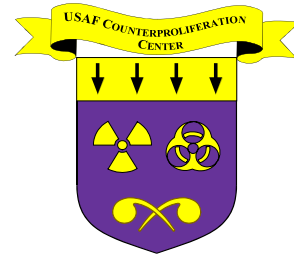


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11 April 2003

USAF COUNTERPROLIFERATION CENTER

CPC OUTREACH JOURNAL



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Washington Post

April 10, 2003

Pg. 36

Administration Now Turns To Finding Prohibited Weapons

Discovery May Soothe War's Skeptics

By Glenn Kessler and Dana Milbank, Washington Post Staff Writers

The surprisingly quick collapse of organized resistance in Baghdad yesterday turned attention to the hunt to locate the massive stores of chemical and biological weapons that the administration used as the main justification for going to war in Iraq.

In announcing the beginning of the war 21 days ago, President Bush told the nation that "the people of the United States and our friends and allies will not live at the mercy of an outlaw regime that threatens the peace with weapons of mass murder."

In the months preceding the war, the administration made a detailed case to the world about Iraq's extensive weapons capabilities. It said that Iraq had not accounted for 25,000 liters of anthrax; 38,000 liters of botulinum toxin; 500 tons of sarin, mustard and VX nerve agent; and 30,000 munitions capable of delivering chemical agents. But three weeks of war, and U.S. troops occupying much of Iraq, have not produced a confirmed use or cache of prohibited weapons. The failure to find such weapons has complicated the administration's hopes of convincing the world, particularly skeptics in Europe and the Middle East, that the war was about more than toppling Saddam Hussein's government.

Administration officials say the fact that Iraq did not use chemical weapons against U.S. troops reflected the military's success in destroying Hussein's command structure and ability to deliver such weapons.

They also say -- and even experts critical of the war agree -- that prohibited weapons will almost certainly be found. State Department spokesman Richard Boucher said yesterday that the discovery of chemical weapons suits and gas masks by U.S. troops meant that "the only conclusion can be that the Iraqi soldiers were preparing for the use of chemical weapons by their own side."

With fear of Hussein almost gone, "people will step forward pretty fast" and identify Iraq's weapons stores, said former Reagan arms official Kenneth Adelman, who serves on the Defense Policy Board. "It should be pretty soon, in the next five days."

Still, the absence of such weapons until now raises alternate possibilities that the Iraqi leadership was deterred from using them out of fear of massive retaliation, or that Hussein's biological and chemical capabilities were overstated -- either of which would undermine the arguments Bush made in going to war.

If the United States does not discover significant weapons, "it will just make it easier for those opposing U.S. action to make the point that it was not necessary to go to war," a European ambassador said yesterday. He said many governments will be unimpressed even if the United States uncovers a cache of weapons, because Hussein's failure to use such weapons proved the contentions of France, Germany, Russia and others that his government was contained and thus it was not necessary to go to war.

"We've had so many statements from high officials about the weapons of mass destruction in Iraq," said Lee H. Hamilton, the former Democratic chairman of the House International Relations Committee, who now is president of the Woodrow Wilson Center. Hamilton, who favored the effort to oust Hussein, said it's imperative to find and secure the weapons both to protect American credibility and to keep them from getting to terrorists.

"In terms of the rest of the world and for historians, the United States has a lot at stake here," he said.

In a sign of the pressure to find the proscribed weapons, the administration pledged yesterday to redouble efforts now that the Iraqi government is effectively ended. Defense Secretary Donald H. Rumsfeld yesterday announced rewards for Iraqis who help to uncover hidden weapons and documentation. He also said the administration is concerned that weapons have been smuggled.

"The thought that as part of this process, some of those materials could leave the country and [get] in the hands of terrorist networks would be a very unhappy prospect," Rumsfeld said at a Pentagon briefing. He added that "to the extent they haven't been moved out of the country -- it obviously is important to find them."

In the months leading up to the war, the administration made serious and specific allegations about Iraqi capabilities in biological, chemical and nuclear warfare.

"The United Nations concluded in 1999 that Saddam Hussein had biological weapons sufficient to produce over 25,000 liters of anthrax -- enough doses to kill several million people," Bush said in his State of the Union address. He also pointed to U.N. conclusions that Iraq had "materials sufficient to produce more than 38,000 liters of botulinum toxin -- enough to subject millions of people to death by respiratory failure."

"Our intelligence officials estimate that Saddam Hussein had the materials to produce as much as 500 tons of sarin, mustard and VX nerve agent; in such quantities, these chemical agents could also kill untold thousands," Bush continued. He also said Hussein had "upwards of 30,000 munitions capable of delivering chemical agents," and "several mobile biological weapons labs."

A CIA report released by the administration in October 2002 said: "Since inspections ended in 1998, Iraq has maintained its chemical weapons effort, energized its missile program, and invested more heavily in biological weapons; most analysts assess Iraq is reconstituting its nuclear weapons program."

The CIA asserted Iraq "has begun renewed production of chemical warfare agents, probably including mustard, sarin, cyclosarin, and VX." It said "all key aspects" of Iraq's biological weapons program "are active and most elements are larger and more advanced than they were before the Gulf war." The report said Iraq was developing drones likely "intended to deliver biological warfare agents."

"The president has set the bar very high," said Joseph Cirincione, director of the nonproliferation project at the Carnegie Endowment for International Peace. "He spoke to the nation repeatedly about a vast program of weapons of mass destruction, about hundreds of tons of chemical and biological weapons will could kill millions of people. The president has to produce more than a few barrels of chemical agents."

A senior administration official said yesterday it is too early to make any conclusion on what investigators will find, and he expressed confidence that Iraq's programs will be exposed. "The preoccupation till now has been to secure the country and end the regime," he said.

He also said it wouldn't make sense to compare the eventual discoveries with the allegations made by the administration before the war started. Many of the assertions made before the war, he said, were based on "the questions they [Iraqis] refused to answer," such as unexplained gaps between weapons stocks that had been produced and those destroyed.

Asked if Americans should expect the military will find 500 tons of sarin and mustard and VX nerve agent, as Bush had asserted, the official said: "The Iraqis may have poured it into the ground someplace."

Whether large stores of prohibited weapons are found appears to be of little consequence for domestic politics. In a Washington Post/ABC News poll last week, 22 percent of Americans said the war would be justified only by finding weapons of mass destruction, down from 35 percent two weeks earlier.

"Given the success of the war, that factor, which was one of the co-imperatives of the front end, has become decidedly less important," Republican strategist Rich Bond said.

International opinion is a tougher sell. Jonathan B. Tucker of the U.S. Institute for Peace said opponents of the war are unlikely to be impressed unless investigators, verified by international experts, can find hundreds of tons of chemical agents that would be needed to pose a military threat.

"The Bush administration will try to spin it that if the real threat was a terrorist threat, even small quantities could provide a threat, but other countries may not be persuaded," he said.

