a barracks in Dhahran, Saudi Arabia.

It was "the worst single engagement of the war" and demonstrated that "we had underestimated the ballistic missile threat," Paul D. Wolfowitz, the deputy Defense secretary, said in July testimony to Congress.

In response to the Scud threat, U.S. forces deployed the first version of the Patriot, which had been designed primarily for the less-challenging job of knocking down enemy aircraft.

Then-President Bush claimed these systems knocked down 41 missiles in 42 tries in the war. But critics soon offered evidence that the Patriots had actually hit metal debris broken loose by the Scuds' atmospheric reentry, not warheads.

While some still defend the Patriot's effectiveness, former Defense Secretary William S. Cohen said flatly last January that in 1991 the earlier Patriot "didn't work."

After the war, the Army began a redesign that has resulted in a rebuilt alignment for all the Patriot's principal parts. While the proposal to build a national missile defense is controversial because it would undermine arms control agreements, politicians of both parties strongly support building defenses against shorter-range missiles.

When Clinton administration officials came into office in 1993, they slowed plans for a national missile defense while pouring billions in new money into the Patriot and other short-range antimissile programs.

The Patriot's mission is to protect against enemy aircraft, low-flying cruise missiles and short- and medium-range ballistic missiles.

The system consists of a launcher that sits on a truck bed and carries up to 56 missiles; a ground radar that finds and tracks threatening missiles and planes; and an "engagement control station" where operators sit.

The new Patriot has a more fine-grained radar that will enable operators to distinguish enemy warheads from other flying objects. The missile is more maneuverable than its predecessor, in part because of the addition of 180 tiny rocket thrusters, embedded near its nose.

Probably its biggest improvement is in the way it goes about destroying its target.

The earlier Patriot missile was designed to destroy the enemy projectile by exploding within several yards of the warhead and releasing a hail of metal fragments.

Guided by the more accurate radar, the new system is designed to strike the target directly, making it more likely that the metal-encased warhead will be destroyed.

Current plans call for the new Patriot missile to be tested in combat-like conditions from January until May. Then the Army and senior defense officials will decide whether to approve full-rate production of the missile.

In flight tests over the last five years, the Patriot struck its targets eight out of nine times.

But some defense officials and outside experts caution that the Patriot's effectiveness in battle won't be fully known until the Army subjects the equipment to the last few months of tests.

The system won't be fully proved until it has been subjected to "real honest-to-gosh operational tests," said Philip E. Coyle, the chief Pentagon weapon tester during the Clinton administration.

Army officials insist the technology won't need big changes at this point, in part because of their experience using the earlier Patriot. Some outside analysts agree.

"This has been a very, very good [missile defense] development program, compared to almost any others," said Duncan Lennox, editor of Jane's Strategic Weapons Systems, in London. "I think it's already very mature."

The Patriot is likely to be a moneymaker for the missile's contractor, Lockheed Martin Corp., Lennox said. Some industry officials believe that in addition to the 2,200 missiles the Army wants, Lockheed Martin may be able to sell more than 1,000 to allied countries.

Though deployment of the new Patriot might not take place for several years, some missile defense advocates have focused on it as an argument for proceeding with national missile defense.

"Not only can you hit a bullet with a bullet, we've been doing it repeatedly," said Rep. Duncan Hunter (R-Alpine), chairman of the House Armed Services Committee's research and development subcommittee, in a congressional hearing last summer.

Others contend that the Patriot's success shows only that, given a lot of time and money, the Pentagon can devise a system to work against a less-challenging threat.

They note that the Patriot is designed to deal with missiles that travel at one-third the speed and about one-tenth the range of an ICBM. They also point out that the PAC-3's development has been underway since 1965 and that the program has encountered repeated delays and cost overruns.

The program cost \$6.9 billion from 1994 to 2000, the General Accounting Office found last year, jumping 77% during that period.

Brookings analyst Lindsay, co-author of "Defending America" and an advocate of limited missile defense, praises the Patriot program. But he says there's a big leap from the PAC-3 to defense against high-speed, long-range missiles.

Equating the two "is like saying, since I can hit an underhand pitch from my Uncle Frank in the backyard I'm ready for a ball from [Dodgers pitcher] Kevin Brown," he said.

The senior Army officer on the program, Col. Tommie E. Newberry, acknowledges that the effort has been more costly, time-consuming and complex than predicted.

"We have spent more money than we expected and it has taken two years longer," said Newberry. "When you get into cracking the nut on some of the science, it's more difficult than you anticipated."

Yet Newberry predicted that the new Patriot would prove such an improvement that "I think anybody would say that it's well worth the investment and the wait."

Air Force Defends Spending Half A Billion On Iffy ICBMs

By John M. Donnelly

A top Air Force general defended the service's decision to spend over half a billion dollars producing nuclear-missile guidance sets without gathering enough test data to prove their accuracy.

In one of the largest recent examples of buying unproven weapons systems, the Air Force two years ago okayed \$537 million in contracts with Boeing to build guidance upgrades for Minuteman III ICBMs. At the time, testers had quietly warned the Air Force that the two flight test that had occurred weren't enough to show the missiles' accuracy.

Since then, the testers concerns have been borne out, as the missiles have shown a "slight accuracy bias," said Brig. Gen. Craig Cooning, the official in charge of buying Air Force space systems, in the service's first on-the-record acknowledgment of the highly classified accuracy problem.

The new NS-50 guidance systems are expected to enable Minuteman IIIs—which soon may be the United States' only land-based nuclear ballistic missiles—to last 20 more years without degrading performance. Whether that goal will be met is now open to question. Cooning believes a \$7 million software fix should solve the problem.

