#159
26 Mar 2002

USAF COUNTERPROLIFERATION CENTER

CPC OUTREACH JOURNAL

Air University
Air War College
Maxwell AFB, Alabama

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USAF Counterproliferation Center Annual Conference

2-3 May 2002

"Countering the Asymmetric Threat of NBC Warfare and Terrorism"

held at the

William F. Bolger Center for Leadership Development in Potomac, MD.

Look for link to register On-Line and the proposed agenda at our web site above.

Click on May 2-3, 2002 Conference.

CONTENTS

Bioterrorism Experts Head to Atlanta

Mon Mar 25, 3:16 PM ET

By ERIN McCLAM, Associated Press Writer

ATLANTA - Hundreds of health officials descended on Atlanta this week for an annual conference on emerging infectious diseases and were warned that terrorists might try to spread deadly germs through the food supply.

Terrorists could try to make the biological attack even more dangerous by taking down critical communications systems, according to experts from the Centers for Disease Control and Prevention (news - web sites).

"The national system was overwhelmed" by the anthrax scare last fall, said Dr. James Hughes, chief of infectious diseases at the Atlanta-based CDC. "Clearly we learned that we were not adequately prepared. This was a small attack."

The conference agenda, usually filled with sessions on obscure diseases and small outbreaks, is dominated this year by information on anthrax and smallpox — considered among the most dangerous terrorist agents.

The anthrax-by-mail attacks killed five people last fall and sickened 13 others. The CDC said earlier this month that a Texas laboratory worker handling anthrax specimens became infected with the bacteria and is recovering.

Hughes said health experts must consider the possibility of genetically altered germs, the release of more than one agent at a time, or transmission through animals and the food supply.

To guard against deadlier attacks, the CDC is distributing $918 million to state and local health departments later this year and next year. The CDC is encouraging them to give priority to upgrading labs and training health workers on how to recognize diseases like anthrax and smallpox.

During and after the anthrax mailings, the CDC was criticized for not communicating clearly to the public about what was myth and what was a real danger. Hughes said some of the millions of dollars to be doled out to prepare for bioterrorism must address communication.

"Clearly, that was something that did not work well during the anthrax attacks," he said. "Our lives have changed. We will be prepared."

The conference also included a refresher course on smallpox, a highly contagious and deadly disease not seen in humans in a generation.

The CDC and a Moscow laboratory hold stocks of the virus, and experts worry that samples could fall into the wrong hands and be converted into a terrorist weapon.

Dr. Stanley Foster of Emory University, who was part of the team that eradicated smallpox, said the United States could react swiftly to a smallpox release, but other countries are extremely vulnerable, with no vaccine or weak public health systems.

Three Johns Hopkins University researchers suggested shutting down all air travel in and out of cities after even one case of smallpox is reported to avoid rapid spread of the disease.

"We could easily have 100 million cases and 20 million deaths," Foster said. "Are we going to be able to prevent it?"

http://story.news.yahoo.com/news?tmpl=story&u=/ap/20020325/ap_on_re_us/bioterrorism_1

Surgeon-turned-senator writes book on how to prepare for bioterrorism

Thu Mar 28, 2:09 PM ET

By NANCY ZUCKERBROD, Associated Press Writer

WASHINGTON - It was 2 a.m. when Sen. Bill Frist (news, bio, voting record) received a call from a concerned acquaintance wanting to know if the rash on her son's knees was from anthrax.

The question was one of many put to the surgeon-turned-senator last fall when anthrax-laced letters first turned up. The scare thrust Frist into the spotlight, as colleagues and others looked to him to explain what was happening.

Now Frist has written a book, "When Every Moment Counts: What You Need to Know About Bioterrorism from the Senate's Only Doctor."

"Look in the index, find your question and get an answer rather than toss and turn though the night worrying whether that rash that you have is anthrax or tularemia or smallpox," said Frist, R-Tenn.

At the time of the anthrax outbreaks, Frist's Web site was one of the few that gave information on how to handle mail and what to do in case of exposure. At the height of the scare, it was getting 40,000 hits a day, compared with a few hundred before.
Most of Frist's book is written in a question-and-answer format, which Frist hopes will make it easier to follow. "Otherwise it's kind of boring to read about botulism toxin," he said. "But when you ask a question and the answer is it's the strongest poison known to mankind, and you learn that a few drops in a bottling plant would have an impact, all of a sudden you begin to think about those things."
Frist, 50, was a heart-lung transplant surgeon before ousting three-term Democratic Sen. Jim Sasser in 1994. He won re-election in November 2000.
Stories about terrorism are interspersed throughout his book, including a description of how a cult in Oregon contaminated salad bars with salmonella bacteria in 1984.
Also included is practical information, such as what supplies to keep on hand in case of an attack and which gas masks offer the most protection.
The book offers some stark images, such as a chest X-ray of one of last year's anthrax victims and a heartbreaking image of a baby who developed lesions from smallpox vaccine.
Frist said he is trying to educate and motivate people, not scare them.
"The goal is to reduce the potential for panic and paralysis and to transform that potential into resolve, into calmly facing what can be done," he said.
Frist said he will donate the royalties to the Tennessee Public Health Association for bioterrorism training for health professionals.
http://story.news.yahoo.com/news?tmpl=story&u=/ap/20020328/ap_to_po/frist_bioterrorism_1

Combating Terrorism: Key Aspects of a National Strategy to Enhance State and Local Preparedness, by Patricia Dalton, director, strategic issues, before the Subcommittee on Government Efficiency, Financial Management, and Intergovernmental Relations, House Committee on Government Reform, in Long Beach, California.GAO-02-549T, March 28.
http://www.gao.gov/cgi-bin/getrpt?GAO-02-549T

Washington Post
March 27, 2002
Pg. 22

Anthrax Vaccine Doesn't Affect Fertility, Study Finds

The anthrax vaccine does not appear to harm women's fertility, according to a study of Army soldiers.
The study involved Army women who were not believed to have been pregnant when they got their shots. It found that the vaccine appears to have no ill effects on pregnancy rates and birthrates.
The study also suggested the vaccine does not increase the risk of birth defects when given to nonpregnant women. But those results were not conclusive because very few pregnancies occurred among the soldiers studied, the researchers said.
The study by Andrew Wiesen and Christopher Littell of Madigan Army Medical Center in Tacoma, Wash., appears in today's Journal of the American Medical Association.
The findings follow reports earlier this year about preliminary Navy data suggesting a possible link between birth defects and the anthrax vaccine when given to women in early pregnancy.
Associated Press

Washington Post
March 27, 2002
Pg. 9

Report Cites Unaccounted Plutonium

Amounts Sufficient to Create 'Dirty Bomb,' Official Says

By Walter Pincus, Washington Post Staff Writer

The Energy Department cannot fully account for small amounts of potentially dangerous plutonium provided under a 1954 Atoms for Peace program to 33 countries including Iran, Pakistan and India, according to an inspector general report released yesterday.

Some of the plutonium, which was packed in sealed capsules, contained between 16 and 80 grams of the radioactive material and "would be a serious health hazard if damaged," an official familiar with the report said.

"They would be able to create a dispersal device," the official said, referring to "our concern being the dirty bomb."

Although it would take more than six pounds of plutonium to create a nuclear explosion, the chemical explosion of radioactive material in a "dirty bomb" could spread minute amounts of plutonium that, if inhaled or ingested, could be fatal, said Thomas B. Cochran, a physicist with the Natural Resources Defense Council.

The Energy Department inspector general report noted that the plutonium capsules sent overseas were supposed to be followed through a Sealed Source Registry, but that program was discontinued by the Reagan administration in 1984.

The capsules, which were distributed under the Atoms for Peace program until the late 1970s, were intended for use in calibrating radiation-measuring devices or for research.

The Clinton administration disclosed in 1996 that the United States had distributed abroad "approximately two to three kilograms of plutonium mostly in the form of sealed sources to foreign countries since the late 1950s."

Among the other countries that received sealed plutonium capsules were Brazil, Israel, the Philippines, Taiwan, Malaysia, Greece, Colombia, Thailand, Turkey, Venezuela and Vietnam.

At that time it was unclear as to the ownership of the plutonium capsules because some were only loaned to foreign governments and others were actually transferred. The report says "it has inconsistent historical data regarding the ownership of the material."

Robert S. Norris, a researcher for the Natural Resources Defense Council, said yesterday that U.S. nuclear assistance to Iran and India under the program helped those governments' efforts to build a bomb.

"The Atoms for Peace program was designed to put a good spin on the atom," Norris said, "and instead it has helped Iran and India to start their bomb programs."

