Chair Resource

From: Marcia Schneider <[redacted]>
Sent: Sunday, August 27, 2023 3:12 PM
To: Chair Resource
Subject: [External_Sender] Re Holtec safety and accountability long term at NM site

Chair Hanson

I appreciate your and the rest of the NRC's focus on safety as we progress towards a more clean energy future in the US.

However, I do have concerns that we've licensed a private co, Holtec to operate their spent fuel repository in NM. Against opposition by the state legislature, the governor, and all members of the US congressional delegation.

Holtec hasn't proved to be a very accountable partner in decommissioning projects, always with an excuse and a "culture of safety" public response.
What ensures the people of NM and all those encountering Holtec work along rail lines and plants that we are safe whether Holtec stays in business or not, and that safety has a higher priority than profits for Holtecs shareholders?
Recent problems cited at Holtec's NJ operation:
https://www.washingtonpost.com/business/2022/05/13/holtec-oyster-creek-nuclear-plant-cleanup/

Thanks very much
Marcia Schneider

BUSINESS

The dangerous business of dismantling America's aging nuclear plants

Accidents at New Jersey's Oyster Creek power plant have spurred calls for stricter oversight of the burgeoning nuclear decommissioning industry

By Douglas MacMillan

May 13, 2022 at 6:55 a.m. EDT

FORKED RIVER, N.J. — The new owner took over the Oyster Creek Nuclear Generating Station in 2019, promising to dismantle one of the nation's oldest nuclear plants at minimal cost and in record time. Then came a series of worrisome accidents.

One worker was struck by a 100-ton metal reactor dome. Another was splashed with radioactive water, according to internal incident reports and regulatory inspection reports reviewed by The Washington Post. Another worker drove an excavator into an electrical wire on his first day on the job, knocking out power to 31,000 homes and businesses on the New Jersey coast, according to a police report and the local power company.

All three incidents occurred on the watch of Holtec International, a nuclear equipment manufacturer based in Jupiter, Fla. Though the company until recently had little experience shutting down nuclear plants, Holtec has emerged as a leader in nuclear cleanup, a burgeoning field riding an expected wave of closures as licenses expire for the nation's aging nuclear fleet.

Over the past three years, Holtec has purchased three plants in three states and expects to finalize a fourth this summer. The company is seeking to profitably dismantle them by replacing hundreds of veteran plant workers with smaller, less costly crews of contractors and eliminating emergency planning measures, documents and interviews show. While no one has been seriously injured at Oyster Creek, the missteps are spurring calls for stronger government oversight of the entire cleanup industry.

In the nearly three years Holtec has owned Oyster Creek, regulators have documented at least nine violations of federal rules, including the contaminated water mishap, falsified weapons inspection reports and other unspecified security lapses. That's at least as many as were found over the preceding 10 years at the plant, when it was owned by Exelon, one of the nation's largest utility companies, according to The Post's review of regulatory records.

Joseph Delmar, a spokesman for Holtec, defended the company's record, saying it takes safety and security seriously. The recent incidents "are not reflective of the organization's culture," he said, adding that the worker who knocked down the power line "did not follow the proper safety protocols." Delmar said the company has decades of experience building equipment to store nuclear waste and employs veteran plant workers to dismantle reactor sites.

"While the decommissioning organization may seem new, the professionals staffing the company are experienced nuclear professionals with intimate knowledge of the plants they work at," Delmar said in an emailed statement.

Holtec is, however, pioneering an experimental new business model. During the lifetime of America's 133 nuclear reactors, ratepayers paid small fees on their monthly energy bills to fill decommissioning trust funds, intended to cover the eventual cost of deconstructing the plants. Trust funds for the country's 94 operating and 14 nonoperating nuclear reactors now total about $86 billion, according to Callan, a San Francisco based investment consulting firm.

After a reactor is dismantled and its site cleared, some of these trust funds must return any money left over to ratepayers. But others permit cleanup companies to keep any surplus as profit — creating incentives to cut costs at sites that house some of the most dangerous materials on the planet.

