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HEADLINE: Fighting For Lethal Leftovers
Texas farm town sees future in storing toxic plutonium

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DATELINE: Amarillo, Texas

BODY:

On the flat, fertile plains of the Texas Panhandle, where wind-whipped rows of wheat and dusty cattle ranches cloud the landscape, the U.S. government is unloading a product that is proving nearly as indestructible as it is deadly.

And the boosters in Amarillo can't get enough of it.

The product is plutonium -- the explosive heart of atom bombs, which is among the most toxic and radioactive of substances. But civic leaders, who want the plutonium stored at the Pantex nuclear assembly plant, see it as a rich resource with incalculable value for everyday citizens.

''The Department of Energy wants to be in a community where it is welcome, and that's certainly the truth here,'' said Steve Alhenius, economic director of the Amarillo Chamber of Commerce. ''We feel plutonium is a viable energy source. Who's to say that we won't run out of oil or natural gas someday and might need an alternative source of fuel?''

With no more calls for renewed weapons production, U.S. Cold War colonies such as Amarillo, Aiken and Richland are locked in a competition to decide which will assume the brunt of the country's nuclear materials work during the next century.

This is what has become of the Cold War colonies. With their production lines shut down, their facilities aging and their financing under attack, they are desperately seeking any role within the shrinking weapons network that will provide jobs and money during the coming years.

They are vying, at the behest of the energy department, for the storage rights to a half-century accumulation of nuclear fuels -- a contest further intensified by DOE budget cuts that will cost tens of thousands of jobs from Florida to California in the next few years.

In Amarillo, a place more synonymous with sorghum and beef, that translates into lobbying for surplus plutonium, a substance with a radioactive half-life of 24,390 years. It seems as odd a move as the original choice to place Pantex on

the Great Plains of Texas, prairie land that served as the railhead for the great cattle drives of the late 1800s and as home to buffalo-hunting Comanches until they were driven out by the U.S. Army.

But to defense officials, Pantex's location almost smack dab in the middle of America made the unrelentingly flat grasslands a logical site as the final assembly point for the nation's nuclear weapons. So it was on this prime farmland that the hub of the nuclear weapons complex was born in secrecy and in silence.

Now, everyone from farmers to high school students visit the high-security plant. Buses filled with tourists whisk by guard towers, concrete bunkers and underground assembly bays where all of the nation's nuclear weapons were put together and where they are now steadily being dissembled.

Every visitor is exposed to a series of briefings, exhibits and fact sheets -- all telling them why Pantex, 17 miles northeast of Amarillo, is the best site for a national plutonium recycling center and for storing up to 20,000 plutonium pits, elements that will require the world's best safekeeping and security.

''One of the issues we have to deal with is the community's willingness to be educated about plutonium,'' said Alhenius, the chamber official. ''The problem with most of this country is that anything nuclear is viewed as a negative. That's not the case here.''

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As he looks at the outline of Amarillo from his 15th-floor window inside the Bank of Amarillo building, Jerome Johnson sees a wealth of opportunity for a city that for decades was regarded as an extended truck stop along Route 66.

Measured and eloquent, the white-haired lawyer and co-chair of Panhandle 2000 is the biggest Pantex booster in Amarillo. Nobody really wants plutonium, he said, but it makes sense to keep the pits at Pantex because the explosive elements in the weapons are already there.

''None of the alternatives for storing it are clearly a winner,'' he said. ''But they know how to handle it and how to store it. This isn't just a problem for Amarillo, it's a problem for the whole world.''

Unlike Johnson, the nation's scientific community sees only limited options for dealing with plutonium in the future.

Some engineers believe that it could be used to fuel civilian nuclear reactors. But given the substance's tremendous explosive capability and availability of vast amounts the reactor fuel uranium, which is cheaper and easier to use, most physicists believe all efforts should concentrate on finding a safe way to get rid of the plutonium.

For even after the military plutonium is disposed of, the remaining material will have to be stored for tens of thousands of years in some deep repository where neither humans, earthquakes, volcanic activity or subterranean water channels can disrupt the storage sites.

In the meantime, the boosters in Amarillo believe that Pantex, which has been handling plutonium for 40 years, is the safest place to store the pits. So they hold rallies, hand out buttons and lobby in Washington, D.C., for the right to hold the stuff.

