

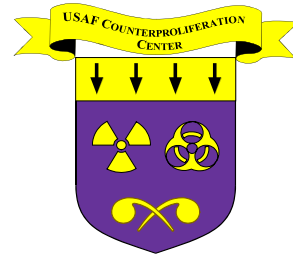
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*Air University
Air War College
Maxwell AFB, Alabama*



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.

Established here at the Air War College in 1998, the USAF/CPC provides education and research to present and future leaders of the Air Force, as well as to members of other branches of the armed services and Department of Defense. Our purpose is to help those agencies better prepare to counter the threat from weapons of mass destruction. Please feel free to visit our web site at www.au.af.mil/au/awc/awcgate/awc-cps.htm for in-depth information and specific points of contact. Please direct any questions or comments on CPC Outreach Journal to Lt. Col. Michael W. Ritz, CPC Intelligence/Public Affairs or JoAnn Eddy, CPC Outreach Editor, at (334) 953-7538 or DSN 493-7538.

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Iraq rebuilding chemical arms supply

September 2, 2001

BY JESSICA BERRY

LONDON--At least 20 specially trained Iraqi soldiers are dead and up to 200 have been hospitalized after taking part in a chemical weapons exercise that went wrong.

News of the training accident emerged last week amid concerns that Saddam Hussein has rebuilt his chemical weapons arsenal. The soldiers, based in the Zaafarnia region south of Baghdad, were suffering from severe respiratory problems, according to intelligence officials inside Iraq.

"They were training in the Al Suwayrah and Basmaya camps three months ago," said one official. "We know that the accident has not stopped the training. Fresh soldiers were brought in soon after." The Al Suwayrah camp has been rebuilt since it was attacked in February by American and British aircraft.

Saddam last used chemical weapons against the Kurds in March 1988 at Halabjah, with helicopter gunships causing thousands of injuries. In December 1998, American and British warplanes mounted Operation Desert Fox in an attempt to destroy Iraq's chemical weapons capability.

However, evidence surfaced last week that Iraqi scientists are working around the clock to rebuild the Iraqi leader's conventional weapons and self-defense arsenal as well as his chemical capability.

In the past three months, eight military factories have begun working at almost full strength. The most significant, in the unpopulated Syrian border area of Al Qayem, is said to be building chemical weapons and missiles. "The Al Qayem base has only recently expanded," said a Western military observer. "It has just passed under the total control of Saddam's son and heir Qusay. To ensure total secrecy, each scientist has been hand-picked by Qusay."

Evidence also emerged last week that Saddam's most sophisticated Chinese-built radar tracking systems are back to strength. One intelligence official said that many advances had been achieved by Chinese engineers and technicians who had become regular visitors to Baghdad.

According to secret internal documents seen by the Sunday Telegraph, Saddam believes that it is only a matter of time before the West attacks Iraqi installations again. His new self-defense technology last week scored a propaganda success, shooting down a pilotless U.S. spy plane. It is the first time that the Iraqis have downed an Allied aircraft since the Gulf war in 1991. The Iraqi leader is determined to ratchet up the tension by fomenting a civil war inside Iraqi Kurdistan to lure more Allied aircraft over his guns, according to intelligence officials.

Sunday Telegraph

<http://www.suntimes.com/output/news/cst-nws-iraq02.html>

Two types of war chemicals to be destroyed in Russia by end of 2001 - official

BBC Monitoring Service - United Kingdom; Sep 3, 2001

Text of report in English by Russian news agency Interfax

Tokyo, 3 September: Russia will destroy all its category two and category three chemical weapons before the year's end, a senior Russian official said on Monday [3 September].

The two categories comprise artillery shells containing phosgene, a toxic substance, Sergey Kiriyyenko, the president's envoy to the Volga Federal District and head of the Russian state commission for the destruction of chemical weapons, told reporters during a visit to Japan.

"Under the international Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons, Russia will finish destroying the shells before the end of 2001," Kiriyyenko said.

He said Russia currently possesses 3,844 shells containing a total of 10 tonnes of phosgene. He also said there were about 40,000 tonnes of category one weapons in Russia today. They are "weapons that contain combat toxicants consisting of sarin and soman," he said.

Source: Interfax news agency, Moscow, in English 1721 gmt 3 Sep 01

/BBC Monitoring/ © BBC.

<http://globalarchive.ft.com/globalarchive/articles.html?id=010903005917&query=chemical+weapons>

Russia ready to offer free help to remove chemical weapons

By Ko Hirano

TOKYO, Sept. 3, Kyodo - Former Russian Prime Minister Sergei Kiriyyenko said Monday that Russia is prepared to provide Japan and China with technology and know-how "for free" to help remove chemical shells that Japan abandoned in China at the end of World War II.

Kiriyenko, currently visiting Tokyo in his capacity as head of Russia's chemical arms disarmament commission, said Moscow is ready to help Japan dispose of the weapons left in China in 1945, which the Chemical Weapons Convention obliges Japan to complete by 2007.

Russia is willing to offer information and know-how based on its experience in disposing of chemical weapons, but it is up to Japan and China to decide whether they will adopt the technique developed by Russia or the one used by the United States, he said.

Kiriyenko told a news conference at the Japan National Press Club in Tokyo that Russia shares concerns over the abandoned chemical shells as China is Russia's immediate neighbor. Japan estimates that 700,000 chemical shells remain in China, while Beijing puts the figure at two million.

Under the Russian technique, experts open weapons and mix the poison with chemical substance, thereby making the weapons nonhazardous, he said, adding the work is carried out in a vacuum.

The poisonless weapons are then brought to a disposal facility where they are disposed of under low temperature.

Chemical weapons are burned and disposed of in high temperatures under the U.S. system, he added.

The 39-year-old former Russian premier said the proposal is part of Russia's call for the international community to get rid of chemical weapons around the world as early as possible.

Russia, for its part, is also making efforts to eliminate chemical weapons, with Moscow boosting funds for the purpose six-fold in the state budget for fiscal 2001.

Russia possesses 40,000 tons of chemical weapons, while the U.S. has 30,000 tons.

Kiriyenko said Russia has disposed of all its 288,000 explosive substances and related equipment, and plans to dispose of all 3,844 artillery ammunition by the end of the year.

Kiriyenko is visiting Japan at the start of a tour to lobby for an extension of the April 2007 deadline under the 1997 Chemical Weapons Convention for completing the disposal of chemical arms to 2012. On Monday, he held talks with Foreign Minister Makiko Tanaka and former Prime Minister Ryutaro Hashimoto.

He plans to visit the remaining members of the Group of Eight nations -- the U.S., Canada, Britain, France, Germany and Italy -- after leaving Tokyo on Tuesday.

<http://home.kyodo.co.jp/all/display.jsp?an=20010903182>

Animal Disease Is Reminder of Bioterrorism Danger

03 September, 2001 00:28 BST

By Patricia Reaney

GLASGOW, Scotland (Reuters) - Britain's foot and mouth crisis shows what can go wrong when a nation cannot deal with a highly infectious disease and should be a reminder of the dangers of biological warfare, a Scottish scientist said on Monday.

Since the disease was first detected in late February more than 3.7 million farm animals in Britain have been slaughtered and the country's tourism industry has been badly damaged.

"Foot and mouth disease is a real example of what happens when a disease gets out of control," Sir William Stewart told journalists at the launch of a science conference in Scotland.

The former chief scientific adviser to the British government and president of the British Association for the Advancement of Science (BA) said that fortunately foot and mouth was a disease with virtually no direct effect on people.

But he feared that advances in molecular biology and the sequencing of the human genome had led to decreased interest in microbiology. This could have left Britain ill-prepared to deal with the threat of bioterrorism and the 30 conventional microbes that are considered biological warfare agents.

"There are those who say: the First World War was chemical; the Second World War was nuclear; and that the Third World War -- God forbid -- will be biological," he told the BA science conference.

Although the use of biological weapons is forbidden by international convention, Stewart told the week-long conference that began on Monday that some countries had stockpiled anthrax, a deadly bacterium.

"If nuclear weapons and space technology dominate the global defense thinking -- what is left for the smaller and rogue nations without them?" he said.

"Are we sufficiently and adequately prepared in the UK?" Stewart added.

He called for more funding and emphasis on microbiology because of the increased spread of infectious diseases, as well as the threat of bioterrorism.

"It is a timely reminder that we must not forget about microbiology. Implications of its effect and how it is used go far beyond the farm gate and countryside," he said.

http://www.reuters.co.uk/news_article.jhtml?type=sciencenews&sporttype=&StoryID=194270

Top scientist warns Britain to be prepared for biological warfare

By Charles Arthur ,Technology Editor

03 September 2001

Wars of the future could be fought with microbes rather than bombs and missiles, a leading scientist warned a British conference yesterday.