Although relatively small amounts of plutonium are involved, Energy Inspector General Gregory H. Friedman said in his report, "Recent world events have underscored the need to strengthen the control over all nuclear materials, including sealed sources." He added, "In the wrong hands, these sources could be misused."

Denver Post
March 24, 2002
Pg. B-11

Vials Raise Fears About Lowry

Discovery hints more chemicals may lurk

By John Ingold, Denver Post Staff Writer

The discovery of 10 vials containing a suspected but unidentified chemical warfare agent has reinforced officials' fears about what may be lurking in the soil of the former Lowry Bombing and Gunnery Range east of Aurora.

'We have been under the assumption for many years that we are dealing with conventional explosive stuff' at Lowry, said Jeff Edson of the Colorado Department of Public Health and Environment.

'And unfortunately what happened this week confirmed what we always feared, that the Lowry Bombing Range was used for more than just plain explosive-type things.'
Crews digging through a burial pit at the Jeep demolition area - an area where supposedly only standard explosive weapons were used - discovered the vials on Wednesday. Two of the bottles were labeled as mustard agent, a chemical weapon that blisters the skin and lungs, if inhaled, and can cause numerous short-term and long-term damage.
The contents of the other vials have not been identified, said Jeff Edson, manager of the Colorado Health Department's remediation and restoration unit. Edson's unit oversees cleanup of all Department of Defense sites in the state.
The Lowry Bombing and Gunnery Range was used from World War II through the Vietnam War for Army munitions and ordnance training.
On Friday, Army chemical specialists moved the vials to the Pueblo Chemical Depot, just east of Pueblo.
Edson said the state decided it was safer for the specialists, part of the Army's Technical Support Team out of Aberdeen Proving Ground in Maryland, to determine what is in the vials in the security of the Pueblo facility. The Pueblo Chemical Depot houses nearly 800,000 mustard-filled munitions.
'The whole unknown of this whole issue is what is in the bottles,' Edson said. 'That's why we chose to put them in an empty isolated igloo down in Pueblo, in probably one of the safest areas in the country to go and store this stuff.'
Edson said the concern was twofold.
First, the Jeep demolition area is on a part of the 100-square-mile bombing range that is close to both Aurora Reservoir and Arapahoe Park Racetrack. Second, the bombing range is not a secure facility and officials did not want anyone trying to steal the vials for sinister purposes.
'Because there was publicity about it and that facility was not secure, we felt we didn't want to provide the risk to the public,' said Marion Galant, spokeswoman for the Health Department.
The vials are part of a training pack the Army apparently used to educate soldiers about chemical weapons, Edson said. Crews cleaning up the Jeep demolition area discovered an empty training pack on Tuesday, Edson said, and discovered the vials on Wednesday. They stopped digging when they had found 10 vials.
'We don't really know how many more bottles are in that pit,' Edson said.
The unearthing comes after numerous discoveries in recent months of other chemical and biological weapons at the bombing range, Edson said.
Right now, none of the chemicals pose a danger to the public, he said. They are sealed in containers and are buried.
But he said the existence of the weapons was enough to make him call an Army Corps of Engineers team in Huntsville, Ala., that specializes in chemical weapons to discuss how to proceed in cleaning up the Jeep demolition area and other parts of the bombing range.
'I am a little anxious to go and get the bottles identified,' he said. 'But the contents in the bottles is only a snapshot of what's out there.'

European Stars and Stripes
March 27, 2002

Peacekeepers Guarding Radioactive Cobalt Found At Kabul Hospital

By Rick Scavetta, Stars and Stripes
KABUL, Afghanistan — Dirty secrets surface in the aftermath of war, and Afghanistan is no different.
British peacekeepers discovered radioactive cobalt last week inside the ruins of Kabul University’s medical hospital.
"It emits high-energy gamma radiation," said British Capt. James Cameron, who heads a team of soldiers and airmen who specialize in nuclear, biological and chemical hazards. "We’re keeping an eye on it until we can hand it over — lock, stock and barrel — to the International Atomic Energy Agency."
Caretakers of the stored cobalt-60 apparently kept it hidden from the Taliban and al-Qaida, who could have used the element as part of a "dirty bomb," British Army spokesman Lt. Tony Marshall said.

Theoretically, a dirty bomb-maker would use nuclear waste rather than something as powerful as cobalt, officials said. Touching the element could burn a person, make them ill or even kill them. But the peacekeepers are not taking chances.

"You could break this stuff into a powder, pack it with explosives and you've got a dirty bomb," Marshall said.

Foreign intelligence agencies, including the CIA, had already combed the university grounds but failed to detect the cobalt, Cameron said. The CIA also denied Cameron's request to fly over the area in one of their aircraft to test for radiation, he said.

Cameron's team consulted Britain's Defense Radiation Protection Service before visiting the site. Radiation measured in curies tells specialists how dangerous an element, such as cobalt, can be. If the team found just 20 curies, they had a huge portion, the government agency told the team. A curie is the unit used to measure radioactivity.

In 1978, when truckers brought the cobalt over land from Russia, it measured 5,000 curies, Cameron said. Nearly a quarter century has passed, but the amount remains significant.

Based on preliminary tests by the British team, the amount of cobalt known to exist at the university registers over 300 curies, according to Cameron.

"With a size like that, it's monstrous," Cameron said. "You won't see me going in there to take it out."

Cameron's team detected the radiation hazard last week and submitted a report Friday to the United Nations in Geneva, Switzerland.

Experts from the IAEA, an agency that normally assists developing countries in containing nuclear hazards, arrived Monday in Kabul to inspect the site, a former radiation treatment center for cancer patients.

Cameron's team is glad the IAEA responded so quickly, and with good reason. The British contingent has identified two other radioactive sources at the university, which the agency will investigate this week as well.

"It's better to secure them all in one site," an IAEA worker said.

Meanwhile, university professors from the physics department were scheduled to meet with peacekeepers this week to discuss the problem. On Saturday, a civil military cooperation team met with Kabul University Chancellor Mohammed Akbar Popal, who knew little about the cobalt's existence.

"Officially, I don't have any word on it," Popal said. "We had sources of radiation. They have been lost, I don't know where."

Physics professors asked Popal for an increase in their salary because they felt the suspected radiation posed a health risk, Popal said. He asked peacekeepers to supply him with radiation detectors to find the extent of the problem — apparently unaware that British soldiers had already located cobalt-60 material.

During the 1980s, Kabul medical students treated cancer patients with doses of radiation from cobalt-60. The cobalt source is actually only 6 centimeters long and 1.5 centimeters thick, about the size of a highlighter pen. It's housed in a building with lead-lined inner walls, 9-feet thick.

The element was kept in a secure vault and pulled along a mechanical conveyor above the patient undergoing treatment. Doors made from depleted uranium opened briefly, releasing a high-energy pulse of gamma rays.

Then the cobalt would be hoisted to its secure storage area. The British team believes the cobalt is now contained within protective walls.

Much of the west side of Kabul, to include the university's Aliabad Hospital, was destroyed during the fighting between Hazaras and the Afghan government in the early 1990s.

Hazaras used a rocket-propelled grenade to force open the thick, lead doors to the inner chamber where the cobalt is stored. More than likely they thought it was a safe, Cameron said.

While the radiation hazard creates a huge problem for the international community trying to assist Afghanistan, the cobalt does not pose an immediate threat to some 2,000 students housed in nearby dormitories, Cameron said. A neighborhood is located just behind the hospital.

"They're OK unless they go wandering inside that building," Cameron said.

Medical student Hamad Jawid, 25, studied pediatrics at the university for seven years. During the Taliban's rule, the Red Cross investigated the building, and many students knew something was hidden inside the pockmarked yellow building with no windows, Jawid said.

"I knew it was about cobalt radiation, where cancer was treated by students," Jawid said.

Security guards, lounging in the sun nearby, missed Jawid and a group of friends, who easily slipped into the old hospital compound Sunday and wandered around. The building's front doors were wrapped with several rolls of barbed wire, but a broken window allowed access into the treatment room.

Peacekeepers are wary of notifying the public because it might draw curious locals to the site. Plans are to weld the doors shut, Cameron said.

New York Times
March 28, 2002

U.S. Will Pay For Gas Masks For Alabama

By The Associated Press

BIRMINGHAM, Ala., March 27 — The federal government said today that it would pay for safety gear that resembles a gas mask for thousands of people who live near an incinerator where the Army will burn deadly nerve agents.

As many as 35,000 people in eastern Alabama could receive the protective hoods and training. The Federal Emergency Management Agency said no money would be released until the state provided a plan for ordering and maintaining the hoods and for training people to use them. The agency said several details remained to be worked out.

State and federal emergency management officials said they were unaware of any such previous effort, making this the first mass distribution of safety gear to American civilians.

