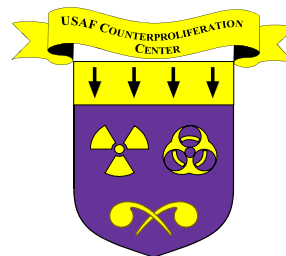


USAF COUNTERPROLIFERATION CENTER

CPC OUTREACH JOURNAL

*Air University
Air War College
Maxwell AFB, Alabama*



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

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

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AJC Says Iran's Weapons Programs Threaten U.S.

U.S. Newswire
23 Jun 15:07

American Jewish Committee Says Iran's Weapons Programs Threaten U.S

NEW YORK, June 23 /U.S. Newswire/ -- The American Jewish Committee is warning in a new report that the United States probably cannot stop Iran from acquiring nuclear, chemical and biological weapons, but it can continue to constrain Iranian capabilities to reduce risks to U.S. forces and allies in the Middle East.

"This study is a chilling reminder of the profound dangers posed by the Islamic fundamentalist regime in Tehran," said David A. Harris, executive director of the American Jewish Committee. "Responsible governments must continue to deny Iran the access to technology its leaders so eagerly crave to generate deadly mischief."

http://www.usnewswire.com/topnews/Current_Releases/0623-133.html

Iran and Weapons of Mass Destruction

By W. Seth Carus

W. Seth Carus, Ph.D., is a senior research professor at the Center for Counterproliferation Research, National Defense University, Washington, D.C. The views expressed in this article are those of the author and do not necessarily reflect the official policy or positions of the Department of Defense or the U.S. government.

Iran and Weapons of Mass Destruction

On Aug. 4, 1998, Iran launched the Shahab-3, a seventeen-ton medium-range ballistic missile (MRBM) capable of carrying a 1.2-ton payload over an estimated 1,300 kilometers. Only eighteen months before, a senior U.S. intelligence official had told Congress that Iran might take as long as ten years to acquire a missile with such a long range. After the test launch, the U.S. government recognized that "the Shahab-3 significantly alters the military equation in the Middle East by giving Tehran the capability to strike targets in Israel, Saudi Arabia, and most of Turkey." The Shahab-3 became operational in early 2000.⁴...

<http://www.ajc.org/pre/IranWeaponsIndex.htm>

Military Praises Device That Detects Deadly Viruses

Saturday, June 24, 2000

BY FRANK CURRERI

THE SALT LAKE TRIBUNE

Military scientists are studying a DNA detector that may make Americans significantly less vulnerable to terrorist attacks with chemical and biological weapons.

The invention, created by Salt Lake City-based Idaho Technologies at the federal government's request, uses DNA testing and RNA sequencing to quickly identify a host of deadly invisible pathogens, including anthrax and the plague...

<http://www.sltrib.com/06242000/utah/61574.htm>

New York Times

June 28, 2000

French Hold Suspected Terrorist Tied To Bin Laden

By Donald G. McNeil Jr.

PARIS, June 27 -- The police here have detained an accused terrorist who is linked to the network of Osama bin Laden and to an Islamic fundamentalist cell in Canada that plotted to bomb American buildings, an investigator said. The suspect, Abdelsalem Boulanour, a 34-year-old Frenchman of Algerian origin, was arrested when he arrived on Saturday after being deported from the Philippines, where he had served a six-month sentence for possession of explosives, according to an investigator who spoke on condition of anonymity.

He is believed to have close ties to Ahmed Ressay, an Algerian arrested in December at the border with Canada with bomb material in his car. Mr. Ressay, whose trial is to begin in July in the state of Washington, is accused of plotting to blow up American buildings and faces up to 130 years in prison.

The two men are part of a group led by Fateh Kamel, an Algerian veteran of the Afghan war against the Soviet Union, that kept apartments in both France and Montreal, the investigator said. Three years ago, they raised money through armed robberies in northern France and planned to bomb a meeting of the Group of 7 industrialized nations. The French police learned their names from personal phone books found in raids, but much of the group scattered.

Mr. Boulanour apparently went to the Philippines, where he has links to the Moro Islamic Liberation Front, which is fighting to create an Islamic state there and is thought to be behind a spate of bombings. Mr. bin Laden, the Saudi-born millionaire suspected of masterminding the 1998 bombings of American embassies in Kenya and Tanzania, is thought to pay for the training camps used by the Moro Front and its rival, the Abu Sayyaf group. The latter is now holding about 20 foreign hostages.

