Radioactive attack still seen as threat

Washington team is trained for such emergencies

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A decade after the breakup of the Soviet Union, emergency planners in Seattle and around the nation are once again worrying about what seemed a Cold War relic -- the threat of a radioactive attack.

Secretary of State Donald Rumsfeld and CIA Director George Tenet have since Sept. 11 repeatedly warned that Osama bin Laden's al-Qaida network is trying to build a new weapon of mass destruction, possibly one that would use radioactive substances wrapped around a conventional explosive -- a so-called "dirty bomb."

The evidence is cryptic, but omnipresent.

Just this week, Bush administration officials told The New York Times that Special Forces troops found canisters crudely marked with a skull and crossbones in three locations in Afghanistan after al-Qaida fighters were routed out of their lairs.

The canisters were only faintly radioactive, just enough to trip a Geiger counter -- a sign, perhaps, that bin Laden's terrorists were flimflammed by a con artist who promised them more potent material.

In a more ominous report the same day, the National Intelligence Council, an analytical group that advises the CIA, flatly stated that "weapons-grade and weapons-usable nuclear materials have been stolen from some Russian institutes." No one knows how much or where it has gone.

The 'dirty bomb'

Despite discovery of diagrams for nuclear devices in Afghan caves, few believe al-Qaida has the sophisticated technology or weapons-grade fuel needed to achieve its decade-old goal of making a full-scale, fission-driven nuclear explosive. Its attempts to buy technology in the black market have been amateurish at best, said Nikolai Sokov, a senior research associate with the Center for Non-Proliferation Studies at the Monterey Institute of International Studies.

Production of a dirty bomb, the nuclear weapon's less-lethal cousin, is more possible, but still a daunting task. Compared to most chemical and biological agents, radioactivity is an ineffective killer. Massive amounts of radioactive materials would have to be packed into a bomb to register any immediate health effects, requiring a bomb that would be difficult to assemble, difficult to smuggle and dangerous to handle.

Still, to a terrorist, a radioactive attack would have its attractions.

Unlike most biological and chemical agents, radioactivity can linger for days, weeks, months or years in a blast zone, depending on the materials used.

Emergency workers are better prepared for chemical and biological spills than for radioactive dangers, even in Washington state, where a federal pilot program in 1998 helped create one of the nation's first teams designed to deal with all weapons of mass destruction.

And the specter of a radioactive bomb evokes one of the deepest emotions that Americans fostered during the long years of the Cold War -- the intense, and in some cases irrational, fear of radiation.

The country is well-stocked with experts who could quickly assess the true short-term dangers in the aftermath of a radiological explosion, said

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John Poston, a Texas A&M professor who chaired a committee that studied the potential of terrorist bombs for the National Council on Radiation Protection and Measurements last fall.

Whether they would be heeded in the atmosphere of fear that would likely follow a radioactive event is another question.

"I know that we would try to communicate, and we would give information to the news media," Poston said. "But what they would do with it just scares the hell out of me."

The Defense Department offers no estimate of likely casualties in the event of a radiological attack, but Bruce Blair, president of the Center for Defense Information, a Washington, D.C., think tank, estimates the potential deaths from a large, noon-time dirty bomb blast in Manhattan at around 2,000 -- bad, but far fewer than the 100,000 that even a small nuclear blast would kill.

Others suspect lighter casualties -- most of the damage would be from the blast, not radiation.

"You must realize that it is not a Chernobyl situation. It will not be a World Trade Center-sized disaster," Sokov said. "Most likely, you will have contamination of several blocks, so it is not unmanageable."Potential sources for radioactive materials are not difficult to find. Hospitals use iodine-125, cobalt-60 and cesium-137 in therapy.

Spent fuel rods stored in nuclear power plants would be a more potent source of radioactivity, but they are hot, heavy and difficult to handle without significant modification. None of that has stopped people from trying to create radiological weapons.

Iraq tested a 12-foot bomb in 1987, hoping to spread enough radiation over a battlefield to cause vomiting, cancer, birth defects and slow death, according to the Wisconsin Project on Nuclear Arms Control. The Iraqis scrapped the idea because even a one-ton bomb couldn't spew enough radiation to produce the deadly effects.

That, in a nutshell, is the problem with most radiological devices.

"The amount of radioactive material it would take to kill people in a matter of days or weeks is so high as to be insurmountable," said Poston.

Nevertheless, government agencies at all levels say they are gearing up to counter the threat.

The U.S. Customs Service has dispersed 4,000 radiation-detection devices among its border inspectors to check for nuclear weapons and weapons-grade materials, Commissioner of Customs Joseph Bonner said last month. It plans to install additional X-ray and gamma-ray inspection technology, along with radiation detectors, to the northern border and at seaports in the coming year.

The Defense Department in 1998 started training National Guard teams to respond to nuclear, biological or chemical incidents with sophisticated detection equipment and communications systems. The Weapons of Mass Destruction Civil Support Teams are to determine the extent of damage or danger, then help gather expert information for emergency workers. Washington's team, based at Camp Murray near Tacoma, was the nation's third to complete training and achieve certification. Twenty-four are now certified nationwide.

Washington also received about $1 million from a federal program that provides first responders with detection equipment and protective clothing, said Seattle Assistant Fire Chief A.D. Vickery. Vickery's Unit 77 has radiation detectors, as do several other hazmat teams in the state.

But it would cost at least $22 million to equip every police and fire unit statewide, he said, and until that happens, most first responders will be at risk in a large incident. Also, in the traffic logjam that would likely follow a radiological attack in downtown Seattle, or any other city, it's difficult to say how quickly a National Guard team could make its way to the scene. New York's team took 12 hours to reach the scene of the World Trade Center attacks on Sept. 11, hampered by traffic and the deaths of some of its commanders in the initial attacks.

Information the key

Problems such as those are crucial, because information will be the key to minimizing the damage if a radiological attack does occur, Poston said.

How long an area would have to be cordoned off would depend on the amount of material used and its half-life. But radiation would dissipate at a logarithmic rate, dropping 90 percent in the first hour after a blast and to only 1 percent of the original level after two days, according to a Center for Strategic and International Studies report.

It takes a great deal of radiation to cause death or even serious radiation sickness in a short time, Poston said. But the effects of long-term exposures, particularly if they are complicated by traumatic injuries, are less understood. Fear of the unknown -- and how the public would react -- remains a serious concern.

If a trained military overreacts to insignificant amounts of radiation, what would the public do?

The answer could be more encouraging than many suspect, said Phil Anderson, a senior fellow in the International Security Program at Washington, D.C.'s Center for Strategic and International Studies. He notes there was little panic in New York even as the attacks unfolded.

"I want to believe, that 9-11 is a good example of the idea that there isn't going to be mass hysteria," Anderson said. "The American people are, by and large, pretty tough, and they are going to stand up to this."

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