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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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Washington Post
May 25, 2007
Pg. 14

U.S. Urges New Sanctions As Iran Stands Firm On Nuclear Policy

By Karen DeYoung, Washington Post Staff Writer

President Bush said yesterday that the administration will press the United Nations to adopt new, expanded sanctions against Iran, as Iranian President Mahmoud Ahmadinejad said Tehran would "never retreat even one step" from its nuclear enrichment program.

The separate comments followed an International Atomic Energy Agency assessment that Iran has accelerated its enrichment program in defiance of two U.N. Security Council resolutions demanding its suspension. The IAEA report, delivered to the U.N. Security Council on Wednesday, said Tehran's refusal to provide verification information had lessened the agency's ability to monitor Iranian nuclear capabilities.

Ahmadinejad ruled out even a temporary suspension. Iran's technological capabilities were reaching a "peak," he said, and "it will never retreat even one step from this path." Iran has denied charges that its enrichment program is intended to provide material for a nuclear weapon, saying that it is interested only in energy uses and that it has a sovereign right to proceed.

In a news conference, Bush said he would discuss additional sanctions with Russian President Vladimir Putin and Chinese President Hu Jintao. "The first thing these leaders have got to understand is that an Iran with a nuclear weapon would be incredibly destabilizing for the world," Bush said.

Security Council members Russia and China reluctantly agreed with the earlier sanctions resolutions in December and March. Asked yesterday whether he favored tougher measures, Putin said, "We shall work in cooperation with our partners, as we have always done in the past, not to prevent Iran from developing modern technology but to prevent it from creating a nuclear weapon," according to a Reuters report. A Chinese government spokesman in Beijing called for strengthened diplomacy.

French Foreign Minister Bernard Kouchner called yesterday for swift adoption of new sanctions. Referring to the spinning mechanism that produces enriched uranium, Kouchner said Iran now had more than 2,000 centrifuges in operation at its underground facility near the town of Natanz. The IAEA report put the mid-May total at 1,312.

On a separate track, the United States, Britain, France and Germany have offered expanded economic and diplomatic ties with Tehran in exchange for suspension. European Union foreign policy chief Javier Solana will meet next week with Ari Larijani, Iran's top nuclear negotiator, but there is little expectation of a breakthrough. IAEA Director General Mohamed ElBaradei, who has angered Western governments by advocating negotiations with Iran without prior suspension of enrichment, reiterated his views at a news conference in London yesterday, saying that the United States and Iran risked "a major confrontation."

Bush, in his news conference, also criticized Iran for actions against U.S.-Iranian nationals who have been incarcerated, detained or put under house arrest there in recent weeks. "We've made very clear to the Iranian government that the detention of good, decent American souls who are there to be beneficial citizens is not acceptable behavior," Bush said.

Human Rights Watch yesterday reported the disappearance of a fifth U.S.-Iranian national believed to have been detained during a visit to Iran. Ali Shakeri, a businessman from Irvine, Calif., who has lived in the United States since the 1970s, was due to return to the United States from Tehran in early May after a visit to his ailing mother. But he has not been heard from since he left for the airport, according to HRW and two Iranian friends who expected him in London en route home.

"We have every confidence that Shakeri is in detention" in Iran, said Hadi Ghaemi, Iran analyst for Human Rights Watch.

Staff writer Robin Wright contributed to this report.

<http://www.washingtonpost.com/wp-dyn/content/article/2007/05/24/AR2007052400776.html>

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GovExec.com

Army stockpiles, destroys WMD antidotes in Iraq

By Bob Brewin bbrewin@govexec.com

May 24, 2007

Despite not finding weapons of mass destruction in Iraq for the past four years, the Army still sends to the war zone -- and later destroys -- millions of dollars worth of antidotes that soldiers would take in case they are attacked by nuclear, chemical and biological weapons, according to internal Army documents obtained by *Government Executive*.

The policy is a leftover from when the Bush administration believed Saddam Hussein possessed weapons of mass destruction, which include chemical and biological agents. But no such weapons have been found since the war started in March 2003.

The antidote kits -- which contain treatments for nerve gas along with injectors, antibiotics to fight anthrax and drugs to reduce the effects of radiation exposure -- are no longer given to soldiers when they arrive in Iraq. The Army stores the kits, called Individual Service Member Medical Chemical Defense Materiel, in locked military vans "without being issued to the individual soldier. In addition, millions of dollars worth of [the kits] are incinerated annually in Iraq," according to the briefing documents prepared by the Army Medical Department. "Current theater policy is to incinerate all [kits] prior to redeployment." The documents do not put an exact dollar value on the kits. The briefing was given to top commanders by the Task Force 3 Medical Command, the senior medical command operating in Iraq.

Dave Foster, an Army spokesman, said the service's policy is "to issue the [kits] to each unit prior to deployment, and ensure all unused [kits are] turned in prior to the unit's redeployment for destruction." Foster declined to answer other questions because the briefing documents were stamped "For Official Use Only."

Cynthia Vaughn, a spokeswoman with the Army Medical Department, declined to answer queries for the same reason. The U.S. Central Command, which sets overall policy for the Iraq theater, did not respond to questions about why the Army incinerates the kits.

According to a supply bulletin issued by the Army Medical Materiel Agency, much of the materiel in the kits -- including the atropine injectors and the antibiotics -- should be stored in a controlled temperature setting between 59 and 86 degrees. Army spokesman Foster said the components "expire after 12 to 15 months in an uncontrolled temperature environment, such as the Southwest Asian desert," which includes Iraq, where temperatures routinely drop below 59 in winter and exceed 100 in summer.

The supply bulletin directs the Army to return all kits that were stored correctly to stock, unless theater or command policy specifies otherwise. Assets that were maintained in central storage (not issued to individuals) and under unknown storage conditions or were outside prescribed storage temperatures must be destroyed, according to the bulletin.

Philip Coyle, senior adviser with the Center for Defense Information, a security policy research organization in Washington, said he views the incineration as a waste of taxpayer dollars. At the very least, he said, the Army should take steps to store the kits correctly.

Coyle, who served as assistant secretary of Defense and director of its operational test and evaluation office from 1994 to 2001, believes the Army's decision to keep shipping the kits to Iraq is a direct result of assertions by the Bush administration that Saddam Hussein possessed WMD and "insinuations since by Vice President [Dick] Cheney and others that WMD might still be found. Accordingly, it wouldn't be surprising if no one in the Army has wanted to raise the policy issue of why are we still sending these kits to Iraq," Coyle said.

Ivan Oelrich, vice president for strategic security programs at the Federation of American Scientists in Washington, said that continuing to ship the kits to Iraq is a rational policy just in case "some terrorist gets hold of ten gallons of nerve gas." The political repercussions of a nerve gas attack against unprotected U.S. troops would be severe, he added.

But, Oelrich said, if the Army continues to ship the kits to Iraq, "it has to be more than symbolic. . . . [They have] to be stored and managed correctly."

Just storing the kits does not protect troops, Coyle argued. "If the insurgents actually disbursed chemical or biological agents, U.S. soldiers would die since they don't have the kits close by," he said.

The Army, Coyle added, could argue that there is a "logistical advantage in lead time to have the kits in Iraq [instead of in the United States], even though the kits are not being distributed to the troops." But he said "this argument would not hold water unless the scenario assumed that a first insurgent attack with chemical or biological agents would be followed by other attacks. And in this scenario the Army would essentially be sacrificing the first to die, and then -- only after they died -- be distributing kits to other soldiers in anticipation of future attacks. I can't imagine the Army would operate this way if they really believed there was a credible threat."