Biological weapons pose a real and growing threat which nations ignore at their peril, said Sir William Stewart, a former chief scientific adviser to the Government.

But he warned that microbiology, essential to combat such weapons, was becoming a "Cinderella subject" in Britain, where it was losing the battle for research resources.

Sir William, president of the British Association for the Advancement of Science, told fellow scientists: "There are those who say the First World War was chemical, the Second World War was nuclear, and that the third world war - God forbid - will be biological.

"Information on the potential use of biological agents is widely available in the published literature. The offensive use of biological weapons is forbidden by international convention. Yet, the published literature lists around 30 conventional microbes as potential BW [biological warfare] agents."

Sir William's warning came in his presidential address to this year's British Association Festival of Science at Glasgow University. He argued that the foot-and-mouth epidemic should be seen as a salutary lesson - even though it did not harm humans.

"We only have to look at the current foot-and-mouth episode to see what can go wrong if we are not properly prepared and when a bug is not adequately contained," he said. A nation unprepared for foot-and-mouth was poorly equipped to defend itself against a military biological attack, he added.

The Iraqi dictator Saddam Hussein is known to have stockpiled anthrax and has used biological weapons against Kurds in his own country.

"If nuclear weapons and space technology dominate the global defence thinking, what is left for the smaller and rogue nations without them? Are we naive enough to believe that the recent advances in microbiology and genomic biology will be restricted to the civil field?" Sir William asked. Apart from their potential use as weapons, the threat from bacteria and viruses was growing on a global scale, he warned. Drug resistant "superbugs" were emerging that were impervious to most antibiotics; serious infections are rife in hospitals; and sexually transmitted diseases were on the increase, he said. Bacteria and viruses were now known to have a wider role in many diseases, such as cancer, stomach ulcers and heart disease, he said.

Sir William criticised the scientific establishment for being out of touch with the public on issues such as genetic modification, BSE, mobile phones and the MMR vaccine.

"Scientists have to be careful and consider the full implications of what they are seeking to achieve," he said. "The problem with some clever people is that they find cleverer ways of being stupid."

About 300 speakers and 5,000 members of the public are expected to attend the week-long science festival, which this year marks the organisation's 170th birthday.

<http://news.independent.co.uk/uk/science/story.jsp?story=91999>

Preparing for Germ Warfare U.S. Performing Secret Experiments in Case of Attack

By [John McWethy](#)

CAMP 12, NEVADA TEST SITE, Nev., Sept. 4 — In a remote corner of the Nevada desert, a highly restricted area once used to test nuclear bombs, the U.S. government has been running a secret experiment called Project Bachus.

It is a small germ warfare factory, set up inside an abandoned government building. U.S. officials say they built it to better understand how to detect similar operations in places like Iraq or Afghanistan or even by terrorists here at home.

The factory, built by the Pentagon's Defense Threat Reduction Agency, has been brought to full production for several weeks on two occasions — in 1999 and again in 2000. Technicians grew several pounds of a harmless bacterium with characteristics similar to deadly anthrax.

"A terrorist could easily grow anthrax in a facility like this," Jay Davis, who was DTRA director at the time the factory was built, said in an interview at the one-time classified facility, "and produce enough quantity in a covert delivery to kill, say, 10,000 people in a large city."

The DTRA team bought all materials for the small-scale laboratory from local hardware stores and the Internet. Included in their shopping list was a 50-liter fermenter purchased "used" from overseas. "Commercial item. Off the shelf," Davis said. "Easy to find."

At no time did any of the purchases cause law enforcement to be suspicious, Davis added.

'Fairly Concealable'

Asked if this was how a terrorist group might put together such a laboratory, Davis said: "A terrorist group would choose to do this, yes ... This is the size of thing you would be afraid a non-state group would do, either people in our country or people in some other country. This is fairly concealable."

The primary reason for conducting the experiment was to place sensors outside of the building to create what the intelligence community calls a "signature," according to intelligence sources. Once in operation, technicians measured heat changes, emissions that could be sampled in the air and soil as well as patterns of energy consumption.

"The ultimate product is knowledge," Davis said. Other officials say the primary customers for the knowledge were the CIA and Defense Intelligence Agency, both agencies responsible for detecting an operation like this in other countries. Officials say the FBI also was given data from the project.

And according to officials who supervised the project but asked not to be identified, what is so frightening about this top-secret project is that it shows that with the right technical knowledge, it is surprisingly easy to build and operate a small germ warfare factory. And worse, even with the most sophisticated sensors, it is extremely difficult to detect. Proving Preparedness

The project was conducted in such extreme secrecy that some worry it might be misunderstood and seen as a violation of the international treaty that bans making germ weapons.

"I think there is a very delicate line that has to be drawn between the need to keep some kinds of information secret and the need to allay suspicions about what the country is up to," said Judith Miller, a reporter for the *New York Times* and co-author of a new book on biological warfare called *Germs*.

"People overseas will think that the United States may be secretly conducting an offensive weapons program, that we may be secretly trying to develop biological weapons," she said.

As for the Bush administration, Miller said: "I think that this administration wants to not only expand these projects, but intends to keep most of them secret."

Miller and other experts on biological weapons have been concerned that the supersecret U.S. projects would be misunderstood by other governments and might lead those governments to develop offensive biological weapons. But the Pentagon agreed to show ABCNEWS this once-secret project. Sources say it's part of an effort to anticipate a threat that has the potential to kill on a scale only nuclear weapons could match.

<http://www.abcnews.go.com/sections/wnt/WorldNewsTonight/germwarfare010904.html>

Police claim Colombian rebels used poisonous gas

Police suspect Colombia's biggest rebel army of using poisonous gas in an attack that left four police officers dead. If the attack is confirmed it would be the first case of chemical weapons being used in Colombia's 37-year civil war. The attack occurred on Sunday in San Adolfo, Huila province, 230 miles south of Bogota. Speaking in an interview with RCN radio, Colonel Francisco Henry Caicedo, the police chief of the province, accuses the Revolutionary Armed Forces of Colombia, FARC, of using "poisonous gas". However, national police chief General Ernesto Gilibert says authorities have not confirmed chemical weapons were used and are still investigating. He says such a development would be "very worrisome". In the attack, rebel bombs leaked gas into the bunkers and tunnels used by the police as they tried to defend the town, Caicedo said. The bodies of the dead policemen had no visible bullet or shrapnel wounds, he added. Six police officers who survived the attack are under observation in a Huila hospital and are in stable condition. The FARC had no immediate reply to the accusations. Story filed: 20:08 Tuesday 4th September 2001
http://www.ananova.com/news/story/sm_390185.html

Russia seeks Japan's support on chemical arms deadline

The Japan Times: Sept. 4, 2001

Russia requested Japan's support Monday for its plan to seek a five-year extension to 2012 of the deadline for eliminating chemical weapons under a global treaty, Foreign Ministry officials said. Visiting former Russian Prime Minister Sergei Kiriyenko explained the plan and made the request to Foreign Minister Makiko Tanaka, the officials said. Kiriyenko said the plan to extend the deadline under the Chemical Weapons Convention is a result of a Russian government review of its program to destroy chemical weapons after the task was transferred from the Defense Ministry to a nonmilitary organ, the officials said. Tanaka did not say whether Japan will support the plan and asked Kiriyenko to give further details to Yuji Miyamoto, director general for arms control and scientific affairs at the Foreign Ministry, whom Kiriyenko was to meet later Monday, according to the officials. The extension would be possible if signatory states approve it at a conference of the state parties, based on recommendations of the executive council of the Organization for the Prohibition of Chemical Weapons. Russia, the holder of the world's largest chemical weapons stockpile, estimated at 40,000 tons, plans to request that the deadline be extended from 2007 to 2012 at a session of the OPCW executive council scheduled to open Sept. 25 in The Hague, giving as a reason its financial difficulties. Kiriyenko explained that 18 countries are currently assisting Russia to get rid of its chemical weapons and asked for Japan's support in the area. Tanaka said Japan wants to think about what it can do, but she added that the domestic fiscal situation is severe, the officials said. According to the officials, Kiriyenko said Russia is ready to provide technical cooperation to Japan to help it dispose of chemical shells it abandoned in China at the end the 1937-1945 Sino-Japanese War. Japan estimates 700,000 chemical shells are left in China. The Chinese government puts the figure at 2 million. Kiriyenko is also planning to explain to other Group of Eight countries about Russia's intention to seek an extension of the deadline, the officials said. Japan is the first stop on Kiriyenko's tour that will take him to Britain, Canada, France, Germany, Italy and the United States, the officials said. He has been in Japan since Aug. 24. On bilateral ties, Tanaka told Kiriyenko that Japan wants the relationship between the two countries to develop in a stable manner and asked him to relay the message to President Vladimir Putin, the officials said. Kiriyenko said Putin also places emphasis on ties with Japan and that Russia is also hoping to make efforts to build a constructive and mutually beneficial relationship, according to the officials.
<http://www.japantimes.co.jp/cgi-bin/getarticle.pl5?nn20010904a6.htm>

Beijing Open To Talks On U.S. Plan *Missile Defense Deal May Be Considered*

By Philip P. Pan, Washington Post Foreign Service

BEIJING, Sept. 4 -- China said today that despite continuing opposition to U.S. missile defense plans, it is willing to engage in a "serious dialogue" with the Bush administration and consider a new American offer to share details about the system.