In a written response to a query, Cooning said that the first two flights of the upgraded missile, plus simulations, gave the Air Force confidence to go forward with the huge contracts in November 1999. Only later did a software glitch show up that undermined the accuracy in tests.

Philip Coyle, until earlier this year the Pentagon's top tester, said in an interview Friday that in 1999 he judged the guidance accurate enough, given the fact that the missiles would be delivering nuclear warheads, to do their jobs. Even though he sanctioned production, Coyle says he warned the Air Force that two tests were not enough to conclusively prove the upgrade's accuracy.

Meeting range requirement

The Air Force is spending an estimated \$5 billion extending the lives of its Minuteman III force: \$2.4 billion on the Guidance Replacement Program and \$2.6 billion on the Propulsion Replacement Program, which puts new solid propellant in the three-stage missile.

In his statement, Cooning said the new propulsion system is meeting the range requirement: "Demonstrated performance in all these tests meets, and in some cases exceeds, the specific requirements" documented by the Air Force, he said.

As for the guidance upgrades, the Air Force and TRW, which manages ICBM programs, jointly decided in late 1999 to sign up Boeing for full-rate production after just the first two of six flight tests were conducted in 1998. Boeing makes the guidance units at a facility in El Paso, Texas. Cynthia Taylor, a Boeing spokeswoman, said the company has already signed deals to make 228 of a planned 652 units for \$537 million.

But Cooning said there was no indication in 1998 that the missiles would be off-target after the first two tests and numerous simulations. The problems only surfaced later, he said.

"The accuracy achieved during the first two flight tests was within the performance requirements, ... consistent with over 50 previous Minuteman III flight tests, and fully supported the production decision," he said. "Four subsequent flight tests and extensive analysis revealed the slight accuracy bias."

Cooning for the first time explained, in unclassified terms, just what went wrong with the new guidance computer and electronics, which are to replace the 1960s vintage model in the Minuteman IIIs.

"The original guidance software was converted to a new computer language ... to run on the new computer," he said.

"The new computer executed the software as planned, but completed a specific in-flight mathematical computation in a slightly different manner than the original computer. ... The slight accuracy bias does not affect the overall Minuteman III weapon system effectiveness and is easily corrected."

On the bull's-eye ring

However, if the first two tests gave no reason to think the upgraded missiles were not accurate, neither did they give sufficient confidence that the missiles in fact were accurate, said Coyle, in a statement for a Defense Week story last February that first disclosed the accuracy questions.

On Friday, Coyle reiterated the view that testers were concerned that the two tests didn't provide enough data to demonstrate performance. The testers required more tests, which the Air Force completed. Only after those tests lent credence to the accuracy fears did the Air Force acknowledge the problem inside the Pentagon, Coyle and others said.

"The first two shots hit on the ring of the bull's eye, not in the center of the bull's eye," Coyle said of the first flight tests.

Despite the uncertain accuracy results of those initial tests, his office deemed the guidance upgrade "operationally effective," blessing the program to start production. Coyle defended that decision on three counts. He said that the accuracy problems were not decisive, because there were so few tests; the missiles were not off target by much; and, ultimately, slight inaccuracies were not operationally significant in a nuclear weapon.

Coyle's unclassified February 2000 report to Congress, which came after the production green light was given, said the guidance performance was "worthy of further analysis with the benefit of additional actual flight test data."

But his February 2001 report to Capitol Hill was stronger, though production lines were humming: "Flight test data available to date are insufficient for a determination as to whether Minuteman III accuracy requirements are being met. ... Additional flight testing is required." "The re-entry vehicle miss distances were considerably larger than the requirement specified in the ORD [Operational Requirements Document]," the report said of one Minuteman III test.

30 years experience

Cooning, in his statement, pointed out that the Minuteman III upgrade's problems were less than those encountered in the development of the original Peacekeeper and Minuteman III missile programs.

But those programs did not have 30 years experience under their belts. Cooning and other officials have cited that experience is undergirding Air Force confidence that the upgrade would be a relatively simple and cheap matter, especially compared to developing a new missile. At least to some extent, that confidence has proven unwarranted. If START II takes effect, the U.S. land-based nuclear arsenal will comprise just 500 of the upgraded Minuteman III ICBMs.

International Herald Tribune
September 10, 2001

Battle On Missile-Defense Funds Heats Up

By Brian Knowlton

WASHINGTON--Spending on foreign policy and defense - and particularly the Bush administration's missile-defense plan - is coming under increasingly sharp scrutiny as the sluggish economy hangs darkly over congressional budget deliberations.

On Sunday, top administration spokesmen and Democratic leaders in Congress clashed Sunday both on the wisdom of a proposed missile defense and how to pay for it, sketching the outlines of what is shaping up as a defining debate.

Senator Joseph Biden of Delaware, chairman of the Foreign Relations Committee, predicted that the full Democratic-controlled Senate would uphold a committee vote Friday not just to reduce funds for missile-defense testing but to require congressional approval before President George W. Bush can order tests that would violate the Anti-Ballistic Missile Treaty with Russia.

Defense Secretary Donald Rumsfeld said Mr. Bush would veto any Senate bill that sought to limit Mr. Bush's freedom to order missile tests.

And the Senate Republican leader, Trent Lott of Mississippi, said that the attempt to require congressional approval for missile-defense testing had "no chance at all of going into law."

Mr. Rumsfeld said that the Senate committee bill "basically ties the president's hands" as he seeks an agreement with Russia to replace the ABM Treaty with an arrangement that permits national missile defense, presumably in exchange for a reduction in the U.S. nuclear arsenal.