The Task Force 3 Medical Command briefing recommended the Army Medical Department conduct a threat analysis of the Iraq theater of operations to determine the requirements for current antidote kits and consider employing regional contingency stocks to meet those requirements.

The specific antidotes and drugs contained in the kits include:

- Atropine, an antinerve gas agent loaded in what the Army calls an antidote treatment nerve agent auto-injector.
- 500mg tablets of ciprofloxacin, the generic name for the drug developed by Bayer Pharmaceutical to treat individuals exposed to the inhalant form of anthrax bacteria.
- 5mg tablets of diazepam, the generic name for Valium, to counter convulsions caused by nerve gas.
- 30mg tablets of pyridostigmine bromide, which is used to treat soldiers exposed to nerve gas.
- Potassium iodide tablets, which can be used to treat troops exposed to radiation.

http://govexec.com/story_page.cfm?articleid=37018&dcn=todaysnews

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GovExec.com

Panel to pave way for massive bio-defense facility

By Chris Strohm *Congress Daily*

May 24, 2007

The House Homeland Security Committee plans to mark up a bill quickly after next week's recess to authorize a massive new bio-defense facility, paving the way for a high-stakes competition that some believe will bring billions of dollars in jobs and commerce to the winning congressional districts.

At least five lawmakers on the committee, including its chairman, represent districts that stand to benefit if the facility is built in or near them, according to an analysis by *CongressDaily*.

The authorization bill will give the Homeland Security Department authority to enter into a contract and begin construction on the National Bio and Agro-Defense Facility, a state-of-the-art center for researching and protecting against biological threats to humans and animals.

The department is evaluating 18 sites in 11 states, from California to North Carolina. Consortiums comprising local governments, private companies and universities have organized to bid for the contract, which is estimated to be worth nearly \$500 million.

The competition is heating up, as the department plans to narrow the list of potential sites this summer and award a contract to one site in October.

The new center is expected to be one of the government's premier research labs for the next 50 years, bringing billions in jobs and commerce to congressional districts around it. Some community organizations near potential sites have protested, however, saying they fear the facility will be too dangerous.

House Homeland Security Emerging Threats Subcommittee ranking member Michael McCaul, R-Texas, is leading the charge to write the authorization bill.

"I anticipate this should move rather quickly through the Congress," McCaul said, adding that he expects the committee to do a markup soon after the Memorial Day recess.

The edge of McCaul's district is about 20 miles from Texas A&M University, a contender for the new center. McCaul said he does not believe he has a conflict of interest in writing an authorization bill for the center while his district would benefit if the contract went to Texas A&M. "Of course I'd love to see Texas A&M selected," he said. "But the fact of the matter is, we are staying out of the selection process."

Another competing entity is the Gulf States Bio and Agro-Defense Consortium in Mississippi, which operates a site north of Jackson, Miss., on the fringe of the district represented by Homeland Security Chairman Bennie Thompson, D-Miss.

Thompson could not be reached for comment Wednesday. But when the Homeland Security Department announced last August that the Gulf States Consortium was in the running, Thompson gushed with optimism.

"Today, we moved one step closer to securing a major homeland security asset for our state and nation," Thompson said in a statement. "With the collective participation of the entire metro-Jackson community, we now have a real opportunity to showcase our best and brightest.

"As this process moves forward, Mississippi's application will be strengthened by the contributions of a diverse cross-section of participants at every level. I look forward to working with our congressional delegation and state officials to make that happen."

Two other lawmakers on the Homeland Security Committee also represent districts near potential sites.

The Texas Biological and Agro-Defense Consortium is in the competition with three sites around San Antonio, Texas, on the fringe of the districts represented by Reps. Lamar Smith, R-Texas, and Henry Cuellar, D-Texas.

And the North Carolina Consortium has a site just outside the district of Rep. Bob Etheridge, D-N.C.

http://govexec.com/story_page.cfm?articleid=37012&dcn=todaysnews

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(Editor's Note: Please note in paragraph four of the article below that the Army, Marine Corps, and Navy doctrine officers have agreed to adopt a modified version of the Air Force C-CW CONOPS.)

Army Chemical Review

Jan-Jun 07

U.S. Army Chemical School's magazine

Providing CBRN Support to Domestic Disasters

By Mr. Jacques A. Walden Sr.

Imagine that you are working at your desk at a military installation and you hear an explosion. Five minutes later, you notice a strong chemical smell that burns your throat and eyes. Many of your coworkers are covering their noses and eyes for protection from the irritation. You know that something is very wrong, but what you don't know is that a detonation has occurred at an industrial chemical plant just 5 miles downwind from your office, and toxic chemicals are spreading through the atmosphere. Your first thoughts are of your children attending school and your spouse working near the detonation site. Even before you have a chance to regain your composure, you hear a

second explosion. You immediately think of the nuclear power plant 15 miles from your office. You are aware that an incident at the plant could create a downwind hazard area of 25 miles and expose up to 15,000 people to radiation particles.

This is a horrific scenario that we hope never plays out, but one for which we must remain vigilant. To ensure the safety of its citizens, the leaders of the U.S. Armed Forces must ensure that the appropriate tactics, techniques, and procedures (TTP) are in place to support chemical, biological, radiological, and nuclear (CBRN) operations in and around military installations in the continental United States (CONUS). Currently, the Joint Requirements Office for CBRN Defense (JRO-CBRN Defense) is sponsoring the revision of Field Manual (FM) 3-11.34, *Multiservice Procedures for Nuclear, Biological, and Chemical (NBC) Defense of Theater Fixed Sites, Ports, and Airfields*. The current publication, dated August 2000, focuses on operations outside the continental United States (OCONUS), but the events of 11 September 2001 redefined the likelihood of an attack and redirected focus on CONUS attacks.

The services are in agreement that the new title *Multiservice Tactics, Techniques, and Procedures for Installation Chemical, Biological, Radiological, and Nuclear Defense* reflects the essence of current MTTP operations. In the new publication, the term “installations” will refer to military bases and fixed sites, ports, and airfields. The completed publication will provide examples of installation descriptions recognized by the Army, Marine Corps, Navy, and Air Force and will create a common multiservice reference for planning, resourcing, and executing TTP for CBRN defense at CONUS and OCONUS installations. The primary users of this publication will be CBRN staff officers and noncommissioned officers, personnel assigned to perform collateral CBRN duties, commanders and staffs at tactical through operational levels, and civilian agencies. The MTTP is currently in the signature draft phase of the development process and is scheduled to be published during the third quarter of Fiscal Year 2007.

Army, Marine Corps, and Navy doctrine action officers have agreed to adopt a modified version of the Air Force counter-chemical warfare (C-CW) concept of operations (CONOPS). This agreement comes following approval from the Combating Weapons of Mass Destruction (CbtWMD) Issue Team, Force Protection Functional-Capabilities Board. The CbtWMD Issue Team was briefed by the Joint CBRN Combat Developments (JCCD) Experimentation and Analysis Branch in February 2006 reference the split mission-oriented protective posture (MOPP) concept experiment.

