



## Cold War finally ends at 3 S.A. schools

Web Posted: 04/11/2005 12:00 AM CDT

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Tucked away in storage rooms at three San Antonio high schools sat nuclear dinosaurs of the Cold War, largely forgotten for decades among the beakers and microscopes cluttering nearby shelves.

That all changed early Sunday morning, when a crew from Los Alamos National Laboratory in New Mexico, flanked by school district and state health officials, converged on the schools to whisk the equipment away and transport it "to a secure location."

The removal was part of the Energy Department's Offsite Recovery Program, an operation set up in 1999 and bolstered significantly after 9-11 to recover radioactive material throughout the country.

What brought the crew to Brackenridge, Fox Tech and Lanier high schools were 31-year-old pieces of scientific equipment containing small but potent nuclear pellets encased within nearly a ton of lead and steel.

"This thing is perfectly safe," said Andy Tompkins of the Nuclear & Waste Operations OffSite Recovery Project. "It was designed to be used in school. To get any dose at all you would literally have to sit on top of the thing for weeks. But because of 9-11, people are more worried about radioactive material and the fear that someone could cause mischief with it."

Each machine originally contained 400 curies of cesium-137 in a pellet roughly the size of a pen. Because the substance's half-life is 30 years, each now probably contains about 200 curies. (A curie is a measure of radiation.) Cesium-137 is a highly radioactive isotope often used in medical and industrial radiology that is also a likely target of terrorists who want to build "dirty bombs."

Tompkins said the dose in each machine could "cause a mess" if it were spread throughout a confined area, but he said that the heavy shielding makes the radioactive material nearly impossible to get at and move.

The equipment, called a gammator, is a 1,850-pound keg-like object that was used to irradiate items for school experiments. Somewhere between 120 and 140 of the gizmos were distributed to schools, hospitals and other institutions as part of the "Atoms for Peace" program started in the Eisenhower era to push the civilian use of nuclear energy.

The three that showed up in San Antonio in 1974 were the only ones to make it to Texas.

According to the 1969 pamphlet supplied by the Radiation Machinery Corp., the "gamma irradiator" purported to "bring to the classroom the experimental capabilities of a nuclear laboratory" so "students may explore the burgeoning new applications and industries which rely on radiation to achieve results that cannot be obtained by any other means."

Bill Vinal, San Antonio School District science director, said teachers likely used them to irradiate seeds so students could study genetic mutation.

However, Vinal, who was a science teacher at Brackenridge High School in the mid-'90s, said he's never encountered anyone who can remember using the now dated-looking equipment.

"I've had new teachers come in here and say, 'What the heck is that?'" Vinal said. "It was new and exciting at that time, but now we can do a lot of these things without irradiating the items."

Vinal said the equipment probably wasn't used much after the first couple years, and several students who attended the schools in the mid-1970s said they had no memory of the gammators.

The equipment was moved Sunday by U.S. Stars, a San Antonio rigging company that specializes in handling heavy objects.

Two of the moves were relatively routine, thanks to a dolly, an elevator and a forklift. Unfortunately, the gammator was too heavy for the elevator at Fox Tech, leaving the eight-man crew no choice but to muscle the 1,850-pound barrel down the stairs.

U.S. Stars employee Marc Miles said it was the heaviest thing he'd ever moved by "brute force," but the endeavor was problem-free, except for a few half-dollar-size concrete fragments chipped from the stairs.

Tompkins said another key element in securing the material for so many years was that no one seemed to remember it existed.

"The thing that has protected them so well for so long is anonymity," he said. "A level of security like that can't be bought."

Cesium-137 incidents, while rare, aren't unknown.

Chechen insurgents placed a canister of cesium powder in a Moscow park in 1996 but never spread the substance.

In 1987, scavengers in the Brazilian city of Goiania found a canister holding 1,400 curies of cesium-137 that had been abandoned by doctors. The men parceled out the glowing blue powder in their neighborhood, where children and adults rubbed it on their bodies. Four died and 19 suffered radiation burns.

The Offsite Recovery Program is responsible for collecting radioactive material from more than 10,000

sites since it started in 1999, and plans to collect from nearly 8,000 more by the end of the decade. Sunday's recovery was the first time federal officials have been willing to publicize a recovery.

"The main reason is that we've already got most of the large sources," said John Bass, Los Alamos National Laboratory public affairs officer. "We want to let people know that something is being done to protect their safety and security."

The equipment stored at the three local schools was tested annually by the Texas Department of State Health Services and never showed any signs of leaking.

Vinal has wanted to get rid of the pieces for a couple of years, but waited for the federal program because he didn't like the \$40,000 disposal fee, for each piece, that private companies quoted him.

As he watched the truck carrying the equipment pull away from the final school, Vinal breathed a sigh of relief.

"We have no use for them," he said. "There's just no reason to keep this type of material around."

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