The comments from a Foreign Ministry spokesman represented China's first public response to reports of a U.S. proposal to hold intensive talks on missile defense in an attempt to assuage China's concerns. The spokesman declined to comment further, but a major state-run newspaper published a lengthy editorial on its Internet site welcoming the U.S. offer and suggesting in the clearest terms to date that there may be room for compromise. China has been the most vocal and stubborn critic of the Bush administration's proposed missile defenses, in large part because the system could neutralize China's limited nuclear arsenal. But Beijing has toned down its rhetoric in recent months, and today's comments suggested it may be interested in accommodation.

In reports over the weekend, U.S. national security adviser Condoleezza Rice and other U.S. officials said the administration would intensify efforts to convince China that it would not be threatened by the missile system. They say the system is designed to protect the United States and allies from terrorists or hostile small states such as Iraq, Iran and North Korea.

Rice said the United States plans to offer China an advance look at plans for testing the system, and another administration official said the United States would signal it recognizes that both countries might want to resume nuclear weapons testing in the future. Such tests, now precluded by a voluntary worldwide moratorium, could allow China to field a new generation of mobile, multiple-warhead missiles.

The Foreign Ministry spokesman, Zhu Bangzao, said the government is aware of the proposals reported in Washington but will not respond in detail because it has not received a formal request for talks. "We are opposed to missile defense, but we are also in favor of dialogue to seek a solution," he said.

An editorial on the Web site of the state-run China Daily newspaper was more enthusiastic, saying the Bush administration's proposal "raised the level" of U.S.-China discussions and outlining a possible deal. It was written by Zhu Feng, a leading security strategist who directs a team of researchers studying the impact of U.S. missile defense plans on China's national security.

"I think the chances for an understanding are getting better," Zhu said in a telephone interview. Zhu said he was not speaking for the government, but China's news organizations are careful not to publish opinions that contradict the central leadership's views.

Zhu's editorial said Beijing might accept the missile defense system if Washington agreed not to protect Taiwan with it and recognized China's need to preserve its ability to deter a nuclear attack. In other words, the United States would have to accept China's desire to maintain enough nuclear missiles to pierce the planned U.S. defenses.

In return, Zhu wrote, Beijing could take steps to "increase transparency and strengthen mutual trust," and to reassure the United States that China is not a threat. In the interview, he added that China could do so by refraining from a radical buildup of its nuclear forces and promising not to help other countries obtain technology to penetrate a U.S. shield, such as decoys and countermeasures.

Zhu said Chinese leaders are interested in a deal in part because they do not want to be isolated if President Bush succeeds in persuading Russian President Vladimir Putin to accept the missile defense system. In addition, he said, China does not want to engage in an expensive nuclear arms race that might weaken its economy.

The most difficult issue in negotiations may be the status of Taiwan, the self-governing island that Beijing considers part of China and vows to take by force if necessary. Bush has promised to do "whatever it takes" to defend Taiwan, but has not said clearly whether the missile defense system would be used to protect the island.

New York Times
September 5, 2001

U.S. Restates Its Stand On Missiles In China

By David E. Sanger

WASHINGTON, Sept. 4 — The Bush administration issued a new set of statements today about how it views the buildup of Chinese nuclear forces, declaring that it would not "seek to overcome China's opposition" to Mr. Bush's missile defense plan by dropping any objections to the modernization of China's nuclear forces.

In the statement, issued by Mr. Bush's press secretary, Ari Fleischer, the White House also said it would not "acquiesce" in the resumption of nuclear testing by China.

The statement was prompted by an article on Sunday in The New York Times, quoting senior administration officials who said they would not object to China's nuclear modernization. China will add intercontinental missiles to its modest fleet of 20 to 24 such weapons no matter what the United States tells China, the administration concluded.

The article quoted officials and outside analysts as saying that once China has more missiles in its arsenal, it should be less concerned about Mr. Bush's missile defense system — because China would have a sufficient number of missiles to overwhelm any American missile defense now being contemplated.

The article prompted criticism of the administration's position by Democrats, and some Republicans, who said they worried that China would interpret it as a go-ahead to build more nuclear weapons. In response, White House officials, led by Condoleezza Rice, Mr. Bush's national security adviser, said the administration was recognizing the strategic reality, and was not offering China any kind of a deal in which American approval of the buildup would be traded for Chinese approval of a missile defense plan.

The statement — issued late this afternoon, officials said — was intended to reinforce that point.

"The United States will not seek to overcome China's opposition to missile defense by telling the Chinese that we do not object to an expansion of their nuclear ballistic missile force," the statement said. "Nor will we acquiesce in any resumption of nuclear testing by China. We are respecting the nuclear testing moratorium and all other nations should as well."

Speaking on background, however, several administration officials have repeated in recent days that China may decide it needs to test its new weapons to assure their safety and reliability.

At the heart of the administration's revised statement today appears to be a distinction between what Mr. Bush's advisers believe China will do and what it will tell them to do. The article on Sunday quoted one of Mr. Bush's senior advisers as saying, "We know the Chinese will enhance their nuclear capability anyway, and we are going to say to them, 'We're not going to tell you not to do it.'"

But today White House officials said they also do not plan to tell China to go ahead with the modernization. "It's not a conversation likely to take place," one senior official said. "We don't have a script that says 'You may proceed.'"

Washington Times
September 5, 2001
Pg. 4

U.S. Denies Trade-Off With China

Seeks reduction of offensive nuclear arms around world

By Bill Gertz, The Washington Times

The Bush administration does not plan to lessen its objections to China's strategic nuclear arms buildup in exchange for Beijing backing a U.S. missile defense shield, a senior Pentagon official said yesterday.

Douglas J. Feith, undersecretary of defense for policy, told reporters that recent news reports suggesting such a trade-off were "not correct."

"We have concerns about the Chinese development of long-range nuclear capabilities," Mr. Feith said.

Both the long-range missile development and short-range missile deployments "have not contributed to stability," said Mr. Feith, who took up the senior defense policy-making post six weeks ago.

Asked later to elaborate on the Pentagon's concerns about China's strategic arms buildup, Mr. Feith said: "Less is better than more."

He said the Pentagon also does not plan to discuss with China a mutual resumption of underground nuclear testing. Earlier, Victoria Clarke, the new assistant defense secretary for public affairs, was asked if the United States intended to tell Beijing that the administration is not opposed to an increase in Chinese nuclear warheads.

"Absolutely not," the spokeswoman said.

"The president's policy is to seek to reduce the number of nuclear weapons, offensive weapons around the world," she said. "He has made this one of the priorities of his administration. He wants to lessen the risk of nuclear war. He wants missile defense as one part of a broader deterrent strategy."

However, the administration will provide a briefing to China on U.S. missile defense plans, as it has done with U.S. friends and allies and Russia, Mrs. Clarke said.

China is engaged in a strategic nuclear arms buildup that includes two new types of road-mobile strategic missiles, the DF-31 and DF-41.

In addition to the two new types of ICBMs, China also is developing a new class of ballistic missile submarines known as the Type 094 that will carry a naval version of the DF-31.

A new attack submarine, Type O93, also is being developed.

China's current long-range nuclear arsenal consists of about 20 CSS-4 ICBMs. It also has a single ballistic missile submarine and hundreds of intermediate-range nuclear missiles.

Asked about the buildup, Mrs. Clarke said: "We are worried about it. We have made that clear before and we'll make that clear going forward."

"Increasing nuclear weapons is not a good way to enhance international stability and cooperation."

The comments were a stark contrast to those of the Clinton administration. In the past, the Pentagon limited all its statements about China's arms buildup by saying China is modernizing its nuclear forces. No expressions of concern about the buildup were made public.

China is opposing U.S. plans for a missile defense shield against long-range attack.