The JRO-CBRN Defense, through the JCCD, sought to validate the use of Air Force CONOPS for split MOPP operations on joint installations. Split MOPP and C-CW operations were reviewed during the literature search the first step in conducting the concept experiment. Split MOPP and C-CW CONOPS were reviewed in detail during a three-day, scenario-driven seminar and tabletop exercise in which Air Force personnel assisted representatives from the joint forces (including the Coast Guard) to apply the Air Force CONOPS to seaport and joint forward-operating bases. The results of the exercise were used to frame the scope of a live experiment with warfighters and subject matter experts. The results of the experiment demonstrated that the Air Force C-CW CONOPS is based on sound doctrinal principles of contamination avoidance that will work for all U.S. forces on multiservice and joint installations. Split MOPP is defined in Air Force Manual (AFMAN) 10-2602 as “a tactic that divides an airbase or operating location into two or more sectors or zones to enable a commander to tailor mission oriented protective posture (MOPP) levels and alarm conditions within each sector to reflect the current hazard and mission priorities within that area” is part of Air Force fixed-base C-CW CONOPS.

Split MOPP TTP information includes guidance on contamination control areas (CCAs), chemical-defense transition zones, and transition points. Additionally, it details standardized marking procedures for processing contaminated vehicles through transition points (TPs).

Installation commanders with joint or multiservice forces must consider whether or not to implement split MOPP TTP. The procedures for implementation include--

- Making preattack preparations.
 - Developing a plan that divides the installation into zone sectors which mirror base installation defense sectors.
 - Providing guidance on contamination avoidance, including instructions on donning MOPP gear and seeking protection with overhead cover.
- Making postattack preparations.

- Organizing reconnaissance teams for each zone to determine contaminated and uncontaminated areas.
- Designating guidance for lowering MOPP levels in zones free of contamination.
- Establishing possible locations for TPs and CCAs between hot and cold zones.^{1, 2, 3}

The JRO-CBRN Defense also has the lead on the revision to FM 3-11.21, *Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical Aspects of Consequence Management*. Joint Publication (JP) 3-41 defines chemical, biological, radiological, nuclear, and high-yield explosives (CBRNE) consequence management (CM) as “actions taken to address the consequences from all deliberate and inadvertent releases of chemical, biological, radiological, nuclear agents or substances, and high-yield explosives with potential to cause mass casualties and large levels of destruction.” The U.S. Army Chemical School staffed the revised document to Army, Marine Corps, Navy, and Air Force doctrine action officers for service distribution and comments. The service comments were adjudicated during a multiservice working group in November 2006. This publication, scheduled for completion in November 2007, will be designed for use from the joint task force (JTF) level to the tactical unit leaders performing CBRN CM. It will also support functional and service staffs in foreign and domestic locations that are tasked with planning, preparing, and conducting CBRN CM operations. The revised FM 3-11.21 will--

- Define the roles of military units and staffs involved in planning and executing integrated CBRN CM in foreign and domestic environments.
- Consider a large spectrum of CBRN potential incidents, whether the result of natural, deliberate, or accidental release (including toxic industrial material).
- Address the integration of active and reserve component forces in conducting CBRN CM.
- Address the employment of military CBRN defense capabilities (as authorized) in support of federal, state, and local civil authorities.
- Fill the gap between MTTPs and joint doctrine publications (such as JP 3-40 and JP 3-41).

The new FM 3-11.21 will include chapters on the doctrinal aspects of planning, preparation, and response and recovery operations, while the appendices will include TTP. The TTP information will consist of Department of Defense CM assets, vulnerability reduction measures, CBRN incident site assessment, and decontamination operations. The JRO-CBRN Defense looks forward to comments from Army, Marine Corps, Navy, and Air Force CBRN subject matter experts on the final coordination draft. This input will assist service-appointed CBRN doctrine action officers in developing a quality publication which ensures that our military has the appropriate MTTP required to respond to a CBRN CM incident.

Endnotes:

1TPs are used to admit uncontaminated personnel into MOPP 4 zones and to transition personnel with minimal contamination between hot and cold zones (following the decontamination of boots and gloves and the completion of cleanliness verification). TPs are also used to partially decontaminate mission-essential vehicles that move between hot and cold zones to perform specific missions.

2CCAs are used to perform a thorough decontamination on personnel who have been grossly contaminated and cannot be cleaned at the TPs. A thorough decontamination of vehicles and equipment is not performed during a split MOPP operation.

3Additional split MOPP TTP will be written into the revised FM 3-11.34.

References:

AFMAN 10-2602, *Nuclear, Biological, Chemical, and Conventional (NBCC) Defense Operations and Standards*, 29 May 2003.

FM 3-11.21, *Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical Aspects of Consequence Management*, 12 December 2001.

FM 3-11.34, *Multiservice Procedures for Nuclear, Biological, and Chemical (NBC) Defense of Theater Fixed Sites, Ports, and Airfields*, 29 September 2000.

JP 3-40, *Joint Doctrine for Combating Weapons of Mass Destruction*, 8 July 2004.

JP 3-41, *Chemical, Biological, Radiological, Nuclear, and High-Yield Explosives Consequence Management*, 2 October 2006.

Mr. Walden is an employee of Battelle Memorial Institute and serves on the JRO-CBRN Defense staff at Fort Leonard Wood, Missouri, as a doctrine integrator. He is a U.S. Army officer with 9 years of Active Army and 11 years of U.S. Army Reserve duty.

http://www.wood.army.mil/chmdsd/pdfs/Jan-June_2007/Walden-Final.pdf

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Star Bulletin
May 25, 2007

UH, Army to scour for bombs in ocean

By Gregg K. Kakesako
gkakesako@starbulletin.com

The Army will again partner with the University of Hawaii this August on a \$2.3 million underwater survey to try to pinpoint the location of nearly 600 tons of chemical weapons believed to have been dumped five miles south of Pearl Harbor in 1944.

Eric De Carlo, UH oceanography professor, said the more extensive part of the underwater survey will involve the use of the Hawaii Undersea Research Laboratory submersibles Pisces IV and Pisces V in November.

The Army says it believes that 16,000 M47A2 bombs containing nearly 600 tons of mustard agent were dumped in the area around Oct. 1, 1944. Each chemical bomb weighs 100 pounds and is nearly 32 inches long. The depth in the areas is estimated at between 1,000 and 1,500 feet.

Tad Davis, deputy assistant secretary of the Army for the environment, safety and occupational health, told reporters yesterday that the Pearl Harbor site is one of three known chemical weapons dumpsites that were found during what he described as "the largest research project" ever undertaken by the Army. The Army pored over a more than a million documents housed at the National Archives in Maryland and Washington, D.C., dealing with the way chemicals were disposed between 1919 and 1972, when the practice of ocean dumping was banned.

Besides the site the Army and the University of Hawaii scientists will examine this summer, the Army believes there are two other dumping areas in Hawaii waters.

The largest amount of chemical weapons is believed to have been dumped in an area 10 miles west of the Waianae Coast, where nearly 2,000 tons of lewisite, mustard, hydrogen cyanide and cyanogen chloride were discarded.

Lewisite and mustard are blister agents, which produce irritation and damage to the skin and mucous membranes, pain and injury to the eyes and, when inhaled, damage to the respiratory tract. Hydrogen cyanide and cyanogen chloride are blood agents, which, when inhaled, interfere with the tissue oxygenation process, especially in the brain. An additional 29 tons of mustard were disposed of 10 miles south of Pearl Harbor.