Under French law, proof that Mr. Boulanouar was a member of a terrorist cell could be enough to jail him for 10 years, the source said. The French police do not believe that he is a suspect in the Kenya and Tanzania bombings or in the plot to bomb American buildings.

New York Times
June 29, 2000

Joint Exercise On Missiles Seen For U.S. And Russia

By Michael R. Gordon

MOSCOW, June 28 -- In an effort to broaden their military cooperation, Russia and the United States are planning to conduct a joint exercise of their defenses against short- and medium-range missiles, a senior United States official said today.

The aim is to rehearse the procedures for coordinating Russian and American theater missile defenses against a common foe, American officials said. The exercise is likely to take place at Fort Bliss, a United States Army post in Texas, before the end of the year.

Theater defenses are antimissile systems like the Russian S-300 or the American Patriot that are intended to counter short- or medium-range missiles -- typically missiles with ranges between a few hundred and a few thousand miles -- that could threaten American troops abroad or endanger the United States' allies.

The plan for the joint exercise does not mean that Moscow has dropped its opposition to the Clinton administration's proposal to erect a missile shield over the United States. Russia still fears that the administration plan, which is intended to counter intercontinental-range missiles, would give the United States a strategic advantage.

But theater systems have emerged as the one missile defense area in which Washington and Moscow seem able to cooperate, albeit for their own reasons.

"We are resuming our longstanding cooperation in theater missile defense," a senior American official said.

Plans for the exercise were discussed in talks here by senior Russian and American defense officials. The broad aim of the talks was to restore the cooperation between the two militaries that existed before NATO's war with Yugoslavia.

The two sides, for instance, discussed a plan to have Russian peacekeepers from Kosovo train American soldiers for that mission at the United States military training center in Hohenfels, Germany.

The Russian motivation to cooperate on theater missile defense is clear. Moscow sees the administration's plan for a national missile defense as a threat and is energetically advocating theater missile defense as an alternative.

In meetings with American officials, President Vladimir V. Putin of Russia has asserted that theater defenses could be used to shoot down enemy missiles in the first few minutes after their launching, when they are relatively slow and their rocket engines are still burning, an approach that is known in the United States as a "boost phase" defense. This, the Russians suggest, could protect the United States and Europe from threats from states like North Korea, dispensing with the need for the administration's system, which involves the deployment of 20 missile interceptors and a battle-management radar in Alaska by 2005.

The Pentagon has a different motivation in seeking to cooperate on missile defense. American officials are eager to draw the Russians into a discussion of potential missile threats and ways to counter them in the hope that the Kremlin's opposition to national missile defense might wane. And they want to learn about Russian technology.

The cooperation itself involves a "command post" exercise at Fort Bliss, the El Paso home of the 32d Army Air and Missile Defense Command, according to a United States official. That means that Russian and American officers would practice the procedures that are needed to track enemy missiles and then coordinate and fire Russian and American antimissile defenses. No "enemy" missiles would actually be launched or shot down.

Russians and American officers have been involved in two previous exercises -- in Moscow 1996 and in Colorado Springs in 1998 -- but they have essentially been computer simulations. Another round of talks is planned before the date of the command post exercise is set; it is expected to be held in the fall.

"This is an attempt to move out of institute and simulations into the field," a United States official said. "It is still a simulation but under more realistic field conditions."

Representative Curt Weldon of Pennsylvania, a Republican influential on missile defense, said the Pentagon had been too slow to cooperate with the Russians on theater defense, in part because the administration was initially opposed to the idea of a national missile defense.

"We should have been doing this all along," Mr. Weldon said in a telephone interview. "We have sent the wrong signals to the Russians, and now they wonder why we want to get them involved."

Mr. Weldon recently met with Russia's Deputy Defense Minister, Nikolai Mikhailov, who said Moscow was interested in working with the Americans in developing a new system, the S-500. But Mr. Mikhailov did not describe that system in any detail.

Defense Daily
June 29, 2000
Pg. 6

Joint Work With Russia Will Not Stop U.S. NMD, Gansler Tells Panel

By Kerry Gildea

Any potential joint work on a U.S.-Russian missile defense system will not replace U.S. efforts to build its own national missile defense (NMD) system, Pentagon acquisition chief Jacques Gansler told the House Armed Services Committee yesterday.