Over the past several days, unidentified Bush administration officials have suggested in news reports that the administration might not oppose the Chinese strategic buildup as a way to win Beijing's support for the U.S. defensive shield.

"Our position on missile defense is that we intend to do an aggressive, robust research and development program with the intent to test and deploy a limited system that protects us, and our forces deployed abroad, and our friends and allies from the threat of missile attack from rogue nations or an accidental launch," Mrs. Clarke said.

"And the only ones who should be worried about that, or concerned about that, are those who have less than the best of intent toward us."

Chinese officials will be offered a briefing on U.S. missile defense plans in meetings set to be held over the next several weeks, she said.

India-UK-Talks /WRD/

Indian and UK officials hold non-proliferation talks

New Delhi, Sept 5, IRNA -- India and Britain on Tuesday held talks on nuclear issues, ballistic missile proliferation, chemical and biological weapons conventions and export controls, said Press Trust of India today. The discussions held at the Foreign and Commonwealth Office in London, capital of the United Kingdom, also referred to the close coordination between the two countries during the recent UN Conference on Illicit Trade in Small Arms and Light Weapons which focused on practical measures to strengthen bilateral cooperation in the field, adds PTI.

The Ministry of External Affairs' Joint Secretary for Disarmament and International Security Affairs Sheel Kant Sharma headed the Indian delegation to the third round of the India-UK Formalized Dialogue on Non-Proliferation and Disarmament while the Director for International Security, Foreign and Commonwealth Office, William Ehrman, led the UK delegation.

The dialogue was institutionalized at a meeting of the foreign ministers of the two countries during Robin Cook's visit to New Delhi in April last year. It is intended to enhance mutual understanding of the problems posed by proliferation of weapons of mass destruction. It also symbolized the growing strength and dimension of the bilateral relationship, it was officially announced in London.

UK Minister for Defense Procurement Lord Bach met the Indian team on arrival in Britain.

Speaking on the eve of the talks, he said, "We are committed to developing a strong dialogue with India on non-proliferation and disarmament issues. This dialogue gives us an opportunity to regularly discuss areas of common ground and try to narrow areas of difference."

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<http://www.irma.com/newshtm/eng/14124118.htm>

Washington Post
September 5, 2001
Pg. 16

U.S. Seeks Duplicate Of Russian Anthrax

Microbe to Be Used To Check Vaccine

By Vernon Loeb, Washington Post Staff Writer

The Pentagon is working to duplicate a modified strain of anthrax reportedly developed by Russian scientists to determine whether the strain is resistant to the anthrax vaccine administered to U.S. military personnel, senior defense officials said yesterday.

Victoria Clarke, the Pentagon's top spokesman, said the Bush administration is confident that this anthrax research and other experimental efforts aimed at thwarting biological attacks are in compliance with the 1972 Biological Weapons Convention, which bans the development of biological weapons but allows "defensive" research.

None of the modified anthrax will be produced by scientists at the Defense Intelligence Agency without further legal reviews and congressional briefings, Clarke said.

"We're compliant, and the legal reviews that have been done to date indicate that the work would be compliant," Clarke said. "We take the threat of the spread of biological and chemical warfare very, very seriously."

The Pentagon's research into developing defenses against biological weapons, although largely secret, has long been acknowledged by defense officials and experts in the field. One of those experts, Amy E. Smithson, based at the Henry L. Stimson Center in Washington, said yesterday that the research falls into a "gray area" in which military scientists are required to build simulated weapons and strains in order to devise defenses against them.

Clarke's remarks, which were echoed by White House spokesmen, were in response to an article in yesterday's New York Times that said the anthrax research and two other biological defense efforts had caused fears among some Clinton administration officials about whether the research violated the Biological Weapons Convention.

The other two projects are a Defense Department effort to build a germ fermenter using commercially available technology and a discontinued CIA program, code-named "Clear Vision," to build a mock bomb -- minus a fuse and other weapons components -- that could be used to disperse biological agents such as anthrax.

Briefing reporters at the Pentagon, Clarke said the Defense Threat Reduction Agency's construction of a germ fermenter at the military's former nuclear test site in Nevada involves "commercially available equipment" and "commercially available organisms."

Its purpose is to study whether countries or terrorists believed to be developing biological weapons might produce "signatures" that could be detected using sensors and other intelligence-gathering technologies, she said.

Smithson, a proponent of strong Biological Weapons Convention enforcement, said all three sound like "legitimate defense work" that would fall within the convention's allowance for defensive research.

Clarke denied that the Pentagon's ongoing biological defense work caused the Bush administration in July to reject a protocol for enforcing the Biological Weapons Convention that had been in the works for the past six years.

But she acknowledged that one problem with the protocol is that it would make biological defense work more difficult.

Clarke said the Pentagon first became interested in producing the modified anthrax strain after a 1997 article in a scientific journal reported that Russian scientists had implanted into the anthrax microbe genes that cause food poisoning, producing a strain that is resistant to Russia's anthrax vaccine.

Clarke said attempts to obtain a sample of the strain from the Russians have proved unsuccessful. She noted that the Russian government has never officially acknowledged producing the strain.

New York Times
September 5, 2001

When Is Bomb Not A Bomb? Germ Experts Confront U.S.

By Judith Miller

A former senior government lawyer yesterday vigorously disputed the Bush administration's assertion that the global treaty banning biological weapons permits nations to test such arms for defensive purposes.

The lawyer, Mary Elizabeth Hoinkes, who was general counsel of the Arms Control and Disarmament Agency from 1994 to 1999, said such an interpretation of the 1972 treaty was a "gross misrepresentation" that "risks doing serious violence" to an accord the United States has long championed.

The New York Times reported yesterday that the United States had made and tested a model of a small Soviet-designed biological bomb as part of a series of secret research projects that officials said were aimed at defending against a growing threat of a germ attack.

The projects were begun under the Clinton administration and approved then by Pentagon and Central Intelligence officials, but Ms. Hoinkes said she did not know details of the project at the time. She refused to discuss it further.

The treaty bars nations from developing, acquiring or stockpiling biological weapons to be used for "hostile purposes or in armed conflict." It permits experiments on microbes, provided that quantities are small and the purpose is defensive.

An administration official contended this week that the treaty also allows such experiments as long as the aim is "protective," not hostile.

The distinction, Ms. Hoinkes said, was "too cute by half."

She said the treaty was intended to bar even initial research on munitions that spread disease. The Bush administration's interpretation — apparently shared by the Clinton administration — gives nations too much latitude to research offensive weapons in the name of defense, Ms. Hoinkes asserted. "You see a room full of people manufacturing bombs, and they say, 'I'm only doing this for defensive purposes and I have no intention of ever doing it for real because my heart is pure,'" she said.

State Department and other administration officials describe Ms. Hoinkes as a leading expert on the germ weapons treaty. She joined the State Department in 1976 and began working in 1981 at the Arms Control and Disarmament Agency, which was merged into the State Department in 1999.

She was not alone in her dismay.

Spurgeon M. Keeny Jr., a deputy director of the Arms Control and Disarmament Agency from 1977 to 1981, expressed similar concerns about the interpretation of the treaty and how such an assertion would be perceived abroad.

"In the eyes of the world, it's going to look like we've been clandestinely violating the treaty," said Mr. Keeny, who is president of the Arms Control Association, nonpartisan experts who support efforts to curb weapons of mass destruction.

Bill Harlow, spokesman for the Central Intelligence Agency, which tested the bomb model, said yesterday that the device was not a weapon because it lacked a fuse and did not contain dangerous germs. "Everything we did was in full compliance with the treaty," he said.

The State Department declined to discuss the experts' arguments. A spokesman said the administration had found that the research programs were "in compliance" with existing treaties and that appropriate legal "mechanisms" were in place to conduct such reviews.

An international conference to discuss how to strengthen the germ treaty is scheduled for November, and Mr. Keeny said the administration could expect accusations that Washington had ignored a treaty that most nations have signed.

"If any other country was found to be doing what we were supposedly doing, they would call it a dangerous violation of the treaty, and it surely appears to be a violation of the treaty in terms of common interpretation," he added.

Victoria Clarke, a Pentagon spokeswoman, also confirmed yesterday that the Defense Department had drawn up plans to produce small amounts of genetically modified anthrax, a deadly toxin, but that the project had been "put on hold" earlier this year to make sure it did not violate international treaties and domestic laws.

Still, she said, the Pentagon intends to press ahead with the anthrax project. Pentagon officials have said that producing the stronger poison would aid in developing vaccines and other defenses.

Defense Daily
September 5, 2001
Pg. 6

Additional U.S. Nuke Reductions Likely, Feith Says

By Hunter Keeter

The United States is likely to authorize further unilateral reductions in its offensive nuclear force structure as a result of the nuclear forces posture review now underway, according to Under Secretary of Defense for Policy Douglas Feith.