Chemical weapons were routinely dumped into the ocean from the end of World War II until outlawed by Congress in 1972, Davis added.

Except for the lewisite, the chemicals were contained in bombs, projectiles and mortar shells. The lewisite was housed in large containers. Some of the chemical bombs were 1,000-pounders containing hydrogen cyanide and cyanogen chloride.

De Carlo said the methodology will be similar to a National Oceanic and Atmospheric Administration project last year that surveyed the area known as Ordnance Reef off Pokai Bay. That survey took two weeks and combed a 5-square-mile area using sophisticated sea floor mapping and imaging equipment. NOAA concluded in March that there was little contamination from the conventional munitions found there.

<http://starbulletin.com/2007/05/25/news/story07.html>

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Army Times
May 29, 2007

Study: Sarin at root of Gulf War syndrome

By Kelly Kennedy - Staff writer
Posted : Tuesday May 29, 2007 6:22:58 EDT

As benefits administrators, officials and politicians argue the worthiness of studies on Gulf War syndrome, researchers say they have no doubts that they've found the root of the problem.

Sarin gas.

And they have advice for as many as 300,000 troops exposed to small doses of sarin in 1991: Don't use bug spray, don't smoke and don't drink alcohol.

"Don't do anything that would aggravate a normal, healthy body," said Mohamed Abou-Donia, a neurobiology scientist at Duke University who conducted two studies for the Army.

Research released in early May showed that 13 soldiers exposed to small amounts of sarin gas in the 1991 Gulf War had 5 percent less white brain matter — connective tissue — than soldiers who had not been exposed. A

complementary report showed that 140 soldiers who were exposed had the fine motor skills of someone 20 years older — what researchers called a “direct correlation” to exposure.

The data was the work of Roberta White, chairwoman of the Department of Environmental Health at Boston University School of Public Health.

Her study was noteworthy because it was funded by the Veterans Affairs and Defense departments, and used Pentagon data to triangulate the locations of troops who were in the path of a huge sarin plume unleashed when U.S. forces destroyed an Iraqi chemical weapons dump in Khamisiyah in March 1991. The study also used new technology to look at troops’ brains.

Of the 700,000 service members who served in Desert Storm, 100,000 have reported mysterious symptoms. Until recently, each study commissioned by the VA and Pentagon concluded the problems were caused by stress and had no physical cause.

“We’ve been asking for this for so long,” said Denise Nichols, a Gulf War veteran who spends much of her time fighting for more information. “It’s not surprising to me. It’s what I would expect.”

Nichols, like the other veterans, has heart palpitations, a cough, nose bleeds, joint aches, spine pain, twitching in her legs and leg pain. She also reacts to strong chemical smells with coughing so heavy she can’t breathe, she said.

The issue surged to the fore in a Senate hearing Wednesday as Sen. Patty Murray, D-Wash., asked if the VA would send out letters to veterans who may have been affected, as they did to 100,000 troops at higher risk of brain cancer because of sarin exposure.

Murray called the study a “great example” of how recent research can provide guidelines for care. It seems easy enough: If a soldier complains of Gulf War syndrome, why not check him out with an MRI?

She called the study’s findings “overwhelming,” but noted that the VA’s response, once again, was merely: “We’re going to study this.”

“They were told, ‘It’s all in your head, you’re making it up.’ Now there is a study that provides a direct link. They deserve to know the answer,” Murray said.

Sen. Bernie Sanders, I-Vt., called the research “profound.”

“We started out by denying there was any problem,” he said. “It shows that many soldiers may have suffered brain damage.”

Dr. Gerald Cross, acting principal deputy undersecretary for health at the Veterans Health Administration, agreed with Murray that troops deserve answers.

But Cross said Sanders’ description of the findings “is different from how I read it.” Cross called the findings of White’s research a “slight anatomical variation.”

The debate over this issue goes back 16 years to when U.S. forces blew up the chemical munitions dump in Khamisiyah and released a plume of sarin gas to which thousands of U.S. troops were exposed — something the Pentagon denied until 1997.

As more research was done, and as veterans systematically sought details through the Freedom of Information Act, scientists showed Desert Storm vets exposed to sarin were at higher risk for brain cancer. And the veterans eventually showed the Pentagon knew that as many as 300,000 service members had breathed in small doses of the toxic fumes.

Paul Sullivan, of Veterans for Common Sense, said he filed FOIA requests in 1994, and then helped ensure research was made public that showed veterans were not making up their illnesses.

Eventually, 10 years after the Gulf War, the Research Advisory Committee on Gulf War Veterans’ Illnesses was created by Congress. It held meetings to determine what needed to be done, to review research, and to fund further research outside the VA and Defense Department, Sullivan said.

“That’s why, in the last few years, you’ve seen all the sarin, depleted uranium and pyridostigmine bromide research,” Sullivan said. “It’s a bittersweet victory because people waited so long.”

To date, he said, no one has contradicted that research. As such, Sullivan said he thinks every Gulf War veteran should automatically be presumed to have been exposed to sarin.

In 1999, working on behalf of the Rand Corp., Beatrice Golomb, professor of internal medicine at the University of California, San Diego School of Medicine, reviewed every study she could find on the issue. She said it was the first time anyone had pulled all that research together.

Golomb said she found a link between symptoms of Gulf War veterans and their exposure to sarin, pyridostigmine bromide (PB) and bug repellent, all of which overstimulate muscles by inhibiting acetylcholinesterase, a chemical that signals muscles to stop moving. The tongue, being a big muscle, eventually cuts off a person’s ability to breathe if it is overstimulated.

In the case of the bug repellent, the ill effects are aimed at the bug, not the person wearing the repellent.

In large enough amounts, PB is harmful, but in small doses it acts to prevent nerve agents from overstimulating muscles, and the effects of PB itself are temporary and reversible.

Exposure to sarin alone would be problematic enough. But for Gulf War veterans, exposure to sarin as well as PB and/or bug repellent may have been what ushered in Gulf War syndrome.

Abou-Donia's research showed the combination of nerve agents, PB, bug spray and stress could cause any of those chemicals — as well as any lurking viruses — to cross the blood-brain barrier, causing other problems. He said he has no doubt there are other long-term effects of low doses of sarin on other body systems, citing chronic fatigue, muscle weakness and fibromyalgia as symptoms.

White's work came in the wake of animal research that showed persistent central nervous system effects and acetylcholinesterase inhibition following exposure to sarin at levels too low to produce clinically observable symptoms.

The use of PB among troops, and PB's potential role in Gulf War syndrome in combination with other substances, also has been scrutinized.

PB slows the effects of nerve agents, giving troops more time to self-administer antidotes. Research has shown PB offers troops a better chance of survival against the nerve agent soman, rather than sarin, because soman works much quicker than sarin.

Golomb's research showed that just before the Gulf War, the U.S. government knew Iraqi leader Saddam Hussein had sarin in his arsenal, but had no evidence he possessed soman.

As such, she said "there was no benefit" to giving troops PB to increase their survival odds in the event of a sarin attack as long as they had access to the antidote, she said.

Yet according to the Pentagon, about 250,000 troops were given PB during the Gulf War.

Golomb said the U.S. military changed its PB policy because of the report she did for Rand and is not dispensing it to troops in the current war in Iraq.

John Rash, who did research on PB for the Pentagon in the late 1970s and early 1980s, was charged with ensuring people could react with their antidotes quickly enough to prevent nerve gas poisoning.

