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The Towns That Say “Yes in my Backyard!” to Nuclear Waste

By [Ben Christopher](#) · 6,287 views · [More stats](#)

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Photo credit: [Waste Control Specialists](#).

On November 10, 2011, a hundred or so residents of Andrews, Texas, gathered at a large hole in the ground to celebrate the grand opening of America's newest nuclear waste dump.

Assembled amongst the locals were political and business luminaries from Dallas, Austin, and Washington D.C.. For the ribbon cutting, hedge trimmer-sized scissors were passed out to the various men in suits responsible for making Andrews County a repository for the nation's radioactive trash. Among them were the senior managers of Waste Control Specialists (WCS), the company that owns the site, Harold Simmons, the conservative Dallas billionaire who owned that company; and Bob Zap, the mayor of Andrews at the time.

The inauguration of the low-level radioactive waste facility, Texas' first, ended with a barbecue.

Most communities would not find the prospect of housing nuclear refuse cause for celebration. And yet, two years earlier, the town had narrowly voted to fund the construction of the disposal site with a \$75-million bond.

Despite the enduring opposition from a handful of locals and the state Sierra club, most of Andrews' 15,000 residents were eager to celebrate their accomplishment. And it was an accomplishment.

With the opening of the WCS facility, the town of Andrews had done what no other community in the United States has accomplished in two decades: it wrangled the necessary political support to open a new nuclear waste disposal site.

"We're accustomed to a riskier type of industry here," says Julia Wallace, the executive director of the Andrews Chamber of Commerce, which supported the radioactive disposal facility. In a community that has long depended on the roughnecking jobs of the oil-and-gas industry, nuclear waste did not seem like a decidedly dirtier business, she says. Plus, unlike the perpetually booming and busting petroleum market, radioactive trash—which must be stowed away for tens, hundreds, or even thousands of years—promises a consistent return on investment.

Andrews isn't alone in making that investment. Across the high plains of west Texas and eastern New Mexico, communities have invited private companies to set up shop reprocessing, storing, and disposing of radioactive trash. If Detroit is the "Motor City" and the San Francisco Bay Area has "Silicon Valley," this arid stretch of the southwest is reinventing itself as America's "nuclear corridor."

In doing so, they are also offering a solution—if a temporary and controversial one—to America's longstanding failure to find a home for its nuclear waste.

A Brief History of How Not To Dispose of Nuclear Waste

Though the term "nuclear waste" conjures up images of undifferentiated, glow-in-the-dark goo, it refers to a wide variety of irradiated refuse. But, in broad strokes, civilian nuclear waste comes in two basic flavors: high-level and low-level.

High-level is largely made up of spent fuel rods, pulled hot and dangerous from cooling pools in nuclear power plants across the country. This is the stuff that generates the power at nuclear power plants and, once removed, it will remain radioactive, for all intents and purposes, forever. The federal government intends

to one day bury these rods deep in the ground somewhere. More on that plan later.

Low-level waste, on the other hand, is pretty much everything else that's too radioactive to pass along to your neighborhood garbage collector. This includes the metal filters, wires, gauges, tools, and residues from nuclear power plants; the gloves, booties, and goggles worn by plant technicians; the syringes, swabs, and medical equipment from PET scans and oncology wards; and the fluids, vials, and animal carcasses from laboratory experiments.

This hodgepodge low-level waste can be further divided into classes that roughly correspond to the threat they pose to public health. The radioactivity of Class A waste fades to safe levels within one hundred years. Class C garbage can remain dangerous for half a millennium.

But whatever the official category of radioactive trash, the United States has never been good at getting rid of the stuff.

In the earliest years of America's nuclear energy program, the waste issue was handled with a combination of lax regulation, aggressive arms proliferation, and a misplaced confidence that scientific progress would soon deliver a solution.

In a win-win for atomic energy advocates and war hawks alike, high-level waste was reprocessed into bombs, with the remaining dregs shipped off to federal facilities in Tennessee, South Carolina, and Washington State.

But there was no such elegant solution for low-level waste. Throughout the 1950s, the Atomic Energy Commission's disposal method of choice was to place the refuse into concrete barrels and then, like a Mafia hit job, weigh it down with cement and drop it into the sea.