The administration still hoped, he said, "to find a framework that we can establish between our two countries that is not Cold War-oriented."

If no such accord was reached by the end of the year, he said, Mr. Bush would consider giving the required six-month notice that the United States planned to withdraw.

Such a unilateral withdrawal, Mr. Biden said, would be an "absolute disaster" for U.S. foreign relations. And with the economy badly in need of stimulation, he said, money should not be spent on uncertain technologies that would provide little stimulus, "like the Star Wars program."

The threatened curbs on missile-defense spending, including a \$1.3 billion cut from the administration request of \$8.3 billion, followed a bitter debate Friday in the Senate Armed Services Committee. With 13 Democrats voting for the restrictions and 12 Republicans opposing them, the ground work was laid for a full-blown Senate battle on missile defense.

The \$7 billion for the missile program approved by the committee would amount to a 37 percent increase over the current fiscal year.

The Republicans opposed the defense authorization bill that included the missile-defense funds although it included the \$329 billion sought by the administration, and amounted to the biggest military spending increase in more than a decade.

Under the provision passed by the Senate committee, Mr. Bush would have to notify Congress before spending money for any test that would violate the ABM Treaty, which allows some missile defense research but bars deployment of a national missile defense. Both houses of Congress would then have one month to vote on whether to allow the test. Meanwhile, the national security adviser, Condoleezza Rice, appeared to contradict press reports that the administration had led Beijing to believe Washington would not oppose limited growth in the small Chinese nuclear force and a possible resumption of underground nuclear testing if Beijing acquiesced to a U.S. missile defense.

"The president is trying to bring down the number of nuclear weapons in the world, not increase them," Ms. Rice said on Fox-TV.

"It is important to maintain the moratorium on testing. We are meeting that moratorium, we see no reason to test now, we don't believe that others have reason to test either."

She defended plans for a missile defense, saying that ballistic missiles were "ubiquitous now."

The president, she said, would make "a good offer" to the Russians and others "about a new strategic framework."

Mr. Biden was sharply critical of the Bush administration's push, in the face of strong opposition abroad, for a missile defense.

"In eight short months," he said, "we have distanced ourselves from our allies more than we ever have before and we have brought our adversaries closer together than ever before." Citing what he said were greater threats to the United States from smuggled nuclear, chemical or biological weapons, he said, "Missile defense will protect us from virtually nothing."

But Representative Dick Army of Texas, a House Republican leader, replied, "It's a moral imperative to you and me, senator, if we can use all our American genius and technology to give our children something better than the duck-and-cover we had when we were in school" in the event of a Soviet missile attack.

New York Times
September 8, 2001

Senate Committee Cuts Money From Missile Defense Plan

By Thom Shanker

WASHINGTON, Sept. 7 — The Senate Armed Services Committee, in an uncharacteristically partisan vote, cut \$1.3 billion from President Bush's proposal for missile defense today and adopted language requiring any test that would violate the Antiballistic Missile Treaty to gain Congressional approval.

Senator Carl Levin of Michigan, the committee's Democratic chairman, threw down another stark challenge, saying that if President Bush withdraws from the ABM treaty, Democrats are likely to try to block American missile defenses that do not adhere to principles of that arms control agreement, even if defunct.

Senator John W. Warner of Virginia, the committee's ranking Republican, immediately released a letter from Defense Secretary Donald H. Rumsfeld, who said he would recommend a presidential veto if Congress made such a cut in the \$8.3 billion request for missile defense and required the president to seek Congressional approval for certain tests.

"If such language were to become law, the U.S. would fall still further behind in countering the threats of long-range missiles," Mr. Rumsfeld wrote.

In addition, "it would send a signal to the Russians and other countries that may prefer that the U.S. remain vulnerable to ballistic missiles that they can wait us out, while proliferation and offensive missile developments continue apace," Mr. Rumsfeld wrote.

After the 13-to-12 committee vote that sent the 2002 defense authorization bill to the full Senate for debate, Mr. Warner said he had found no precedent for the lack of unanimous committee support for the proposal.

"This language, I point out, will not become the law of the land, as sure as I'm standing here," Mr. Warner declared. The language drafted by committee Democrats was to pressure the administration to remain a party to the 1972 ABM treaty or to negotiate "a new strategic framework or other agreement" with Russia that permits expanded work on missile defense by mutual agreement.

The tactic brought complaints from Republicans that the legislation would give Moscow too much control over United States military policy.

But Mr. Levin responded, "This does not give the Russians leverage, it gives Congress a voice to act responsibly." There are many in Congress "who would not vote for a test which is in conflict with the arms control agreement," Mr. Levin said. He added, "We were told by the administration, well, they're going to give us that information, but they never have."

The military authorization bill approved by the committee today was the full \$343.5 billion requested by the administration; most of the money over the \$329 billion requested for the Pentagon is for nuclear arms program managed by the Energy Department.

The bill includes the \$18.4 billion in the president's amended budget request, although committee members noted that this sum may not be available given competing interests and a shrinking surplus.

The full Senate is expected to debate the defense measure in two weeks, and a floor fight is expected over missile defense. The version of the bill now working its way through the Republican-controlled House does not cut missile defense spending or require Congressional approval of tests.

The committee bill shifts \$1.3 billion from missile defense to an assortment of other Defense Department programs. But it preserves money for a missile defense test bed in Alaska, even though critics say the test site intended to provide cover for a speedy deployment of missile defenses in violation of the ABM treaty.