Rash's research looked at the long-term effects of PB in combination with sarin and soman on rats. At first, he said, the filaments separating muscle cells "turned to soup." But within days, the membranes reappeared and the rats seemed to have recovered.

"That's what made the Army particularly like our study," he said.

But he said he didn't look at how the drug would affect any other body system. And, he said, he knew the combination of stress and drugs could cause the agents to cross the blood-brain barrier.

Rash said his study was never published because the U.S. military didn't necessarily want to publicize the results during the Cold War era. But he said it will come out within the next two years.

A human study in 1997 showed subtle deficits in short-term memory and attention, a slight elevation of hospitalization for circulatory diseases, and a twofold increase in brain cancer deaths more than four years after exposure.

To Abou-Donia, the connection became clear after terrorists hit a Tokyo subway with sarin in 1995. Hospital workers who were never in the subway but who worked with sickened passengers came down with the same symptoms reported by Gulf War vets.

"At last they can have peace of mind because they know what it was, most likely," he said.

But, he said, there isn't much that can be done now — although he cautioned Gulf War vets not to use insecticide.

"It's kind of too late to do much of anything," he said. "But the body has many redundant systems. Usually, if the damage is small, other neurons will take over. As time goes by, people will adapt."

A list of units exposed to sarin in the 1991 Gulf War is [online](#).

http://www.armytimes.com/news/2007/05/military_sarin_gulfwar_070525w/

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New York Times

May 26, 2007

Pg. 10

Missile Defense Test Is Halted After The Target Rocket Fails

By Thom Shanker

WASHINGTON, May 25 — A highly anticipated test of a new Pentagon system to defend against long-range ballistic missiles was halted early on Friday because the target rocket fell far short of the designated interceptor range in the Pacific, officials announced.

Since the attacking rocket and dummy warhead never reached the area to be defended, the missile interceptor was never launched from its base at Vandenberg Air Force Base, north of Santa Barbara, Calif., officials said.

The Missile Defense Agency will categorize the aborted mission as a “no test,” because no new information was generated on the overall system, including the interceptor, radar and command systems. “We were not able to get the target downrange far enough or high enough to present a threat to the system,” Lt. Gen. Henry A. Obering III, director of the missile agency, said. “It fell well short of the intended area. The system itself never had a chance to recognize it as a threat, and so did not respond to the target.”

In a telephone interview, General Obering said early information from the test range indicated that the failure was in the second motor of the three-stage target rocket, launched from Kodiak Island, Alaska. The target rocket was a Polaris intercontinental ballistic missile from a family first used to carry nuclear warheads 40 years ago.

General Obering said that the interceptor missile scheduled for the test remained ready for launching, but that it might take until August to prepare another target missile and dummy warhead. The previous major antimissile test, in September, was a success. Although designed just as a trial run of the radar at Beale Air Force Base, near Sacramento, the interceptor missile hit and destroyed the attacking rocket.

After that, another test was delayed until this week while experts perfected a system to relay test information to ground monitors from the interceptor, although that system would not be on board in wartime.

The Bush administration envisions a limited system of 40 missile interceptors at Fort Greely, Alaska; 4 at Vandenberg; and 10 in Poland. The administration calls the system a counter to a small-scale attack like one that might be initiated by countries like Iran and North Korea.

Democrats in Congress have proposed cutting money to delay the Polish program and tracking radar in the Czech Republic. In Moscow, Kremlin officials have warned that deploying the American missile-defense components to Central Europe would damage relations.

<http://www.nytimes.com/2007/05/26/washington/26missile.html>

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Los Angeles Times
May 26, 2007
Pg. 1

Arabs Make Plans For Nuclear Power

Iran's program appears to be stirring interest that some fear will lead to a scramble for atomic weapons in the volatile region.

By Bob Drogin and Borzou Daragahi, Times Staff Writers

VIENNA — As Iran races ahead with an illicit uranium enrichment effort, nearly a dozen other Middle East nations are moving forward on their own civilian nuclear programs. In the latest development, a team of eight U.N. experts on Friday ended a weeklong trip to Saudi Arabia to provide nuclear guidance to officials from six Persian Gulf countries.

Diplomats and analysts view the Saudi trip as the latest sign that Iran's suspected weapons program has helped spark a chain reaction of nuclear interest among its Arab rivals, which some fear will lead to a scramble for atomic weapons in the world's most volatile region.

The International Atomic Energy Agency sent the team of nuclear experts to Riyadh, the Saudi capital, to advise the Gulf Cooperation Council on building nuclear energy plants. Together, the council members — Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the seven sheikdoms of the United Arab Emirates — control nearly half the world's known oil reserves.

Other nations that have said they plan to construct civilian nuclear reactors or have sought technical assistance and advice from the IAEA, the Vienna-based United Nations nuclear watchdog agency, in the last year include Egypt, Jordan, Syria, Turkey and Yemen, as well as several North African nations.

None of the governments has disclosed plans to build nuclear weapons. But Iran's 18-year secret nuclear effort and its refusal to comply with current U.N. Security Council demands have raised concerns that the Arab world will decide it needs to counter a potentially nuclear-armed Iran. The same equipment can enrich uranium to fuel civilian reactors or, in time and with further enrichment, atomic bombs.

"There is no doubt that countries around the gulf are worried ... about whether Iran is seeking nuclear weapons," Gregory L. Schulte, the U.S. representative to U.N. agencies in Vienna, said in an interview. "They're worried about whether it will prompt a nuclear arms race in the region, which would be to no one's benefit."

The United States has long supported the spread of peaceful nuclear energy under strict international safeguards. Schulte said Washington's diplomatic focus remained on stopping Iran before it could produce fuel for nuclear weapons, rather than on trying to restrict nations from developing nuclear power for generating electricity.

But those empowered to monitor and regulate civilian nuclear programs around the world are worried. Mohamed ElBaradei, director-general of the IAEA, warned Thursday that the surge of interest in sensitive nuclear technology raised the risk of weapons proliferation. Without singling out any nation, he cautioned that some governments might insist on enriching their own uranium to ensure a steady supply of reactor fuel.

"The concern is that by mastering the fuel cycle, countries move dangerously close to nuclear weapons capability," ElBaradei told a disarmament conference in Luxembourg.

Iran is the obvious case in point. Tehran this week defied another U.N. Security Council deadline by which it was to freeze its nuclear program. The IAEA reported that Iran instead was accelerating uranium enrichment without having yet built the reactors that would need the nuclear fuel. At the same time, the IAEA complained, Iran's diminishing cooperation had made it impossible to confirm Tehran's claims that the program is only for peaceful purposes.

That has unnerved Iran's neighbors as well as members of the Security Council.

"We have the right if the Iranians are going to insist on their right to develop their civilian nuclear program," said Mustafa Alani, a security expert at the Gulf Research Center, a think tank based in Dubai, United Arab Emirates.

"We tell the Iranians, 'We have no problem with you developing civilian nuclear energy, but if you're going to turn your nuclear program into a weapons program, we'll do the same.' "

Iran sought to rally Arab support for its nuclear program at the World Economic Forum meeting of business and political leaders this month in Jordan.

"Iran will be a partner, a brotherly partner, and will share its capabilities with the people of the region," Mohammed J.A. Larijani, a former deputy foreign minister, told reporters.

Arab officials were cool to his approach, however, and openly questioned Iran's intentions.