While the Pentagon is looking at the Russian-proposed S-500 missile defense system and other proposals for joint work, these options would be "all are a compliment to our systems, rather than a replacement," Gansler said.

In general, the United States has to take seriously each proposal the Russians make on missile defense, but there is "a lot of vagueness" in their proposals, Gansler said.

"We are not going to let that slow down anything we are doing" on the U.S. NMD program, he added.

Air Force Lt. Gen. Ronald Kadish, director of the Ballistic Missile Defense Organization (BMDO), last week confirmed that the organization is in the midst of reviewing a variety of options to cooperate with Russia on NMD, including one option of joint work on a new Russian S-500 (Defense Daily, June 23).

Rep. Curt Weldon (R-Pa.), chair of the HASC's research and development subcommittee, said that he learned of the Russian system during a visit to Moscow earlier this month with Defense Secretary William Cohen. The S-500 would be an upgraded capability from the Russian S-400, estimated to be capable of engaging enemy ballistic missiles with ranges of 3,500 kilometers.

Yesterday, Weldon said the Russians he met with would provide little information on the S-500, but he assumes it will break the demarcation threshold allowed for ballistic missiles in the Anti-Ballistic Missile Treaty.

The Russian officials told Weldon they cannot move ahead on S-500 because they do not have the funding, and therefore want to work jointly with the United States, he said.

Gansler also raised questions about the Russian proposal to work jointly on boost phase intercept (BPI) systems.

Again, he said, these systems are viewed as "compliments" to the U.S. NMD system.

"They are definitely what we are evaluating," he said.

But, there are problems with BPI systems, Gansler said. For example, the decision time to engage an enemy missile in the boost phase must be so quick that it takes human-decision makers out of the loop, he said.

And, with a quick BPI decision, it may be difficult to tell the difference between an actual enemy missile launch and a foreign satellite launch, Gansler said. And, in order to conduct BPI, a very high-speed interceptor would have to be developed, he added.

When pressed by some Democrats on the panel to list where NMD would fall in a priority list when pitted against the Joint Strike Fighter, new submarines and Army transformation needs, Gansler refused to single out any one program.

He said all of those come to mind immediately as top DoD priorities, and that those requirements are all well stated in the budget request the Pentagon sent to Capitol Hill.

USA Today
June 29, 2000
Pg. 9D

New Foam Defeats Biological Weapons

A government task force has unleashed its latest weapon in the fight against bioterrorism: foam. Similar in appearance to standard firefighting foam, the chemical neutralizes deadly chemicals and biological agents including

sarin, which was used in the 1995 Tokyo subway attack that killed 12 people, and anthrax, a pathogen widely recognized for its ease of production and mobility. The foam is intended for use at emergency or disaster sites by "first responders," who include firefighters, hazardous-material teams, bomb squad, paramedics and public work crews. The foam also can be used in industrial settings, according to Arthur D. Little's Technology & Innovation Group of Cambridge, Mass., developer of the foam. It will be available for about \$10 per gallon as soon as commercial partners sign on.

Washington Times

June 30, 2000

Pg. 1

Russia Sells Missile Technology To North Korea

By Bill Gertz, The Washington Times

Russia is selling missile technology and components to North Korea and nuclear weapons components to Iran, The Washington Times has learned.

Moscow's latest weapons proliferation activity was outlined in sensitive intelligence reports sent earlier this month to senior policy-makers, according to U.S. intelligence officials.

A June 8 U.S. intelligence report from the National Security Agency, which conducts electronic eavesdropping, stated that missile component companies in Russia and Uzbekistan, in Central Asia, were cooperating on the sale of missile parts to North Korea, the officials said.

The parts being sold included a special aluminum alloy, laser gyroscopes used in missile guidance and connectors and relays used in missile electronics, they said.

The report identified the government-owned North Korean company. A U.S. intelligence agency asked that the name not be disclosed. The Russian and Uzbek manufacturers were not identified.

Disclosure of Russia's latest missile-proliferation activities comes weeks after Russian President Vladimir Putin announced a plan for a pan-European missile defense shield to complement a U.S. system opposed by Moscow.