They are also competing against civic interests in Aiken for a tritium-producing accelerator and have helped set up a consortium of Texas universities to study future uses of plutonium and other fissile materials.

''Nobody wants something done out there that would be unsafe, but Pantex has always been accepted on the part of its safety record,'' Johnson said. ''There's always been an inventory of plutonium out there and because of the emotions over this issue, the danger of plutonium has been overrated.

''Everybody involved in this is in the same position: The DOE doesn't need all these sites and we recognize that. But this is about survival, and in the scheme of things, Pantex is a very logical place to survive and to flourish.''

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The razor wire on the 18-foot high cyclone fence at Pantex sparkles in the midday sun, drawing the eyes away from the dusty beige earth piled on top of the concrete bunkers. A guard in an armor-plated Chevrolet Suburban drives by, his face and the 30-caliber submachine gun in the rear hidden by tinted windshields.

Beyond three sets of barbed fences lies Pantex's Zone 4, home to 60 World War II-era steel and concrete ''igloos'' that house plutonium pits, the cores of nuclear warheads. The pits confine the explosive plutonium inside steel jackets, and each pit is delicately suspended inside a cushioned canister.

Between the two fences closest to the entrance is an expanse of clay-colored soil that is scanned by high-tech sensors. Two guard towers rise over each side of the area, which is patrolled by a heavily armed SWAT team.

The entrances to the bunkers are covered by massive concrete slab doors with four holes -- the only key being an industrial forklift heavy enough to raise the cement blocks.

''So even if a group of terrorists somehow made it in, they'd have to be carrying one of these (forklifts) in their back pocket to get to the pits,'' said Tom Walton, the energy department's spokesman at Pantex.

This is the most secure area in the DOE's nuclear weapon complex, a veritable fortress with layers of security that appear to cover every possible attack. By most expert accounts, the plutonium appears to be safely stored.

Safety is the biggest concern at Pantex. Terrorists and black marketers are secretly trying to acquire enough of the stuff to build at least a crude bomb from stolen plutonium. And it only takes about 4 kilograms -- a ball about the size of a grapefruit -- to make one.

Renegade nations such as Iraq, Iran and North Korea have made no secret of their desire to acquire at least small nuclear arsenals; and there are others such as Israel, India and Pakistan that will not acknowledge the secret atom

bombs they are known to possess.

But the risk of theft by terrorist is only one part of the safety puzzle.

Energy department officials admit that they do not fully understand the effects of long-term storage of the radioactive metal. The plutonium pits in nuclear weapons were only designed to last 20 to 30 years and the aging process and stability of their containers remain uncertain.

That is among the concerns of residents opposed to Pantex as a short-term storage site, with short-term meaning up to 50 years. A group of auditors found last year that a forklift accident in the bunkers could slam several pits together until the plutonium has a chain reaction and emits lethal radiation. A team of scientists concluded that the plant needs a computerized tracking system to monitor each of the thousands of individual pits.

Beverly Gattis, head of Serious Texans Against Nuclear Dumping, said that despite years of complaints about the site being directly on the flight path of huge military transport planes landing at Amarillo International Airport, the potential for a crash has hardly raised an eyebrow.

''They just said that planes don't fly over Pantex,'' she said. ''So I guess all these years we've been looking at UFO's.''

In February, several Pantex employees reported that a small plane had landed near Zone 4. But when security teams rushed out to find the aircraft, they could not even find a tire mark.

''That remains an unknown,'' is how Walton explained it, adding that huge C-5s and B-52s used by military training crews no longer fly directly over Zone 4. But even as he said that, a green C-5 appeared to line up directly over the security area's stadium lights on its descent over the plant.

''Even if one crashed, it would have to penetrate the bunker, then get through the walls, penetrate the barrels and rupture the pit,'' he said. ''The chances of that happening are pretty remote.''

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To outsiders, the energy department's new openness policy, which includes the public tours, has been a slow but welcome change from the agency's cloak-and-dagger past.

But to the workers, it is an unsettling intrusion.