The IAEA team's weeklong foray to Saudi Arabia followed ElBaradei's visit to the kingdom in April. The Gulf Cooperation Council plans to present the results of its study on developing nuclear plants to the leaders of council nations in the Omani capital of Muscat in December.

"They don't say it, but everyone can see that [Iran] is at least one of the reasons behind the drive to obtaining the nuclear technology," said Salem Ahmad Sahab, a professor of political science at King Abdulaziz University in Jidda, Saudi Arabia. "If the neighbors are capable of obtaining the technology, why not them?"

Officially, leaders of the Arab gulf states say they are eager to close a technology gap with Iran, as well as with Israel, which operates two civilian reactors and is widely believed to have built at least 80 nuclear warheads since the 1960s. Israel does not acknowledge its nuclear arsenal under a policy aimed at deterring regional foes while avoiding an arms race.

Advocates argue that the gulf states need nuclear energy despite their vast oil and natural gas reserves.

The region's growing economies suffer occasional summer power outages, and the parched climate makes the nations there susceptible to water shortages, which can be offset by the energy-intensive processing of seawater.

"The promising future of nuclear energy in electricity generation and desalination can make it a source for meeting increasing needs," Abdulrahman Attiya, the Kuwaiti head of the Gulf Cooperation Council, told the group this week in Riyadh.

Attiya also cited long-term economic and environmental advantages to nuclear energy.

"A large part of Gulf Cooperation Council oil and gas products can be used for export in light of expected high prices and demand," he said. "It will also help to limit the increase in carbon dioxide emissions in the gulf region."

It remains unclear how many countries will carry through on ambitious and enormously expensive nuclear projects. In some cases, analysts say, the nuclear announcements may be intended for domestic prestige, and as a signal to Iran that others intend to check its emergence as a regional power. As a result, some analysts say fears of a nuclear arms race in the Middle East are overblown.

"Those who caricature what's going on as Sunni concern about a Shiite bomb are really oversimplifying the case," said Martin Malin, a nuclear expert at Harvard University's Kennedy School of Government, referring to Sunni Muslim-led Arab countries and Shiite Muslim-led Iran.

Aggressive international monitoring, he contended, could ensure that nuclear energy programs don't secretly morph into weapons capabilities.

"If what Jordan is really concerned about is energy, and the U.S. is concerned about weapons, all kinds of oversight can be provided," Malin said.

A Russian diplomat here similarly cautioned that Iran's influence on other nations' nuclear plans might be overstated. "I should be very cautious about any connection between these two things," he said. "We don't deny that even Iran has the right to peaceful nuclear activities."

Although enthusiasm for prospective nuclear programs appears strongest in the Middle East, governments elsewhere have displayed interest in atomic power after years of decline in the industry that followed the 1979 reactor accident

at Three Mile Island in Pennsylvania and the far worse 1986 radiation leak at Chernobyl in Ukraine. About 30 countries operate nuclear reactors for energy, and that number seems certain to grow.

"There's certainly a renaissance of interest," said an IAEA official who works on the issue. "And there's likely to be a renaissance in construction over the next few decades."

IAEA officials say the largest growth in nuclear power is likely to occur in China, India, Russia, the United States and South Africa, with Argentina, Finland and France following close behind. The United States has 103 operating plants, more than any other country, and as many as 31 additional plants are under consideration or have begun the regulatory process.

And there are other nations in line. Oil-rich Nigeria and Indonesia are preparing to build nuclear plants. Belarus and Vietnam have approached the IAEA for advice. Algeria signed a deal with Russia in January on possible nuclear cooperation. Morocco and Poland are said to be considering nuclear power. Myanmar disclosed plans to purchase a Russian research reactor.

Even Sudan, one of the world's poorest countries, has expressed interest.

"When Sudan shows up, we say, 'You're in a real early stage and here's what you need. A law. Get people trained. Build roads. And so on,' " the IAEA official said.

So far, the nuclear programs around Iran are in the early planning stages. Alani, the security expert in Dubai, said most of the nations in the region were scoping out the possibilities but had made no final decisions or begun constructing facilities.

"They feel it's a right and significant move at least to put [their] foot in the door of civilian nuclear energy," he said.

"It's not a race, not yet."

Drogin reported from Vienna and Daragahi from Dubai.

<http://www.latimes.com/news/nationworld/world/la-fg-nuclear26may26.1.754545.story>

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New York Times

May 30, 2007

Russia Hails Test Of A New Missile It Says Can Pierce Defense Shields

By C. J. Chivers

MOSCOW, May 29 — Russia held a test launching of a new intercontinental ballistic missile on Tuesday and said it had successfully fired the weapon almost entirely across its northern airspace to the Russian Far East.

The launching of the missile, which traveled more than 5,000 miles and was covered extensively on state television, occurred as President Vladimir V. Putin again chided the West for American-led plans to install an antimissile shield in Europe.

"We think it would be harmful and dangerous to turn Europe into a tinderbox and fill it with new types of armaments," Mr. Putin said, according to the official Itar-Tass news agency.

Russian officials also pointedly said that the new missile, known as the RS-24, had been fired from a mobile launcher and that it could carry as many as six warheads that could not be defeated by current or future missile-defense systems.

All of the RS-24's warheads were recorded as striking their targets at a test range in Kamchatka, near the Pacific Ocean, officials said.

"In terms of defense and security, Russians can look calmly to the country's future," First Deputy Prime Minister Sergei B. Ivanov said, Itar-Tass reported.

The extensive coverage of the test appeared to be directed at Russia's domestic audiences, and the United States reacted calmly.

An American diplomat, speaking on condition of anonymity, said the missile was well known to Western governments, and that its launching complied with ballistic missile treaties. "This is well within the Start II treaty limitations, and they met the treaty requirements by giving us advance notice," the diplomat said. "It's not a matter of concern."

The Kremlin, angered by Western criticism of its conduct and preparing for parliamentary elections in the fall and presidential elections next year, has been speaking in strong terms against the West for several months.

It is also in deep disagreements with the West over NATO expansion and the European missile defense shield proposed by the United States.

http://www.nytimes.com/2007/05/30/world/europe/30russia.html?_r=1&oref=slogin

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Boston Globe
May 30, 2007

Russia Says New Missile Can Beat Any System

Putin warns US on Europe-based defense shield

By Steve Gutterman, Associated Press

MOSCOW -- Russia tested new missiles yesterday that a Kremlin official boasted could penetrate any defense system, and President Vladimir Putin warned that US plans for an antimissile shield in Europe would turn the region into a "powder keg."

First Deputy Prime Minister Sergei Ivanov said Russia tested an intercontinental ballistic missile capable of carrying multiple independent warheads, and it also successfully conducted a preliminary test of a tactical cruise missile that he said could fly farther than existing, similar weapons.

"As of today, Russia has new tactical and strategic complexes that are capable of overcoming any existing or future missile defense systems," Ivanov said, according to the ITAR-Tass news agency. "So in terms of defense and security, Russians can look calmly to the country's future."

Ivanov is a former defense minister seen as a potential Kremlin favorite to succeed Putin next year. Both he and Putin have said repeatedly that Russia would continue to improve its nuclear arsenals and respond to US plans to deploy a missile defense system in Poland and the Czech Republic -- NATO nations that were in Moscow's front yard during the Cold War as Warsaw Pact members.