Gov. Don Siegelman's office said the hoods would be distributed under an agreement reached after the governor filed a lawsuit last month to block use of the chemical weapons incinerator at the Anniston Army Depot. The emergency management agency denied that the agreement was linked to the lawsuit.

A spokesman for Mr. Siegelman, Rip Andrews, said the state would withdraw its request that a judge block the opening of the incinerator in return for the government's $7 million pledge of gear and training.

The hoods, which function like gas masks but are larger and simpler to use, would go to people who live nearest the incinerator.

The money would also be used to buy gear for as many as 500 police officers, firefighters and emergency management workers who would respond to any accident at the incinerator, said Mike Burney, emergency management director for Calhoun County.

The Army plans to begin test burning of nerve gas in September.

Defense Week Daily Update (Special Report)
March 27, 2002

Marines Inadequately Train For Chem-Bio: Audit

By John M. Donnelly

WASHINGTON — Numerous U.S. Marine Corps battalions are not properly training to fight in an environment poisoned by weapons of mass destruction, according to an internal Navy report obtained by Defense Week. Individual Marines often practice wearing masks and other protective gear, but they do not use the equipment enough while rehearsing mission scenarios with their units, said the report, obtained via the Freedom of Information Act.

"As a result, Marine Corps infantry and armor units might not be totally prepared to carry out their wartime missions under chemical and biological conditions, thus increasing the potential for unnecessary loss of life and the risk of not meeting policy goals during a two-major-theater war," said the Naval Audit Service report to Marine Corps Commandant Gen. James Jones and Navy leaders. "Intelligence estimates also show that a high chemical and biological threat exists in areas of potential conflict."

The training shortfalls occur, the auditors say, even though U.S. military doctrine requires forces at all echelons to be ready to fight in the presence of chemical and biological weapons and even though auditors from the Defense Department and Congress have warned the Pentagon numerous times since the Gulf War that its forces are not adequately training for such warfare. The Marine Corps commandant, in particular, certified in writing to the Pentagon and Congress in 2000 that the Marine Corps had corrected the problem.

The lack of chemical and biological training was "primarily due to some Marine Corps commanders not considering such training to be a top priority," said the report, which the Marine Corps vehemently disputes.

The Naval Audit Service report comes as Marines and other forces are in harm's way in Afghanistan, where the Pentagon says al Qaeda has sought to turn toxins and germs into weapons.

Many Marines deployed there are "special-operations capable" and may have received extra training, a defense official said. But U.S. forces are also planning for possible action against Iraq, which is believed to possess its own stock of such weapons, as do several other countries. Marine Corps infantry and tank forces—the sort examined in the new report—might be involved in future conflicts, if not the current one.

The commandant's office said in a letter to the auditors included in the report that chemical and biological defense training "is integrated into existing training programs within Marine Corps infantry and armor units."

The letter also said that the Navy auditors did not make enough visits or have enough information to support their criticisms; nor did the auditors cite any Marine Corps units failing evaluations of chemical and biological preparedness, the letter said.

The Marine Corps would not make any officials available for interviews, saying the letter constitutes the Marine Corps reply.

Twenty Marine units studied

The Naval Audit Service report, "Marine Corps Infantry/Armor Readiness Reporting," was printed last November but has not previously been released or publicized. The audit was based on interviews, documents and six weeks of visits to 20 Marine Corps units.

The 20 units studied are the three divisions located at Camp Pendleton and Twentynine Palms, Calif.; Camp Lejeune, N.C.; and in Okinawa and Hawaii—plus four regiments and 13 battalions within those divisions. The infantry units, which Defense Week will not name, comprise about a third of the Marine Corps active infantry battalions.

"Marine Corps infantry and armor battalions were not fully integrating realistic chemical and biological defense (CBD) training into their collective unit exercises in a consistent and frequent manner, even though it is included in the Marine Corps training doctrine," the report said. To the extent the training occurred, its "scope and duration was limited," the report said, and it was "not integrated with other training events and not realistic to mission requirements."

The audit said that "half" the training for chemical attacks was "conducted under 'scripted' conditions and in a classroom environment."

In addition, according to the auditors, Marine Corps officers "conceded that their battalions could not consistently sustain enough proficiency in CBD [chemical and biological defense] integrated training because they did not have the time to train for such an endeavor."

Essentially, the Navy auditors found that the Marine Corps units at all echelons were not incorporating the use of gas masks, suits, gloves, detectors and decontamination equipment in the course of rehearsing mission scenarios such as storming a bunker or evacuating non-combatants.

By contrast, joint U.S. military doctrine, the Marine Corps' own rules and Pentagon reports to Congress all stress the importance of incorporating the use of such equipment in actual field exercises to reinforce classroom training and provide confidence in the ability of personnel to perform while using the heavy gear.

The commandant's office, in its reply, said the chemical and biological training was integrated in battalion-level training, even if not always at lower echelons such as platoons or companies. The auditors did not witness battalion-level training, the commandant's letter said.

The auditors replied that military doctrine requires the use of protective equipment in unit training at all levels, not just the highest ones. Also, the auditors say that they interviewed officers about battalion-level training, and those officers said weapons-of-mass-destruction rehearsals were not adequately integrated at that level.

Masks left at home

Moreover, the report said, Marine Corps officers did not consistently require those under their command to carry masks and other such equipment during training exercises—even though the Marines officially require it. In fact, the auditors said they did not see Marines carrying protective gear at all during visits to Camp Lejeune, Camp Pendleton and Twentynine Palms.

Marine Corps officers acknowledged to the auditors that Marines often did not carry masks to the field for fear they would break, a point the commandant's office seemed to similarly concede in its reply to the auditors.

The commandant said that when doomsday-weapons training is underway, such gear is required, but not at other times, because "it would not make good sense to bring the … gear only to have it damaged."

However, the auditors said that the Marines should use the gear at all times: "We believe that with the threat of weapons of mass destruction being used by our enemies, carrying the field protective mask at all times during training and deployment is essential."

In 2000, Defense Week disclosed an internal Pentagon survey that found that about half of almost 20,000 Army and Marine Corps M40 masks—the ones at issue now—had "critical" defects that might have rendered them inoperable. As far back as 1994, the Pentagon's Inspector General, in a secret report, had warned about mask defects—though nothing was done until the 2000 study that confirmed the IG worries. Even now, it is unclear what has been done about the mask problems.

It is ironic that the fear of breaking masks would keep Marines from training with them, because the 2000 survey found that the masks were breaking because of insufficient use in training. The 2000 report, presaging the new naval audit, said commanders "do not provide enough emphasis on NBC (nuclear, chemical and biological) defense training and maintenance."

Reports vs. results

The 2000 mask report was one of several inside and outside the Pentagon that revealed a lack of protective equipment and training in its use.

In a classified 1998 report, the Pentagon Inspector General found that at 187 of 232 units in all three armed services commanders were not fully integrating chemical and biological defense into unit mission training. The IG recommended that a series of reports and evaluations be regularly completed.

In 2000, Marine Corps Commandant Gen. James Jones certified in writing that the IG's recommendations had been fulfilled.

But Marine Corps officials told the Navy auditors that they do not check to see whether completing the reports actually solves the problem.

"However, the Headquarters, Marine Corps internal management controls official informed us that he does not check to determine whether the agreed upon corrective actions, when fully implemented, actually amend the respective material weakness," the audit said.

So far, official military evaluations of chemical and biological preparedness have not always proven reliable.

The Defense Department has repeatedly certified to Congress that the U.S. military is prepared to fight in a chem-bio environment. But the latest of the Pentagon's annual certifications to Congress to that effect contained errors—understating requirements and overstating inventory, the GAO said in a November 2001 report.

Similarly, the Defense Logistics Agency fought the Defense Criminal Investigative Service for years when DCIS said that 780,000 chemical-protective suits bought from a company called Isratex might be flawed because the company was defrauding the government. Seven years after the fraud was first investigated, the suits were recalled. But a quarter million are still unaccounted for because of faulty inventory-management systems.

Along those same lines, the new Navy audit report also criticizes Marine Corps commanders for not accurately and consistently reporting to senior officials their units' readiness data in all areas—beyond just chem-bio issues. The same auditors recently hit the Navy for overstating the readiness of their Marine Corps F/A-18 Hornet squadrons and Navy F-14 Tomcats.

Legacy of warnings

"In summary," the report said, "we believe some commanders generally did not adhere to the high importance that the secretary of defense has given to effectively operating in a chemical and biological environment.

"We also believe that commanders need to be held accountable through periodic inspections that will effectively identify when CBD training is not being integrated into combat exercises in a frequent, realistic and consistent manner," the report said. "If the Marine Corps is not prepared, the enemy's chemical and biological weaponry could easily counteract the U.S. dominance in conventional warfare and encumber the movement of U.S. forces in critical regions around the globe."