Cirincione provided a "crude standard" to determine whether the war would be justified in the eyes of the world: Will the amount of illegal weapons in Iraq be enough to kill more people than were killed by the war itself?

<http://www.washingtonpost.com/wp-dyn/articles/A1324-2003Apr9.html>

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Washington Post
April 10, 2003
Pg. 36

Nuclear Site Safety Tightened

Radiation Detected At Iraqi Complex

By Joby Warrick, Washington Post Staff Writer

Days after the site was overrun by Marines, U.S. military commanders said yesterday they have imposed heightened security and safety measures at a nuclear complex where the Iraqi government warehoused radioactive material. Iraqi forces abandoned the Tuwaitha nuclear site over the weekend, prompting fears among nuclear experts that the facility might be plundered, or that arriving U.S. troops or Iraqi civilians might be exposed to potentially dangerous doses of radiation.

The site, about 15 miles south of Baghdad, is Iraq's only internationally sanctioned repository for nuclear material. Since the early 1990s, large quantities of uranium and dozens of radioactive devices used in medicine and research have been stored at the site in warehouses that are sealed and monitored by the International Atomic Energy Agency, the United Nations nuclear watchdog.

Marines who have held the facility since Sunday have entered some of the complex's bunkers and recorded high levels of radiation inside, according to reports from embedded journalists. The accounts fueled speculation initially that the troops had discovered a secret nuclear weapons laboratory.

Among U.S. and international nuclear experts familiar with the site, the reports raised concerns that the IAEA's seals may have broken, leaving the nuclear material vulnerable and Iraqis and U.S. troops in danger of radioactive contamination.

"There is a risk to troops who might enter these secure areas, and there's a risk of looting that could allow the material to be spread around," said one nuclear expert close to the IAEA's Iraq inspection team.

A spokesman for U.S. Central Command in Qatar said coalition forces were familiar with the materials stored at Tuwaitha and had taken steps to protect troops and guard against theft.

Built in the 1960s, Tuwaitha was the birthplace of Iraq's previous nuclear weapons program and the site of a French-built nuclear reactor that was destroyed in an Israeli bombing in 1981. All of Iraq's known stocks of weapons-grade uranium were removed following the 1991 Gulf War, but Iraq was allowed to keep about 1.7 tons of low-enriched uranium and nearly 500 tons of natural uranium at Tuwaitha under IAEA safeguards. Low-enriched uranium is not immediately useable for a weapon but could be valuable to anyone trying to build one.

The site also served as a repository for about 150 pieces of radioactive equipment that Iraq was permitted to keep for medical or industrial applications. Some of the devices contain high levels of radiation and could be potentially used in a "dirty bomb," said David Albright, a former IAEA inspector and president of the Institute for Science and International Security.

"This might be a good opportunity for [coalition forces] to take this stuff out now," he said. "Why leave it for the next Iraqi government to deal with?"

<http://www.washingtonpost.com/wp-dyn/articles/A1573-2003Apr9.html>

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USA Today
April 10, 2003
Pg. 10

North Korea Pulls Out Of Non-Nuclear Treaty

By Barbara Slavin, USA Today

WASHINGTON — North Korea Thursday becomes the first country to quit the 33-year-old global treaty banning the spread of nuclear weapons, amid indications that it is continuing preparations to become a serial producer of nuclear bombs.

The reclusive regime, which faced off with the United States last fall over mutual accusations that each side had broken a separate nuclear pact, announced 90 days ago it would withdraw from the Nuclear Non-Proliferation Treaty. The United Nations' nuclear watchdog, the International Atomic Energy Agency, considers the withdrawal official today.

A senior U.S. official says the North Koreans have been spotted recently amassing the chemicals needed for separating plutonium from spent fuel rods at the North's nuclear facility at Yongbyon.

The official, who asked not to be identified, would not specify the chemicals. But nuclear experts say they probably include acids used to dissolve metal fuel rods so the plutonium can be removed. They are typically delivered in railroad tank cars.

A resumption of reprocessing could allow North Korea, already said to possess enough plutonium to have built one or two bombs, to produce enough for a half-dozen more in a few months. U.S. officials worry that could destabilize the Korean peninsula. Even worse, officials fear, is that North Korea, which has a long history of selling weapons, could sell bombs or bomb material to another rogue state or a terrorist group.

The crisis began last October, when the North Koreans admitted they have a secret uranium enrichment program that U.S. officials said violates a 1994 U.S.-North Korea agreement that bars bombmaking efforts. Since then, the North Koreans have restarted a reactor at Yongbyon and kicked out U.N. inspectors.

The tense faceoff has been overshadowed by the U.S.-led invasion of Iraq. But North Korea "is the next big security challenge," warns Ashton Carter, a former senior Pentagon official in the Clinton administration who helped set its policy toward North Korea.

Tuesday is the birthday of Kim Il Sung, North Korea's founder and father of its current leader. Speculation has mounted that the North Koreans might escalate their confrontation with the United States by launching a ballistic missile, starting reprocessing or even carrying out an underground nuclear test.

North Korea has demanded direct negotiations with the United States, but the Bush administration says it will talk only if North Korea's neighbors — South Korea, China, Russia and Japan — are there.

Wednesday, the U.N. Security Council met to discuss the situation but was unable to reach any agreement. U.S. diplomats say China has blocked even the issuance of a non-binding statement by the Security Council president condemning North Korea's behavior.

North Korea has warned that it would regard any U.N. action against it as an act of war. Maurice Strong, a special adviser to U.N. Secretary-General Kofi Annan, met with North Korean leaders last month. The North Koreans told Strong that the U.S. invasion of Iraq confirmed their view that they are "next on the list," he said.

Analysts worry about the precedent set by North Korea's withdrawal from the Nuclear Non-Proliferation Treaty.

David Albright, president of the Institute for Science and International Technology, says Iran might follow North Korea's precedent.

"The problem is that U.S. policy (of threatening to pre-empt nuclear threats militarily) is scaring nations away from non-proliferation agreements," Albright says. "Are we on a slippery slope?"

<http://www.usatoday.com/usatoday/20030410/5056307s.htm>

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InsideDefense.com

April 9, 2003

Rumsfeld: U.S. Offering Rewards For Information On Iraqi WMD Programs

The United States is offering rewards to Iraqis who turn over information regarding Saddam Hussein's weapons of mass destruction programs, Defense Secretary Donald Rumsfeld said today.

"We still need to find and secure Iraq's weapons of mass destruction facilities and secure Iraq's borders so we can prevent the flow of weapons of mass destruction materials and senior regime officials out of the country," Rumsfeld told reporters during a Pentagon briefing. "And we're asking people to come forward and help in this effort.

"Rewards are available to those who help us prevent the disappearance of personnel, documentation and materials," he added. "Good lives and a better future are possible for those who turn themselves in and choose to cooperate with coalition forces."