Russia has bristled at the plans, dismissing US assertions that the system would be aimed at blocking possible attacks by Iran and saying it would destroy the strategic balance of forces in Europe.

"We consider it harmful and dangerous to turn Europe into a powder keg and to fill it with new kinds of weapons," Putin said at a news conference with visiting Portuguese Prime Minister Jose Socrates.

Russian arms control expert Alexander Pikayev said the new ICBMs appeared to be part of Russia's promised response to the missile defense plans and, more broadly, an effort to "strengthen the strategic nuclear triad -- land-based, sea-based and air-based delivery systems for nuclear weapons -- which suffered significant downsizing" amid financial troubles after the 1991 Soviet collapse.

The ICBM, called the RS-24, was fired from a mobile launcher at the Plesetsk launch site in northwestern Russia. Its test warhead landed on target some 3,400 miles away on the Far Eastern Kamchatka Peninsula, the Strategic Missile Forces said in a statement.

The new missile is seen as eventually replacing the aging RS-18s and RS-20s that are the backbone of the country's missile forces, the statement said. Those missiles are known in the West as the SS-19 Stiletto and the SS-18 Satan.

The RS-24 "strengthens the capability of the attack groups of the Strategic Missile Forces by surmounting antimissile defense systems, at the same time strengthening the potential for nuclear deterrence," the statement said.

Ivanov said the missile was a new version of the Topol-M, first commissioned in 1997 and known as the SS-27 in the West, but one that can carry multiple independent warheads, ITAR-Tass reported. Existing Topol-M missiles are capable of hitting targets more than 6,000 miles away.

Pikayev, a senior analyst at the Moscow-based Institute for World Economy and International Relations, said that little had been revealed about the missile's development, but that Russia has been seeking to improve its capability to penetrate missile defense systems and that the new missile would likely answer to that goal.

He said that Russia had been working on a version of the Topol-M that could carry MIRVs -- Multiple Independently Targetable Reentry Vehicles -- and that its development was probably inevitable after the US withdrew from the 1972 Anti-Ballistic Missile treaty in 2002 in order to develop a national missile defense.

Pikayev concurred with the missile forces' statement that the RS-24 conforms with terms laid down in the START-I treaty.

http://www.boston.com/news/world/europe/articles/2007/05/30/russia_says_new_missile_can_beat_any_system/

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International Herald Tribune
May 25, 2007

Studying anthrax in a Soviet-era lab - with Western funding

By Daria Vaisman

TBILISI, Georgia: Dali Gogiashvili has worked as a scientist at the Eliava biological institute here for 30 years, but only recently, after a pause of more than a decade, has she come back to what she knows best: anthrax.

Gogiasvili and other scientists at the institute have resumed their research thanks to funding from the Pentagon, the North Atlantic Treaty Organization and several U.S. groups, which stepped into the void created by the collapse of the Soviet Union and Georgian independence in 1991.

"After the end of the Soviet Union we couldn't work on anthrax anymore," Gogiasvili said. "During the last few years, they've restored the work."

The Eliava institute has worked with anthrax and other diseases since it was set up in 1923. It later received support from Stalin, a native Georgian.

With concerns increasing over possible bioterrorist attacks, Eliava is just one of many Soviet-era science institutes to receive U.S. and European funding, intended to prevent dangerous Soviet-produced pathogens from falling into the wrong hands.

But scientists have another interest at Eliava as well: its work on bacteriophages, naturally occurring viruses that can be cultivated to target and kill specific strains of infectious bacteria.

The institute currently has one of the largest collections of bacteriophage samples in the world, and its scientists are considered among the best.

"Eliava is a brand name in bacteriophages," said the institute's new director, Revaz Adamia, who was the Georgian ambassador to the United Nations until taking up his current post in October.

In Soviet days, Eliava employed up to 800 scientists, who churned out hundreds of tons of bacteriophages each year. They were given to doctors to treat common infections from bacteria like staphylococcus and streptococcus, much like antibiotics. They were also given to the Soviet Army to prevent outbreaks of dysentery in Central Asia.

But bacteriophages were also used to produce vaccines, treatments and detection kits for a number of pathogens - including anthrax, botulism and brucellosis - that experts now consider likely to be used by terrorists in the event of a biological attack.

A growing number of researchers say that bacteriophages, and the enzymes derived from them, could have far-reaching potential in the next generation of treatments against biological weapons.

David Trudil, executive vice president of the American biotech firm New Horizons, who works with both Eliava and the U.S. Department of Energy, said: "There are bacteriophages that may be useful in targeting genetically modified organisms that current detection systems or antibiotics aren't effective against."

The Eliava Institute went into a tailspin in the 1990s when Russia cut off all funding. A number of its laboratories were sold off, and severe electricity shortages destroyed half the institute's bacteriophage samples.

Remnants of the recent past - exposed ceilings, unheated rooms and chipped green paint - now stand in sharp relief to newly pristine and well-equipped laboratories, as the sounds of construction ring through the institute.

"Renovation is everywhere," said Aleksandra Kavtaradze, one of Eliava's mostly female staff, who has worked at the institute for 45 years.

The Pentagon's Defense Threat Reduction Agency has given \$400,000 for a new roof and other repairs, and another \$500,000 for a bacteriophage project on cholera, one of the biggest causes of death among children in the developing world.

The Pentagon agency's liaison in Georgia, C.J. Nutter, swept through the halls in a hard hat and loosened red tie, blueprints in hand, but declined to comment on the project. "Our policy is to let them speak for the program themselves," he said.

Other funders include the Civilian Research & Development Foundation of the U.S. National Science Foundation, the State Department's Biotechnology Engagement Program, and NATO. Direct grants have totaled \$4 million in recent years.

A current project with Battelle, an Ohio-based research enterprise that works with the U.S. Department of Energy, uses bacteriophages to develop a faster and more precise anthrax detection system that could replace the current version. Such a system could detect quantities of anthrax bacteria in the environment, whether in the air or on a surface.

One of Eliava's biggest backers is the International Science and Technology Center, a Moscow-based nonproliferation organization set up in 1992, after the fall of the Soviet Union, to prevent Soviet weapons scientists from sharing material or information. Funders include the European Union, Canada, Japan and the United States. Scientists familiar with the research being conducted at Eliava say that the institute's work appears to be purely defensive and not applicable to the production or use of biological weapons.

"The work that I know about at the Eliava Institute would be useful only for the treatment of infections, the diagnosis of disease, or the detection of the agents in the environment," said David Robinson, chief biologist of the Battelle branch in Crystal City, Virginia. Battelle company receives U.S. government contracts for projects related to national security.

Sonia Ben Ouagrham-Gormley, senior project manager at the Washington branch of the Center for Nonproliferation Studies, a nongovernmental organization, agreed. "Currently I don't think there is any risk that they are producing biological weapons," she said.

Meanwhile, many see commercial potential for bacteriophages in the treatment of common antibiotic-resistant infections.

This idea has met resistance from the U.S. Food and Drug Administration, due in part to the fact that bacteriophages are active agents and change constantly, making safety trials prohibitively expensive for the agency.

The pharmaceutical industry, too, has expressed doubts about commercial use because it is difficult to patent bacteriophages, which occur naturally.

Nonetheless, the State Department's BioIndustry Initiative met with Eliava staff in March to discuss potential licensing agreements, while a U.S.-based biotechnology firm, Phage International, opened the world's first bacteriophage medical tourist facility in Tbilisi in 2005.