If that conclusion sounded familiar, it may have been because in yet another audit—this one a November 2000 report by the General Accounting Office—analysts said chemical and biological training shortfalls that could have cost lives and mission effectiveness in the Gulf War remained a concern in all three services, including the Marine Corps.

"Our current and prior work as well as the work of DoD's Office of the Inspector General found that commanders were not integrating chemical and biological defense into unit exercises and the training was not always realistic in terms of how units would operate in war," the 2000 congressional report said.

"For example, we were told by Marine Corps officers responsible for chemical and biological defense training at the unit we reviewed that commanders are not fully integrating chemical and biological defense into unit exercises, as required by Marine Corps policies, because operating in protective equipment is difficult and time-consuming and

this (1) decreases the number of combat essential tasks that can be performed during an exercise and (2) limits offensive combat operations," the report said.
Over the course of the Navy audit last year, Marines voiced similar reasons for not including such training in the normal course of preparing for war.

Moscow Times
March 28, 2002
Pg. 6

Bomber Upgrade

MOSCOW (Reuters) -- Russia plans to modernize all 15 of its Tupolev-160 bombers, capable of carrying nuclear-tipped cruise missiles, a senior official at the Kazan aircraft maker said Wednesday.
Yury Trofimov, deputy general director of Kazan aircraft maker KAPO, said the plant's management and the Defense Ministry signed a protocol of intent to modernize all strategic bombers capable of carrying nuclear-tipped cruise missiles.
"KAPO will carry out all repairs and modernization of the Tupolev-160s, including its avionics, radio-electronic equipment and weaponry, with a new class of missiles with conventional or nuclear warheads," he said.

Washington Post
March 28, 2002
Pg. 26

Russia Plans To Finish Nuclear Plant In Iran

MOSCOW -- Russia will finish building a nuclear power plant in Iran despite U.S. opposition and is considering a tentative request from North Korea for a similar plant, Russia's top nuclear official said.
The United States has urged Russia to abandon a 1995 contract with Iran to complete a nuclear reactor at Bushehr, saying the project could help Iran build a nuclear bomb.
Russia says the reactor will be used only for civilian purposes and will remain under the supervision of the International Atomic Energy Agency.
On a conciliatory note, Atomic Energy Minister Alexander Rumyantsev said Russia viewed the U.S. concerns with "great attention" and hoped for a "compromise that would help strengthen confidence and peace while allowing Russia to reap economic benefits."
But he also said his ministry was looking at the request from North Korea, which the Bush administration suspects is developing nuclear weapons.
Associated Press

Seattle Post-Intelligencer
March 27, 2002

Plan For Disposing Of Mustard Gas Prompts Skepticism

By Joseph B. Frazier, The Associated Press

PORTLAND -- Oregon environmental officials say they will listen to the Army's ideas about changing disposal plans for thousands of tons of deadly mustard gas, but indicate it will be a tough sell.

Assistant Army Secretary Mario Fiori will meet tomorrow with Gov. John Kitzhaber and his environmental staff to suggest that the 2,440 tons of mustard gas stored at the Umatilla Chemical Depot be neutralized with water instead of being burned.

Mustard gas makes up about 64 percent of the 3,717 tons of deadly chemical war agents stored at the depot. Trial burns at the $1.2 billion incinerator are to start in May. Regular incineration is scheduled to begin in February 2003 and to be complete in 2007.

"We are open to hearing what Fiori has to say about neutralization, but we have serious reservations about the amount of water involved," said Chris Dearth, environmental projects director for the governor's Natural Resources Office.

"It is an enormous amount -- we are told in the millions of gallons a day," he said. "That kind of water is just not available."

Agricultural demands on water in the area are heavy and growing.

The Army says neutralization is quicker and cheaper and in January released a disposal plan for treating mustard gas stored at the Aberdeen Proving Grounds in Maryland.

The Army said neutralization would save $250 million at the Aberdeen facility.

In neutralization, the mustard agent is mixed with water and heated in a reactor to destroy the mustard agent.

The end product of the reaction will then be treated to neutralize the resulting acids. The state is awaiting some details of the process from Aberdeen.

Dearth said the secondary waste created at the Oregon facility would have to be shipped out of state for processing.

Also, he said, the state has worked for years to prepare for the incineration of mustard gas and other chemical agents at the depot. "We don't want to upset the community consensus we have spent years building," he said.

Wayne Thomas, who administers the chemical demobilization program for the Oregon Department of Environmental Quality, said neutralization of the mustard agent -- and other munitions -- was considered in 1996-1997 when the original assessment was done on the technology to be used at Umatilla.

Concern over the amount of water needed also was raised at that time, he said.

"We made the decision that the best technique was incineration," he said. "We stand by that today."

But while neutralization has been approved for mustard gas at Aberdeen, that process has not yet been used, he said.

"Incineration has been demonstrated as being very successful, from the original tests in Utah to the pilot project on Johnston Island (in the Pacific) to the fully operating Deseret plant in Utah.

"Overall, the Army has destroyed more chemical agent (by incineration) than we even have at Umatilla," he said. "The track record is there."

Albuquerque Journal
March 26, 2002
Pg. A1

DOE Wants New Factory To Make Plutonium Pits

By John Fleck, Journal Staff Writer

The Department of Energy has launched what could be a multibillion-dollar effort to build a factory to make plutonium triggers for U.S. nuclear weapons.

The project is likely to take 15 years, according to Everet Beckner, deputy head of the National Nuclear Security Administration. That means planning must start now in order to meet eventual demands to replace aging nuclear weapons, Beckner said in a recent interview.

One of the first steps will be to come up with a list of possible sites, Beckner said, a list that could include both existing DOE nuclear sites and potential new ones.

Sites with existing DOE plutonium operations include Los Alamos National Laboratory and the Savannah River Site in South Carolina.

The project will build on technologies being developed now at Los Alamos, where workers have set up a small production line to build a limited number of plutonium triggers, called "pits," to meet near-term needs.
Plutonium pits are round, grapefruit-sized metal shells squeezed by high explosives to trigger a weapon's nuclear blast. In the past, they were manufactured at the Energy Department's Rocky Flats plant near Denver. The U.S. government has been unable to make pits since Rocky Flats, plagued by safety and environmental problems, was closed in 1989.
"The United States is the only nuclear weapons state that cannot produce plutonium pits for its weapons," John Foster, a former weapons designer and senior adviser to the government on the issue, complained in testimony before the House Armed Services committee last summer.
Energy Department officials have talked in the past about building such a plant, but the talk has become more urgent this spring as officials realized how long the project will take.
"We need to begin thinking seriously about a modern pit production facility," John Gordon, head of the National Nuclear Security Administration, told members of the Senate Armed Services Committee on Feb. 14.
Energy Secretary Spencer Abraham was questioned on the issue March 13, during an appearance before the Senate Armed Services Committee.
"Can you explain why is it acceptable that we don't have a nuclear weapons manufacturing system and the Russians do?" asked Sen. James Inhofe, R-Okla.
Beckner said in the interview that work on a new plant did not begin during the 1990s because no need was seen.
In the near term, Los Alamos National Laboratory is the Energy Department's answer to pit production. A team there has built about a dozen practice pits; team members are going through the rigorous process of certifying that the pits they make meet the exacting specifications required of a stockpile weapon.
More than 450 people at Los Alamos are working on the project.
By 2007, the department plans an ability to build 10 pits per year at Los Alamos.
In the long run, significantly larger capacity is needed.
Exactly how many pits will be needed and when is unclear, Beckner said, because no one knows what problems will be caused by aging in the existing plutonium.
"The critical question," he said, "is what is the useful age of a pit, and we simply don't know."
Whatever that is, Beckner said, it is clear that if the nation continues to maintain a nuclear arsenal it will need to make new pits at some point.
Federal law requires detailed environmental studies, Beckner noted.
No detailed cost estimates have been developed, but it clearly could be in excess of a billion dollars, Beckner said.
At a technical conference two years ago, one DOE official suggested it could cost as much as $3 billion.
Said Beckner of that estimate, "That's not a ridiculous number."
The cost of working with the dangerously radioactive plutonium is what drives the cost of the factory far beyond any ordinary metal-working plant, Beckner said.
"This is an extraordinarily complex nuclear operation," he said.

Kansas City Star
March 26, 2002

Even Nuclear Arms Might Not Bust Enemy Bunkers, Scientists Say

By Scott Canon, The Kansas City Star

There is good reason the United States put its doomsday command center inside a mountain and its shadow government in subterranean bunkers.
It is the same reason al-Qaida fighters take to caves and that, the world suspects, Iraqi President Saddam Hussein stashes his deadliest weapons underground.
Because even when chased by a military with the most amazing bombs, an enemy on the run or trying to cache supplies can expect that a bunker dug deep enough rarely buckles.