By the 1960s, the AEC started to push for a land-based solution for low-level waste—not because it was safer, but because it cost less than the maritime option. Throughout that decade, six federally licensed landfills started operating across the country. By and large, these facilities were privately owned and run.



The Maxey Flats Low-Level Radioactive Waste Site in Kentucky was closed after a leak was discovered in 1977. Photo credit: [RRJackson](#).

“The disposal was pretty slipshod,” says Barry Rabe, professor of environmental policy at the University of Michigan’s Ford School of Public Policy. “Not a whole lot more than digging trenches and ditches and dropping in waste.”

Such slipshod measures yielded predictable results. Leaks and contamination of nearby water sources led to the shuttering of three of the six sites. By 1978, only the Beatty, Nevada; Richland, Washington; and Barnwell, South Carolina facilities remained in operation. Of those three, Barnwell received the lion’s share—some 80% of all U.S. low-level radioactive waste.

At around the same time, the federal government’s high-level waste reprocessing system hit a snag. When spent nuclear fuel is reprocessed, it isolates plutonium,

the likes of which is used in nuclear warheads. In 1977, the Carter administration suspended all commercial reprocessing as an anti-proliferation measure.

This was a victory for anti-nuke advocates, but it compounded the waste disposal problem. Just as the remaining landfills were being forced to absorb larger and larger volumes of the low-level trash, federal regulators began asking nuclear power plants to store more and more of their high-level waste on site.

In short, stockpiles of nuclear waste were growing, and the country was running out of places to put it.

Desperate times call for desperate measures. In 1978, NASA drafted a [report](#) that contemplated disposing of waste in outer space. Of the five destinations considered, the sun's orbit and the surface of the moon were considered "most attractive," though in the end the ideas were considered impractically expensive and risky. (If you think SpaceX's recent launchpad [explosion](#) was bad, imagine if it had been carrying irradiated scrap metal.)

Things came to a head in the spring of 1979 when a reactor at the Three Mile Island Nuclear Generating Station in Pennsylvania suffered a partial meltdown. Aside from dealing a major blow to the public's trust in nuclear technology, the incident also irradiated a fair amount of station infrastructure, creating a huge amount of low-level waste all at once. When the governor of South Carolina learned that the bulk of it was headed for his state's landfill in Barnwell, he ordered the trucks to turn around.

"We take a lot of [nuclear] waste down here, but we don't want to take all of it for the whole country," the governor's health and environmental secretary told the [press](#). South Carolina increased disposal fees by 600% and partially closed the facility.

The following year, Congress declared a "national crisis."

A Civil War Over Nuclear Waste

One could hardly blame South Carolina.

A state's reluctance to host a nuclear waste depository is more than your run-of-the-mill NIMBY-ism. One of the nation's founding principles, reflected in the Commerce Clause of the Constitution, is that the country is a free-trade area. Nevada cannot place tariffs on Colorado shoes to protect its own cobbler industry. In 1977, the Supreme Court ruled that what is true of shoes must be true

of nuclear waste. As soon as a state opens up a radioactive waste landfill within its borders, it risks becoming a nuclear dumping ground for the entire country.

But in response to the country's main radioactive waste site shutting its doors, Congress provided states with a workaround. Under a new law passed in the final days of 1980, states could place some restrictions on nuclear waste delivery as long as they joined regional waste management "compacts."

Under the new system, if Illinois and Kentucky agreed upon a shared disposal site, they could form a compact, thus reserving the facility solely for nuclear waste generated between the two states. States outside of the compact system would be forced to deal with their own waste.

The compact system was seen as a way to facilitate mutually beneficial arrangements amongst the states. Instead, it just relocated the same old argument over where to locate landfills. As one hazardous waste treatment expert [characterized](#) the situation, "what we have is a Lebanon of hazardous waste in which everybody is fighting everybody else."

In the late 1980s, New York found itself unable to join a compact (the state's five nuclear power plants made it an unpopular partner) and unable to open any new waste dumps in-state (municipalities and counties didn't want the trash either). Without any place to locate its radioactive waste, the State of New York would soon be forced under the new rules to assume legal ownership of the waste.

Instead, New York sued the federal government and seventeen other states joined. The resulting Supreme Court decision held that non-compact states could not be forced to take responsibility for their own waste. The ruling stripped the compact system of its teeth. States no longer had final responsibility over low-level waste. Instead, that responsibility fell to the generators of the waste (mostly nuclear power plants), who could either send it to one of the country's few licensed landfills or store it onsite.