Even after reactors are shut down, long metal rods containing radioactive pellets — known as spent fuel — are stored steps away, in cooling pools and steel and concrete casks. Nuclear safety experts say that an industrial accident or a terrorist attack at any of these sites could result in a radiological release with severe impacts to workers and nearby residents, as well as to the environment.

The Nuclear Regulatory Commission, the independent federal agency tasked with overseeing safety at nuclear sites, conducts regular inspections during the decommissioning process. But state and local officials say the NRC has failed to safeguard the public from risks at shut down plants, deferring too readily to companies like Holtec.

“The NRC is not doing their job,” said Sen. Edward J. Markey (D-Mass.), who has pushed the agency to adopt stricter regulations around plant decommissioning. “We need a guaranteed system that prioritizes communities and safety, and we don’t have that right now.”

The NRC’s leadership is divided over the role regulators should play. The agency was created in 1974, as the first generation of commercial reactors was going online, and its rules were mainly designed to safeguard the operation of active plants and nuclear material sites. As reactors shut down, the NRC began reducing inspections and exempting plants from safety and security rules.

Last November, the NRC approved a new rule that would automatically qualify shut-down plants for looser safety and security restrictions. Christopher T. Hanson, a Democrat nominated by President Donald Trump and promoted to the role of chairman by President Biden, has said the changes would improve the “effectiveness and efficiency” of the decommissioning process.

Commissioner Jeff Baran, also a Democrat, voted against the proposed rule and called for the NRC and local governments to play a bigger role. “Radiological risks remain at shutdown nuclear plants that must be taken seriously,” he cautioned in public comments. Baran added that the agency already takes a “laissez-faire” approach to decommissioning and that the new rule “would make the situation even worse, further skewing the regulation towards the interests of industry.”

Dan Dorman, the NRC’s executive director for operations, said in an email that the agency lifts restrictions at plants only if it determines the plant will continue to be safe. In addition to citing Holtec for violations at Oyster Creek, the agency has required the company to take corrective measures, including external security assessments of all its nuclear sites.

“Our increased oversight and the recent enforcement actions demonstrate our concern about the situation at Oyster Creek,” Dorman said.

Holtec faces mounting criticism beyond Oyster Creek. Michigan officials have said they worry Holtec will leave residents on the hook for cleanup costs at the Palisades plant on the shores of Lake Michigan. Massachusetts officials have protested Holtec’s plan to take 1 million gallons of contaminated water from the defunct Pilgrim power plant and dump it into Cape Cod Bay.

While Holtec acknowledges a funding shortfall at Palisades, Delmar says the fund will appreciate in value to cover the cost of the cleanup. At Pilgrim, Holtec has said the potential radiation dose from the Cape Cod release would be far less than the average traveler receives on a typical cross country flight.

In the Southwest, Holtec has ignited a different controversy. As the company acquires old plants, it is proposing to ship the highly radioactive spent fuel to New Mexico, where it plans to build a storage facility. Gov. Michelle Lujan Grisham (D) has vowed to fight the plan, telling Trump in a 2020 letter that storing radioactive material in the oil-rich Permian Basin region would be "economic malpractice."

Holtec says it is working in partnership with a group of local officials who believe the benefits of the facility including new jobs and investment outweigh the risks. On its website, Holtec says the facility will provide "a safe, secure, temporary, retrievable, and centralized facility for storage of used nuclear fuel and high-level radioactive waste until such time that a permanent solution is available."