"We anticipate further reductions in nuclear offensive forces," Feith told reporters during a briefing at the Pentagon yesterday.

The nuclear posture review, a congressionally-mandated study, is due to report by Dec. 31 on the status and recommended disposition of current nuclear forces--including missile weapon systems, aircraft and submarines. Once excess force structure is identified, DoD will move quickly to dispose of it rather than tying the arms disposal process down with a lot of additional study and deliberation, he added. The cuts would be in addition to proposals already on the table to retire the Peacekeeper ICBM force, to reduce and consolidate the Boeing [BA] B-1 bomber fleet and to cut from the Navy's Trident ballistic missile submarine force.

Feith's comments come days before a visit to the former Soviet Union for follow-up discussions on American plans for a limited missile defense system. That visit, slated for this weekend, is the third formal meeting between the United States and Russia on the implications of missile defense and the likelihood of American withdrawal from the 1972 Anti-Ballistic Missile treaty.

"One of the things we will be doing next week is getting feedback on the information we gave them [the Russians] here last week during missile defense briefings [with Russian military officials]...At some point we are either going to jointly agree to move beyond the treaty, or we are going to notify anyway," Feith said of the ABM agreement, which the Bush administration has said it must move past in order to foster a new kind of relationship with Russia. Feith said that other issues continue to concern the United States as it tries to build a post-Cold War relationship with Russia, for example the proliferation of missile and weapons mass destruction technology to potential adversaries such as Iran and others.

The proliferation of military equipment in general--such as small arms and other technologies--remains a concern in discussions with Russia as well as China and other nations, Feith noted.

Moscow Times
September 5, 2001
Pg. 4

More Iranian Reactors

MOSCOW (Reuters) -- Russia is putting new plans to Iran for building more nuclear power plant reactors in the city of Bushehr, deputy Atomic Energy Minister Yevgeny Reshetnikov said Tuesday.

Reshetnikov, in comments carried by Itar-Tass, said a team of Russian specialists would visit Iran soon to present a feasibility study for assembling more nuclear reactors. He said negotiations with Tehran on signing the contract could start as early as December.

Reshetnikov's remarks seemed certain to raise eyebrows in Israel during Prime Minister Ariel Sharon's visit. Both Israel and the United States have criticized Russia's construction of the 1,000-megawatt nuclear power plant at Bushehr, but Moscow and Tehran insist the project has no military purpose.

WEDNESDAY SEPTEMBER 05 2001

Secret US germ tests threat to treaty

FROM ROLAND WATSON IN WASHINGTON THE Pentagon has secretly built a germ factory capable of producing enough deadly bacteria to kill millions of people, it was revealed yesterday.

The project is one of a number of covert biological initiatives pursued by the United States over recent years. One proposal awaiting final approval is to manufacture a more potent version of anthrax using genetically engineered biological agents. Last night, Donald Rumsfeld, the US Defence Secretary, confirmed that the Administration planned to proceed with these tests.

The disclosure suggests that the US has been severely testing the spirit, and possibly the letter, of the 1972 convention on biological weapons. The treaty forbids nations from developing or acquiring weapons that spread disease, but allows work on vaccines and other protective measures.

The White House insisted yesterday that all research conducted by military and CIA scientists in the field of biological warfare was "purely defensive". The projects, which were started under the Clinton Administration and are set to be expanded under President Bush, are designed to allow the US to defend itself in the face of germ warfare, according to government officials.

Ari Fleischer, Mr Bush's spokesman, said: "The United States has operated for a period of time a programme that was designed to protect our servicemen and women particularly from the hazards of chemical and biological warfare." However, the disclosure, in *The New York Times* yesterday, is likely to deepen the diplomatic rifts between Mr Bush and other Western governments already smarting from what they regard as his high-handed approach to international protocols. Mr Bush has angered significant sections of international opinion by threatening to dismantle the 1972 Anti-Ballistic Missile Treaty in favour of his vision of a missile defence shield. He has also refused to sign the Kyoto treaty on climate change.

Yesterday's disclosure was seen as one reason why Mr Bush had also refused to sign up to a draft agreement strengthening the 29-year-old convention on biological weapons, even though it had been ratified by 140 other countries. By signing, the US would have had to reveal if, and where, it was conducting defensive germ research. The first in a series of projects was begun in 1997, according to *The New York Times*, whose report was timed to coincide with the imminent publication of a book entitled *Germs: Biological Weapons and America's Secret War*. The impetus for the research was to mimic the steps that a state or terrorist would take to amass a biological arsenal, allowing the US military to better understand the threat, according to Administration officials who spoke to the authors. It led the Defence Threat Reduction Agency, an arm of the Pentagon, to build its own germ factory in the middle of the Nevada desert.

At Camp 12 of the Nellis Air Force Range, scientists constructed a 50-litre cylinder capable of cultivating germs out of materials bought commercially from hardware stores. The aim was to assess how easy it was for a rogue state or terrorist group to construct one of its own without being detected. In a separate CIA programme, codenamed *Clear Vision*, agents built and tested a model of a Soviet-designed bomb that they feared could make its way on to the black market.

In a third programme the Pentagon has drawn up plans to engineer genetically a more potent version of the bacterium that causes anthrax. The project would be designed to assess whether the anthrax vaccine given to US servicemen and women was effective against such a superbug. The projects led to rows among officials about whether they violated the 1972 treaty. Legal advice taken by the CIA suggested the research was within its bounds, but others disagreed.

An official from the Clinton White House complained that they had not been kept fully informed of developments. However, after they became aware of the extent of the projects, the White House took its own legal advice and concluded that the treaty was not being violated.

<http://www.thetimes.co.uk/article/0,,3-2001305743,00.html>

(Editor's Note: Hyperlink for referenced report listed after article.)

Aviation Week & Space Technology

September 3, 2001

Pg. 100

New Arms Policies Seen Altering Warfare

By Robert Wall, Washington

U.S. military planners and policy makers should prepare to confront new types of conflicts as a result of shifts underway in the global arms market, a National Intelligence Council report contends.

Entitled "Transformations in Defense Markets and Industries," the assessment by the U.S. government group points to two major trends in national armaments policies. One is broadening the sources from which governments buy weapons. The second is a "commercialization" of national defense industries in which they can't rely on domestic consumption for their long-term health, but have to compete for arms exports.

The outcome is "a world characterized by the routine diffusion of weapons and technology, embedded security-of-supply issues, and reduced national control over indigenous defense industrial bases," the study said.

The changing dynamics in the arms industry also are expected to affect arms control efforts. Because states view weapons exports as beneficial to their domestic industrial strength, the National Intelligence Council believes new conventional non-proliferation and arms control agreements will be difficult to formalize.

For the U.S., these developments could mean its industrial advantage over other countries could be reduced. While the NIC analysis found that U.S. companies currently lead in all major arms sectors, "increased concentration on export markets, new niche strategies, and growing numbers of mergers and acquisitions are increasing the competitiveness of global defense industries and may eventually erode the U.S. lead in some areas of defense products and services."

The NIC urged that "the characteristics of the new global armament system should be an explicit factor in U.S. security and defense planning and in the evaluation of future warfare capabilities." Furthermore, it argues, U.S. policy makers should pay more attention to maintaining an edge in the evolving global arms market.

The NIC asserts that transatlantic defense ties--in terms of what the U.S. buys and sells to allies overseas--constitutes an important factor in how the global arms environment develops. But it believes "there are dim prospects for significant transatlantic defense industrial cooperation unless the U.S. substantially opens its domestic market and is willing to export advanced technology."

Because advanced systems are easily acquired, the impact on warfare is expected to be that no side in a conflict between near-peers can count on retaining a technical advantage for long. Furthermore, the chance of relative technological balance between two opponents "will create a strong incentive to preemptively employ forces en masse early," the NIC said.

In conflicts between unequal parties, the weaker side will find it easier to conduct "asymmetric" warfare, building expertise in one area where the opponent is deemed vulnerable. Obtaining those niche abilities is considered more likely since technology is seen as easy to acquire.

FOR INDUSTRY, systems integration is one of the skills expected to take on increasing importance. While U.S. companies have been strong in this area, the study points out that entities in several other countries are gaining this expertise. "Systems-integration-for-hire will be a characteristic of the diffused armaments world," according to the report.

The NIC also documents that the problem U.S. defense companies are facing in competing with the commercial sector for engineering talent is being felt throughout the global defense industry. "The market for skills represented by the current annual global armaments budget of about \$250 billion is competing with a global commercial high-technology market in excess of \$1.6 trillion. If the defense sector loses, the pace and character of global military force development will suffer."