Three decades later, the compact system remains in place, but it is an incoherent mess.

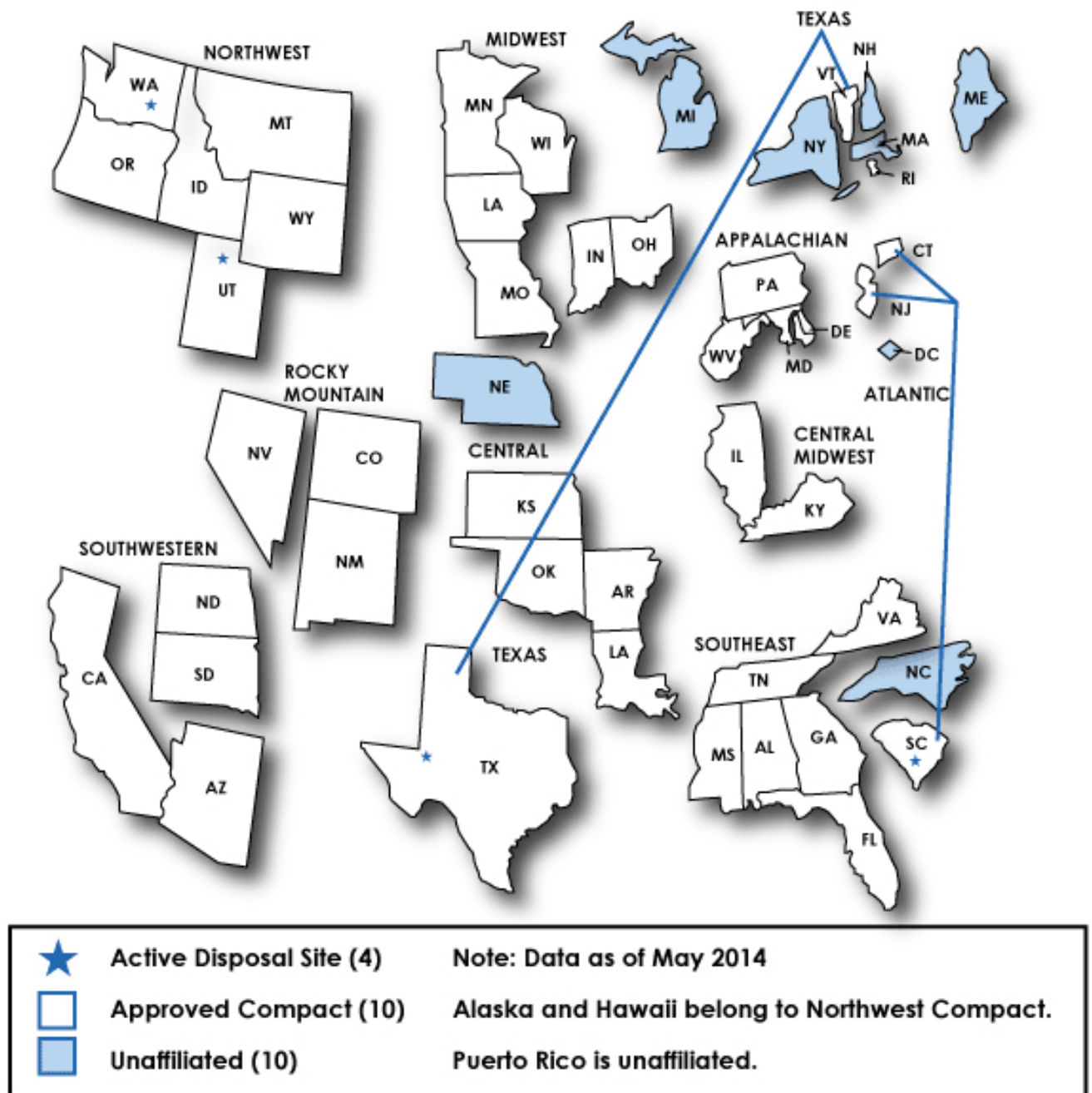


Image source: [United States Nuclear Regulatory Commission](http://www.nrc.gov)

"A lot of consultant time has been spent and a lot of proposals have been made, but we've seen very little addition of new waste disposal capacity," says Rabe. In the meantime, the total amount of low-level waste has only grown. In 1995, the

country had approximately 32,000 tons of the stuff. Now, the figure is over 70,000 tons.