"There's a race on between people who want to hide their stuff or themselves underground and the people they're hiding from," said Robert Hewson, the London-based editor of Jane's Air-Launched Weapons. "Right now, the people who are hiding have the edge."

Simply put, experts in areas ranging from geology to engineering to warfare concur that a low-tech refuge carved sufficiently deep into rock can withstand assault from even the most sophisticated of 21st-century bombs. The government estimates 1,100 such bunkers exist from North Korea to Iraq to hide the nastiest of weapons or the highest ranking of enemy leaders.

In fact, leaks this month suggest that American frustration with cat-and-mouse has the Bush administration contemplating a taboo -- unleashing nuclear firepower on targets previously reserved for conventional weapons.

A draft of the Nuclear Posture Review -- echoing the thoughts of Bill Clinton's nuclear war planners -- calls for the military to study using nuclear weapons against hardened targets in a handful of nations.

"But a nuclear weapon is not a magic bullet," said Steve Fetter, a physicist and public policy professor at the University of Maryland who worked in the Defense Department under Clinton.

Theory and practice

While nuclear weapons represent the most extreme approach, they also show how hard it is to crumple an underground compound.

Experts expect an attack on, for instance, an Iraqi bunker probably would be an earth-penetrating B61-11 -- partly assembled at the Honeywell plant in Kansas City. It would be carried by the B-2 stealth bomber, which flies nonstop to anywhere in the world from Whiteman Air Force Base, Mo.

In theory, that relatively small nuclear warhead's shape and super-hardened steel nose would knife deep into the earth's surface before exploding.

Instead of Hiroshima-style blinding light and mushroom cloud, the energy of this atom-splitting would run out in shock waves through the earth to collapse caves or bunkers.

Or perhaps not.

Princeton University physicist and arms-control specialist Robert Nelson studied how the B61-11 might work in practice. In test drops from a B-2 cruising at 40,000 feet, the bomb usually burrowed 20 to 30 feet in the Alaska permafrost. (It does, however, have a tendency to skip off the ground if it strikes at too shallow an angle.)

But a nuclear explosion at 20 feet underground actually maximizes radioactive fallout.

"The fireball breaks through the surface of the earth, carrying into the air large amounts of dirt and debris," Nelson wrote last year. "This material has been exposed to the intense neutron flux from the nuclear detonation, which adds to the radioactivity from the fission products."

To contain the radiation from a 5-kiloton explosion -- relatively small by today's standards -- such bombs at the Nevada Test Site were buried 650 feet.

"We're back where we started with nuclear weapons," said Stephen Schwartz, publisher of The Bulletin of Atomic Scientists. "The fallout, both radioactive and political, is just too great."

Checking the science

Another physicist looked at what destructive power a buried nuclear bomb could wreak.

"I figured if you buried a nuke, it was going to destroy a lot of stuff underground," said Geoffrey Forden, a senior research fellow at the Massachusetts Institute of Technology's security studies program.

But in preparing an article for Jane's Intelligence Review, Forden needed to check the science first. He combed through decades-old research that explored the use of nuclear explosions to build reservoirs or to clear a channel for a canal across Panama.

Forden used that data to analyze the likely damage to underground bunkers from a bomb penetrating about 100 feet -- five times deeper than B61-11s burrow and well beyond what physicists believe is possible.

"Even a (10 kiloton) nuclear weapon cannot destroy or even damage the equipment in an underground facility buried 300 meters in granite," Forden wrote.

The Pentagon acknowledges the 700-pound B61-11 does not penetrate deep enough to reach some bunkers. It recommends studying whether a 5,000-pound version could do better, although physicists say the existing bomb is already at the limits of how far a projectile could sink into the earth without breaking apart.

Even a bunker less than a quarter-mile underground might survive a nuclear bomb that misses by fewer than 200 yards -- which is quite possible considering the B61-11 comes without a guidance system.

Forden studied the problem posed by the suspected underground chemical weapons near Tarhunah, Libya. The plant is believed to have a pair of tunnel entrances. Which direction those tunnels lead, however, is a mystery.

That means a nuclear bomb might strike the area and still spare the bunker, Forden concluded.

All this strategy is based on the assumption that the bomb would even go off. That is no sure bet.

An earth-penetrating bomb would meet a shock equal to 10,000 times the force of gravity. Consequently, it uses a warhead adapted from the technology used for atomic artillery shells -- they were subject to similar forces when shot from a cannon -- that are no longer in use.

But the package of earth-penetrating shell and atomic warhead never has been tested as a whole. The U.S. has operated under a self-imposed nuclear testing ban for more than 10 years.

A new role

The Bush administration has dismissed suggestions that it is considering anything very new for American nuclear policy. Yet high-ranking officials also have stressed that the United States stands willing to use a range of options to deter chemical or biological attacks.

Stephen Younger, a nuclear-weapons specialist who recently went from a top spot at the Los Alamos National Laboratory to a key policy-making post in the Pentagon, wrote two years ago in favor of a new role for nuclear strikes.

"Some very hard targets require high yield to destroy them," Younger wrote when he was at Los Alamos. "It might be desirable to retain a small number of higher-yield nuclear weapons in the arsenal as deterrents against enemy confidence in the survival of such targets."

Still, many experts said conventional bombs currently may hold at least as good an answer to attacking buried shelters. While ordinary bombs could not be expected to cave in the buried Libyan depot, perhaps if guided by lasers or satellites they could reliably slam shut the entrances.

"Then you just keep watching it to see if they dig it open," said Hewson, the British air weapons expert. "When they do, you just hit it again. Maybe you haven't destroyed their anthrax supplies, but you've put them out of reach."

In Afghanistan, the U.S. military has tried new 2,000-pound "thermobaric" bombs. Instead of packing explosive power, they come as super-charged fire breathers that, when they hit the entrance of a cave or tunnel, can suck out the air from inside and reduce any occupants to ash. A barrier in a tunnel, however, can protect against that sort of attack.

Among those answering the military's call for bunker-busting ideas was Paul Worsey, a University of Missouri-Rolla professor who deals with explosives and engineering as a mining specialist.

Worsey's proposal assumes ground troops can grab the territory over a bunker for at least a few hours. Then, he said, a crew simply could drill a narrow hole from ground level into a bunker, pour in liquid explosives and stand back.

"If they plug your hole, you just blast away the plug," Worsey said. "I suppose the Air Force would prefer to drop something off a stealth bomber, but that approach doesn't seem to solve the problem."

Arkansas Democrat-Gazette
March 25, 2002
Pg. B1

U.S. Grew 'Ugliest Weapons' In Arkansas

By Daniel Yee, Arkansas Democrat-Gazette

Botulinum toxin, touted as the world's deadliest toxin, has a historic link to Arkansas: It was homegrown at the Pine Bluff Arsenal for years during the Cold War.

Today, weaponized quantities of botulinum toxin are considered a scourge by U.S. officials. The toxin, along with smallpox, anthrax and plague, is among the four most likely agents that terrorists would use in a biological attack.

Botulinum toxin, the extremely potent cause of a nerve and muscle-paralyzing disease, can be easily produced and transported.

But in the 1950s, botulinum toxin and anthrax were seen as a necessary evil, as officials believed the weapons had to be developed to keep up with the Soviet Union's interest in gaining a biological-warfare advantage.

In 1953, the arsenal added a biological weapons complex to mass-produce and store bacteria-based weapons like botulinum toxin and anthrax. The U.S. Food and Drug Administration's National Center for Toxicological Research at Jefferson now occupies that site.

The project remained as closely guarded a secret as the military's atomic bomb production sites; the public didn't learn the true nature of the arsenal's biological weapons facility until 1954.