In the version of the authorization bill approved by the committee today, \$700 million is added to compensation and quality of life accounts for those in uniform; \$1 billion is added for readiness; \$800 million is added for transformation of the military to a lighter, more lethal force; and \$600 million is added to improve capabilities for responding to terrorism.

Mr. Levin warned the administration that Congressional Democrats might try to bind America to the principles of the ABM treaty even if President Bush invokes his legal right to withdraw, and compared the situation to that of the Comprehensive Test Ban Treaty, signed by President Bill Clinton but unratified. Many senators nonetheless believe its provisions "are important to world stability," Mr. Levin said.

"Whether or not we're bound by it, because we haven't ratified it, we've decided — under my hypothesis — that we're not going to fund a test in violation of a treaty, even though that treaty doesn't bind us because we never ratified it," Senator Levin said. "It's no different from that."

The bill approved by the committee includes a measure sponsored by Senator Bill Nelson, Democrat of Florida, that would establish new rules for absentee voting by members of the military. It would grant residency guarantees, extend registration and simplify the application process for absentee ballots. The proposal also calls for testing absentee balloting on the Internet.

Overseas military ballots figured prominently in the contested Florida recount in last year's presidential election.

(Editor's Note: Hyperlink for report mentioned in article below, listed after article.)

Washington Post

September 8, 2001

Pg. 9

CIA Says Iran Got New Missile Aid

Russian, North Korean and Chinese "entities" supplied fresh ballistic missile-related equipment and know-how to Iran last year, moving it toward self-sufficiency in long-range missile production, CIA Director George J. Tenet told Congress yesterday.

In an unclassified version of a report mandated by law, Tenet said Iran remained one of the most active seekers of foreign technology for developing and delivering weapons of mass destruction. During the period covered by the report -- July 1 to Dec. 31, 2000 -- Tehran was described as pressing ahead with an effort to develop a domestic capability to build chemical, biological and nuclear weapons plus their delivery systems.

The U.S. intelligence community predicts that Iran probably will be able to threaten the United States with intercontinental ballistic missiles within 15 years.

Unclassified Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions,

1 July Through 31 December 2000

http://www.cia.gov/cia/publications/bian/bian_sep_2001.htm

(Editor's Note: Hyperlink for referenced report, above.)

Washington Times

September 10, 2001

Pg. 12

Iraq Pursues Biological Weapons

Iraq's pursuit of chemical and biological weapons threatens to become a serious problem, Defense Secretary Donald H. Rumsfeld said yesterday.

Without monitoring by U.N. weapons inspectors, the Iraqis have been "working diligently to increase their capabilities in every aspect of weapons of mass destruction and ballistic missile technology," he said. "And as they get somewhat stronger, the problem becomes greater."

A CIA report delivered to Congress on Friday described the efforts of other countries to obtain weapons of mass destruction. Iraq again may be producing biological warfare agents, the report said, although confirming that is difficult given the inspectors' absence.

San Diego Union-Tribune

September 8, 2001

U.S. Firms Land Deal To Destroy Russian Weapons

By Reuters

WASHINGTON -- Five U.S. engineering and management firms have been awarded a defense contract totaling \$5 billion to eliminate Russian nuclear and other arms and protect nuclear warheads, the Pentagon said yesterday.

The contract, which will run through 2006, is part of a decade-old effort authorized and financed by Congress to help safely destroy former Soviet weapons of mass destruction in Russia and assure that they are not stolen.

The Pentagon said the new contract work will be shared by Brown and Root Services Division of Halliburton International Co., Raytheon Co., Bechtel National Inc., Parsons Delaware Inc., and Washington Group International Inc.

Defense News
September 10-16, 2001

Seeking Greater Power Over Missile Research, Pentagon's BMDO Plans Annual Reviews Of Programs

By Gopal Ratnam, Washington

The Pentagon's Ballistic Missile Defense Organization (BMDO) plans to conduct annual reviews outside the normal Pentagon acquisition process, a senior agency official told Defense News.

The reviews will help the BMDO determine the progress of its research and development efforts, which programs to pursue and which ones to drop, U.S. Army Maj. Gen. Willie Nance, program manager for the ground-based midcourse missile defense program, told Defense News.

"We want to assess every year the progress we are making, and as system components start to show they are good through testing, then we can say we are ready to proceed to procuring those systems and deploying them," Nance said.

"When we find some [programs] that don't measure up to what our needs and expectations are, we may have to decide to truncate those programs, putting the money into others," he added.

The BMDO also will have sole authority to decide which research and development programs are worth pursuing, unlike all other weapon programs that are subject to review by the Defense Acquisition Board (DAB), Pentagon officials say.

"The milestone decision authority [for missile defense programs] has to rest within the Ballistic Missile Defense [Organization]," said Edward "Pete" Aldridge, the U.S. undersecretary of defense for acquisition, technology and logistics, at an Aug. 16 news briefing.

Missile defense programs "cannot come to a DAB until [they are] ready for deployment, and then it will go into its normal process," Aldridge said. "But up until the time it's ready for deployment, it has to be operated in a different way than the way we do business."

Pentagon regulations require that major weapon systems classified as Acquisition Category I usually be subject to periodic reviews by the DAB.

The board is staffed by the undersecretaries of defense for policy and acquisition, the director of operational test and evaluation, service secretaries and officials from U.S. Joint Forces Command.

Weapon system program managers are expected to brief the DAB at critical points in the program and to seek its approval before proceeding to the next phase of a program.

Former Pentagon officials and congressional staff members say the Pentagon would be able to convince Congress to go along with its plan.

"Regardless of the DAB reviews, there will be plenty of scrutiny on the national missile defense issues," one Republican U.S. Senate staff member told Defense News Aug. 30.