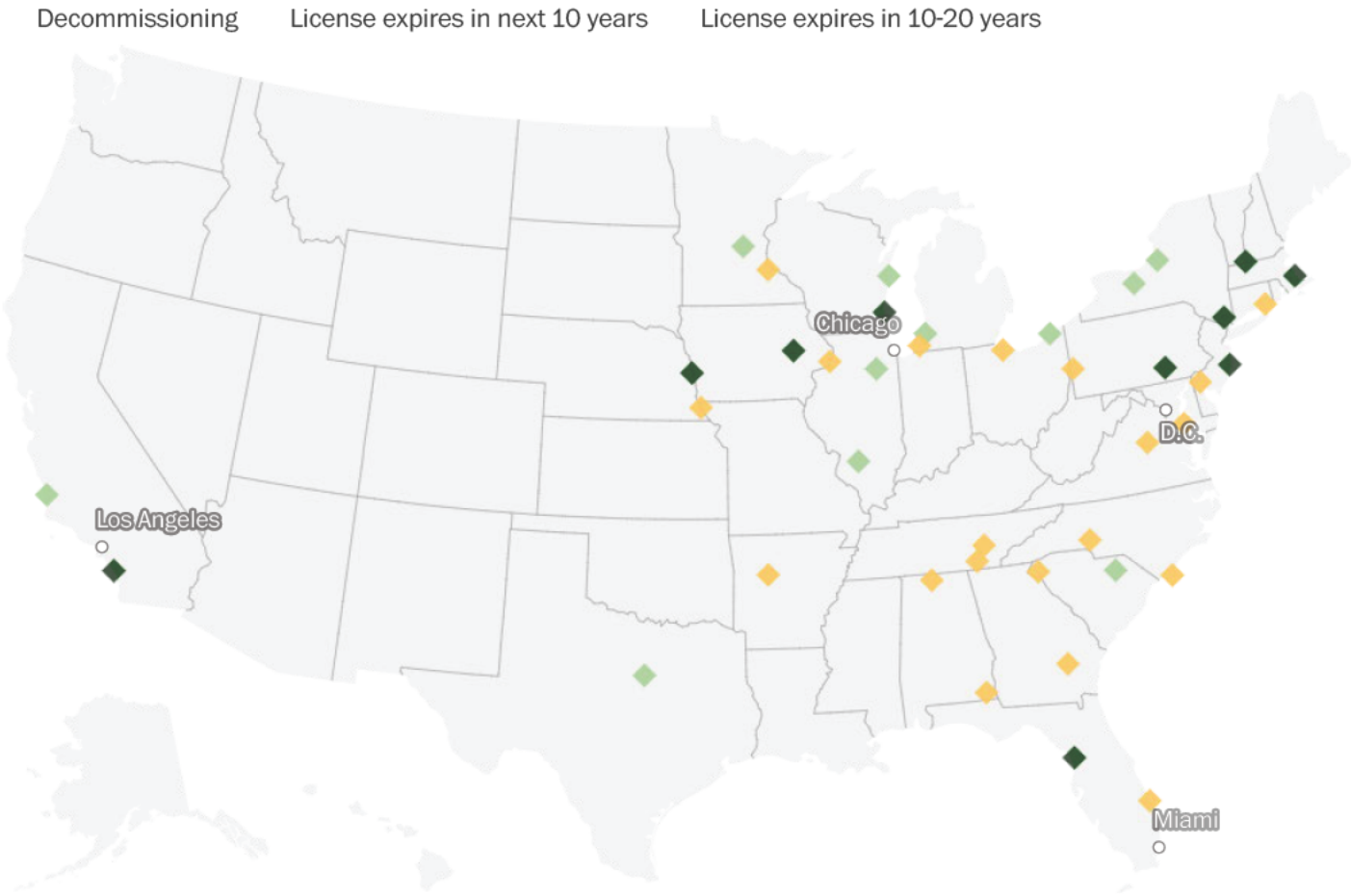
The growing debate marks the latest twist in the tortured saga of nuclear power, which once was hailed as a miracle technology capable of producing large quantities of clean, affordable energy. In the early 1970s, the federal Atomic Energy Commission estimated that about 1,000 reactors would be built in the United States, and that nuclear sources eventually would provide at least half of the world's power.

But those ambitions soon collided with fears about nuclear radiation, especially after disastrous meltdowns at Chernobyl in Ukraine and Fukushima in Japan. Nuclear energy peaked at around 18 percent of global electricity production in the 1990s and now comprises about 10 percent, according to the U.S. Energy Information Association.