"This intelligence shows the Russians are playing both sides of the fence," said an intelligence official. "They are talking missile defense while helping boost the missile threat."

Mr. Putin earlier this month proposed a continentwide missile defense that would protect capitals from Lisbon to Vladivostok from missile attack. His suggestion followed President Clinton's declaration last month that he is willing to share U.S. defense technology with Russia and other "civilized nations."

The security agency also reported that Russia was collaborating with a North Korean missile company in sending Scud B missile components to the Middle East state of Yemen.

Officials familiar with the report explained that the gyroscopes for North Korean Scud B missiles were first sold to North Korea's Changgwang Sinyong company in Kazakhstan and then resold to Yemen.

The announcement earlier this month that the United States is lifting some sanctions against North Korea stated that Changgwang Sinyong would remain subject to restrictions. Changgwang Sinyong was sanctioned by the State Department in April for its role in selling Scud missiles to Iran, and because of the company's missile proliferation activities, all U.S. export licenses for the company are blocked.

As to the nuclear exports to Iran, a third NSA report from June 8 stated that Russia is sending tritium gas to a nuclear weapons research center in Tehran.

Russia has been engaged in helping Iran develop a nuclear power generating plant at Busheer, but, in the past, Moscow has denied helping Iran develop nuclear weapons.

Tritium is a radioactive gas — an isotope of hydrogen. Its primary use is to enhance the explosive power of nuclear warheads.

Robert Barker, a nuclear weapons specialist, said tritium has some applications other than its use in nuclear weapons. For instance, it is used in radio luminescence. However, its delivery to a nuclear research center would indicate plans to use it for weapons, he said.

"The well-known utilization of tritium is for enhancing the performance of nuclear weapons," Mr. Barker said in an interview. "This is an issue of concern and one would expect Iran to be very forthcoming in providing assurances about what it is being used for."

A Senate aide who specializes in weapons proliferation said the reports show Russian weapons proliferation continues to be a danger. And he commented, "This is one more example of the Russian government's failure to

control missile technology and nuclear exports. Whether the government is incapable or uninterested in controlling its borders is immaterial."

About the North Korean connection, the aide said Moscow's "work with North Korea in sending missile components to a third country also demonstrates that the North Korean problem is not solved in any way, shape or form."

Rep. Curt Weldon, Pennsylvania Republican and senior member of the House Armed Services Committee, said the Russian arms proliferation shows the "complete breakdown" of Clinton administration arms-control policies.

"This is another clear indication of this administration's total failure in the arms-control arena," he said in an interview. "They have consistently denied the reality that these problems exist and now we're continuing to pay the price as rogue states continue to develop systems to be used against America, our allies and our troops that we have to defend."

The Clinton administration has been trying for the past several years to win Moscow's cooperation in curbing dangerous nuclear-arms sales. But the U.S. appeals have not been successful in curbing the transfers, according to the intelligence officials.

"Russia is continuing to ignore U.S. government demands to halt the arms sales," the intelligence official said and added, "The fact that it is collaborating secretly with other states is even more troubling."

USA Today
June 30, 2000
Pg. 21

This Is Only A Test, But Lives Still At Stake

Course simulates toxic terrorist attack on 'Big City, USA'

By Peter Eisler, USA Today

WASHINGTON - The red, orange and blue cloud spreads ominously across the map on the wall-sized screen at the National War Gaming and Simulation Center. In the top right corner, numbers tick higher and higher, tallying the thousands of people being exposed to the deadly anthrax spores blowing east over "Big City, USA."

It's been 40 minutes since "foreign terrorists" unleashed the toxin, and the military and civilian officials gathered at a conference table under the screen are struggling to develop a federal response. Every idea is upended by the whirlwind of events unfolding before them. The situation raises questions so complicated that the notion of right and wrong answers simply does not apply.

Somewhere from 40,000 to 50,000 people in the sprawling, fictional city on the West Coast are in a position to breathe a lethal dose of the poison. Without immediate medical aid, most of them will die within 48 hours. Tens of thousands more are likely to pass through the cloud on their afternoon commutes. Two major hospitals lie in the plume's path and can't be counted on to treat victims. There isn't enough anthrax vaccine to go around.

Then there's the matter of breaking the news to the public. Everyone at the table knows panic can stymie any plan. Public relations must be weighed in every strategic move - emergency response and evacuation, diplomatic initiatives, catching the culprits.