"It is not like the Congress is going to go away and not get briefed on the progress," the staff member said. "None of these programs will suffer from lack of eyes watching them."

Since the BMDO intends to handle research and development and not acquisition or deployment, bypassing the DAB process would be acceptable, said Philip Coyle, former director of the Pentagon's test and evaluation office and now with the Center for Defense Information, a think tank here.

While the missile defense plans of President Bill Clinton's administration called for deployment of a limited land-based system, the bulk of the \$8.3 billion the Pentagon wants to spend in 2002 on missile defense will be directed toward research and development programs.

The research and development effort is intended to identify promising new technologies to shoot down enemy missiles from air, sea, land and space.

Unlike the Clinton administration, the administration of President George W. Bush has not committed itself to a specific architecture or model of how the various elements of the missile defense system would work.

Bush administration officials also have not committed themselves to a deployment schedule, instead choosing a broad research, development and testing effort.

The Pentagon canceled Clinton administration plans to build a 20-interceptor national missile defense system in Alaska. Instead BMDO and Pentagon officials have chosen to build an extensive test facility, with five test interceptors to be based in Fort Greeley, Alaska, and radar sites in the Pacific Ocean.

The proposed changes in the management of missile defense programs have been prompted by the need for flexibility, Pentagon spokeswoman Cheryl Irwin said in response to questions by Defense News.

However, the office of the undersecretary for acquisition, technology and logistics "is also aware of its responsibilities for oversight of major acquisition programs and will continue in that role," Irwin said. "We are working the details of acquisition oversight for the BMDO programs, but look more towards efficiency in the current procedures, and less towards major changes," she added.

The Pentagon will notify Congress of its plans to change the process for BMDO programs "when and if appropriate," Irwin said.

Staff Writer Amy Svitak contributed to this report.

Denver Rocky Mountain News
September 7, 2001

Missile Outcome May Affect State

Colorado military bases have stake in defense programs

By M.E. Sprengelmeyer, News Washington Bureau

WASHINGTON -- Democrats began an all-out assault Thursday on President Bush's missile defense plans, and Colorado military facilities could be caught in the budget crossfire.

Senate Democrats on the Armed Services Committee have proposed cutting \$1.3 billion from Bush's \$8.3 billion budget request for ballistic missile defense. They also would attach strict restrictions on how the rest of the money could be spent.

If they are successful -- and overcome a threatened presidential veto -- that would delay development of a so-called missile shield that would have its nerve center at a complex of satellite tracking centers and Air Force facilities in Colorado.

The exact financial impact on Colorado bases is unknown, but the long-term impact would be severe, said Sen. Wayne Allard, R-Colo.

"They tie the president's hands in moving forward with missile defense programs," Allard said. "I think it's very ill-advised."

"The one thing people don't understand is that we don't have the capability of intercepting an intermediate range missile or a long-range missile," Allard said. "If we're ever going to be serious about defending this country, what we have to have in place is a missile defense program. This undoes (Bush's) plan."

Allard is a member of the Senate Armed Services Committee, which worked into Thursday night debating a military spending bill for the full Senate to consider. Missile defense is the biggest sticking point.

Bush has called for faster testing and deployment of an elaborate system of satellites, early warning radar and intercept missiles to shoot down missiles launched by "rogue nations."

An offshoot of the so-called Star Wars concept of the 1980s, the system would rely on technology used at NORAD in Cheyenne Mountain, Schriever Air Force Base and U.S. Space Command in Colorado Springs, and Buckley Air Force Base in Aurora.

Most of Colorado's contributions would be technical, involving computer systems and expert personnel, as opposed to missile production or launch facilities elsewhere that tap more budget spending. Budget cuts might not affect the state's bases directly or immediately, but over time a reduced missile defense plan means a diminished mission for the Colorado facilities, congressional staff members have said.

Democrats have questioned whether missile defense will work and said it could start a new arms race while diverting money from other needed programs.

This week, Sen. Carl Levin, D-Mich., chairman of the Armed Services Committee, said some of Bush's proposed spending on missile defense "cannot be justified."

In the House of Representatives, Missouri Rep. Ike Skelton, the ranking Democrat on the House Armed Services Committee, said he wants to cut about \$860 million from missile defense programs.

Skelton sees bigger needs elsewhere in the military, such as conventional weapons, improving dilapidated base housing and improving military pay, spokeswoman Lara Battles said.

Birmingham (AL) News
September 7, 2001

8 Rockets Leak Nerve Gas At Anniston Army Depot

By Katherine Bouma, News staff writer

Workers at Anniston Army Depot found eight rockets leaking nerve gas Thursday, a day after a worker became sick while in an igloo with another leaking rocket.

Doctors determined the worker wearing heavy protective gear was overcome by the heat Wednesday, not harmed by escaped sarin gas, said Army spokesman Mike Abrams.

"He was in an igloo with a leaker. He became nauseated," Abrams said. "That is one indication of chemical exposure."

Workers at the Army depot routinely test the stockpile of chemical weapons that are being stored in protective bunkers called igloos until their scheduled incineration in the next few years. They've found a total of 10 rockets leaking sarin gas this week. More than 800 leakers, or rockets emitting minute levels of chemicals in gas form, have been found at the Anniston Army Depot since routine surveys began in 1982. More than 700 of them contained sarin.

However, it's unusual to find 10 in a few days, Abrams said.

"This has been a difficult week," he said.

The employee who became sick Wednesday was given a blood test which, compared to a baseline test taken when he was hired, showed he was clean of chemical exposure, Abrams said.

Blood tests have been given to chemical weapons workers suspected of exposure on three occasions this summer, and they have tested clean each time, Abrams said.