The defense secretary said one of the reasons it is important to find Iraq's WMD capability "is because the nexus between terrorist states with weapons of mass destruction -- in this case, chemical and biological and nuclear technologies and knowledge -- and terrorist groups, networks, is a critical link."

The secretary did not say what U.S. agencies other than DOD were offering rewards, and did not specify dollar amounts. "They are very important, just as the opportunity for people to improve their lives and get off a black list is important. And there are rewards, and carrots and sticks," he said.

Coalition forces need help, Rumsfeld said. "We need people to come forward and volunteer that information. And we're at a point now where they need not fear -- if they're in one of the liberated areas, they need not fear this regime, because this regime is not going to come back and occupy that country."

-- *John Liang*

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Washington Times

April 10, 2003

Pg. 13

U.S. Soldiers Enter Saddam's Tunnels

By Robert Tanner, Associated Press

The mysterious tunnels of Iraq are rumored to stretch for scores of miles, linking palaces, military strongholds and safe houses, and concealing leaders, treasure or weapons of mass destruction.

For U.S. troops strapping on night goggles and venturing underground, the tunnels are a new kind of battlefield in this war. No maps, no light and no handle — yet — on what they might find.

"For the type of regime we're dealing with, the tunnels represent an ideal spot to conceal weapons and serve as a hide-out and in some cases an escape route," said Lt. Mark Kitchens, a spokesman for U.S. Central Command.

Saddam Hussein is said to have built so many tunnels that just about anything could be underground — troops, weapons of mass destruction, the Iraqi president himself.

"There were all sorts of tips and rumors, 'dig under this and you will find that,'" said Ewen Buchanan, a spokesman for the U.N. Monitoring, Verification and Inspection Commission.

Mr. Buchanan said U.N. arms inspectors in 1998 found a combination of bunkers and tunnels below some of Saddam's palaces, but not the sophisticated network that had been rumored.

"But that doesn't say that they don't exist," he said.

On Tuesday, at the airport outside Baghdad, 150 soldiers of the 101st Airborne's 3rd Battalion, 3rd Brigade searched a 12-room complex inside a cave with white marble floors, 10-foot ceilings and fluorescent lighting. They found cigarette butts, tea bags and other signs of recent abandonment — but no Iraqis.

"We're going to have to try to figure out where they go," brigade commander Lt. Col. Lee Fetterman told Associated Press writer Kimberly Hefling. "There's no telling."

On Monday, U.S. forces captured an Iraqi colonel in one tunnel who was calling in artillery fire from his hide-out.

Also at the airport, a Knight-Ridder news service report described 30 men from 1st Platoon Apache Company entering a tunnel through a "staff only" doorway below the airport's baggage claim. They found a corridor 20 feet high and 20 feet wide that stretched for hundreds of yards in each direction — but no Iraqis.

Reports, some stretching back years, mention the existence of tunnels and bunkers built by Serbian, German or Chinese engineering firms, leading from palaces to secret hideaways and more.

Defense Secretary Donald H. Rumsfeld repeated those reports in December, arguing the futility of U.N. searches for weapons of mass destruction.

"They've got enormous miles and miles and miles of underground tunneling," Mr. Rumsfeld said. "I don't know how inspectors on the surface of the Earth can even know what's going on in the underground facilities."

Hussein al-Shahristani, a scientist who was imprisoned by Saddam and fled during the 1991 Persian Gulf war, told CBS' "60 Minutes" in February that plans originally called for a subway beneath Baghdad.

Saddam "got all the drawings; he told his military, 'Go ahead and do them but not for a Metro, for our weapons of mass destruction. We can hide them, move them around,'" Mr. al-Shahristani said. "We believe now it is more than [60 miles] of very complex network, multilayer tunnels."

But Mr. al-Shahristani never saw the tunnels himself, he said.

Few have, said Patrick Garrett of Globalsecurity.org, a military affairs think tank. "There is tons of conjecture on this subject right now," he said, but "there's been no official confirmation or official imagery."

After encountering the caves used by Al Qaeda and the Taliban in Afghanistan and the rumors of tunnels in Iraq, the U.S. military took steps to ready its troops.

A 1.1-million-acre site with miles of old mining caves in the Mojave Desert in Southern California was turned into a Tunnel Warfare Center in 2001, training troops in the challenges posed underground.

<http://www.washtimes.com/world/20030410-92959840.htm>

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Reader's Digest

April 2003

Pg. 63

Search & Destroy

The mission: to find unsecured weapons of mass destruction before terrorists do

By Michael Crowley

IN THE EARLY MORNING HOURS of August 22, 2002, the race to protect America from nuclear destruction focused on an aging building in Eastern Europe. Under cover of darkness, a paramilitary operation unfolded in the area around the Vinca Institute, home to a Soviet-era nuclear reactor in the Serbian capital of Belgrade. Soldiers and police closed off nearby streets. Snipers took up rooftop positions. Counterterrorism commandos stood on high alert. Their mission was to protect a cargo of terrifying potency: some 100 pounds of highly enriched uranium — spent fuel from the reactor that could be used to develop up to three nuclear bombs.

For years the fuel had been stored at Vinca under conditions that made American officials uneasy. Security amounted to one or two armed guards. The fuel itself was stored in containers light enough for a man to carry, but not radioactive enough to kill him quickly. Within months of such a theft, a nation or terrorist group employing a few skilled scientists and some fairly basic equipment could be ready to devastate the city of its choice.

PROJECT VINCA, as it was called by the State Department, ended that threat. The uranium was loaded into one of three identical trucks, two of which acted as decoys. With an armed escort and helicopters hovering overhead, the convoy traveled along 22 miles of closed roads to Belgrade's international airport. From there the radioactive cargo was flown to its destination: Russia, where it would be converted into a form of uranium unsuitable for a nuclear bomb.

THE WORLD IS NOW dotted with places like Vinca, where terrorists might secure the ingredients to make weapons of mass destruction. Thirteen countries are known to possess chemical, biological or nuclear weapons. Perhaps 25 in all have such weapons programs going full-throttle. More than 40 nations, meanwhile, have nuclear

research facilities that store either enriched uranium or plutonium. But the most dangerous places are weapons sites where security is abysmal or where scientists could be available to the highest bidder. And the majority of these are tucked away in remote areas of the former Soviet Union.

The stakes were made clear on September 11, 2001. As Thomas Friedman, foreign affairs columnist for *The New York Times*, has said, technology now enables a superpower like the United States to be attacked by "super-empowered" individuals such as Osama bin Laden. He can communicate easily through the Internet and satellite telephones to form virtual Al Qaeda cells that can become all too real as they carry out their nefarious deeds.