As part of its assessment, the NIC reviewed the arms industry policy in several countries. For Russia, it painted a bleak picture. "The defense industrial base is in a state of decline and disarray. The majority of Russian defense enterprises would be considered bankrupt in Western terms," the study asserts. However, defense output has increased slightly the last two years, after falling drastically for several years. Exports generate more than 60% of that business. The latest government weapons procurement plan is expected to need only about 25-30% of industry's capacity.

The Russian government has been working for several months to try to consolidate the defense industry, but some of the major realignment remains to be undertaken. But Russia's industrial dependence on exports is also seen as changing the security environment because the country is liberally selling advanced equipment like precision-guided weapons.

China's armaments industry also is having problems, primarily because half the businesses are in remote areas, the NIC says. "They are supported by inadequate infrastructure and have difficulty interacting internationally." Beijing is trying to rectify the situation, but the NIC believes "it will probably require a long time and investment before this will be solved." Other problems seen in China's defense industry include low-quality equipment, high rate of consumption of raw materials and a poorly educated workforce.

Transformations in Defense Markets and Industries

Section One:	Global Transformation in Defense Markets and Industries
Section Two:	Two Key Trends for the Future of Warfare
Section Three:	Composite Characteristics of Global Armaments Transformation
Section Four:	First Order Security Consequences of a Diffused Armaments World
Section Five:	Adapting to New Defense Economic Realities
Section Six:	Warfare in a Diffused Armaments World
Section Seven:	Specific National Security Issues for the United States
Section Eight:	Important Strategic Uncertainties
Section Nine:	Summary

http://www.odci.gov/search?NS-search-page=document&NS-rel-doc-name=/nic/pubs/research_supported_by_nic/battilega/transformations_summary.htm&NS-query=Transformations+in+Defense+Markets+and+Industries&NS-search-type=NS-boolean-query&NS-collection=Everything&NS-docs-found=2&NS-doc-number=1

Aerospace Daily
September 5, 2001

Defense Science Board Team Completes Review Of Targeting

A Defense Science Board team recently finished a study of the entire precision-targeting process, reviewing all planned precision weapons programs and existing and planned reconnaissance and surveillance systems, according to a study participant.

The "summer study" team also was charged with examining precision-targeting "challenges," such as moving targets and enemy use of cover, concealment and deception, said Christopher Bolkcom, an aerospace analyst at the Congressional Research Service (CRS) and one of about 50 people who took part in the study.

The group, which has finished a draft report, briefed senior Defense Department leaders on its findings Aug. 24. The draft report has not been made public, but an unclassified version of the final report will be released eventually.

The study was led by Robert Nesbit, senior vice president and general manager of The MITRE Corp., based in Bedford, Mass., and McLean, Va., and Vincent Vitto, president and CEO of Draper Laboratory in Cambridge, Mass.

The two study chairmen will continue to brief senior DOD leaders this fall.

The Defense Science Board is under the auspices of the Office of the Undersecretary of Defense for Acquisition, Technology and Logistics.

The 1999 Yugoslavia air war illustrated some of the military's problems with targeting. According to a recent CRS report, coalition forces flew 4,500 suppression of enemy air defenses (SEADS) sorties but were able to destroy only two of 22 Serbian surface-to-air missile batteries. Defense officials said the conflict showed that the time between detecting targets and attacking them is too great for the U.S.

Another Defense Science Board summer study team recently completed a review of defense science and technology programs. That report has also not been released.

-- *Marc Selinger*

Dallas Morning News
September 4, 2001

Atomic Museum Changing Its Target

Albuquerque center increasing exhibits on peacetime nuclear uses

By Ed Timms, The Dallas Morning News

ALBUQUERQUE, N.M. – A menacing collection of missiles and aircraft, along with one of the largest U.S. nuclear bombs ever built (minus the parts that go boom) surround a nondescript building on Albuquerque's Kirtland Air Force Base.

Nonfunctional versions of "Little Boy" and "Fat Man," the atomic bombs dropped on Hiroshima and Nagasaki during World War II, are on display inside, along with other nuclear weapons developed by the United States to counter the threat of the former Soviet Union's nuclear arsenal.

The National Atomic Museum is touted as having the world's largest unclassified collection of exhibits chronicling the development of nuclear weapons. For most of its history, other uses of nuclear technology received much less attention.

But that's in the process of changing.

Plans call for moving the museum off the Air Force base, doubling its size and dramatically increasing the space dedicated to nonmilitary nuclear technology. And to reflect the changed emphasis, the National Atomic Museum ultimately will become the National Museum of Nuclear Science and History.

"There just has not been a very strong attempt, until now, to create a facility that can adequately tell the whole story," said museum director James K. Walther.

Some of the museum's exhibits already focus on more peaceful uses of nuclear technology, such as one that describes the scientific contributions of Nobel laureate Marie Curie, co-discoverer of radium. But Mr. Walther said there's simply not enough room to feature more exhibits on non-weapons technology, such as nuclear energy or the use of nuclear technology in food preservation.

The heavy emphasis on weapons also was a natural outgrowth of its heritage. Created in 1969, the museum is owned by the U.S. Department of Energy and operated by the nearby Sandia National Laboratories. The museum's charter, however, is much broader.

Roughly half of the exhibition space in the new building, to be located in Albuquerque's Balloon Fiesta Park, will be dedicated to nonmilitary nuclear technology. As exhibits that deal with no-military applications of nuclear technology are developed, the benefits and potential problems – such as dealing with nuclear waste and the risks of radiation exposure – will be addressed.

The other half of the exhibition area will incorporate much of the weapons technology currently on display.

"It's important to inform the public about the history of the atomic bomb, the very early work in nuclear physics," said Ben Benjamin, 78, a museum volunteer who was part of the Manhattan Project, the massive wartime effort to develop an atomic weapon. "The bomb, I think, was one of the greatest scientific achievements in our history."

Mr. Benjamin witnessed the detonation of the world's first nuclear device on July 16, 1945. As a civilian, he had worked on precision optics in Minneapolis. After he joined the Army, he ended up working on photo-optics for the top-secret project.

Before the explosion, Mr. Benjamin recalled, rumors about what would happen were rampant.

"There was lots of speculation, from it being a dud to ... fissioning the nitrogen in the air, which would consume the nitrogen all around the Earth."

The museum's current exhibit also details the role of nuclear weapons through the Cold War, a time when the specter of a nuclear war was very real and schoolchildren, in "duck and cover" drills, were taught to crawl under their desks in the event of a nuclear attack.

Mr. Walther said that the museum strives to present a balanced view on nuclear weapons.

"We're not in the opinion business," he said. "We present the material, the facts as we can best determine ... and let people draw their own personal conclusions."

When the museum relocates, perhaps by 2005, government support will decline and a private nonprofit foundation will have an increasing role. Mr. Walther said the new location will be more accessible and should draw in more visitors, especially during Albuquerque's annual balloon festival. About 80,000 people now visit annually. Some foreign visitors, Mr. Walther said, are surprised that they can walk through the museum and view the weapons. But everything on view is unclassified.

"If you see the outside of a nuclear weapon from 1950, you're not going to be able to build one," Mr. Walther said.

"In fact, the Internet contains much more material than we're allowed to present."

ABM Tests Mostly Miss Real Issues

Analysts Say Tracking Capabilities Have Lagged For Decades

By Fred Kaplan, Globe Staff

WASHINGTON - In the next few weeks, Congress is slated to vote on whether to fund a new missile test site in Alaska that, if built, would violate the 1972 ABM treaty, one of the pillars of Russian-American nuclear arms control.

Exhibit A in the case for going ahead with the plan was the July 14 test in which a 55-inch-long "kill vehicle" fired from Kwajalein Atoll in the Marshall Islands zoomed up 140 miles above the earth, homed in on a mock warhead that had been launched from Vandenberg Air Force Base, Calif., and slammed into it at 15,000 miles per hour, smashing it to bits.

Advocates cheered. A bullet, so it seemed, can hit a bullet.

However, official reports and high-level Pentagon analysts point out that hitting one object in space is very different from shooting down a real-life missile attack, even a small-scale attack by a rogue nation or terrorist group, or neutralizing an accidental launch.

"The technology has improved quite a bit, just in the past few years," said a high-level Pentagon official who has closely followed the program and who spoke on condition that he not be identified. "But the fundamental problems with missile defense in general haven't changed."

These problems include making the system able to shoot down more than one incoming missile at a time, designing radars that can distinguish between a missile and decoys, and defending the radars themselves from attack.

Even though these issues have been well understood over the 45 years that the military has been developing the ABM program, no tests have tried to address them.