Leakers are sealed into steel containers and segregated in an igloo with other leakers. Abrams said the weapons found to be leaking this week were emitting slightly more sarin gas than usual, but not enough to leave a liquid puddle.

New York Times
September 8, 2001

Japan: Warning On Terrorism

The United States Embassy warned citizens of a possible terrorist attack against American military bases or places frequented by military personnel in Japan. "We have received unconfirmed information that terrorist actions may be taken against U.S. military facilities or against establishments frequented by American military personnel," the embassy said. A similar warning was issued in South Korea. The two countries are host to more than 85,000 American troops.

Howard W. French (NYT)

Baltimore Sun
September 7, 2001

Russia Seeks More Time To Destroy Chemical Arms

By Associated Press

MOSCOW - A top Russian official acknowledged yesterday that Russia had delayed destroying its chemical weapons stocks but said Moscow is committed to doing so and deserves a five-year extension of an international deadline.

Sergei Kiriyenko heads a new committee charged with leading the political effort to destroy Russia's 44,000 tons of chemical weapons, the world's largest arsenal.

Russia ratified the Convention on Chemical Weapons in 1997, committing itself to destroy the stockpile within a decade. But it had long complained that it could not afford the estimated \$7 billion program despite pledges of aid from abroad.

Kiriyenko said that until this year, Russia had done little to fulfill its obligations under the convention and that the U.S. Congress had good reason to freeze its funding for the program for two years.

Now Russia's Cabinet has approved a new, cheaper program that would enable the destruction of its chemical arsenal by 2012, without international funding.

Kiriyenko said Russia had transferred authority over the destruction effort to a civilian agency. He said Russia has completed destruction of the detonators used for its chemical weapons.

Washington Post
September 8, 2001
Pg. 9

Israelis Brief U.S. On Anti-Missile System

Israeli officials said they hoped to cover most of the country with three batteries of Arrow anti-missile installations by the end of the decade.

Here to brief Bush administration officials on a successful Aug. 27 test, the Israelis said they would spend \$2 billion to \$2.5 billion on the Arrow missile shield in that time frame.

The Bush administration has promised \$65 million to support the project this year, but the officials said Israel was seeking an increase to cope with an accelerating missile threat from Iran, Iraq and Syria.

Nanoengineering may alter face of combat

'Smart' uniforms use treated fibers

By Associated Press,, 9/10/2001

NYORK - To help soldiers survive, the US Army is developing a new generation of combat uniforms using tiny, red fibers that let air through while blocking toxins from chemical and biological weapons.

The "chemical protective overgarment," expected to ship in as little as two years, is one of the early uses of nanotechnology: the science of manipulating single atoms and molecules to create new products.

While nanotechnology won't be ready to build tiny machines or computer processors for at least 10 years, researchers in materials science are already using it to change the properties of plastics, oils, and textiles, giving them breathability, heat-resistance, strength and flexibility.

"They're such small fibers, it's not a trivial matter to get them into a uniform that's going to be twisted and sat on," said Tom Tassinari, a scientist with the US Army Natick Soldier Center in Natick, Mass.

Ten years out, the Army hopes to distribute a "smart" combat uniform with nanoengineered fibers, embedded sensors, and tiny computers that allow it to stop bullets, monitor vital signs, and undergo chameleon-like camouflage changes that blend in to surroundings, Tassinari said.

In the military and civilian worlds, a wave of new nanoproducts are emerging, though none as sexy as, say, the carbon nanotube mini-robots that may someday swim in our blood streams and repair damaged cells.

Products include scratch-proof eyeglasses, helium-filled sneakers, and plastic-encased ballistic missiles.

Eddie Bauer sells \$42 Nano-Care khakis, with a cotton fabric that undergoes a chemical treatment devised by Nano-Tex, a subsidiary of Burlington Industries Inc. The treatment adds an outer structure to the cotton molecule to better fend off wrinkles and globs of ketchup, said Delores Sides, a Burlington spokeswoman.

Nano-Tex has added liquid-repellent characteristics to fabrics used on couches, and breathability to synthetics, giving them the comfort characteristics of cotton.

The company is now testing an odor-trapping fabric whose molecular-sized sponges hold stale vapors through multiple wearings, until the item - socks, for example - come into contact with a washing machine's soapy water. In Fountain Valley, Calif., Hybrid Plastics is creating nanoparticle additives for plastics found in everything from high-performance jet engine lubricants to weatherproof circuit boards in boats and swimming pools.

Like other nanotechnology practitioners, Hybrid Plastics alters the molecular structure of its raw material to create a new structure with properties that go far beyond the original.

The nanoparticles that make up the powder and liquid additives sold by Hybrid are tiny. The largest has a diameter of just 3 nanometers, or billionths of a meter.

The nanoparticles are used in plastic that carries the qualities of an industrial ceramic: resistance to heat and cold, super-hard toughness, and flame resistance.

Lichtenhan said versions of Hybrid-enriched plastics are being tested by NASA on the exterior of the International Space Station, and by military and aerospace firms as a replacement for the metal bodies of ballistic missiles and satellite launch rockets.

The nanoplastic missiles are cheaper and easier to manufacture than metal-jacketed ones and can protect the payload - whether a warhead or satellite - from collisions with space junk while enduring the deep cold of space and the heat of re-entry, Lichtenhan said.

Hybrid is also developing a nanolubricant for the Air Force that can handle temperatures of 500 degrees Fahrenheit - about 100 degrees higher than current oils - without burning or breaking down, Lichtenhan said.