Project Vinca is a good example of what the future of America's battle against terrorism will look like. Even as the FBI, CIA and NSA hunt down terrorists around the world, a parallel effort is underway to make the raw ingredients of mass terror secure — whether they are chemical agents like sarin, VX nerve gas and mustard gas; biological agents like anthrax and ricin; or the essential ingredients of nuclear weapons, highly enriched uranium or plutonium. Last spring, this quest took Senate Foreign Relations Committee Chairman Richard Lugar to a massive Russian chemical-weapons complex at Shchuch'ye, an impoverished town in Western Siberia. Inside the corroded buildings, some with deteriorated roofs, are nearly two million artillery shells. Stacked snugly in racks, they could be mistaken for an enormous collection of wine. But the containers are filled with two of the most lethal substances known to man: sarin and VX nerve gas.

Iraq has already shown the world what nerve agents can do: In 1988, Saddam Hussein slaughtered 5,000 Kurds in a northern Iraqi town with a cocktail of sarin, tabun and VX gas, along with mustard gas. Years later, many survivors have permanent, crippling nerve damage and respiratory problems. Even more devastating, their babies are being born with birth defects and mental retardation.

Many of the shells at the Shchuch'ye warehouses are easy to carry off. Lugar fit one into an ordinary briefcase. "The Russians claim that this single shell would kill all in a stadium of 85,000 people," says Lugar. "And this is just one of the smallest shells."

Russian soldiers stand guard at the Shchuch'ye facility. But most Russian military men are paid poorly, making them susceptible to bribes from people who might want to buy or steal shells.

"The concern at the moment is an inside job by someone who wants to feed his family," explains Ken Myers, a Lugar staffer who has visited Shchuch'ye.

The Russians have an inventory of Shchuch'ye's cache, but if one shell out of two million were to go missing, who would notice? Nor is there a shortage of potential buyers in the area. Shchuch'ye is located near the Russian border with Kazakhstan, reportedly a base of operations for Al Qaeda terrorists over the years.

Tracking down and keeping tabs on substances like the nerve gas in Shchuch'ye is extremely difficult and expensive work that will stretch across nearly every populated continent. But the task is being undertaken, largely thanks to the pioneering efforts of Senator Lugar and former Senator Sam Nunn, who now heads the Nuclear Threat Initiative, based in Washington, D.C.

Through their decade-old Nunn-Lugar program, the U.S. government has been spending \$1 billion a year to secure and destroy weapons of mass destruction in the former Soviet Republics and employ, in peaceful work, cash-strapped weapons scientists who might otherwise go to work for rogue states or terrorists.

So far, the program has deactivated more than 6,000 nuclear warheads, destroyed hundreds of weapons such as ballistic missiles, and found jobs for tens of thousands of scientists. Still, the risk has been diminished only slightly. Chemical weapons stockpiles — some 40,000 metric tons in Russia alone — have barely been touched; security at many of the former biological weapons facilities remains lax; and nuclear materials (200 metric tons of plutonium and 1,200 metric tons of uranium in Russia) have been completely secured at fewer than half of the facilities that house them.

IT'S CLEAR WHY Nunn and Lugar have focused their efforts to date on the former Soviet Union. Georgia, Ukraine, Kazakhstan, Uzbekistan and Belarus — all being former Soviet Republics — have stores of chemical, biological or nuclear materials. And Russia itself contains the mother lode of the world's super-deadly materials. This is what remains of the crumbling Soviet Cold War arsenal.

The old Soviet bloc is not the only problem. Several countries that have spawned or supported terrorists, including Egypt, Iran, Libya and Sudan, are believed to have germ-weapons programs—and little is known about the security of their laboratories and the allegiances of their scientists. Meanwhile, nations as diverse as Syria, Congo and Bulgaria have nuclear "research" reactors, like the one at the Vinca Institute, that are believed to account for some 20 tons of uranium. (Italian authorities, in fact, caught Mafia operatives in 1998 trying to sell a uranium rod that had been stolen from a reactor in Kinshasa, Congo. The plant manager had not even known the rod was missing.)

IT IS THROUGH THE WORK of Nunn and Lugar in the former Soviet Union, however, that we can see most clearly what the dangers look like. Consider the Pokrov Biologics Plant southeast of Moscow. Pokrov was ostensibly built during the Cold War to produce animal vaccines. But it had another secret purpose: to brew killer

germs capable of wiping out America's livestock en masse. The refrigerators at Pokrov still store a wide variety of virulent germs, including anthrax. But as of last spring, the plant's security-alarm system was 30 years old and not working properly. And a building housing viruses was guarded by a lone man with a German shepherd. Inside, Senator Lugar found a refrigerator with its "security" amounting to a piece of string with a wax seal. Another refrigerator with deadly viruses stood in a second-floor room by a window, accessible to anyone with a ladder. Thanks to the Nunn-Lugar program, security is being upgraded at places like Pokrov. And, in a model for future efforts, the plant is being converted to peaceful uses. One of the facility's old biological fermenters now churns out a shampoo, of all things, sold under the label "Green Mama." But experts say shoddy security is still the norm at chemical, biological and nuclear facilities throughout Russia.

It's not just the germs, but also the know-how of the makers, that have officials worried. Many Russian bioscientists work in labs with no heat, and are paid as little as a few hundred dollars a month. Several top Russian germ scientists have said they were approached in the 1990s by Iranian officials, offering them salaries five times greater than what they were earning. Some are believed to have accepted. Countries like Iraq and North Korea are reported to have made similar offers — a serious problem, given that the Soviets employed some 65,000 scientists in their germ-weapons program.

Finally, there is the nuclear material available in the former Soviet Union — some 20,000 weapons, and enough bomb-grade uranium and plutonium (much of it in non-weapons nuclear facilities) to build 40,000 more. In one chilling case, two kilograms of highly enriched uranium were stolen from a nuclear research institute in Sukhumi, Georgia, in the early '90s. That uranium has never been recovered.

Authorities have reported that dozens of attempts to smuggle nuclear material have been thwarted, including the arrest in 1998 of workers at a Russian nuclear-weapons facility who had plotted to steal 18.5 kilograms of highly enriched uranium — possibly enough to build a bomb.

Even more recent attempts, in Bulgaria and Georgia, indicate that nuclear material may increasingly be destined for the Middle East or Asia. This would square with a finding of a recent commission led by former Senator Howard Baker and former White House counsel Lloyd Cutler: "The task force was advised that buyers from Iraq, Iran and other countries have actively sought nuclear-weapons-usable material from Russian sites."

A facility of particular concern is the Kharkiv Institute of Physics and Technology in Ukraine, which houses about two-thirds more bomb-grade uranium than the Vinca Institute did. Workers at Kharkiv typically earn the equivalent of \$150 per month, and heat and lights are often turned off to cut utility bills. These facts are surely not lost on those interested in acquiring nuclear weapons; in 1998, Saddam Hussein dispatched an Iraqi delegation to Kharkiv, supposedly to explore business opportunities there (no nuclear material is thought to have been transferred).