Two years later, the facility expanded to include virus-based weapons like Q fever or Venezuelan equine encephalitis.
But in 1969, President Nixon announced the United States would get out of the biological arms race by destroying its stockpile of biological weapons and its ability to produce more. Botulinum toxin and other biological weapons at the arsenal were destroyed between 1971 and 1972.
Life magazine, after a 1971 tour of the stockpile's destruction, said the arsenal's germ weapons were "the ugliest weapons ever devised."
Botulinum toxin goes back to the 19th century, when it was discovered in German patients with "sausage poisoning," or botulism. The toxin is released by bacteria that grow on certain foods. About 110 cases of botulism occur in the United States each year, according to the federal Centers for Disease Control and Prevention in Atlanta.
"It's a naturally occurring toxin," said Dr. Terence Edgar, director of neuromuscular and movement disorder programs at Arkansas Children's Hospital and an assistant professor of neurology and pediatrics at the University of Arkansas for Medical Sciences.
Children have more vulnerability to botulinum toxin than adults, Edgar said, adding that the toxin sometimes occurs in honey or in contaminated home-canned food.
Patients with botulism suffer from nerve and muscle paralysis and can die of respiratory failure. A patient with the disease may have to stay on a breathing machine for several weeks while receiving medical care, according to the CDC.
"Botulinum toxin is the most poisonous substance known," said Dr. Joe Bates, deputy state health officer for the Arkansas Department of Health, in a November seminar on biological threats.
Today, authorities continue to worry about the possible proliferation of botulinum toxin and other biological weapons from countries capable of producing the agents as weapons.
For example, after the 1991 Persian Gulf War, Iraq told United Nations inspectors it had produced 19,000 liters of the toxin, of which 10,000 liters had been loaded into weapons.
In the mid-1990s, the Japanese cult Aum Shinrikyo tried to use the toxin as a biological weapon but failed, according to the Johns Hopkins University Center for Civilian Biodefense Strategies in Baltimore.

Washington Post
March 28, 2002
Pg. 1

Smallpox Vaccine Turns Up

Discovered Doses Buy Time for U.S.

By Rick Weiss, Washington Post Staff Writer
A pharmaceutical company has discovered 70 million to 90 million long-forgotten doses of smallpox vaccine in its freezers, instantly increasing the known U.S. inventory of the vaccine six-fold and ensuring the nation an adequate supply in the event of a bioterrorist attack, according to government sources familiar with the find.
The immediate impact of the discovery is to buy time for the federal government and its pharmaceutical contractors, which together have been racing to produce tens of millions of smallpox vaccine doses as part of the new biodefense initiative. Companies will be able use that cushion of time to fine-tune some of the new vaccine candidates under development, instead of rushing effective but perhaps less-than-perfect vaccines into production as an emergency stopgap measure.
"It's a great insurance policy," said D.A. Henderson, director of the newly created federal Office of Health Preparedness.
The liquid vaccine doses were produced by Aventis Pasteur of Lyon, France, which has its U.S. operations in Swiftwater, Pa. The vaccine has been stored in freezers since it was made decades ago, sources said. It remained unclear yesterday why its existence had gone undiscovered for so long, exactly when it was discovered or by whom.
Sources said the company is negotiating with the Department of Health and Human Services with the goal of giving the U.S. government access to the supply. Among the issues to be worked out are how much money, if any, would change hands in the transaction, and the extent to which the company may be relieved of liability should problems with the vaccine arise.

Calls to Aventis were referred to HHS, which volunteered few details.
"There are legal things that still need to be finalized," said HHS spokesman Bill Hall. HHS Secretary Tommy G. Thompson hopes to settle the deal before next week, Hall said. "Until then, our hands are tied."
A global vaccination effort rid the world of naturally occurring smallpox in 1977, after which the vaccine fell out of production. But a few vials of smallpox viruses were saved in the United States and the Soviet Union. Some experts fear that small amounts of the highly infectious, often fatal agent -- which can be expanded with relative ease in a laboratory -- may have fallen into terrorist hands.
The possibility that smallpox might reemerge as an agent of terror recently inspired U.S. health officials to take stock of existing vaccine supplies. That inventory concluded that the nation has about 15.4 million doses -- barely enough to deal with an attack on a major city or two.
The federal government contracted with various companies to make more of the standard vaccine and to begin work on new and safer versions. But no one knows whether the goal of producing 155 million new doses this year is reachable, and even that would leave the nation far short.
At the same time, in an effort to make more with less, federal scientists have been diluting samples of existing stocks and testing them to see if they are still potent. U.S. health officials have said in recent weeks that studies involving five-fold and ten-fold dilutions are looking very promising. Final results of those tests are to be released today. But even a ten-fold expansion of the previously documented 15.4 million doses would produce only half the doses needed to vaccinate every American.
That shortage is more than covered by the Aventis discovery.
The Aventis vaccine is essentially identical to the previously inventoried vaccine, which was made by Wyeth and went by the name Dryvax. Both were grown from the same seed stock of vaccinia, a virus so similar to the smallpox virus that it primes the immune system against both. The key difference between the two products is that Dryvax is stored as freeze-dried powder, which must be reconstituted by adding a liquid diluent, while the Aventis product was reconstituted and then frozen in its liquid form.
Ongoing studies strongly suggest that the Aventis product is fully potent, according to one government scientist familiar with the work. Indeed, the official said, it's likely that the Aventis product can itself be diluted five-fold if necessary, creating far more doses than would be needed in this nation even in the face of a full-blown bioterrorist attack.
That does not mean it will be easy to defend against such an attack or that deaths would be rare. The vaccine must be given within a few days after exposure to smallpox, posing a logistical nightmare if outbreaks were to occur in several locations simultaneously. Smallpox has historically killed about a third of those it infects.
Another problem is that both the Wyeth and Aventis vaccines can be deadly in people whose immune systems are suppressed by AIDS or other diseases or as a result of their taking drugs for cancer or organ transplantation. In fact, such patients are at risk of life-threatening vaccinia infection simply by coming in contact with others who have been vaccinated, since live viruses are shed from the injection site on the arm.
The discovery of the extra doses could escalate an already heated debate over the wisdom of vaccinating doctors, public health workers and other "first responders," a strategy that some have proposed as a way of ensuring that key personnel would be protected in the event of a covert attack.
One expert yesterday expressed concern that the discovery of the added doses, while reassuring, might lead to a federal decision to offer prophylactic vaccination before a careful analysis of such a program's scientific and social impact is conducted.
"Doing that without proper foresight and planning could be a disaster. It could kill people, that's for certain, and it could undermine the government's credibility," said Tara O'Toole, director of Johns Hopkins' Center for Civilian Biodefense Studies in Baltimore. "There are very significant ethical issues involved in saying, 'Okay, you can have it and you can't.' This is no small challenge."

Baltimore Sun
March 29, 2002

Bush Plan Lacks Funds For APG Project

Disposal of chemical by year's end unlikely

By Andrew A. Green, Sun Staff

Funding to accelerate the disposal of the mustard agent stockpile at Aberdeen Proving Ground is not in the Bush administration's latest spending request, potentially delaying the project's completion by six to nine months.

Out of concern that APG's 1,621-ton stockpile of the chemical weapon could be targeted by terrorists, the Army announced with much fanfare in January that it would dispose of the mustard agent by the end of this year - three years ahead of schedule. But the plan hinged on a $96 million supplemental appropriation that now appears unlikely.

The fiscal 2003 budget is expected to include enough money to pay for the remainder of the project, but that money won't be available until October, said Joseph W. Loverich, Army site project manager at the Aberdeen Chemical Agent Disposal Facility. Without funding until then, the completion date for disposal of the mustard agent would be pushed back to summer or fall 2003, he said.

"In wartime, tough decisions have to be made at the highest levels," Loverich said. "There are some huge bills that have to be paid to fund the war and homeland security, and those bills have to be paid first."

President Bush sent the appropriation request to Congress on March 21, but Congress has not acted on it. Congress can add money to the bill, and Maryland Sen. Barbara A. Mikulski vowed yesterday to try.

"I was pleased that the Army responded to the events of Sept. 11 by coming up with a plan to eliminate mustard agent by the end of this year, but I am extremely disappointed that the administration failed to come up with the funding to implement that plan," she said.

"This money is crucial to keep Aberdeen Proving Ground's mustard agent disposal project on track," Mikulski added. "I secured funding for this project in the past, and I will fight again this year to make sure APG has the resources they need to destroy the mustard agent in a safe and environmentally sound way."

Mustard agent, a banned chemical weapon and known carcinogen, has been stored at APG's Edgewood area since World War II. The Army had planned to build an automated facility to drain the 1,815 containers of the molasses-like substance and prepare them to be recycled in one step. Under the new procedure, the containers will be drained and rinsed by workers and recycled later, a change that cuts months and millions of dollars off the plan.

The Army began construction of its disposal facility last month, but Loverich said that the work would be slowed without additional funding. The Army would also put off hiring workers to neutralize the mustard agent, a process that uses hot water to break down the substance.

Harford County Executive James M. Harkins' spokeswoman, Merrie Street, said the county had been informed of the delay but wasn't concerned by it.

"The community had been living under a three-year timetable, then it was cut to a one-year timetable and now it looks like maybe a year-and-a-half timetable, so it's still a win for the community," she said. "We can all hope the Congress includes some money or the Army finds funding somewhere else, but worst-case scenario, we're still speeding up the whole event."

John Nunn, who is co-chairman of the Maryland Chemical Demilitarization Citizens Advisory Commission and lives in Kent County, said that although the process will still be completed earlier than originally planned, a delay would be a blow to public trust in the Army.