The Eliava institute has "maintained an international reputation for leadership in a novel technology," said Chris Robinson, director of the U.S. Civilian Research and Development Foundation's nonproliferation programs. "As they get more interest from partners in the U.S. and other countries, it's going to be great to watch them grow."

<http://www.iht.com/articles/2007/05/25/news/institute.php>

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Washington Examiner

June 1, 2007

Pentagon To Run Biohazard Cleanup Test

By Maria Hegstad, The Examiner

Arlington - Pentagon officials will test the effectiveness of cleanup measures during a simulated biohazard attack Saturday.

A harmless dust used in organic farming will be released near the Pentagon's south parking lot from the back of a moving truck. As many as 50 volunteers will stand in the parking lot and be "treated" by Pentagon and Arlington County emergency response teams.

The event is a test, not an exercise, said Paul Benda, director of the Pentagon's chemical, biological, radioactive and nuclear directorate. Benda's office is responsible for protecting the Pentagon, Navy Annex and about 30 other buildings in the Washington area from such attacks.

Testers want to determine the amount of dust that lands on the people and cars in the parking lot, and the most effective method of removing it. Arlington County Fire Department trucks will pump water to decontaminate the volunteers and cars.

The test is part of a five-year process to put an automated biohazard sensor system into place, Benda said. Sensors are used because biohazard attacks are hard to see and often do not cause immediate illness. When the system is operational, sensors that detect an airborne biohazard will automatically alter the heating and air conditioning systems at the defense buildings to reduce the biohazard's impact, Benda said.

After the Sept. 11, 2001, attacks, letters containing the biohazard anthrax sickened a score of people and killed two employees at the Brentwood postal facility in the District.

Benda would not say if the system is operating at the Pentagon now. The system will also be extended to Arlington County, Benda said.

The test will be conducted between 8 a.m. and 1 p.m. Saturday.

[http://www.examiner.com/a-758084~Pentagon to run biohazard cleanup test.html](http://www.examiner.com/a-758084~Pentagon+to+run+biohazard+cleanup+test.html)

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New York Times

June 1, 2007

No Breakthrough As Iranian Nuclear Talks Recess

By Victoria Burnett and Helene Cooper

MADRID, May 31 — Talks between Iran's nuclear negotiator and a top envoy for the European Union ended late Thursday with few signs they were closer to breaking their deadlock over Iran's nuclear ambitions.

Javier Solana, the European Union's foreign policy chief, said talks with Ali Larijani, the Iranian negotiator would start again within weeks.

“We cannot say that there has been a fundamental breakthrough, but what we can say is that we have advanced in many important subjects,” Mr. Solana told a brief news conference after the four-hour meeting just outside Madrid. Exactly one year after the Bush administration offered to reverse almost three decades of American foreign policy and enter European nuclear talks with Iran, Washington and Tehran are holding to the same entrenched positions regarding Iran’s uranium enrichment activities. Enriched uranium can be used to produce nuclear fuel, but at much higher grades can be used in nuclear warheads.

Secretary of State Condoleezza Rice accused Iran on Thursday of trying to “perfect technologies that are going to lead to a nuclear weapon.” She said the United States and its allies would continue to seek to isolate Iran financially if it did not suspend its enrichment program. She repeated the American ultimatum that the United States would seek action both within and outside the United Nations Security Council if Iran did not accept the offer to talk, along with the strings attached.

“The question is not why won’t we talk to Tehran, but why won’t Tehran talk to us,” Ms. Rice told a news conference at a meeting of international political leaders.

Mr. Larijani dismissed the possibility of suspending uranium enrichment on Thursday, telling journalists in Madrid that Tehran had “abandoned the suspension issue,” but that it was nonetheless “quite serious about reaching out for a solution to these problems as soon as possible.”

Mr. Solana acknowledged before the meeting with Mr. Larijani that hopes for a breakthrough were slim. “It’s true that as time goes by, if the situation continues, probably the agreement will be more complicated,” Mr. Solana said. “I will try to see if we can pave the way in order to get into formal negotiations.”

Foreign ministers of the Group of 8 industrialized nations issued a statement on Wednesday that “if Iran continues to ignore demands of the Security Council, we will support” more sanctions at the Security Council, which has already passed two sets of mild sanctions against Iran in the past six months.

A European official briefed on the talks said Mr. Larijani hinted, ahead of talks in Turkey last month, to diplomats involved in the negotiations that Iran might be prepared to suspend partly its enrichment process as a condition for lifting sanctions and beginning formal talks. The Associated Press reported Wednesday that this nascent proposal was dismissed by European diplomats and then withdrawn by Iran.

Bush administration officials have refused to talk to Iran about its nuclear program, holding out American participation in Iran’s nuclear talks with Europe as a carrot to be given to Iran only if Tehran first agrees to suspend uranium enrichment.

Victoria Burnett reported from Madrid and Helene Cooper from Vienna.

<http://www.nytimes.com/2007/06/01/world/europe/01diplo.html>

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New York Times

June 1, 2007

India And U.S. Try To Rekindle Stalled Talks On A Nuclear Pact

By Amelia Gentleman

NEW DELHI, May 31 — Talks intended to restart stalled negotiations on a landmark nuclear pact between India and the United States began here on Thursday amid disagreement over India’s right to continue testing nuclear weapons and process spent fuel.

When the nuclear deal was first announced almost two years ago, it was seen as symbolic of a new strategic partnership between India and the United States. But negotiations over the details have made only slow progress as both countries have shied away from making politically delicate concessions.

R. Nicholas Burns, the United States under secretary of state for political affairs, arrived in New Delhi on Thursday and went directly into meetings with Foreign Secretary Shiv Shankar Menon in an attempt to broker a compromise before an expected meeting between President Bush and Prime Minister Manmohan Singh on the sidelines of the Group of 8 summit meeting in Germany next week.

Once finalized, the deal would overturn 30 years of American sanctions on the sale of civilian nuclear technology — fuel and reactors — to India. It would give India the status of a “responsible” nuclear power, even though it has refused to sign the Nuclear Nonproliferation Treaty.

Before the talks, American officials said they were optimistic that solutions could be found. “There is considerable work to be done on what is a very technical and detailed agreement,” David C. Mulford, the United States ambassador to India, said in a statement. “We want to finish as soon as we can and both sides are positive we can do this.”

Mr. Burns, who last month expressed frustration at the slow pace of the talks, said this week in Washington that the deal would “continue to require hard work and difficult compromises to reach completion.” But he added, “Despite

some difficulties of late, I believe we will reach the mountaintop and realize the enormous promise of this breakthrough agreement.”

Supporters of the deal in the United States are concerned that the longer the negotiations continue, the less time there will be to push the deal through before the Bush administration draws to a close.

For Indian officials, the main obstacle to an agreement is an American requirement that a voluntary moratorium on testing nuclear weapons be converted into a legally binding commitment, meaning that the United States could withdraw nuclear fuel supplies if India decided to test another nuclear weapon.

India’s unilateral commitment not to test nuclear weapons is “obviously contingent on existing conditions continuing,” M. R. Srinivasan, a former chairman of India’s Atomic Energy Commission, wrote in the newspaper The Hindu on Thursday. If “China, Pakistan or another country were to test, then clearly India cannot be expected to continue its moratorium.”

<http://www.nytimes.com/2007/06/01/world/asia/01india.html>

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