That's why the opening of the facility outside Andrews, Texas, in 2011 came as such a relief to many watchers of the nuclear industry.

“Very few countries around the world have found ways to really resolve this and deal with it,” says Rabe. From the [United Kingdom](#), to [Germany](#), to [Japan](#), Americans are not alone in rejecting nuclear waste disposals in their backyards. “I think the Andrews case will be really instructive and important.”

Radioactive Waste as Economic Development

Even in the rarefied world of radioactive disposal facilities, the Andrews site occupies an unusual niche.

Today, there are four low-level waste landfills operating around the country. Two, in South Carolina and in Washington, can only accept waste from their respective compacts. A third, in Utah, which began operating in the early 1990s, only accepts Class A refuse.

That makes the Andrews facility the only landfill that can receive all classes of low-level radioactive waste from any state in the continental United States.



Image source: [United States Nuclear Regulatory Commission](#)

As a result, for many producers of nuclear waste, Andrews is effectively the only game in town. This has been good news for the local economy, says Julia Wallace of the Andrews Chamber of Commerce. Since WCS began accepting low-level waste, new high-skilled jobs have come to town, donations to schools and other charities have increased, and civic participation in sleepy Andrews is on the rise.

The singular position of the WCS facility within the nuclear waste industry has also been good news for the company's bottom line. (According to an article in the [New York Times](#) from 2014, for the permanent use of a cubic foot of soil, WCS charges waste producers \$10,000). This is also one of the reasons that the Utah-based EnergySolutions announced its intentions to buy WCS last November.

EnergySolutions is little known outside the obscure world of radioactive trash management, but it is in many ways the linchpin of U.S. low-level nuclear waste policy.

When the company formed in 2007, it brought the low-level radioactive waste sites in Clive, Utah, and Barnwell, South Carolina, under the same corporate roof. If the WCS acquisition is approved, this will give EnergySolutions ownership of three of the four low-level sites across the country. With the exception of the Northwest compact, which has access to the Richland, Washington site, all states will have little choice but to send their radioactive refuse to EnergySolutions-owned landfills.

Though EnergySolutions' has been able to acquire a dominant position in the industry, it is not because they have edged out the competition by nefarious means. There are few radioactive landfills across the country for the simple reason that few communities want them in their backyard.

There are few communities, in other words, like Andrews, Texas.

From Disposal to Storage

In December of 2014, Waste Control Specialists, the company that owns the Andrews site, announced its plan to get into the big leagues of radioactive waste. Alongside its low-level waste disposal operation, they had filed an application to store spent nuclear fuel, waste that will remain dangerously radioactive for thousands of years.

Unlike a disposal site, which serves as a permanent home for radioactive refuse, a storage facility functions as more of a hotel—a temporary fix until the federal government settles on a permanent disposal site. The government has been looking for one of those for a long time.

In the early 1980s, just as the compact system was getting up and running, Congress decided that the safest way to dispose of spent fuel would be to bury it deep in the ground. A few years later, they chose Yucca Mountain in Nevada.

In the intervening years, the Department of Energy spent roughly \$15 billion dollars researching and preparing the site. But Yucca has since succumbed to what political scientists Doug Easterling and Howard Kunreuther have [labeled](#) "the doughnut effect": though the community immediately adjacent to the mountain welcomed the economic benefits associated with such a massive infrastructure project, Nevadans further afield only saw Yucca for what it was: a nuclear waste dump.

"There have always been counties or towns willing to host projects like this," explains Daniel Sherman, the author of *Not Here, Not There, Not Anywhere*, a book about the politics of radioactive waste disposal. "[But] it is rare that you

have a willing host community and a supportive state government that has the political will to follow-through on implementation. Neighboring states can sometimes obstruct a project as well.”

Throughout the early 2000s, Senator Harry Reid and other anti-Yucca interests ran ads in the urban centers of Nevada and in the surrounding states warning of the dangers of Yucca-bound radioactive freight. In the lead up to the congressional elections of 2010, the Obama administration bowed to state-level resistance and took Yucca off the table.