Just ask Dolores Hernandez. Barely 4 foot 10 with a youthful face, Hernandez probably could have sneaked into the auditorium with the Amarillo high school students who have toured Pantex.

Yet her navy blue jumpsuit, with the American flag stitched on the sleeve, gives her away. Hernandez works on ''the line,'' the place where all of nuclear weapons in the U.S. arsenal were once assembled and are now being taken apart.

Hernandez, 37, has worked on the line for 15 years and has been trained in

nearly 10 nuclear weapons systems. She works in one of Pantex's specially designed assembly bays, and until recently would only admit to people that she was employed at the plant. She began as a clerk and then applied for an opening on the then-highly classified assembly line.

''I don't know who told me not to talk, all I know is that it was known that you didn't,'' she said. ''That's how we were trained. So it feels strange to talk.''

Hernandez, accompanied by two other line workers during the interview, said that although her job was more stressful during heavy arms buildup periods, such as during the Reagan administration, the increased emphasis on safety, openness and record-keeping makes life difficult at Pantex.

''It seems like everything we do is now viewed under a microscope,'' she said. ''Ten years ago, the atmosphere was much more to get the product out the door. But now, there's a lot of uncertainty.''

Like the vast majority of Pantex workers, Hernandez supports the energy department's plan for plutonium storage at Pantex. She thinks it all can be done quite safely, but then, she has been marrying high explosives with plutonium in missiles for more than a decade.

''Everyone just learns to respect it,'' she said. ''You have to remember that there aren't any other jobs like this. I mean, where can I go to find work when I tell people that for the last 15 years I've assembled nuclear weapons?''

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On a warm spring day, the Pantex site is permeated by the smell of the adjoining IBP plant, one of the country's largest beef processing plants, a sprawling, high-tech slaughterhouse.

For years, the farmers who live around the 16,000-acre plant said they consciously looked the other way while Pantex workers were efficiently assembling thousands of nuclear warheads.

But when the energy department, in conjunction with the Panhandle 2000 boosters group, made a grab for their land a few years back, the farmers rebelled.

Ronnie and Trish Neusch, who raised four children in their farmhouse on the western edge of Pantex, were among those who accidentally found out that their wheat, cane and milo fields had been offered to the department by the group supporting Pantex's expansion.

Indeed, under the plan, all farms within a mile radius of the plant would have been sacrificed, while the boosters promised to supply the agency with all the utilities, roads and water that it might require.

''Land acquisition involves only a small number of landowners and should proceed quickly and without significant complications,'' according to the boosters' proposal. The farmers were never even notified.

The move turned into a public relations nightmare, uniting the farmers for the first time in decades against the plant, forcing numerous public hearings, environmental studies and, ultimately, killing the Pantex expansion plan.

The farmers organized their own groups, including Panhandle Area Neighbors and Landowners and Save Texas Agriculture and Resources. They hooked up with other advocates and began a crash education course on the history of Pantex and other weapons sites.

And they did not like what they learned. The farmers were particularly worried that any toxic waste released at Pantex might seep into the Ogallala Aquifer, which sits several hundred feet beneath the site. The Ogallala is the largest aquifer in the United States, running from South Dakota to north Texas.

Jim and Jeri Osborne, who for more than 40 years have lived with explosions shaking their walls, security guards roaming their pastures and Pantex's stadium lights turning their nights into days, have no problem with the plant carrying out its post-Cold War mission to disassemble the country's nuclear weapon stockpile.

But the energy department's desire to store up to 20,000 plutonium pits has triggered a chain reaction even among many conservative Republicans such as the Osbornes.

After living so long with the fitful bureaucracy of the nuclear weapons industry, the Osbornes now find it difficult to believe the promises of a safe and secure future at Pantex, especially with polluted graveyards such as Hanford and Rocky Flats serving as symbols of the department's darkest side.

''For years they told us that planes don't fly over the plant, even though we can watch them out our window,'' Jim Osborne said. ''They've told us that no radiation has escaped the plant, even when they've had accidental releases. And now they want to store all of the plutonium in the United States here.''

Trish Neusch said the biggest problem centers on trust. After four decades of living with secrecy and lies, she asks, why should people start believing that everything is safe and secure?

''Can you imagine,'' she said, ''turning one of the leading agricultural areas in America into a nuclear waste depository?

