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“Debate Widens Over Most Effective Way to Secure Energy Department’s Los Alamos Nuclear Site,” John J. Fialka, *Wall Street Journal*

March 15, 2000

POLITICS & POLICY

Debate Widens Over Most Effective Way to Secure Energy Department's Los Alamos Nuclear Site

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LOS ALAMOS, N.M.—In the midnight darkness of April 12, 1997, a secret war game was played out in a canyon here that illustrated the weakness of one of the most heavily guarded places at this nuclear-weapons laboratory.

A small team of elite Army Special Forces commandos, playing the role of terrorists, surprised and quickly overwhelmed the lab's guard force. Running among the dozen buildings in the compound—protected by guard towers, a high fence topped with razor wire and electronic motion detectors—the invaders reached the simulated objective of the game: enough nuclear material to make an atom bomb.

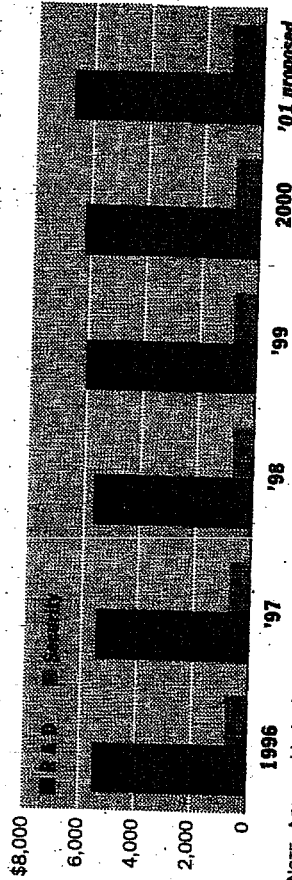
While public attention has been focused on allegations of spying of nuclear-weapons secrets from Los Alamos, the exercise provides a vivid example of a lesser-known security nightmare. There is a growing internal debate over how to protect the Department of Energy lab's aging facilities against the theft of its rich stock of atomic-bomb materials.

In the 1997 test, the final line of defense in the facility, known as Technical Area 18, were the canisters containing portable amounts of plutonium and highly enriched uranium that are regularly handled here. They were purposely made too heavy for an attacker to run off with. The "terrorists" ran off with some anyway, wheeling the material into the woods using equipment the defenders hadn't anticipated—a garden cart.

Though the Energy Department says it has moved to shore up safeguards, the exercise that some agency security planners soberly refer to as "Garden Cart" is a reminder of the challenges.

Nuclear Security

Department of Energy Research and Development budget and Safeguards and Security budget, in millions of dollars



NOTE: Agencywide budget figures for safeguards and security before 2001 are estimated because they were not centrally kept until this year.

Source: DOE

The department spends \$700 million a year for security, but the job of defending some of the agency's most sensitive installations is becoming more risky and expensive as Cold War-era buildings age and as urban sprawl makes facilities more accessible. A public road now runs alongside TA-18, which was picked for its remoteness in 1944. The road must be closed each time technicians hold dangerous "criticality" experiments using remote controls to generate radiation from chain reactions.

The 1997 mock invasion succeeded despite months of guard training and dozens of computerized battle simulations showing that newly beefed-up defenders of the facility would win. "The exercise had a very bad outcome, and they learned," says Houston "Terry" Hawkins, the lab official who oversees TA-18 and antiterrorist-related activities.

Gen. Eugene Habiger, the Energy Department's new director of security operations, has visited TA-18 twice and finds it "very difficult to defend" because it sits on the floor of a canyon surrounded by high, unguarded foothills. After a department analysis showed the security requirements of TA-18 absorbed \$18 million a year to protect \$3 million to \$5 million of research, Gen. Habiger began pushing a two-year-old plan to move TA-18 to a fortress-like complex in Nevada. (The lab maintains research and security costs at TA-18 are about the same: \$12 million each.)

The department spent \$100 million to build the Nevada complex, called the Device Assembly Facility, in the early 1990s as a secure place for the final assembly of nuclear weapons to be tested at the site. Since the U.S. abandoned such testing in 1992, the complex sits largely unused. Gen. Habiger and other security planners argue that its state-of-the-art defenses and its flat, remote location—where outsiders can be seen coming for miles—would make the job of protecting TA-18 less stressful and much cheaper.

But the department is still weighing the move. "There are very critical programs in that facility," says Ernest Moniz, undersecretary of energy. "We just can't afford to turn them off for a few years." Also, the TA-18's skilled technicians are among the handful of people in the world who know how to handle nuclear weapons materials safely, and some aren't anxious to move.

Mr. Hawkins adds that if a nuclear weapon is damaged in transit or if a terrorist group brandishes a nuclear weapon, the U.S. response teams will be guided by the technicians here. The exact configuration of uranium or plutonium used in nuclear weapons determines whether it is safe to handle.

To figure out how a weapon disfigured in an accident or a makeshift terrorist weapon should be dealt with, the experts in TA-18 would use their assortment of different-size pieces of the sensitive metals to model it. "When you get the wrong shape, that thing goes tick-tick-tick-tick-tick," explains Mr. Hawkins, referring to a Geiger counter. "We want to make sure that doesn't happen." In scientific terms, putting the metals in the wrong shape initiates a chain reaction that could emit a lethal burst of radiation to people nearby. The experts here call it "going critical."

Meantime, DOE officials say more recent exercises show the security loopholes here have been plugged. This has been done largely by adding more guards, some of whom can be seen patrolling in armored Humvees topped with .50-caliber machine guns. "You can never have enough security," says Brig. Gen. Thomas Gioconda, acting head of the department's defense-related programs, "but you also have to run a program."

Security exercises are governed by what Gen. Gioconda and others describe as "the threat," a secret level of preparedness that is periodically reassessed. "The threat" was markedly upgraded during the early 1990s when Soviet weapons and mercenaries began to reach terrorist groups.

To assure that its guard forces could cope, DOE began using Army Special Forces units as simulated attackers, plus an Army method of war gaming that tends

to deter cheating. It uses lasers, mounted on rifles and other weapons that register "kills" on special receivers worn by soldiers.

Referees remove "killed" soldiers from the fray. They enforce safety precautions to assure that guards and attackers remove real ammunition from their weapons before the "force-on-force" exercises begin. A tragedy occurred here in December 1995, according to Scott Gibbs, a laboratory program director, when a guard forgot to remove his ammunition and shot another guard, playing the role of attacker.

The 1997 exercise came after another reassessment of the threat, he says. Because more powerful weapons used by attackers could quickly eliminate guards in watch towers, the laboratory decided to abandon the towers and depend on highly

mobile teams of guards to respond to an attack.

The Garden Cart attackers, however, used snipers hidden in the hills to "kill" the first guards who arrived. Because they happened to be the commanders of the guard force, the rest of the force was thrown into disarray. Many of them also were "killed" as they arrived in small groups down a narrow road leading into TA-18. "[The Special Forces] took them out piecemeal as they came in," says one participant in the game, whose account wasn't challenged by DOE or lab officials.

Despite the mock security breach, Glenn Podonsky, director of the DOE's office of independent oversight, notes that, in reality, no U.S. nuclear facility has been attacked in more than 50 years. "The fact of the matter is that it's never occurred, and I can only conclude that is because we are a very difficult target."