Yes, this is a test, but it's no ordinary exercise. It's no ordinary classroom. And these are no ordinary students. The exercise is the culmination of a first-of-its-kind course at the National Defense University, a Pentagon-run institution that includes the National War College, the Industrial College of the Armed Forces and other military learning centers. The course grew from a 1997 presidential order aimed at preparing future leaders for complex national crises, from foreign entanglements such as the Cuban missile crisis to the ugly specter of a nuclear, chemical or biological weapons attack at home.

If the government faces such a challenge in coming years - and most experts say it's less a matter of if than when - these students may be among those who have to manage it. Drawn from military and civilian assignments across the government, they're on track to become the generals, admirals and agency chiefs of the future. And this class, full of eye-popping insights on the increasingly tough task of keeping America safe in a world of rapidly evolving threats, is supposed to prepare them.

The 12-week course draws on a wide array of government resources, some highly classified. Courtesy of the Los Alamos (N.M.) National Laboratory, students work with some of the world's most advanced computer simulations. Lecturers visit from the FBI, intelligence services, the Federal Emergency Management Agency (FEMA) and other military and civilian offices.

"We're into a whole new world of non-traditional threats that the U.S. hasn't had to face before," says John Hnatio, an Energy Department nuclear non-proliferation expert who developed and led the course for the university.

The explosion in information technologies and the growing availability of potent new weapons mean tomorrow's leaders will need to adopt new rules of strategic thinking, Hnatio says, and this course aims to help future leaders prepare for that challenge in "high-stress, real world" environments.

USA TODAY sat in on the course, which ended in May. This reporter acted as an adviser on how the media would react in various crises. The only ground rule was that classified material not appear in the newspaper.

This is the story of the course, of the enormous challenges inherent in keeping America safe in an increasingly dangerous world, and of the people aiming to tackle that job.

New threats, new lessons

The course is built around two major exercises, which test students in both foreign and domestic scenarios. The first, which supposes that China is found to be moving nuclear missiles into the Panama Canal Zone, is the offshore crisis. Big City is the domestic one.

And it's a national security official's worst nightmare.

The scenario: Big City, which looks strikingly like Los Angeles, is hosting an Asia-Pacific Economic Cooperation summit attended by multiple world leaders. The FBI, in the sort of detailed threat assessment typically generated for such events, has warned of a potential terrorist attack. Sensors that can detect toxic agents in the air have been put in place around the city - a setup being considered for real-life use at the Salt Lake City Olympics in 2002. But officials see the more likely threat as conventional and homegrown. Precautions focus on protests, maybe a bombing.

As the summit opens, the students, acting as the president's National Security Council, get an urgent call from the FBI's agent in charge in Big City. Malaysian dissidents apparently have followed through on a threat, received just hours earlier, to stage a terrorist attack in response to the jailing of allies in their homeland.

"We've just received indications from sensor arrays that there's been a confirmed release of some type of substance from at least three and perhaps more locations near (Big City) International Airport," the agent says. "Local and state responders (are) ready to enter the area, but we are uncertain of the amount of dispersal and the levels of contamination."

It's a brutally complicated scenario, with challenges ranging from mass casualties and public panic to protecting foreign leaders and nabbing the terrorists. Yet, as this class has learned, this sort of domestic crisis has become a very real threat.

Throughout the course, there has been comparatively little instruction on offshore security risks, which are seen as more conventional, more easily handled by traditional defense strategies. Instead, the bulk of the work is shaped by the current belief among many security experts that attacks at home, probably by terrorists, are the big threat that the government isn't ready to face.

"An attack on American soil using either a chemical or biological or, indeed, a nuclear weapon, is not only possible, but probable," Defense Secretary William Cohen said last month on NBC's Meet the Press.

The nation's vulnerability to such an attack was driven home first by the World Trade Center bombing in 1993 and reinforced as recently as this past December, when an Algerian man was charged with smuggling explosives from Canada in an alleged plot to bomb millennium celebrations. Although there has never been a chemical, biological or nuclear incident, Cohen noted that the development of such devices by terrorist-friendly regimes makes it all but inevitable.

"What we have to do is prepare ourselves," Cohen said, acknowledging the challenge of planning a response involving scores of local, state and federal agencies.