''We always had the mind-set here of taking the worst the government had to offer, but that all changed. If this plan goes ahead, we run the real risk of having all the plutonium in the U.S. stored in our back yard and then having the federal government just walk away someday.''

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As Aiken and Richland and Amarillo struggle with their changing roles in the post-Cold War era, the federal government is grappling with the toughest question of all: what to do with all the lethal leftovers from the decades of arms buildup.

So far, only one permanent repository has been designated for for nuclear

wastes and it is being developed primarily to store spent fuel elements from the civilian nuclear power industry.

It is a series of caverns excavated in the depths of Yucca Mountain and located inside the energy department's heavily-guarded Nevada Test Site 65 miles north of Las Vegas.

If approved, the Yucca Mountain repository will cost billions of dollars. The proposed storage facility has some severe limits. Although the site would be designed to hold the wastes for thousands of years, its storage capacity will not allow more than the 600 tons of plutonium now being held temporarily in spent fuel rods at civilian nuclear power plants across the country.

Within the past month, scientists at the Los Alamos National Laboratory have raised a new problem, warning that their calculations indicate the masses of nuclear fuel to be deposited there might ultimately corrode their containers and trigger huge nuclear explosions inside the mountain.

Nevada's **governor** and legislature have opposed the Yucca Mountain project as a major safety hazard from the beginning, and powerful political forces are lining up against it.

''The whole problem is a heritage of the Cold War today, and arms controllers and environmentalists are often pitted against each other, even though they have the same goal -- to prevent humanity from being irreparably damaged,'' says Wolfgang K. H. Panofsky, the renowned Stanford physicist.

''The problem simply won't go away,'' he admits, ''and we can't really solve it. All we can do is minimize the risks.''

THE PANTEX PLANT

The Pantex Plant is located in the Texas Panhandle on 16,k000 acres 17 miles northeast of Amarillo. It was constructed by the Army in 1942 as a conventional bomb plant, decommissioned after World War II and sold to Texas Tech University as excess government property. In 1951 the Atomic Energy Commission asked that 10,000 acres of the site be used for nuclear weapons work. During the mid 1960s, Pantex experienced its first expansion with the assumption of weapons maintenance and modification tasks from plants that closed in San Antonio and Clarksville Tenn..The second expansion came with the closing of a plant in Burlington, Iowa in 1975. The Pantex Plant has been the only U.s. nuclear weapons assembly/disassembly plant since Burlington closed

CHART:

DISMANTLING NUCLEAR WEAPONS

* Where nuclear bombs are dismantled

Outside view (above) of assembly/disassembly cells, or 'Gracel Gerties' at the Pantex plant. The circular structures are about 33 feet in diameter and have about 17 feet of gracel on the roof. These facilities are designed for the portion of the assembly or disassembly where the chemical high explosive

material and nuclear package are put together or separated. Pantex has 13 of these units.

* Number of nuclear weapons dismantled at Pantex.
The Pantex Plant is the United States' main site for weapons dismantlement. weapon design varies greatly, requiring a range of methods to safely disassemble and dispose of the materials. Nuclear bombs and most nuclear artillery shells are returned to Pantex intact. Only the warheads from missiles are returned; launch vehicles are disposed of elsewhere. Disassembly occurs in the 'Gravel Gerties' and may take days to weeks to complete

YEAR NUMBER OF WEAPONS

1989 1,208

1990 1,151

1991 1,595

1992 1,303

1993 1,556

1994 1,371

Source: U.S. Department of Energy

CHRONICLE GRAPHIC

EC:

GRAPHIC: PHOTO (7), GRA,(1) A field near the Pantex nuclear assembly plant was plowed, farmers fought a plan to expand the plant, (2) Activist Beverly Gaddis and Energy Department official Tom Williams have been discussing Pantex's future, (3) Sixty steel and concrete bunkers at the Pantex site, house the explosive cores of nuclear warheads, known as 'plutonium pits', (4) Jeri Osborne, whose home is close to the plant that explosions there shake her walls, has been tracking cancer cases in areas surrounding Pantex, (5) Panhandle 2000 President Jerome Johnson looked out over Amarillo, whose downtown is dotted with em

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