Other chemical firms toiling in the nanorealm include DuPont, whose scientists are trying to create fibers that conduct electricity and change their shape from round to square or triangular. DuPont wants the fibers to be used in clothes that change color and size at a wearer's command, said DuPont spokeswoman Leslie Cormier.

A small company outside Boston, Triton Systems, Inc., is selling a nanoengineered plastic pouch for use as a helium-filled heel cushion in Converse Helium sneakers sold in Japan and China.

Triton uses an additive of clay nanoparticles to tighten the molecular structure of the pouch, allowing it to trap the helium underfoot for a minimum of 18 months, said Ross Haghghat, Triton's chairman and chief executive.

This story ran on page C6 of the Boston Globe on 9/10/2001.

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http://www.boston.com/dailyglobe2/253/business/Nanoengineering_may_alter_face_of_combat+.shtml

(Editor's Note: Excerpt from Fox News Sunday listed after this article.)

WIRE: 09/09/2001 10:37 pm ET

Rumsfeld concerned about Iraq's pursuit of chemical, biological weapons

The Associated Press

WASHINGTON (AP) Iraq's pursuit of chemical and biological weapons threatens to become a serious problem, Defense Secretary Donald H. Rumsfeld said Sunday.

Without monitoring by U.N. weapons inspectors, the Iraqis have been "working diligently to increase their capabilities in every aspect of weapons of mass destruction and ballistic missile technology," he said. "And as they get somewhat stronger, the problem becomes some greater."

A CIA report delivered to Congress on Friday described the efforts of other countries to obtain weapons of mass destruction. Iraq may again be producing biological warfare agents, the report said, although confirming that is difficult given the inspectors' absence.

"That problem, particularly biological weapons, over the coming decade is going to be an increasingly serious one," Rumsfeld said on "Fox News Sunday."

"It will have to be attacked from a whole range of methods," including bombing. "Some of them are mobile. They can move them; they're in vans. So it is not a simple thing. But it'll have to be dealt with using a variety of techniques." He commented a few hours before U.S. airplanes attacked missile sites in southern Iraq as part of a pattern the Pentagon says is in response to recent Iraqi hostile threats against U.S. and British aircraft monitoring the so-called no-fly zone established over southern Iraq after the Persian Gulf War.

An announcement from the U.S. Central Command in Florida, which oversees U.S. military activity in southern Iraq, said Sunday's attacks were on two or more surface-to-air sites, but gave no further details.

A Pentagon spokesman said he had no further details Sunday night, but had no reason to think Sunday's action was out of the ordinary. The most recent attacks were last Tuesday and the previous Friday, Aug. 31.

Iraq often claims civilian injuries or deaths have occurred because of U.S. attacks, but made no such assertion's about Sunday's activity.

The CIA report also said Iraq was working on an unmanned drone, called the L-29, that could deliver biological or chemical weapons.

Rumsfeld said other nations continue to trade with Iraq, allowing Saddam Hussein to improve his military technology and increasing the risk to U.S. and British planes enforcing two "no-fly zones" over Iraq.

"Then United States and the U.K. are forced to go in and take out those capabilities," Rumsfeld said on CNN's "Late Edition."

http://abcnews.go.com/wire/SciTech/ap20010909_1711.html

Transcript: Defense Secretary Donald Rumsfeld

(Editor Note: Partial transcript, balance of transcript found at hyperlink.)

...SNOW: There are reports now that Iraq is reconstituting its military manufacturing capabilities. Is it time for the allies to step up efforts against Iraq? And would it be legitimate to go after those manufacturing facilities?

RUMSFELD: Well, that's a call for the president and the coalition partners as to at what point it would be appropriate.

SNOW: Well, let me...

RUMSFELD: But you're quite right. There's no question but that Saddam Hussein and that regime is an outlaw regime. They have an appetite to impose their will on their neighbors. They have an appetite for weapons of mass destruction. They have been, every period since they have been able to get the inspectors out of there, working diligently to increase their capabilities in every aspect of weapons of mass destruction and ballistic missile technology. And as they get somewhat stronger, the problem becomes some greater.

SNOW: It's widely agreed that chemical biological weapons are a big threat in the future. How do we fight them other than simply to bomb factories?

RUMSFELD: First of all, it's very difficult to find them. They do a good deal underground. A biological capability is not something that takes enormous facilities. They've been weaponizing. Other countries in the region have been weaponizing chemical and biological weapons.

And that problem, particularly biological weapons, over the coming decade is going to be an increasingly serious one.

It will have to attacked from a whole range of methods. Bombing, trying to find -- some of them are mobile. They can move them; they're in vans. So it is not a simple thing. But it'll have to be dealt with using a variety of techniques....

<http://www.foxnews.com/story/0,2933,34133,00.html>

Panama accuses US over chemical weapons

By Andrew Bounds in Panama City

Published: September 7 2001 01:15 | Last Updated: September 7 2001 01:18

Panama on Thursday accused the US of deceit after finding chemical weapons on an island occupied by US forces in the second world war.

Announcing the evacuation and quarantine of San Jose, in the Pacific, Jose Miguel Aleman, foreign minister, said the US had declared under the Chemical Weapons Convention of 1993 that it had not left any chemical weapons in Panama.

"The US has declared that no chemical weapons exist in Panama. We have found four bombs. They are intact and have detonators. The [US] Department of Defense is wrong," Mr Aleman said.

The bombs were found by a mission from the Organisation for the Prohibition of Chemical Weapons (OPCW) that visited the island in July and verified they are of US make.

Fernando Gracia, health minister, said the bombs could release a deadly gas that travelled up to 2km, causing heart and skin problems.