Many voices, many roles

The students are broken into three groups and given two hours to come up with an action plan. As the president's national security team, they are the only people in the country who know of the threat to Big City. They must decide when and what to tell local officials, whether to mobilize federal resources and how to deal with the public. As the minutes begin to click by, they talk out the scenario, set priorities and raise questions.

"It's not contagious, so what we want to do is get (people) the hell out of there," says Lt. Col. Doug Robb, an Air Force doctor who notes that anthrax spawns its fatal, flulike symptoms only in those who breath it directly.

This is a break: Anthrax, which is survivable if vaccines are administered within a window that can last several days, is less feared than other pathogens, such as smallpox, that boost casualties exponentially by spreading from person to person.

The students begin discussing ways to segregate people who have been exposed and to block others from entering the danger zone. Tom Kane, a disaster mitigation specialist at FEMA, urges restraint: "Are we already making a rash decision to override local control?"

"And our press strategy?" asks Janie Benton, who manages a nuclear non-proliferation program at the Energy Department. Raising the question of how to break the news without causing widespread panic, she adds, "Is the president going to make an announcement, or will it come from California (officials)?"

A half-hour in, the group learns that the terrorists are threatening another anthrax release if Malaysia doesn't free their comrades. One student suggests a U.S. appeal for the prisoners' release.

Navy Capt. Bob Magee disagrees. He notes that U.S. policy bars concessions: "Are we going to allow the terrorists to dictate what the U.S. position is going to be (on) releasing someone being held as a criminal by a foreign government?"

The discussion reflects lectures on everything from intelligence resources used in planning for an event like the Asia-Pacific summit to the equipment and manpower that can be brought in if a crisis occurs.

The students build their strategy according to the two core elements of government response: "crisis management," or the immediate steps needed to control damage and, if necessary, catch perpetrators, and "consequence management," or dealing with casualties and maintaining critical infrastructure, such as medical services, power and communications.

In each case, local and state officials have lead authority, at least initially, with the federal government providing support. But in a major crisis, like the one envisioned in Big City, it's likely that federal authorities would end up shouldering much of the responsibility.

"Bottom line is the development of a federal, state and local partnership, (and) there are still some holes in every aspect of this arena," Maj. Tom Leonard, National Guard liaison to the FBI's National Domestic Preparedness Office, told the students in one class. Preparing for domestic crises involving unconventional weapons "is one of the first areas where all the federal agencies voluntarily got in the same sandbox."

An event like the Big City attack can involve 40 or 50 federal, state and local agencies, so there's great potential for confusion. And the government has spent countless hours and billions of dollars on readiness and coordination programs.

Critics say those programs are fractured and ineffective. They argue that many waste time and money by preparing for "worst-case" scenarios that might not come to pass. But the administration and many in Congress argue that it would be a mistake to wait until the threat is more imminent. By then, they say, it could be too late.

President Clinton, who speaks often of his concerns about homeland attacks, has put his hand directly in the mix by issuing several orders designed to strengthen planning and response. Presidential Decision Directive 56, signed in 1997, included instructions to create "interagency (programs) to train midlevel managers in the development and implementation of political-military plans for complex contingency operations."

The course, says Army Lt. Gen. Richard Chilcoat, the university's president, "is the prototype."

Driven by technology

The multicolored cloud on the screen spreads inland from the airport over downtown Big City.

It's 90 minutes into the exercise, and the computer is simulating the projected spread of anthrax spores, based on readings from the FBI's sensors, weather conditions and the location of a canister found by police that is believed to have held the poison. Based on where people live and are likely to be at this hour (3 p.m. PT) it forecasts that up to 50,000 people will end up in the toxin's path.

It's the latest in computer simulations, one of many high-tech products stemming from all the federal spending on emergency preparedness.

The sensors that sniff out foreign particles in the air are another example. The government also has spent millions on mobile labs and sophisticated equipment for detecting nuclear devices. It's building vaccine stockpiles for chemical and biological agents. It offers state-of-the-art gear for emergency-response teams.

"You won't get any federal response until the state has acted," Col. Fenton Thomas, Army liaison to FEMA, told students in an early class. But in any big crisis, the federal government, especially the Pentagon, probably will get the call because "the (military) is the heavy hitter. We have the most toys."

Still, the technology has its limits, and that's the catch in Big City.