ENSURING THAT reactors like Kharkiv don't become black-market outlets for terrorists won't be easy. Even a top-priority mission like Project Vinca required more than a year of planning and intensive diplomacy, and it ultimately cost the U.S. taxpayer millions of dollars. What's more, the federal government failed to fund critical parts of the job. Only a private grant of \$5 million from the Nuclear Threat Initiative — which is funded by CNN mogul Ted Turner — made Project Vinca possible.

Other efforts of the Nunn-Lugar program often run afoul of Congress, where members suspect that American dollars may be wasted. A priority of Nunn and Lugar, for instance, has been to construct machinery to neutralize the stockpile of nerve gas at Shchuch'ye. In a speech last year, President Bush called this project "a vital mission." But since then, progress has been held up by bickering in Congress over the extent of the threat. Meanwhile, the shells sit in Shchuch'ye, gathering dust. Or so we hope.

More upbeat news came at the 2002 "G8" summit meeting of the world's leading industrialized nations, where heads of state pledged \$20 billion over ten years to address the worldwide threat. But even that support seems shaky: Experts complain that the plan lacked both specifics and hard commitments.

"Preventing the spread and use of nuclear, biological and chemical weapons should be the central organizing principle on security for the 21st century," says Sam Nunn. Yet he also fears that securing these weapons "doesn't even come close to being a high enough priority for our nation and the world." Nunn likens the United States and its allies to a gazelle running from a cheetah— moving in the right direction, but not nearly fast enough. He hates to think what it might take to drive the point home.

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Nuclear Site Stood Unguarded For Days

Facility containing uranium was abandoned by Iraqis, and U.S. Marines did not immediately move to secure it.

By Bob Drogin, Times Staff Writer

WASHINGTON --Three Iraqi warehouses filled with 2,500 barrels of uranium that could be enriched for nuclear weapons — plus radioactive isotopes that could be used for deadly "dirty bombs" — lay unguarded for several days this week as Iraqi mobs swirled around.

The facility, known as Location C, was Iraq's only internationally sanctioned storage site for nuclear material. It thus was a potential prize for U.S. forces — or for anyone seeking to steal radioactive material for sale to other countries or to terrorists.

Iraqi Republican Guard troops abandoned the site late last week as U.S. armored columns approached the nearby Tuwaitha nuclear research center south of Baghdad. Hordes of looters soon cut Tuwaitha's electric fences and began ransacking homes and offices in the complex, hauling off TVs and carpets in stolen luxury cars.

U.S. officials said Marine combat engineers secured Location C on Wednesday after a State Department counter-terrorism task force warned Central Command of the danger.

Experts, though, say the lapse points to a larger concern: the immediate need to find and secure Iraq's nuclear weapons components, ballistic missile manuals, precursor chemicals for nerve gases, microbe feeder stocks for germ weapons, and countless other potentially dangerous materials that could aid terrorists or illegal weapons programs around the world.

"There's a tremendous danger now that materials could slip out of the country," warned Rolf Ekeus, who headed United Nations weapons teams in Iraq during most of the 1990s. "It's very important that these sites be taken under control immediately."

Although Iraq has not used weapons of mass destruction so far, the Bush administration believes that the country has the capability.

It wasn't clear Thursday whether special U.S. weapons teams had reached Location C. Officials at the Pentagon and in Qatar said they did not know whether anyone had breached the steel doors and removed any of the 500 tons of unrefined uranium and uranium dioxide and the 150 transportable devices with radioactive isotopes from Iraqi hospitals and research facilities that were stored at the site.

"The most immediate concern is the radioactive isotopes," said David Albright, a former nuclear weapons inspector in Iraq who now heads the nonprofit Institute for Science and International Security in Washington. "You worry that some idiot will take them and spread them around.... Or that someone will try to sell them for a dirty bomb," which uses conventional explosives to disperse radioactive materials.

Another potential problem is the 3,000 or so Iraqi scientists, military officers and engineers who provided the intellectual heft, technical expertise and command structure for Hussein's clandestine weapons production and procurement systems, according to U.N. records. About 100 are considered crucial to shedding light on Iraq's secret programs. None has yet been interrogated.

Indeed, not all their identities are known. Experts warn that Iraq's weapons designers may flee the country and offer their services to other regimes before they can be rounded up. Most of the scientists and engineers at Tuwaitha, for example, disappeared before U.S. troops arrived.

"There could be a brain drain like we saw after the collapse of the Soviet Union," said Jonathan Tucker, a former U.N. inspector now at the U.S. Institute for Peace in Washington.

"These are people with valuable technical know-how. Presumably they're now unemployed. They might be tempted to work for other countries or for Al Qaeda."

The Pentagon and CIA are offering large cash rewards in hopes that some of Iraq's scientists, freed from fear of Hussein's regime, will come forward to lead U.S. investigators to the dictator's secret weapons and document stashes.

"You're not going to find the weapons unless you talk to the people who know where they are," said Richard O. Spertzel, a former U.N. biological weapons team leader. "Iraq's method of hiding weapons was to dig a hole in the sand, put the weapon in, put a tarp over it and put the sand back."

Those Iraqi scientists or officials who don't agree to talk may face war crimes charges or prison, U.S. officials said. Either way, the hunt could last years.

So far, U.S. forces have found none of the illegal weapons that Bush administration officials allege are hidden in Iraq — and that still could be used as battlefield or terrorist weapons. President Bush and British Prime Minister Tony Blair repeatedly cited the existence of forbidden weapons as the chief justification for invading Iraq.

The White House repeated the charge Thursday. "We have high confidence that they have weapons of mass destruction," Press Secretary Ari Fleischer said. "This is what this war was about and is about. And we have high confidence it will be found."

Jessica Tuchman Matthews, president of the Carnegie Endowment for International Peace, said Washington should allow U.N. weapons inspectors back into Iraq to assist in the search and to provide an independent assessment of any weapons found. The U.N. teams have amassed vast databases that are unavailable to the U.S. teams.

"There's no question it would be helpful both for international legitimacy and for simple expertise," Matthews said. Fleischer said the Bush administration "never ruled out the possibility of U.N. inspectors playing some type of role in the future of Iraq."

Washington has not asked the U.N. teams for any help so far, however, said Ewen Buchanan, a spokesman for the U.N. inspectors in New York.

For now, the search is in the hands of the Army's 75th Intelligence Exploitation Unit. The military-civilian group includes several hundred chemists, biologists, FBI agents, CIA and Defense Intelligence Agency officers, weapons experts from U.S. national laboratories and other specialists.

The group has created separate teams to explore and test suspect sites, to interrogate Iraqi scientists and officials, and to study captured documents. "As Iraq grows more secure, [the operation] has the potential to grow into thousands of people," a military intelligence official said.

So far, the Pentagon teams have visited only a dozen sites of more than 1,000 on their priority list, the official said. "That could grow as you interview people and you get documents and intelligence," he added.

The challenge is immense. Iraq has a vast petrochemical industry, plus hundreds of research facilities, medical laboratories, pesticide plants, factories and other places where lethal toxins could be secretly produced. U.N. inspectors recently searched 400 sites in four months — and found no evidence of illegal biological or chemical weapons.