Mr Aleman has sent the OPCW report, which he received on August 27, to the US State department and written to Colin Powell, secretary of state, demanding to know if there are other chemical weapons on Panamanian soil. He did not say why the government had delayed evacuating the island.

The US tested chemical weapons there from 1943-48, but on Thursday said all were expended or removed before the island was handed back to Panama in 1948. "We are reviewing the report," the state department said on Thursday.

Canada and Britain also conducted chemical weapons tests there.

Panama will use the discovery to advance its case for a renewed clean-up of firing ranges used by US troops that occupied Panama until the end of 1999. They occupy 25,105ha of the former US-run canal zone.

Mr Aleman said the US may have broken the Panama Canal treaties by failing to clean up the ranges adequately. "If they were wrong with respect to the island of San Jose they could be wrong with respect to the firing ranges," he said. "This strengthens our case for international arbitration."

The US claims it has cleaned the ranges "as much as is viable" and opposes arbitration. "There is no connection between the two issues," said the US embassy in Panama City.

Mr Aleman said Panama would seek compensation from Washington for the cost of the quarantine and the loss of business at a hotel on the island.

<http://news.ft.com/ft/gx.cgi/ftc?pagename=View&c=Article&cid=FT3984X7BRC&live=true&tagid=ZZZ60A9VA0C&subheading=americas>

Britain ordered germ bombs in cold war: Anthrax and plague bacteria tested for 'biological retaliation'

The Guardian - United Kingdom; Sep 10, 2001

BY JAMES MEEK SCIENCE CORRESPONDENT

The government secretly ordered the production of 10,000 biological cluster bombs in the cold war to carry 7,000 disease carrying bomblets towards Soviet targets, a British researcher has revealed.

The bombs, intended to contain 'the most effective biological agent for the incapacitation of workers,' were ordered by the government's air staff in 1946 under the project codename Red Admiral. They were due to be ready by 1957, ostensibly as retaliation in the event of a Soviet biological weapon attack on Britain.

Red Admiral was cancelled in 1954, before the bombs had been built, but not before extensive trials of toxins and viruses had been carried out using live animals on the sea off Lewis in the Hebrides, Antigua, and the Bahamas.

Recently de-classified documents unearthed by Brian Balmer, a specialist in science policy at University College London, revealed that for years after the second world war, biological weapons were seen by the defence establishment as potentially equal in destructive power and usefulness to nuclear weapons.

'Traditional histories talk about weapons of mass destruction in the 1940s being thought of as nuclear and chemical weapons,' said Dr Balmer. 'In fact, the chiefs of staff were giving biological weapons the same priority as atomic [weapons], and air staff requested an anti-personnel biological weapon in 1946.'

Extracts from the documents in Dr Balmer's book, Britain and Biological Warfare, show how defence officials were fascinated and horrified by biological weapons.

In one report from 1947, military strategists wrote that 'botulism toxin dropped into reservoirs and the infection of natural fauna of such areas, eg rats, dogs and cats, with bubonic plague, rabies etc, are all suitable methods of attack'.

They continued: 'It is assumed the Russians are more lice and parasite ridden than we are, therefore it would be to our advantage to attack Russia with bacteria from the parasite-borne groups, ie bubonic plague, typhus etc.'

The report concluded that launching a biological weapon attack would go 'against the teachings of the civilized world', and called for a general prohibition of germ warfare. It recalled the 1925 Geneva protocol, which forbade the

first use of chemical or biological weapons. But the report said Britain should have a germ warfare capacity to be 'fully prepared for any emergency'.

In 1948, the Air Ministry worked out how many bombs it would take to inflict serious damage on 27 key Russian cities. They estimated that if every bombing run went perfectly, 296 biological bombs could do the damage of 59 nuclear weapons.

But as the nuclear programme gathered pace, and the field trials of pathogens showed mixed results, the government abandoned the project.

In 1994, the Conservative government said in a parliamentary answer that five open-air trials of dangerous bacteria and viruses had been carried out at sea, in the late 1940s and 1950s - three in the Caribbean and two off Stornoway on Lewis.

Dr Balmer has uncovered the wide range of pathogens used. Among the biological warfare agents trialled was anthrax. There was also brucella and francisella tularensis, which cause severe fever. Pasteurella pestis, the plague bacterium, was released in the first Hebrides trials, despite safety concerns.

A highly infectious and debilitating, if rarely fatal, virus causing Venezuelan equine encephalitis was deliberately released in trials off the Bahamas, 60 miles south of Nassau, in 1954. Planning Operation Ozone, defence officials cheerfully suggested there would be 'no adverse effect on the tourist trade'.

The trials did not go smoothly. The first, Operation Harness, between 1948-49, began with a breakout in Britain by some of the 250 monkeys specially flown from India for the experiment. Not all were recaptured.

The crews were not told that they were to be involved in biological warfare tests until after the trial flotilla had set sail for the Caribbean. The test rig was made of 35 linked rubber dinghies each with a crate for a live sheep, a box for a monkey and a carrier for three guinea pigs. During preparations, two of the dinghies were taken by sharks. One lab technician caught brucellosis from the test samples; his relatives were told that disease was 'frequently contracted in tropical climates'.

A few small biological bombs dropped by aircraft were tested during and after the war, but the only biological weapons ever manufactured in large quantities in Britain were 5m linseed cattle cakes doped with anthrax and stockpiled in 1943 to poison cattle in German fields.

After the war it turned out that Hitler had ordered that the Nazi effort with biological weapons should stay defensive.

<http://globalarchive.ft.com/globalarchive/article.html?id=010910001132&query=chemical+weapons>