

## Good to Glow

**Despite its own scientists' objections, state regulators are greenlighting a massive nuclear waste dump in West Texas.**

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*Canisters of radioactive waste awaiting burial at the Waste Control Specialist site.*

*Courtesy of WCS*

In February, hundreds of government regulators and businesspeople gathered in Phoenix for [“Waste Management”](#) the annual radioactive waste industry confab. Amid the swag and schmoozing, industry insiders appraised the state of their business. The good news: The nuclear industry appears to be rebounding in the United States, providing potentially huge new radioactive waste streams as planned reactors come online. The bad news: The number of landfills for burying low-level radioactive waste is dwindling. One of the oldest sites, in Barnwell, South Carolina, will close to all but a handful of states on July 1. That will leave 36 states, including Texas, with no place to send the radioactive waste generated by their nuclear power plants, universities, hospitals, and companies.

Since 1980, when the federal government delegated to the states the task of dealing with low-level radioactive waste, not a single new landfill has opened. Ten attempts have been made by states to develop one. The congressional [Government Accountability Office](#) estimates that the failed efforts in developing sites cost a combined \$1 billion.

The industry largely blames public opposition. “We just didn’t get kicked out of South Carolina,” said Steve Creamer, CEO of Utah-based [EnergySolutions Inc.](#), the company that runs Barnwell. “We got brutalized and kicked out of South Carolina.”

Creamer estimated that the United States' 104 commercial nuclear reactors would generate 117 million cubic feet of waste over their collective lifetimes. Federal nuclear facilities under decommissioning orders will produce millions more. Where will it all go?

A subsidiary of Dallas-based conglomerate [Valhi Inc., Waste Control Specialists LLC](#) was in Phoenix to make the case that it was on the verge of doing what no other company has been able to do—license and build a massive radioactive waste landfill.

“Considering our political support, considering our local support, if a new facility cannot be licensed in Texas, it probably can't be licensed anywhere,” said Bill Dornsife, a Waste Control vice president.

By early 2010, Waste Control officials told the conference-goers, the company hopes to begin disposing federal and state radioactive waste at two adjacent Texas landfills in Andrews County. All the company lacks are two final licenses from the [Texas Commission on Environmental Quality](#). One, known informally as the “byproduct license,” would authorize the disposal of 3,776 canisters of radioactive waste from a closed, Cold War-era processing plant in Fernald, Ohio, as well as mill tailings from the Texas uranium mining industry. TCEQ has issued a draft license for the byproduct dump.

The second license would allow the company to bury low-level radioactive waste from federal and state sources, including nuclear reactors, weapons programs, and hospitals. With both licenses, Waste Control could bury more than 60 million cubic feet of waste over the span of 30 years, more than half the volume of the new Dallas Cowboys stadium.

If Waste Control can repel legal challenges by environmental organizations and secure final approval from TCEQ for the second license, its remote site in Andrews County would become the repository for commercial nuclear waste from Texas, and also Vermont as part of a “compact”, between the two states. A loophole in state law, however, allows the state compact commission, an oversight board appointed by [Gov. Rick Perry](#), to contract with other states and compacts for waste disposal. “For political reasons, we don't want anyone to come knocking on the door until we get this up and operating, but I think there are some capabilities there,” Dornsife told his Phoenix audience.

Federal radioactive waste, mostly the leftovers from the U.S. government's atomic weapons program, is the most lucrative of the waste streams contemplated by the company. In 2003, as part of Waste Control-backed state legislation that authorized privatized radioactive waste disposal in Texas, the Legislature granted companies like Waste Control the right to dispose of Cold War-era federal waste as well as waste generated by states.

“[W]e just had to get the state law changed,” said Rod Baltzer, Waste Control president, at the conference. It probably didn't hurt that Dallas billionaire [Harold Simmons](#) owns Waste Control through Valhi. Simmons is one of the top campaign contributors to the state's Republican leadership.

The new landfills would join Waste Control's expanding waste portfolio, all of which are clustered on the company's 1,338-acre site in Andrews County, near the New Mexico state line. The company's radioactive waste treatment and storage plant opened in 1997. The license for that facility is “very unique,” Dornsife said, because it allows for “unlimited storage time, and we could go to unlimited [radio]activity.”

There's also the hazardous waste landfill. Half of that dump is actually filled with radioactive waste, material the state has deemed “exempt”, from radioactive disposal standards. The company's efforts to broaden the exemptions are ongoing. “[D]isposing of radioactive material at [hazardous waste] pricing is extremely cost-effective,” Dornsife said.

In their conference presentations, Baltzer and Dornsife failed to mention the problems the company has encountered with worker exposure to radiation. And while Baltzer admitted that the licensing process has been “brutal,” he didn’t detail the rift it has created within TCEQ between scientists and engineers, who stridently object to Waste Control’s plans, and agency upper management that wants to approve the licenses.