U.S. intelligence apparently wasn't much help. Only one CIA tip led U.N. inspectors to a discovery. In that case, a search of a nuclear scientist's home found notes and documents relating to laser enrichment of uranium, a method Iraq briefly tried and abandoned in the 1980s. "Often the intelligence was very detailed and precise, but it was wrong," said a U.N. inspector who recently returned from Iraq and asked not to be identified.

"It would say, 'Go up the stairs, in the third door on the right, look in the corner, the weapons are there.' But they never were. It's hard to know if the intelligence was wrong, if the Iraqis got wind of it and moved it, or what. It was very frustrating. None of the tips really panned out."

CIA credibility is at stake. In a public report last October, the agency said "most analysts assess [that] Iraq is reconstituting its nuclear weapons program." It also said that Iraq had "renewed production of chemical warfare agents" and that "all key aspects" of its germ warfare program "are active and most elements are larger and more advanced than they were before the Gulf War."

Bush outlined Iraq's suspected weapons in his State of the Union speech in January. Hussein, he said, had biological weapons sufficient to produce more than 25,000 liters of anthrax and more than 38,000 liters of botulinum toxin. He said Iraq also could produce as much as 500 tons of sarin and VX nerve agents, as well as mustard gas. Bush administration and Pentagon officials could only speculate this week as to why Hussein or his aides haven't used any illegal weapons in the three weeks of all-out war. Many warned that the weapons still could be used in car bombs or other terrorist devices in coming days and weeks.

CIA officials believe that Hussein carefully hid whatever arsenal he possessed in or close to Baghdad and his home area of Tikrit and that they were in the custody of Special Republican Guard units commanded by his son, Qusai. But attacks may have been deterred by U.S. warnings that anyone who fired such weapons would be treated as a war criminal, CIA officials said. Or heavy U.S. airstrikes on Iraq's 155-millimeter artillery batteries, truck-mounted 122-millimeter rockets and missiles may have obliterated the delivery systems.

Others speculated that Hussein dismantled his weapons before the war in hopes of surviving the crisis. Or that he and his sons were killed or incapacitated on the first night and thus were unable to issue orders for their use. Or that the orders were ignored.

"It's possible the Republican Guard refused orders, or that they couldn't get to the weapons," said Judith Yaphe, who was the chief CIA analyst on Iraq in the 1991 Persian Gulf War. "The situation may have deteriorated much faster than they thought. Or it's possible, of course, that they didn't really have the weapons to start with."

Others, still in government, expressed similar skepticism. Several said the administration presented worst-case intelligence estimates, not realistic appraisals of the danger.

"I think we'll probably find some stuff, but I don't know how much we'll find," said a U.S. official familiar with the intelligence on Iraq. "It may be a lot less than people were anticipating."

Military field commanders in Iraq clearly feel less concerned. They lowered the alert status this week, no longer requiring U.S. troops to wear the heavy chemical-protection suits they fought and slept in since the war began. Chemical attacks made no sense in Baghdad's crowded confines, they said.

There were other signs that the danger might have been overstated. Despite warnings before the war that Iraq might fire missiles with chemical or biological warheads into Israel, for example, most U.S. intelligence officials privately discounted those concerns. Iraq's missiles could not reach Israel from Baghdad, they said.

Tuwaitha, a complex of more than 100 buildings, sits along the Tigris River about 15 miles south of Baghdad. Built in the 1960s for Iraq's Atomic Energy Commission, it soon housed Hussein's secret effort to build a nuclear bomb. Israeli jets bombed the Tamuz I reactor complex there in 1981, and coalition forces repeatedly attacked the complex a decade later during the Gulf War.

U.S. officials concluded after 1991 that Iraq had a workable atomic bomb design and had been only a year away from enriching uranium to fuel a nuclear weapon. International Atomic Energy Agency inspectors believe that they effectively destroyed or dismantled Iraq's nuclear weapons program during the 1990s, and the agency's inspections earlier this year found no evidence that the program had been revived.

Tuwaitha's Location C stored uranium collected for the nuclear weapons in the 1980s. Iraq mined some low-grade uranium and imported the rest from Portugal, Brazil, Niger and other nations when it could legally do so.

The uranium was not yet enriched for nuclear weapons, however, and thus was not banned or removed under U.N. resolutions approved after the Gulf War. The stacked barrels were checked regularly by International Atomic Energy Agency experts until the war began last month.

Times staff writer Greg Miller contributed to this report.

<http://www.latimes.com/news/nationworld/iraq/inside/la-war-nuke11apr11.1.7459896.story?coll=la%2Dhome%2Dheadlines>

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Washington Times

April 11, 2003

Pg. 1

'It's Just Evil In Here'

Use of chemical weapons, human testing suspected at military prison

By Betsy Pisik, The Washington Times

ZUBAYR, Iraq — Coalition forces have discovered an abandoned military prison here, where discarded gas masks and used atropine injectors suggest the recent presence of chemical weapons and human testing.

U.N. weapons inspectors have no record of the prison, in which at least two cells appear to have been recently sealed with fresh cement and brickwork.

Several chambers have neatly painted signs saying "chemical storage" and bright cartoon drawings of gas masks, gloves and boots.

U.S. troops assessed the prison Wednesday while searching a warehouse containing the remains of several hundred Iraqi and Iranian soldiers. The two are not presumed to be related.

The prison, just east of the Shiabab Airfield and north of Zubayr in southeastern Iraq, appears to have been in use until very recently. A roster of prisoners, discovered inside the compound, lists detainees who were incarcerated as recently as Jan. 4, 2003.

There was no sign of what happened to the inmates and no indication of what their crimes were. But the punishment seems to have been severe.

Piles of blankets, clothing and personal items indicate a hasty departure.

There is also evidence of crude torture. Electric cords snake through a tiny window in one cell, the frayed ends dangling from an anchor in the ceiling. Similar sets of wires trail into other concrete rooms.

"I'd hate to think of what those clamped onto," said one U.S. soldier, who speculated the far end would be attached to a generator. "It's just evil in here."

At least a half-dozen gas masks were scattered near the prison's entrance and inside one of the wire-enclosed walkways of the white cinder-block prison. There were also several spent auto-injectors of atropine, a powerful drug that is administered as an antidote to nerve gas.

Over the last half-decade, U.N. weapons inspectors in Iraq have reported numerous examples of suspected testing of chemical or biological agents on prisoners.

But U.N. spokesman Ewen Buchanan said in New York that the U.N. inspection teams know nothing about a facility at Zubayr. "We have no record of having inspected anything at that location," he said by telephone. With no Iraqi soldiers or authorities to question, coalition officials said it was impossible to explain what might have happened inside the prison.

The air base is in an area presently under the command of British forces, who are rotating command and could not be reached yesterday for comment.