There are few alternatives.

Until just two years ago, the Waste Isolation Pilot Plant, located east of Carlsbad, New Mexico, offered one possibility. A subterranean storehouse for radioactive waste generated by bombs, nuclear submarines, and defense-related activities, WIPP has also served as a testing ground for the viability of safe underground storage for the last 25 years.

That test failed in 2014 when one of the steel barrels containing low-level waste ruptured. (Evidently, [kitty litter](#) is often used to stabilize radioactive waste, but someone had mistakenly used the organic variety.) According to a [Los Angeles Times](#) estimate, the incident, which has shuttered the site for the time being, could cost as much as \$2 billion.

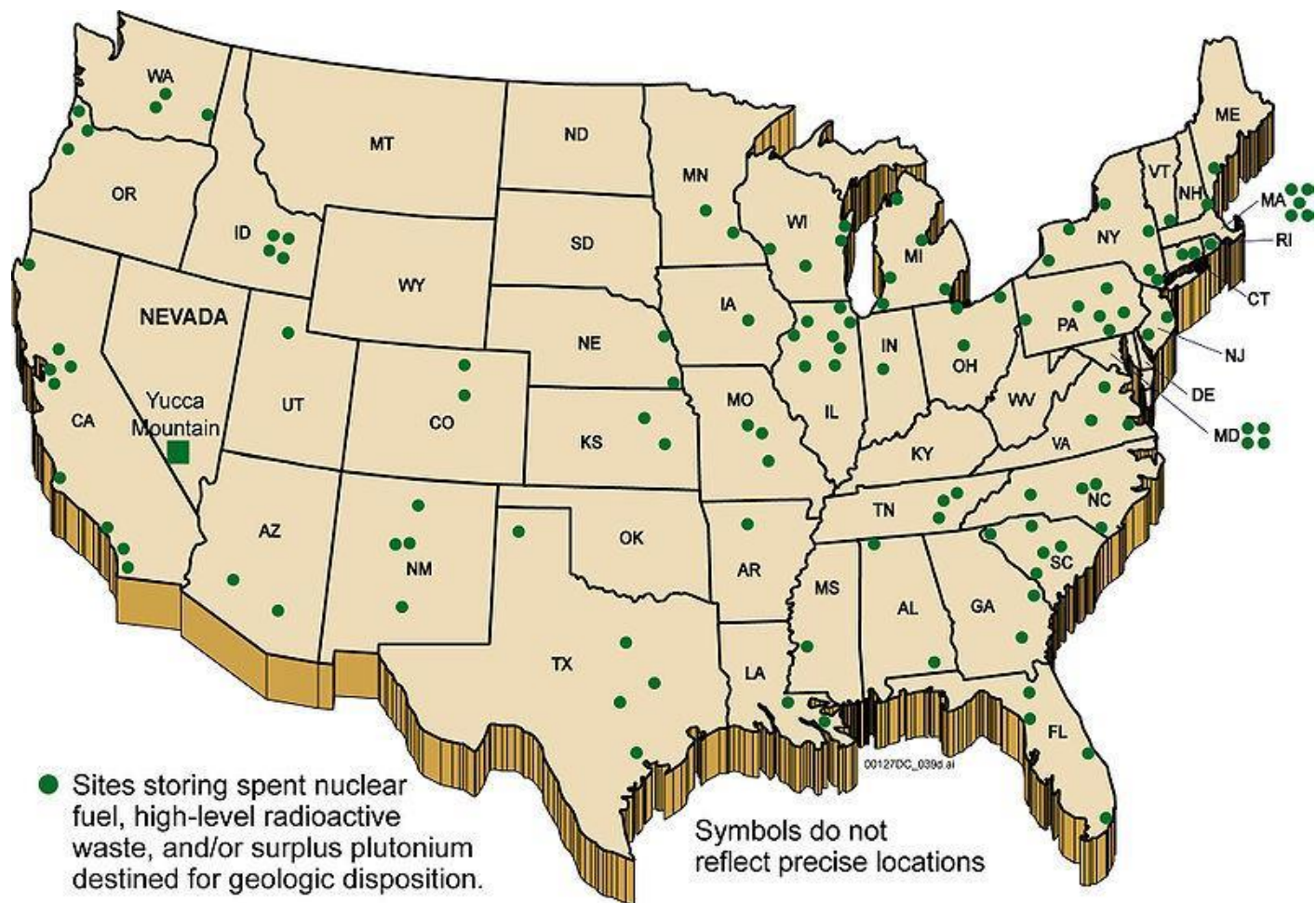
It has also reduced the odds than any state will volunteer to host an alternative, underground repository anytime soon.