In March 2005, Waste Control began processing radioactive waste from the Rocky Flats plant, a site in Colorado that manufactured plutonium triggers for the United States’ Cold War-era hydrogen bomb program. On June 2, 2005, while processing this waste, a worker known in state documents as Number 67 at Waste Control’s mixed waste facility was wounded on his leg by a piece of contaminated metal. The company tested the worker’s urine and feces, and found elevated levels of two plutonium isotopes, as well as americium-241. Later in June, an independent expert determined that the worker had probably inhaled the radionuclides. Over the next few months, as processing of the Rocky Flats waste continued, the investigation expanded to include eight of Number 67’s co-workers. All but one tested positive for low levels of radionuclides, including one employee who hadn’t worked at the mixed waste facility for three years. On September 22, Waste Control management decided to suspend operations at the mixed waste facility and expand the testing to virtually all employees.

In all, 43 individuals had been exposed to plutonium and americium, company testing showed, according to documents uncovered by the *Observer*. According to Waste Control, a ventilation system wasn’t working properly, allowing plutonium and americium particles to escape into the lunchroom and adjacent hallways.

Waste Control maintains that the radiation exposures were not dangerous. The highest calculated dosage to any employee was “less than 10 percent of the regulatory limits,” according to a January 2008 Waste Control report. “We did find a handful of employees that were over our planned exposures; they were below regulatory concern,” said company president Baltzer in an interview with the *Observer*. “We are very fastidious about applying ALARAs low as reasonably achievable” principles. ... We did note that we had some ways to improve our program. Partially as a result of this, we changed out our general manager ... We think some of the employees were not as thorough in their conduct, in their operations, as they should have been.”

A TCEQ audit of the company’s incident report questioned Waste Control’s dosage calculations and its handling of the situation. Waste Control officials assert that the workers were exposed to plutonium and americium-241 over a six-month period covering the summer of 2005. In contrast, the TCEQ audit, completed in spring 2007, posits that the exposures “might have been going on since 2002, at least intermittently at a minimum.” The audit suggests that the company underestimated the number of batches of radioactive waste that were processed. If that were the case, the actual doses might be much higher than company reports indicate.

The audit notes that a preliminary review by John Poston Sr., a professor of nuclear engineering at Texas A&M, “suggested WCS employee doses were ... seven times greater than the WCS-assigned employee doses, but still below regulatory [limits].” The agency has declined to release Poston’s complete findings.

The TCEQ audit also criticized Waste Control for waiting months to suspend operations after it learned employees had been exposed. “It is my opinion that WCS management did not act in a timely manner in their decision to suspend operations until the source of the intakes could be identified,” wrote Sheila Meyers, a TCEQ chemist who authored the audit report. Baltzer said the company began testing workers as soon as possible, and temporarily closed the facility once conclusive lab results were received.

The radioactive contaminations were in large part preventable, the audit noted. Waste Control acknowledged in a report on the incident that testing employee fecal samples could have caught the exposures sooner. That failure to test may be partly the fault of state regulators. In 2003, the [Department of State Health Services](#) dropped a requirement that Waste Control test employees’ feces annually for the presence of radionuclides. Instead, the analysis could be “performed at the discretion of the [company’s] radiation safety officer.”

Four male workers tested positive for radionuclides in 2007, according to TCEQ documents. One employee told inspectors in an August 2007 interview that “the air vents at the mixed waste treatment facility had not been fixed completely.”,

In August 2007, Susan Jablonski, the head of TCEQ’s radioactive materials division, provided her boss, Deputy Director Dan Eden, with a written update on the review of Waste Control’s two license applications. In the memo, which is stamped “confidential,” she identified “radiation protection”, as one of four major outstanding problem areas. “The radiation protection issues appear not to be under control at the larger site,” she wrote. “The apparent loss of control of radioactive materials also impacts the ability to establish true background [radiation] at the site.”, Background, or natural radiation, is necessary as a baseline so that leaks can be detected.

TCEQ would not make Jablonski available for an interview. The agency did not respond to written questions before the *Observer* went to press.

The TCEQ hasn’t issued any violation notices to Waste Control for the radiation exposures.

There have been other accidents involving radioactive material at Waste Control’s facilities. In October 2005, two state inspectors visited the site in Andrews to investigate a string of contamination events, including the worker exposures. Their report notes three other “cross-contamination”, incidents that had occurred in as many



TCEQ whistleblower Glenn Lewis

Photo by Daniel Carter

years: one involving tritium; one involving radon gas; and a leakage of americium-241 and plutonium-239 into a septic system. This string of problems “reflects either defects in ventilation scheme or inadequate administrative controls to prevent cross contamination of facilities,” the inspectors wrote.

Recently, Waste Control agreed to pay \$151,000 in fines to TCEQ for contaminating septic systems on two occasions, and for elevated levels of heavy metals such as arsenic, lead, and mercury at a railcar unloading area.

So far, the accidents have not derailed the company’s activities. Yet stiff resistance from TCEQ personnel in charge of reviewing Waste Control’s proposals has put the company on the defensive. One of the company’s fiercest critics, Glenn Lewis was brought on at the TCEQ’s radioactive materials division to manage any controversies concerning the application. He quickly soured on the process. “It was obvious from the beginning that the enabling legislation was written for the benefit of, and largely by, this applicant,” Lewis said. “That raised immediate concerns about how objective a review of the application could possibly be.”, In December, Lewis left TCEQ

after serving 25 years in Texas state government.