Zubayr is a dismal town just south of Basra, which this week remained darkened by smoke from oil fires and troubled by looting. There are few two-story buildings in Zubayr, and the horizon meets the ground in a barely broken gray line.

The area has not been a fertile farming region since the Baghdad regime began draining the swamps to starve out and relocate its mostly Shi'ite Marsh Arabs after the 1991 war. Today, the area is a vast wasteland.

British troops last week located a warehouse filled with badly decomposed skeletons of more than 400 soldiers presumed to be victims of Iraq's eight-year war with Iran in the 1980s.

A scan of the identified bodies indicated that most of the dead were Iraqis.

Plastic bags of bones, decomposed human dust and scraps of clothing were laid in new plywood coffins or stacked in the corner of the sprawling warehouse inside the disused Shiabah Airfield.

<http://www.washtimes.com/world/20030411-9926440.htm>

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London Times

April 11, 2003

'Mother Of All Bombs' Prepared For Tikrit

By David Charter and Michael Evans, Defence Editor

THE ground battle for the last stronghold of Saddam Hussein's regime could start as early as Monday.

The first elements of the US 4th Infantry Division, including 44 of the latest Abrams M1A2 tanks and 18 Paladin howitzers, will shortly be in attack position outside Tikrit, 112 miles north of Baghdad.

Intelligence sources said some of the missing regime members were now holed up in the town and that Iraqi forces might fight hard to protect them from an American assault. Iraqi military defences around Tikrit are being reinforced by surviving elements of the Republican Guard and by regular army units. This is the clearest sign yet that some of the regime leaders may be in the town.

Major-General Gene Renuart, a spokesman at US Central Command in Qatar, said: "Tikrit certainly is one of the key strongholds of the Baath party and it is an area that is important to us."

As part of the psychological build-up for an attack, General Renuart refused to rule out using the biggest weapon in the American arsenal, the so-called "Mother of all Bombs", or Moab (massive ordnance air blast bomb).

A Pentagon official was quoted on CNN as having confirmed that a Moab had been moved to an undisclosed forward base in the region. The Moab, which detonates 21,000lb of explosives above the ground, is dropped from a slow-moving C130 Hercules aircraft and is guided by the satellite-linked global positioning system.

The Moab, which can create temperatures of up to 538C (1,000F), is also designed to obliterate chemical or biological agents concealed in bunkers.

The heavily fortified town of Tikrit is thought to be one of the most likely sites in Iraq where Saddam could have hidden weapons of mass destruction in its complex bunker and tunnel system.

Charter is in Qatar.

<http://www.timesonline.co.uk/printFriendly/0,,1-6047-642573,00.html>

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New York Times

April 11, 2003

Experts Study Equipment Found Buried In South

By Judith Miller

KARBALA, Iraq, April 10 — A team of military experts hunting for chemical, biological or other unconventional weapons in Iraq today began examining a cache of sophisticated equipment that had been buried at an ammunition plant near this southern city.

The team, known as Mobile Exploitation Team Alpha, traveled to the site this morning from a military camp after receiving a report on Wednesday that engineers from the 101st Airborne Division's Second Brigade had uncovered from mounds of dirt 11 trailer-like containers with the equipment, along with documents and manual, inside. One member of the team said it was difficult to tell what Iraq had intended to do with the equipment, which appeared to be new. The expert said the containers did not seem to be mobile laboratories. The Bush administration has accused Iraq of having mobile laboratories to make germ and chemical weapons. The expert said, however, that much of the equipment could be used for multiple purposes, some peaceful, some not. By day's end, the experts from the Defense Intelligence Agency had laid out some of the equipment that they said could be of particular use in biological and chemical work. Arrayed on the ground were such items as a water purifier, shakers for test tubes and vials, and a water bath that maintains constant temperature. Some of the equipment appeared to have come from other countries, including Switzerland, Germany, India, China and Britain. According to Sgt. First Class Christopher Foster of the 101st Airborne, engineers moved through this vast site on Wednesday afternoon and uncovered the containers after seeing a corner of one of them protruding from a large earthen mound. The containers varied in size, the largest being roughly 40 feet long, 8 feet wide and 8 feet high. The site was apparently left unsecured, however, and by the time Sergeant Foster's platoon, which has expertise in dealing with chemical weapons, arrived in the evening, he said, the containers had been looted. The site was on a Defense Department list of suspicious targets, and was bombed early in the war. The exploitation team, which has been checking other suspect sites, had not had a chance before to come to this plant, which is now known as the Tabook State Company. Iraq says the site, formerly known as the Karbala Ammunition Filling Plant, was used to make conventional munitions for the Ministry of Defense. The site has more than 20 bunkers, a vast network of pipes for water and perhaps waste, and sulfuric acid production facilities. It had been visited as recently as February by United Nations weapons inspectors. The military experts said they were planning to work through much of the night, examining equipment and documents. They estimated that it would take at least two days to explore the material fully.

<http://www.nytimes.com/2003/04/11/international/worldspecial/11WEAP.html>

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ArmyTimes.com
April 10, 2003

Troops Unearth Lab Equipment; Suspect It Was Intended For Chemical Weapons Production

By Matthew Cox and Rob Curtis, Military Times staff writers

KARBALA, IRAQ — Troops with the 101st Airborne Division have unearthed 11 shipping containers, filled with sophisticated lab equipment, that were found buried in the grounds of a chemical plant here. The value of the equipment, the fact that it had been hidden and the evidence that some of it appeared to have been smuggled into Iraq raised the possibility that the facility had been used to manufacture chemical weapons.

One item that raises questions is a 750-pound centrifugal pump that was made in Finland and shipped to a company in Jordan that makes plastic drinking cups. It then somehow ended up in Iraq.

U.N. arms inspectors visited a facility in the immediate vicinity of the chemical plant Feb. 23, but did not find the buried equipment, said a spokesman for the inspectors.

Troops from the 326th Engineer Battalion found the containers Wednesday. They were joined by chemical specialists who unearthed the steel containers, which are either 8 feet by 8 feet by 20 feet, or 8 feet by 8 feet by 40 feet. Inside, they found what they said was about \$1 million in new lab equipment, including computers and a spectrometer, a machine used to analyze chemical compounds.

Along with the pump was its original shipping document, which listed the manufacturer and buyer. No one at the plastic cup maker in Jordan could be reached Thursday night to explain how the pump, shipped to the firm last April, ended up buried in the yard of the Karbala Chemical Company. No one at the pump manufacturing company could be reached to say what that particular model pump could be used for.

The U.N. Oil for Peace office in New York, which controlled imports to Iraq, could not determine whether the equipment had been shipped there legally.

A spokesman for Central Command in Doha, Qatar, Maj. Brad Bartelt, cautioned: "It is important not to rush to any conclusions. As the operation continues, we are using numerous methods to identify and look for any Iraqi weapons of mass destruction."