"The question is whether the Secretary of the Army is going to really assign the priority to Aberdeen that he said to this community and to the [Maryland] Department of the Environment," Nunn said. "They have to make some hard decisions, but they can fund this program if they want to."

Colorado Springs Gazette
March 28, 2002

Army Will Neutralize Poison Gas With Water

Pueblo had fought against incineration

By Tom Ragan, The Gazette

Thousands of tons of mustard agent at the Army's Pueblo Chemical Weapons Depot will be destroyed by water neutralization rather than incineration, Sen. Wayne Allard, R-Colo., said Wednesday.

The decision, which was signed by Department of Defense Undersecretary E.C. Aldridge, came as a relief to many Pueblo residents, who preferred neutralization over incineration for environmental reasons.

In neutralization, there are no fumes or fire, and very few emissions. Instead, the agent is added to hot water, at which point it breaks down, then is biologically treated.
"It's that simple," said John Klomp, a Pueblo County commissioner. "The community here over the last several years has come together and studied all the technologies, and we all wanted this one. Nobody was divided. I think the Department of Defense heard us."
The facility won't be built for at least two more years, and the agent probably won't be neutralized until a year or two after that, said Marilyn Thompson, a spokeswoman with the depot.
On April 5, an Environmental Impact Statement will be released, triggering a 30-day public comment period. After that, Aldridge will sign what is called a Record of Decision, making the use of the technology official, Thompson said.
Allard also learned Wednesday security concerns are prompting Army officials to expedite the destruction of the mustard gas stockpile, said Sean Conway, Allard's spokesman.
"The fewer (terrorist) targets you have out there, the more you can concentrate your security resources on more important targets," Conway said. "Now that the method of destruction has been chosen, we can begin the process. The quicker we get the chemicals destroyed out there, the better."
In all, four methods of destruction were considered for the Pueblo Depot: two based on incineration and two based on a form of water neutralization.
In the past, the Department of Defense has chosen incineration over other technologies at other chemical weapon stockpiles across the country.
Two years ago, a chemical mustard stockpile was incinerated on Johnston Atoll in the South Pacific and a stockpile is now being destroyed in Tooele, Utah. Similar incinerations are planned for the chemical weapon stockpiles in Anniston, Ala., Umatilla, Ore., and Pine Bluff, Ark.
Staff writer Dan Nowicki contributed to this report from Washington, D.C.

Mustard Gas And The Pueblo Depot

Since World War II, 780,000 munitions containing 2,600 tons of chemical mustard agent have been stored in steel and concrete igloos on the depot grounds. In its native state, the agent looks like motor oil and smells a little like garlic. The gas released when the munitions are fired causes blistering of the skin and lungs.
The Pueblo depot is one of eight facilities nationwide with stored chemical weapons. The Army was ordered by Congress in 1985 to destroy the nation's stockpile, but concerns about how to do so without endangering nearby communities led to repeated delays.

Cleaning Up

There were four methods under consideration by the Department of Defense.
Two were methods of incineration, whereby the agent would be burned in a furnace at more than 1,000 degrees. In one case, the liquid mustard would have been sent straight to the furnace. In the other, it would have been frozen first, then sent to the furnace.
In the neutralization process, the mustard agent is mixed with water, at which point it breaks down before it is biologically treated. In one case, bacteria finishes the process, in the other heat and pressure are used.

Los Angeles Times
March 28, 2002

WW II-Era Bomb Plant Gets $4-Billion Face Lift

From Times Wire Reports

Workers began dismantling a rusty guard tower at the Oak Ridge nuclear weapon plant, a symbolic first step in modernizing the 59-year-old facility involved in building weapons ranging from the Hiroshima bomb to the MX missile.
The $4-billion modernization of the Y-12 plant includes rebuilding facilities that date to 1943 and constructing a giant warehouse to store stockpiles of weapon-grade uranium. Most of the uranium is stored in at least five locations around the complex owned by the Energy Department.
The warehouse will be as big as four football fields, and will hold as many as 32,000 cans and drums of bomb-grade material.

Albuquerque Journal
March 27, 2002
Pg. 1

Sandia To Help Build Bomb

Role Called Pivotal To Bunker Buster

By John Fleck, Journal Staff Writer

Weapons designers at Sandia National Laboratories will play a central role in the design of a new bunker-busting nuclear bomb, an Energy Department spokeswoman confirmed Tuesday.

The Energy Department's National Nuclear Security Administration has been asked by the U.S. military to come up with a weapon to destroy underground targets by modifying an existing weapon in the U.S. nuclear arsenal.

The only earth-penetrating weapon in the U.S. nuclear arsenal, designed by Sandia and Los Alamos in the 1990s, "cannot survive penetration into many types of terrain in which hardened underground facilities are located," according to a Pentagon report completed late last year.

Like the approach used in the 1990s, the labs are being asked to modify an existing bomb to do the job rather than designing a new one from scratch.

That avoids a need to conduct underground test blasts, currently prohibited by U.S. policy. It also avoids the need to build new plutonium components, which the U.S. nuclear weapons complex is currently unable to do.

In a return to the way weapons were once designed, a competition has begun between California and New Mexico teams to see who can come up with the best plan to solve the military problem.

The California team will include weapons designers from Lawrence Livermore National Laboratory and Sandia's California lab site.

The New Mexico team will include designers from Los Alamos National Laboratory and Sandia's Albuquerque headquarters.

Sandia officials would not comment on the project, but according to independent experts, Sandia's role in the project is critical.

According to news reports, one candidate for the role is a modification of a bomb Sandia and Los Alamos National Laboratory modified once before, in the late 1990s, to strike underground targets.

A second candidate reportedly would be a modified version of a bomb designed by Sandia and Lawrence Livermore National Laboratory.

Whichever team is chosen for the job, said DOE spokeswoman Lisa Cutler, Sandia will play a central role in the design of the new weapon.

Livermore and Los Alamos design the bombs' nuclear explosive, while Sandia is responsible for all the non-nuclear components the electronic systems used to detonate the bomb and even its case.

Designing a bomb to withstand slamming into the ground and burrowing down before detonating puts special demands on Sandia's components.

"I think Sandia's going to be heavily involved," said Robert S. Norris, a nuclear weapons expert at the Natural Resources Defense Council.

Sandia has played this role before, when labs weaponeers in the late 1990s designed a new harder outer casing for the B61, a Los Alamos-Sandia bomb that has been a mainstay of the U.S. nuclear arsenal for more than three decades.

According to Norris, the work added 300 pounds of metal casing to the outside of the 450-pound B61, giving it extra protection as it burrows into the ground.

The bomb reportedly can destroy targets 20 to 30 feet underground.

Buried targets, especially stockpiles of chemical or biological weapons in underground bunkers, have become a central problem for military planners in recent years.

A secret study called Project SAND DUNE, completed by the labs in the late 1990s, concluded that nuclear weapons would be one effective way to destroy such underground targets.

The new design efforts being launched among the three laboratories are separate from small "advanced concepts groups" that also have been set up in recent months.
While the advanced concepts groups will work on what-if scenarios for next-generation nuclear weapons, the design competition is aimed at a nuclear weapon that could be built during this decade.

Defense Week
April 1, 2002
Pg. 1

New Network Detects WMD Attacks In Seconds

By Tarun Reddy

Time often is the biggest challenge facing emergency response officials when they talk about disaster scenarios involving weapons of mass destruction—or WMD—such as chemical, biological or nuclear weapons. Researchers at a national lab in Tennessee believe they have developed a system, known as SensorNet, to address this issue.
Working with American Tower Corp. and the Army, the Oak Ridge National Laboratory, or ORNL, is developing a system that combines the power of a mass spectrometer, software that predicts how a released substance will travel in the atmosphere and a communications network to alert emergency personnel about an incident.
Boston-based American Tower Corp. operates more than 14,000 communications towers in the United States, Mexico and Brazil. The company's involvement is important because SensorNet could be deployed on existing wireless towers or could be part of an entirely new tower system, according to an ORNL program manager.
James Kulesz, a program manager in ORNL's Systems Engineering and Technology Division, said the idea for SensorNet came as a result of work with the Army's Strategic Biological and Chemical Command (SBCC) shortly after the end of the Persian Gulf War.
"While soldiers tried using chemical and biological weapons [CBW] detection systems that were attached to their uniforms, many of them didn't like the units because they gave too many false positive readings," he said.