All evidence suggests the attack is real - the suspicious canister, the sensors' detection of a foreign agent - but it will take hours to confirm that the particles sniffed by the sensors actually are toxic. The devices detect foreign particles, but they can't identify them. Samples must go to a lab.

"Technology can be a big advantage," Hnatio has told the class, "but it also can work against you."

The students wrestle with their options: Should they delay any response until anthrax is confirmed, or assume the worst and act?

Frustrated, they pepper the instructors with questions about what local authorities are doing.

"Nothing. They don't know what we have," says Andy Andrews, a Los Alamos official running the simulation.

"They're waiting to hear from you."

Ultimately, the students agree on a full-blown response, aiming to limit casualties as much as possible should the worst come to pass.

"The threat is too credible," says Paul Brown, a logistics and acquisition director at the Pentagon.

They decide that state and local officials should be advised to implement emergency-response plans - virtually every big city has received federal assistance to develop and test such strategies - and will be in charge on the ground.

Still, having learned that no U.S. city is capable of responding on its own to a major chemical or biological attack, the students also direct FEMA and the Pentagon to mobilize medical personnel and lab equipment. Several suggest tapping military stockpiles of anthrax vaccine, though they're not sure whether those reserves, at locations around the country, are enough for a crisis of this magnitude.

A specially equipped federal team, on call 24 hours a day at events like the Asia-Pacific summit, is dispatched to evacuate the foreign leaders.

The State Department will alert the officials' countries and advise Malaysia of the terrorists' threat to attack again if the political prisoners are not freed. U.S. envoys shouldn't apply pressure for the prisoners' release, the students decide, but they won't discourage Malaysia from freeing them.

On what to tell the public, there's less consensus. Everyone agrees that public announcements initially should be left to the governor. But should they mention anthrax?

Robb, the Air Force doctor, is concerned about a rush for vaccine.

"If you have two kids and live down here," he says, pointing at the map, "you're going to try to get out to (a hospital) for medication, no matter whether you know for sure that you were exposed."

Until anthrax is confirmed, the students decide, statements will be general, explaining that there's been a possible toxic release, that potentially affected areas will be sealed off and that people in those areas should stay indoors.

Residents will be urged not to rush to hospitals.

"I think we need to go to the media on the side and request (restraint)," Brown says. "Tell them we're trying to avoid public panic."

Lessons learned

Navy Capt. Mike Dunaway, one of the course instructors, likes much of what he sees.

"The first move has to be minimizing the number of people in the exposed area," he says later. He argues that evidence of an anthrax release was so strong that the students did right by assuming the worst. Otherwise, "you'd have to answer the question, if 40,000 deaths was inevitable, why did you let it grow to 100,000?"

The students have come far.

Their first exercise, run at the start of the course, didn't go so well. In that one, rebels of the Revolutionary Armed Forces of Columbia bombed a ship in the Panama Canal, blocking passage. At the same time, in a scenario modeled on the Cuban missile crisis, intelligence satellites spotted what seemed to be missile batteries on the nearby property of a Chinese company with ties to its country's military. The suspected missiles could deliver nuclear warheads to U.S. soil.

The students had trouble setting sound priorities in developing their response. They worried too much about the sunken ship and not enough about the Chinese missiles. They confused agencies' roles and responsibilities. They ordered covert operations without alerting Congress. They had no public information strategy.

"We want them to make mistakes," Hnatio says. "We make the backdrops real - the events, the threats, the terrorist groups - because we want to stress (the students) like the real world. There are multiple jobs to do in these situations. There aren't easy, right or wrong answers."

In the Big City exercise, Hnatio and the other instructors were encouraged by the students' progress in prioritizing information, building a group dynamic and recognizing the potential consequences of various courses of action.

Immediate needs, such as evacuation plans and efforts to control panic, took precedence. But the students also recognized second-tier concerns that would have emerged as the crisis continued, such as the need to deal with tens of thousands of dead bodies that could generate additional public health risks.

Many students seemed awed by the enormity of the challenges to U.S. security, the complexity of the threats and the potential for crises that could shred the nation's social and political fabric.

"How do you handle that, when the country starts to come apart, when a population is reduced to savagery, climbing over each other to get away from a perceived threat?" says Mike Cregge, a Navy captain and former submarine commander now working as a senior staffer at the Pentagon. "It boggles the mind."