On Feb. 23, just about a month before the war began, 13 U.N. weapons inspectors spent five hours at an adjacent munitions factory, the Karbala Loading and Filling Plant, according to Ewen Buchanan, a U.N. spokesman. The plant filled 155mm artillery shells and 122mm and 130mm rockets with explosives, he said.

The American government contends that the Iraqis had the capability to deliver chemical weapons via artillery and rockets.

The Mobile Exploitation Team, which consists of about 18 civilian and military chemical experts, arrived Thursday and cordoned off the chemical plant with concertina wire.

Fox nuclear, biological and chemical reconnaissance vehicles patrolled the complex while the team made an initial assessment of the area. While the team hasn't found proof of chemical weapons production, the site is still considered an important discovery.

"This is significant," said Army Chief Warrant Officer 2 Richard Gonzales, 33, the officer in charge of the exploitation team. "We would not be here if it was inconsequential."

The find came less than a week after chemical soldiers found traces of what they thought were sarin and a blister agent at a pesticide plant less than 10 miles away. The same exploitation team took samples of the agents and sent them to the United States for further testing.

However, Gonzales believes the findings at the pesticide plant were false readings due to organophosphates or fertilizer, compounds that frequently trigger false alarms on chemical detection equipment.

"The pesticide plant was a dry hole," he said.

The Karbala Chemical Plant is believed to have been bombed during the 1991 Gulf War, but there are signs of an active lab that has been used recently.

"We knew it was there, we just didn't know what was in it," said 1st Lt. Elena Araujo, 25, of Bellevue, Wash., a platoon leader in the 63rd Chemical Company. He described what looked like large stocks of sulfur and smaller hints such as distilled water in open containers in the facility's lab that had not yet evaporated.

U.N. inspectors, while visiting the adjacent arms factory, noted construction of a plant they believed would manufacture sulfuric acid, Buchanan said.

"I think it's suspicious," Araujo said. "That's close to \$1 million worth of equipment and they can't even feed their own people."

One container was filled with office equipment and a large amount of documents on Ba'ath party letterhead.

Along with the lab equipment, chemical protective mask filters littered the ground outside one building. Inside were dozens of orange-colored hand grenades scattered among loose ammunition and military uniform items such as black berets.

In addition to the grenades, soldiers found a cache of 225 60mm mortar rounds, 40 rocket-propelled grenades and about 100 artillery fuses.

The team could be at the site for up to 72 hours, Gonzales said. Some of that time will be spent excavating other suspicious sites on the plant grounds.

Whatever is found at this plant, Gonzales said, it is only the beginning of a long, frustrating process.

Former Iraqi leaders "have been working on their tactics, techniques and procedures for hiding this stuff for 12 years," he said.

<http://armytimes.com/story.php?f=1-292925-1763215.php>

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Salt Lake City Deseret News

April 10, 2003

Army's Incinerator Shuts Down Again For Probe

Workers noticed chemical reaction with VX nerve agent

By Joe Bauman, Deseret News staff writer

Less than two weeks after workers at the Army's chemical weapons incinerator began destroying VX nerve agent, the plant has temporarily shut down.

The facility, located near Stockton, Tooele County, began destroying a stockpile of the deadly VX agent on March 28. But on Tuesday work was suspended when workers "observed signs of a slow chemical reaction inside an agent collection tank," said spokeswoman Alaine Southworth.

They saw "unusual conditions" caused when VX agent came into contact with water, she said. Southworth told the Deseret News that the tank had residual water in it, and before the reaction "they didn't think it was going to be a problem."

Processing was suspended while the situation was investigated.

Asked how long operations would be halted, she said it should be only days. "I don't know exactly when, but it's going to be a short time."

The incinerator was shut down from July 16, 2002, until March 28 after two workers were exposed to residual GB nerve agent. Only one tested positive for exposure, and plant officials say he was cleared to return to work the next day. While it was closed, modifications were made and the plant finished switching over to processing VX nerve agent.

Speaking about the latest incident, Southworth said, "at no time was there any danger to (Tooele Chemical Agent Disposal Facility) workers or the public, nor was there any release of agent to the environment."

Craig Williams, director of the anti-incinerator organization Chemical Weapons Working Group, based in Berea, Ky., distributed comments by e-mail to news media.

He said the plant went through "an eight-month shutdown, at a cost of about \$72 million to taxpayers; an 'extensive review' of the management and design; the implementation of what was billed as a complete review of the design and operational readiness; a 'Safety Improvement Program' represented to be inclusive of all corrective actions needed to restart operations" and other reviews.

After that, he wrote, "the facility managed to operate for 10 days, at an extremely low level of throughput, before being shut down!"

<http://deseretnews.com/dn/view/0,1249,480034896,00.html>

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Colorado Springs Gazette

April 10, 2003

Pg. 3

Denver Firm's Pocket-Size Device Could Help Detect Deadly Gases

By The Associated Press

DENVER--The threat of biological and chemical warfare in Iraq has motivated a small Denver company to help safeguard America's troops.

PocketSpec Technologies Inc., a publicly held company with eight employees, has developed a hand-held device that identifies poisonous gas.

The "personal color measurement device," as described by PocketSpec President Jeff Krupka, will allow military and domestic emergency personnel to set up miniature field laboratories. The "lab" equipment consists of a condensation unit about the size of a backpack, a credit card-size chemical detector and a personal digital assistant-size color sensor.

It is the color sensor PocketSpec adds to the mix. Although the company has several prototypes, the technology still is months or even years away, but here is how PocketSpec foresees it will work.

A military unit that encounters an attack of gas or biological weapons, operating with gas masks, will capture air in the portable condensation unit. That device will squeeze out some drops of chemicals technicians with a minimum of training can apply to the chemical sensor. The sensor turns colors, depending on the nature of the chemical.

The colors might be too indistinct for the technicians to measure by eye, however.

That's where PocketSpec comes in. The company's product uses electronic impulses to measure the exact gradients of colors. The colors could allow identification of thousands of chemicals or biological agents, Krupka said.

Krupka envisions law enforcement officers using the devices, then radioing ahead to the hospital with information to expedite treatment.

One Denver-area health care expert, Greg Bogdan of the Rocky Mountain Poison and Drug Center, is skeptical about the device's capabilities.

"Most clinicians I talk to believe it's the training they've received to recognize symptoms that will be more useful to identify what the gas was," he said.

He said, however, a reliable detector able to distinguish a combination of chemical and biological agents would give health care workers a good head start toward treatment.

Bogdan said the device would be useful in detecting gas trapped in the victim's clothes or lungs, protecting health care workers.

PocketSpec is working with an unidentified government contractor and hopes to forge a deal soon.

TESTING REQUIRED

PocketSpec President Jeff Krupka said the company could begin outfitting the military within six months of an agreement; its unidentified partner in the deal says more like two years.

"We have to go through a whole process before we release something like that on the market," the contractor said. "There's a lot of testing to prove it out." Krupka expects the hand-held units to sell for about \$1,000 each, and he would like to begin with an order "in the thousands."

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