In the meantime, nuclear power plants have been left holding the radioactive bag.

Absent a long-term solution, these plants are storing their own spent fuel. This means that virtually every nuclear power plant in the country is currently serving as a de facto nuclear waste storage facility.

“If you look at a map of nuclear power plants, basically each of those is also a nuclear waste repository,” says Barry Rabe. “Most of them are in metropolitan areas.”

The national holding pattern on nuclear waste management has come at a steep cost. The federal government has paid nuclear plants some \$5 billion in compensation for their "temporary" storage costs. The Department of Energy expects to pay at least \$22 billion before a solution is found.



High-level nuclear waste storage locations as of 2006. Image source: [U.S. Department of Energy](#)

In lieu of a long-term solution, the Obama Administration has called for the development of additional “interim storage facilities.” Lobbyists from the nuclear power industry are now pushing Congress to give the Department of Energy authority to enter into contracts with private companies that operate these sites.

On the list of such companies is Waste Control Specialists of Andrews, Texas. But it is not alone.

Friendly Competition for the Most Dangerous Stuff on Earth

The WCS facility sits only a few hundred feet from the New Mexico border. From the town of Hobbs, New Mexico, the distance is about 20 miles as the crow flies. That makes Hobbs closer to the Andrews County landfill—and its projected spent fuel storage facility—than the town of Andrews itself.

And yet, according to Sam Cobb, the mayor of Hobbs, his voters “see no economic benefit” from the Texas facility. Instead, Hobbs, along with officials from Lea and nearby Eddy County, and the City of Carlsbad have been pushing for their own interim storage site. Located 35 miles northeast of Hobbs, the facility will be run by the nuclear waste cask producer Holtec International if it is approved.

“We’re not opposed to Waste Control Specialists putting in the contract,” says Cobb. “If the Department of Energy wants to select two sites, we certainly don’t have a problem with that—as long as one of them is ours.”

If Holtec wins the license, casks of highly radioactive waste will be transported to the site where they will be lowered by crane into ventilated subterranean silos. With each cask stored, Holtec will collect a rental fee from the Department of Energy and a cut of those fees will go to Hobbs and the surrounding towns and counties.

Eastern New Mexico is no stranger to nuclear waste. To the south of Hobbs, the British nuclear fuel company, Urenco, runs a uranium enrichment facility. To the west, International Isotopes Inc. is hoping to establish a factory for depleted uranium processing. On the drive from Hobbs to Carlsbad, you pass the turnoff to the Waste Isolation Pilot Plant.



Route 62, east of Hobbs, New Mexico, the heart of America's "nuclear corridor."
Photo credit: [Leaflet](#)

Taken together, this cluster of nuclear industry makes up what many refer to as “the nuclear corridor” or “nuclear alley.” Lea County has officially adopted the less suggestive term, “EnergyPlex.” In any case, the familiarity means that the local population is less skittish about the prospect of handling radioactive waste, says Cobb.

“We have a very informed and educated electorate about the nuclear fuel cycle,” he says.

Plus, he argues, storing some of the most toxic material ever created by humanity in the arid, rural high plains makes more sense than storing it at various nuclear power plants across the country.

“Behind a chain link fence in some large metropolitan areas are these same casks that we’re talking about putting out here in the desert, 35 miles from the closest

population center,” he says. “This environment out here is very good for something to sit.”

Whether Holtec, WCS, or another company is given permission to store radioactive waste out in this desert, this appears to be the foreseeable future of our nation’s nuclear waste management policy. Conditional on the uninterrupted approval of Texas and New Mexico, we will transport it to the high plains of the southwest and let it sit there until we come up with a better solution.

If the past is anything to go by, it’s likely to sit out there for a long time.

Our next article investigates why a company might pay Malcolm Gladwell, Mike Ditka, or Hillary Clinton \$40,000 to \$250,000 for a speech. To get notified when we post it → [join our email list](#).