In 1997, when the current ABM program began, the Pentagon's test plan called for trying to shoot down a mock warhead that would be surrounded by nine or 10 decoys, all of which would look like a warhead to the "eyes" of a heat-seeking radar.

A year later, the plan was altered so that tests would involve only three decoys. In 1999, the bar was dropped again, to require just one decoy, which could be a large balloon.

A report last year by Philip Coyle, then the Pentagon's director of operational testing and evaluation, criticized this declining standard as virtually rigging any test. Balloons can make for good decoys, but the balloon used in these tests was much larger than the warhead and shaped differently. The heat signature given off by this balloon, he wrote, is "very dissimilar" to that of the mock warhead. Therefore, the kill vehicle "can easily discriminate" between the two.

In House Armed Services Committee hearings in June, General Ronald T. Kadish, director of the missile defense program, acknowledged this critique but noted, "These tests were not set up to evaluate the ability of the system to discriminate a full suite of real-world countermeasures."

Rather, the program's "test philosophy is to add step-by-step complexities over time . . . in increasingly stressful situations."

"It is a walk-before-you-run, learn-as-you-go development approach," he said.

Kadish justified "artificially enhanced" tests with "cooperative targets" as necessary to prove basic principles about missile defense.

The mock warhead was fitted with a beacon that transmitted a radio signal, heightening the chance that the kill vehicle would head toward it, not toward the decoy. When the hit occurred, fragments from the collision scrambled ground-based radar that had tracked the mock warhead. Had there been additional warheads on the way, the radar might not have detected them.

The ABM program has been a holy grail since the middle of the last century. The saga began in 1956, when the Army started its first anti ballistic-missile system, called Nike-Zeus. By 1958, a Pentagon technical panel concluded in a top secret report that the system could easily be overwhelmed by multiple warheads, decoys, or clouds of metallic chaff that could be released by the warheads to confuse Nike-Zeus radars.

Identical conclusions have been reached ever since by various military committees of the President's Scientific Advisory Panel.

When John F. Kennedy took office in 1961, Defense Secretary Robert McNamara ordered his own technical review. The 55-page report concluded that the prospect of a "really effective" missile defense system "is bleak, has always been so, and there are no great grounds for hope that the situation will markedly improve in the future, no matter how hard we try."

The main reason was the same: "No one has yet suggested any solution to the problem of overcoming very simple, lightweight, non-discriminable decoys."

Still, political pressures for an ABM system were great, so when Lyndon B. Johnson became president he insisted that McNamara move ahead with developing a new system, called Nike-X, which would use more advanced, somewhat less vulnerable radar. But technical analysts soon found the same vulnerabilities.

Then came Richard M. Nixon, who redesigned the program and called it Safeguard. Nonetheless, in a top secret memo dated Jan. 5, 1970 - recently obtained by the National Security Archive, a private group in Washington - national security adviser Henry A. Kissinger was told by one of his aides, Laurence Lynn, that the Pentagon figured Safeguard "will be obsolete within three to four years after it is first deployed."

Even China's limited nuclear force at the time could have saturated the system through "penetration aids" such as decoys or a "chaff cloud," which would conceal the incoming warheads from radar detection. A Jan. 21, 1970, memo to Kissinger from Lee DuBridge, the president's science adviser, also noted that Safeguard's new, advanced radars "are extremely vulnerable" to attack.

The coup de grace came on April 15, 1970, when Kissinger wrote Nixon that Bell Telephone Labs, the program's chief contractor since the Nike-Zeus, "wants to get out of the ABM business" because its engineers believed "the system, as it is being built, cannot adequately perform the mission assigned to it."

None of these concerns was made public at the time. Defense Secretary Melvin R. Laird even testified to Congress in 1972 that Safeguard had "no technical problems which would affect a decision to proceed with deployment."

Still, the technical criticisms were partly why Nixon felt few qualms about negotiating an ABM treaty with the Soviet Union. Signed in May 1972, it restricted each side to two ABM sites of 100 interceptor missiles each. (A 1974 protocol further restricted each side to just one site. Two years later, the United States dismantled the few missiles it had built. The Soviet Union stopped its program at 68 missiles and let them fall apart. The treaty also banned basing ABM components in outer space, which the Bush program, if it goes forward, would violate in a few years. And it banned building additional ABM test sites beyond those that already existed, a provision that would be violated by the Alaskan site that Bush wants Congress to fund this month.

ABM programs languished under Gerald R. Ford and Jimmy Carter, though both presidents continued to direct several hundred million dollars a year to the Army's ABM office. Then in 1983, Ronald Reagan revived the notion, ambitiously aiming not merely to defend a few cities, counter a Chinese nuclear attack, or protect intercontinental ballistic missile sites, but to render nuclear weapons "impotent and obsolete."

Reagan's Strategic Defense Initiative envisioned a multilayered system, consisting of old-style ABM defenses plus space-based lasers. Though SDI was dropped, it strengthened the missile defense bureaucracy within the Pentagon. Bill Clinton came under heavy pressure to develop missile defenses, especially after the Republicans won back the Congress. However, he stepped back shortly before leaving office, mainly because of Coyle's critical report.

Then came George W. Bush, whose defense secretary, Donald H. Rumsfeld, had led a panel in 1998 concluding that North Korea, Iraq, and Iran might develop ICBMs in the next five years. Missile defense again became a priority. The Rumsfeld panel concluded that these countries could deploy short-range missiles on ships or barges and sail them close to US coastlines. They could do so more quickly and cheaply than they could build intercontinental missiles.

However, Richard Garwin, a physicist who served on the Rumsfeld panel as well as on many of the scientific panels of the 1950s and '60s, said this claim works against the argument for missile defense. Even if Bush's system could defend against ICBMs, it would not work against missiles fired from short range, especially if they were cruise missiles, which fly in the atmosphere and therefore remain underneath the system's radar.

And the decoy problem had not gone away. The CIA's National Intelligence Estimate of September 1999 concluded that any country able to develop ballistic missiles "would also develop various responses to US . . . defenses." These countermeasures might include such "readily available technology" as decoys, chaff, or wrapping warheads in radar-absorbing material.

Since the 1950s, the United States has spent an estimated \$100 billion on various ABM schemes, as much as on the Apollo space program. The Congressional Budget Office estimates that Bush's program would cost another \$60 billion.

Bush wants deployment of his new system, simply called "Missile Defense," to start in 2004, though Kadish's June testimony suggests this is unlikely.

"I cannot overemphasize the importance of controlling our expectations and persevering through the hard times as we develop and field a system as complex as missile defense," Kadish said. A high-ranking Pentagon official very familiar with the program said: "I admire General Kadish's honesty. A lot of his predecessors put on a happy face and said they could barrel on through. But this makes you wonder: What's the president's hurry to break out of the [ABM] treaty and get something deployed? Deploy what? Against what threat?"

Philadelphia Inquirer
September 4, 2001

Russia Considers Next Step If U.S. Pulls Out Of Treaty

The U.S. is pushing for a missile-defense system. The move could affect all arms agreements between the two countries.

By Dave Montgomery, Knight Ridder News Service

MOSCOW - President Bush's increasingly pointed threats to withdraw from the 1972 Anti-Ballistic Missile Treaty are prompting Russian leaders to contemplate how they might counter such a move - from scrapping all arms agreements with the United States to strengthening ties with China, North Korea and Iran.

Bush still hopes to encourage Russia to abandon the treaty and support his push for a missile-defense system, coupled with deep cuts in both countries' remaining nuclear arsenals. Although Russian officials have expressed interest in eliminating more nuclear weapons, which are difficult and costly to maintain, they have resisted U.S. efforts to revise or scrap the treaty, which they call the bulwark of nuclear stability.

The ABM Treaty prohibits national missile defenses on the theory that neither country would attack the other so long as it was unable to protect itself from a nuclear counterattack. Bush recently said the United States would withdraw from the pact at "a time convenient to America," and the Kremlin heard the message loud and clear. Moscow defense analyst Pavel Felgengauer said Russia's initial response to a U.S. withdrawal would be a "political option" intended to portray the United States as a nuclear rogue and to damage Washington's ties with its longtime allies in Western Europe that also are skittish about abrogating the ABM Treaty.

Russian President Vladimir V. Putin also has vowed that if Bush abandons the treaty, Russia will withdraw from all arms and nonproliferation agreements with the United States. Foreign Minister Igor Ivanov has said more than 30 treaties could be in jeopardy. The most obvious target is the START II treaty, which the Russian parliament ratified last year and which would cut the number of strategic nuclear warheads each side can deploy to no more than 3,500. Defense experts say Russia is prepared to make good on the threat. That would allow Russia to strengthen its nuclear arsenals. Although the country's fragile economy and threadbare military budget would likely prevent an extensive buildup, Russia could begin a limited military buildup, analysts said.