Remote telemetry

In some cases, soldiers became so frustrated with the CBW monitors that they removed them, Kulesz said in an interview. That criticism led SBCC leaders to contact the lab about developing a more effective real-time detection system that would allow military leaders at a central command post to monitor the situation in case a chemical or biological attack occurred.
"The Army was interested in working with us because we had developed a chemical and biological mass spectrometer [CBMS] that could detect the presence of a plume in the air," Kulesz said.
Kulesz explained that each SensorNet site would rely on remote telemetry to detect, and assess the occurrence of a chemical, biological, radiological or nuclear event and transmit this information to a national operations center. The system would include software known as Hazard Prediction and Assessment Capability (HPAC) used in all U.S.-operated military installations
HPAC can produce a plume model, predict the location and number of exposed people and adjust these figures if no responsive action were taken, Kulesz said. In addition, HPAC can predict immediate and latent health effects for the designated population, he added.
A team of researchers tested SensorNet in mid March at several locations in Tennessee to determine its effectiveness, Kulesz said in an interview. The researchers used a non-lethal version of the toxin Sarin and a safe simulant of anthrax to test the reliability of their sensor system, which was connected to a command post at the state of Tennessee's Office of Homeland Security in Nashville.
It took between four and 25 seconds for the CBMS to detect the Sarin-like simulant and a maximum of 96 seconds for the hazard-prediction system at the Nashville command center to determine how the plume might travel beyond its initial release area, Kulesz said.
It took SensorNet between 29 and 40 seconds to identify the anthrax simulant and between 64 and 77 seconds for the command center to predict the substance's pathway, Kulesz said.
"The military had wanted something that could detect and report the presence of a toxic substance within five minutes, so we feel SensorNet far exceeded those expectations," he said.

The anthrax results were especially noteworthy, Kulesz said, because it usually takes someone reporting flu-like symptoms before there are any indications of a possible release.

Vulnerable towers

Researchers also plan to demonstrate the system for Department of Energy officials sometime this year in the Washington, D.C., area, Kulesz said. SensorNet could also be adapted to identify radioactive fallout from what government officials have called a "dirty bomb," a conventional explosive containing radioactive materials, such as readily available cesium strontium.

"SensorNet could help the private sector monitor the path of the fallout to respond accordingly," Kulesz said.

Which wireless towers?

One of the questions in the technology's future is whether it should be used on existing wireless phone towers or devoted to a new generation of towers, Kulesz said. Many people lost the capability to use their wireless phones after the Sept. 11 attacks because of damage done to wireless communications towers near the World Trade Center, raising new concerns about their vulnerability.

"I think this could help foster a strong government-industry partnership to address the tower issue," he said.

If the federal government provided the necessary funding, SensorNet could be deployed within a year, Kulesz said.

Among the issues federal officials would have to consider is whether SensorNet should be a seamless national network, or limited to a few areas.

"From a standpoint of cost-effectiveness, it would make sense to produce a large number of units [as part of a nationwide network] as a way of reducing per-unit manufacturing costs," he said.

SensorNet has been built in a modular fashion, Kulesz said. This will allow it to be updated as spectrometer technology improves.

"Given the way technology improves by leaps and bounds, this is especially important," he added.

Korea Times
April 1, 2002

Bush Hardliners See End To Nuclear Accord

By Sohn Suk-joo, Staff Reporter

Hardliners in the U.S. Bush administration hope a recent decision not to certify North Korea's compliance with the 1994 nuclear agreement will serve as a prelude to the accord's demise, according to U.S. officials.

"The battle remains to be fought (on North Korea) but that's why this shift on the certification question this year is so important," Reuters quoted one senior official as saying.

In a break with previous U.S. policy, President Bush last month decided not to certify that North Korea is following the 1994 accord not to hide materials used in making nuclear weapons.

The pact, called the Agreed Framework, was signed eight years ago and was the key to the resolution of a potential nuclear crisis on the Korean peninsula, as former president Jimmy Carter negotiated the deal at the last minute with the late North Korean leader Kim Il-sung in Pyongyang.

``It was a transitional move away from saying, `Everything is fine.' It's saying, `Be on notice. You've got a year to go,'" the wire news service quoted another official as saying.

``If they don't allow the IAEA the kind of access they need (for inspections), then it's clear they (North Koreans) will have broken the Agreed Framework and the responsibility for that will be unambiguously theirs," the official said.

``You might as well say flatly, `You're in breach of the agreement and it's over,'" he added.

Time
April 8, 2002

Notebook

Tracking The Anthrax Attacks

At one point last week, it began to look as if the anthrax mailings might have an al-Qaeda connection after all. For one thing, military sources confirmed that anthrax traces had been found in several al-Qaeda training facilities. Around the same time, word leaked that Christos Tsonas, a Florida doctor who had treated Ahmed Ibrahim A. Al Haznawi, one of the Sept. 11 hijackers, for a skin lesion, had changed his diagnosis to anthrax after the attacks.

But authorities continue to believe the anthrax killer is a domestic terrorist who operated under cover of the Sept. 11 hysteria. The anthrax traces in Afghanistan could be environmental, according to the military. Troops have found 50 to 60 sites in the country where it seemed al-Qaeda was studying or trying to make and weaponize anthrax; the most advanced was near Kandahar. But they found no evidence of the bioterrorism agent itself. "It was more like a science-fair project than a weapons lab," a Pentagon official says.

As for the Florida physician, the FBI simply doesn't trust his after-the-fact diagnosis, even though a team of experts from Johns Hopkins who recently reviewed the case agreed that anthrax probably caused the lesion. An FBI source says the doctor "had no cultures, no blood tests. His analysis was made from his handwritten notes and memory." More important, the source notes, authorities have combed cars, houses and anywhere else the hijackers were known to have lived or spent time and found no traces of anthrax. "We vacuumed everywhere they had been for residue." FBI officials remain convinced the anthrax came from a U.S. lab.

By Viveca Novak and Mark Thompson

Smallpox Vaccine Supply Could Be Stretched

Diluted Doses Effective, Study Finds

By Justin Gillis

Washington Post Staff Writer

Friday, March 29, 2002; Page A10

If terrorists attacked the United States with smallpox, doctors would be able to dilute the nation's vaccine stockpile to create as many as 150 million doses, enough to vaccinate more than half the population, scientists reported yesterday.

The government also confirmed that 70 million to 90 million doses of smallpox vaccine had been found, unexpectedly, by Aventis Pasteur of Lyon, France, which has its U.S. operations in Swiftwater, Pa. The vaccine is being tested for potency and preliminary indications look positive. Officials offered no additional details.

Taken together, the two developments mean the country may be in far better shape to counter a smallpox outbreak than it appeared to be right after the Sept. 11 terrorist attacks. Aside from the older stockpiles, the Department of Health and Human Services has reordered smallpox vaccine for the first time in decades and is expected to receive 209 million doses before the year is out.

"We will have enough vaccine to save and protect every American should there be an outbreak," Health and Human Services Secretary Tommy G. Thompson said yesterday.

A major study, sponsored by the government and unveiled yesterday by the New England Journal of Medicine, revealed that the existing stockpile of 15 million doses of smallpox vaccine retained its potency when diluted fivefold to tenfold. Thompson called this "great news for Americans."

If the vaccine must be used, the government would probably favor fivefold dilution to be on the safe side, but in case of smallpox attacks on many cities at once, government experts said the new research demonstrates they could dilute the vaccine even further.

"If this were an absolute emergency that we needed 150 million doses, I wouldn't have any hesitation in recommending that we go with the 1-to-10" dilution, said Anthony S. Fauci, director of the National Institute of Allergy and Infectious Diseases, which sponsored the study.

The situation is improving so rapidly, in fact, that political pressure is mounting on the government to permit the vaccine's broader use. States are lobbying for vaccination of some firefighters and health-care workers who would be first on the scene of an outbreak. Fauci and Thompson yesterday stuck by the government's policy that vaccination should be employed only in a proven outbreak, but they also called for public discussion of whether that policy should be broadened once additional vaccine is on hand.

Outlining the case for voluntary mass vaccination, William J. Bicknell, former health commissioner of Massachusetts, wrote in the medical journal that such a policy would discourage a terrorist attack using smallpox. The public, he said, is capable of understanding that the vaccine itself poses risks, and may be willing to bear them. Bicknell calculated that a policy of nationwide vaccination could be expected to result in 168 deaths from side effects. Other experts have estimated several hundred deaths. All agree that tens of thousands of people would be made seriously ill by the vaccine but would probably recover.

"It is time for a full and open debate about the best protection against the possible reappearance of smallpox," Bicknell wrote.

Terrorists are not known to possess smallpox. The ailment, which killed a third of its victims and disfigured the rest, has been eradicated as a naturally occurring disease. But the virus was developed as a biological weapon by the former Soviet Union, and many experts fear that Soviet stocks may have fallen into malevolent hands.

http://www.washingtonpost.com/wp-dyn/articles/A33283-2002Mar28.html