In all, three former TCEQ employees who worked on the Waste Control license applications said they left the agency because of frustration with the licensing process. All three came to the conclusion, after years of working on the applications, that Waste Control's site is fundamentally flawed. "After years of reviewing the application, I submitted my professional judgment that the WCS site was unsuitable," said Patricia Bobeck, a hydrogeologist who worked on the byproduct application. "Agency management ignored my conclusions and those of other professional staff, and instead promoted issuance of the licenses."

Encarnaci3n "Chon", Serna, Jr. an engineer, said he quit in June 2007 when it became apparent that a license for the low-level radioactive waste landfill would be issued despite staff objections. At the end of the staff's technical review in August 2006, Serna and other staff members decided the application was "very, very deficient", and couldn't be approved. Nonetheless, TCEQ managers decided to move forward, giving the company until May 2007 to address some problem areas. "Around that time I started getting the idea that these people are going to license this thing no matter what," said Serna. "I felt that in clear conscience I couldn't grant a license with what was being proposed."

Serna said that when he left, there were still "thousands of questions in every area of review." For example, he had trouble determining accurate calculations of radiation doses workers might expect to receive when handling soil-like "bulk waste." In 2006, Serna wrote in an internal e-mail that he'd come across 57 scenarios in Waste Control's plan in which workers would be close to radioactive waste. "I think there could be potential exposures to significant doses of radioactivity," he wrote.

His overarching concern, shared by the other former staffers, relates to the site's physical location. Serna said he is convinced that the geology of the site is unsuitable for containment of radioactive waste for thousands of years.

That view was echoed in an August 14 memo prepared by two TCEQ engineers and two agency geologists. The proximity of a water table to the disposal site "makes groundwater intrusion into the disposal units highly likely," the four wrote. Their memo stated that "natural site conditions cannot be improved through special license conditions", and recommended denial of the license. The next day, Susan Jablonski conveyed those concerns to Deputy Director Dan Eden, who reports directly to Executive Director Glenn Shankle. Waste Control "states the second water table is no closer than 14 feet from the bottom of the low-level landfill," read her memo to Eden, which is stamped "confidential." A staff analysis, she wrote, "shows that the water table may be closer than 14 feet."

Company president Baltzer told the *Observer* that the former staffers' fears are outdated and overblown. Once Waste Control heard that staff had lingering concerns about the groundwater situation, the company began drilling new boreholes and wells to verify that water wasn't present in or near the landfill. Waste Control has spent \$3 million on the drilling and found no water, Baltzer said. "WCS's license application demonstrates that the site will protect human health and the environment and that water will not intrude into the proposed disposal units under any credible scenario," he said.

In September, the two TCEQ teams working on Waste Control's applications gathered to rehearse a presentation they would be giving Executive Director Shankle later that day. "The entire gist was to communicate the impossibility of licensing either facility," said Lewis, who resigned in December. "As we were adjourning, [Deputy Director] Dan Eden remarked to [TCEQ attorney Stephanie Bergeron Perdue], 'We have to find a way to issue a byproduct license.' This was after an hour-long presentation on why it would be unwise to issue a license for either the byproduct or low-level application."

As staff opposition grew, Waste Control took its case to the agency's upper management. Lobbyist and attorney [Pam Giblin](#), who represents Waste Control, met with Shankle once in September and twice in November,

according to agency records. Baltzer left nine messages for Shankle and four for Eden between July 2007 and January 2008, according to phone logs that reflect only missed calls. Eden met with Waste Control officials at least five times during that period. Former Republican Congressman [Kent Hance](#), a Waste Control investor and chancellor of the Texas Tech University System, paid a visit to Shankle's office in early November. [Cliff Johnson](#), a principal in [Textilis Strategies](#), an Austin-based firm that lobbies for Waste Control, visited with Shankle in September. Shankle also met with Giblin, Baltzer, and Mike Woodward, a Waste Control lobbyist and attorney with Hance's law firm, during that period.

The TCEQ higher-ups were in a bind: Their own technical experts had unequivocally recommended denial, and two members of the team had left in disgust. Yet the agency's managers still wanted to push the licenses forward.

"In late October, Susan Jablonski acknowledged in writing to senior management in the agency that faulty site conditions exist and that they cannot be corrected through license conditions," said Lewis, the former staffer. "What is baffling is that Ms. Jablonski"at the same time acknowledging the inherent impossibility of correcting a bad application"still pledged to support whatever nonsensical recommendation her boss may decide to pursue."

By late October, Waste Control had a draft license in hand for its byproduct dump. TCEQ Executive Director Shankle had chosen to deal with his staff's objections by adding stipulations to Waste Control's licenses, including a requirement that the company conduct further studies on erosion, groundwater, and possible fractures. In March, he rebuffed the [Sierra Club's](#) call to rescind the license. A draft license for the low-level landfill is currently being written.