"Once we have walked out of that [ABM] treaty, we have broken that restraint," said Steven Blank, of the U.S. Army War College in Carlisle, Pa. "They can build whatever they feel like, just as we can."

Although its defense budget can't sustain a costly arms race, Moscow could threaten to deploy short- and intermediate-range missiles and put multiple warheads on existing long-range missiles that now have single warheads.

Any military buildup in Russia likely would increase tensions with the United States, experts say.

"If Russia would withdraw from these existing treaties, both sides . . . become less predictable to one another, and it gives rise to distrust and more suspicion," said Shannon Kile, an analyst with the Stockholm International Peace Research Institute. "It unravels one of the principal accomplishments of arms control."

A U.S. withdrawal also could push Russia into a strategic partnership with China to help counter U.S. global influence, analysts said. The neighboring, nuclear-equipped nations signed a friendship pact earlier this year and have led the opposition to Bush's proposed U.S. missile-defense system.

Additionally, Western analysts fear that Russia would no longer feel constrained from selling arms and military technology to North Korea, Iraq, Iran and other nations that the United States considers sponsors of terrorism or potential nuclear threats.

Although Russia has been eager to accelerate international arms sales to shore up its defense industry, Putin so far has avoided weapons sales or technology transfers that would upset his efforts to strengthen ties with the United States and other Western nations.

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No Deal Soon On Missile Defense Plan, Russia Says

By Peter Baker, Washington Post Foreign Service

MOSCOW, Sept. 5 -- The Kremlin today ruled out the possibility of reaching a substantive agreement with the United States on missile defense before a planned November summit between President Bush and Russian President Vladimir Putin, saying it would take a year or more to settle the issue.

Russia views Putin's scheduled visit to Bush's ranch in Texas as an "intermediate stage" that would simply create a framework for actual negotiations on missile defense and strategic arms cuts that would probably last until at least September 2002, according to Oleg Chernov, deputy secretary of Putin's security council and point man on missile defense.

Bush and Putin first agreed to link discussions on offensive and defensive weapons at their July meeting in Genoa, Italy, but the subsequent talks have not yielded as much progress as U.S. officials expected and an early breakthrough appears elusive. Chernov said there was no chance of working out a mutually agreeable deal by November that would free the United States from the restrictions of the Anti-Ballistic Missile Treaty as Bush hopes. "It's impossible," Chernov said in an interview at security council headquarters not far from the Kremlin. "Even if today, now, we were discussing this [substantively], it's a complex issue." Instead, he suggested, the United States could proceed with only the limited testing and development allowed under the treaty for another year while the two sides talk. "We only propose to postpone it, at least not to make hasty decisions."

The Putin aide's comments left the Bush team taken aback. "I'd be surprised if they really thought we'd sit still for a year," a senior administration official said by telephone from Washington. The United States, he added, would not agree to restrict testing to the stationary anti-missile facilities allowed under the treaty, as Russia suggested. "They'd love that. But that isn't going to happen."

The development underscored the wide gulf between the two sides as they pursue intensive talks on the future of arms control in the post-Cold War era. Bush wants to abandon the ABM Treaty in order to build a defense system that would knock down ballistic missiles launched accidentally or by hostile states such as Iran or North Korea. Russia strongly opposes abrogating the 1972 pact, calling it the foundation of decades of arms control, but is eager for joint arms cuts.

The question of what to do about the treaty has taken on increasing urgency as the United States accelerates plans to test systems banned by the accord. The Bush administration has said its program would violate ABM restrictions within "months, not years" and has awarded a contract to begin work on a testing facility in Alaska next spring. To withdraw from the treaty, the United States must give six months' notice, which would have to come in November to allow the April work in Alaska.

While Bush has disclaimed any deadline for an agreement with Russia, his team has made clear that it hoped something could be unveiled at the November meeting in Crawford, Tex. Bush said recently that the United States plans to "withdraw from the ABM Treaty on our timetable," with or without Russian assent.

But the administration has been trying to reach a consensus with Russia if for no other reason than to quell criticism from congressional Democrats and European allies. A parade of senior U.S. officials made the pilgrimage to Moscow this summer, and two more high-level meetings are scheduled for next week here and in London. After that, Secretary of State Colin L. Powell and Russian Foreign Minister Igor Ivanov will meet in Washington on Sept. 19 and Defense Secretary Donald H. Rumsfeld and Russian Defense Minister Sergei Ivanov will get together the next week. Bush and Putin also will meet in October in Shanghai on the periphery of an Asian-Pacific economic summit.

U.S. officials had considered the Powell meeting in two weeks a critical juncture, an "action-forcing event," as one put it, where they expected Igor Ivanov to deliver Russia's formal response on missile defense to move the talks to a

new stage. But Chernov said today that no such response was planned for that meeting. Instead, he said, Russia was waiting for Washington to make more specific proposals and to open genuine negotiations instead of just briefings. "Our readiness for negotiation has not changed," he said. "We would like to start concrete, substantive consultations and not just presentations of our positions. . . . We are waiting for them."

Given the lack of movement in recent weeks, U.S. officials are now moderating expectations. A senior State Department official told reporters in Washington today that the administration hopes to find "the beginning of a compromise" by November. "I think there's a reasonable chance we can make significant progress, at least in sketching out the outlines of a new framework by then," he said.

The official said the U.S. side had detected a "remodulation" of the Russian position suggesting that negotiations over a new strategic framework could continue even if Bush unilaterally withdraws from the ABM Treaty to pursue testing of the missile shield. While predicting that a unilateral U.S. pullout would prompt a "rough patch in relations," the official said, "I don't think it will be a crisis."

Moscow's strategy could be to play for time. Chernov, a former KGB agent who worked as a television correspondent while undercover in Berlin, recently traveled through the United States promoting Russia's point of view and appeared to be hoping that Bush's missile defense plan ultimately would be weighed down by budget concerns and domestic public opinion.

The Russian national security elite remains divided about what to do if Bush insists on scrapping the ABM Treaty. Some officials and analysts argue that Russia should try to wring concessions out of the United States and remain a world player, while more fervent ABM supporters maintain that Moscow should do nothing to make it easier for Washington to throw away a 29-year-old pact.

"If Russia agrees with American proposals now, then we may win something," said Yuri Fyodorov, deputy director of the PIR Center, a Moscow research organization. "We may try to limit to some extent the size and capacity of the future [anti-missile] system. At the same time, if America is not able to deploy it, then we lose nothing. The rational strategy is to discuss and to get as much as we can for our acceptance of this."

Not so, according to Victor Koltunov, a member of the permanent U.S.-Russian consultation committee on ABM issues. "This is exactly the occasion where there is no place for bargaining," he said. "We're trying to show by every way possible that this isn't in the interest of the United States. . . . Trading would be out of place."

Even if Putin decided to deal, veteran officials agreed it could not be done quickly. "Frankly speaking, I have very big doubts that in such a short period of time we can make such dramatic steps," said retired Maj. Gen. Vladimir Belous, author of a new book on the missile defense. "They haven't even transferred from the stage of consultations to negotiations."

Russia wants to focus the discussions on nuclear arms cuts, which it needs to reduce the country's financial burden. Putin has proposed that each side slash its arsenal to 1,500 strategic warheads, but the Bush administration is still waiting for a Pentagon nuclear review to be completed in late September or early October.

That timetable explains why the two sides could not come to a serious agreement replacing the ABM Treaty with a new arms control pact by November, Chernov said. Asked how long it would take, he said, "That depends on the will. I think that could be done within the next year or even maybe within a year from now -- I mean from September 2001 to September 2002. I don't necessarily mean 2003."

In the meantime, he said, Bush should hold off withdrawing from the treaty. "The Americans can develop their strategic ABM system within the framework of the existing treaty," he said. "Simultaneously, conducting a more active dialogue with us and with other nuclear states about building a new [arms control] system, this could be the less painful way out of the situation in which President Bush has found himself."

The Russian position conflicts sharply with the U.S. desire to avoid the sort of lengthy negotiations that resulted in 500-page treaties during the Cold War. While U.S. officials have not ruled out a treaty to replace the ABM, they prefer a less involved -- and less constraining -- joint declaration, an idea resisted in Moscow.

"You can say anything in consultations and then not follow it," said retired Maj. Gen. Yuri Lebedev, a former Soviet arms control negotiator. "But a treaty signed by heads of state is a document which the sides must abide by. They cannot just ignore it."

Staff writer Alan Sipress contributed to this report from Washington.