Reactors in the United States initially were licensed for 40 years, and most were renewed for another 20 years. Of 94 reactors that are still active, licenses at over half are set to expire in the next two decades, according to Julia Moriarty, a senior vice president at Callan.

The coming wave of nuclear plant closures

Over half of the country's nuclear power reactors will see their licenses e pire in the ne t two decad
Some will seek license renewals, while others will undergo decommissioning.



Note ome plant have multiple reactor with different licen e expiration date

Source: Ca an Inst tute

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Recently, worries about climate change have led some governments to embrace nuclear as a low-carbon source of power. Biden has called nuclear essential to the nation's climate goals, and Washington last year set aside $6 billion for extending the licenses of some plants and $2.5 billion for developing new nuclear technologies.

But the nation continues to puzzle over the problem of nuclear waste. This material, which emanates invisible but harmful radiation for hundreds of years, is stored in protective containers on the grounds of nuclear plants, scattered in dozens of towns across the country. A plan to build a national waste repository in Nevada's Yucca Mountain stalled amid decades of political gridlock, leaving these towns saddled indefinitely with the threat of an accidental release or terrorist attack.

Holtec is approaching those communities with an offer to clean up the mess.

'Accelerated decommissioning'

Founded and wholly owned by Kris Singh, an inventor and entrepreneur, Holtec says it is pioneering a new model of "accelerated decommissioning." At the 24 U.S. reactors currently undergoing decommissioning, over half are expected to take two decades or more to complete the process, NRC data shows; Holtec pledges to return nuclear sites to safe, clean usable land in as few as eight years.

Singh did not respond to requests for comment, and Holtec did not make him available for an interview.

The company's work at Oyster Creek, its first plant, was meant to be a blueprint for the national expansion, Holtec executives said in interviews with The Post in early 2020. Instead, safety advocates argue, it has served as a warning. Cost-cutting has left employees feeling overworked and prone to mistakes, according to two former plant workers who were both laid off by Holtec. They spoke on the condition of anonymity to discuss their former employer.

The company has said in regulatory filings it plans to keep about $85 million in profit from Oyster Creek's $8 6 million trust fund. It has already spent about one quarter of the fund.

Shortly after Holtec took over, regulators found problems with the plant's weapons program. All nuclear plants must maintain weapons, such as guns and ammunition used by security personnel, and test them on a regular basis to secure the sites from attacks. According to an NRC investigation, a Holtec manager skipped the annual tests and falsified the weapons inspection reports to give the appearance the tests were conducted. The manager said in a letter to the NRC that he made mistakes on the company's inspections report because he had been "overwhelmed" following staff cuts, though he denied that anything was intentionally falsified.

"I went from a staff of six to a staff of two, all having extra responsibilities, doubling our workload and learning new criteria of the positions," the manager said in the letter, which was posted on the NRC's website.

In a settlement with the NRC announced this year, Holtec agreed to pay a $50,000 civil penalty, hire a new corporate security director and conduct external security assessments.

Delmar, the Holtec spokesman, said the “roots” of some safety incidents “go back to when the plant was operating and under previous ownership,” but declined to elaborate. The weapons manager, who was fired by Holtec last year, declined to comment.

Another incident took place in January 2020 on the reactor refueling floor a cavernous space high up inside the building that houses the reactor, along with the gargantuan steel-and-concrete structures that protect its core. To remove these structures from the site, workers must cut them into smaller pieces.

As they were slicing the 100-ton reactor dome, the structure unexpectedly swung and struck one employee, according to an internal incident report reviewed by The Post. This person was nearly knocked down a 10-story equipment hatch, according to the two former employees, who didn’t witness the incident but were briefed on it afterward.

The manager overseeing the work had been responsible for three different teams that day and his “mind may have been elsewhere,” according to the report, which blamed the accident on “complacency.” The report described the incident as a “near miss” but did not mention the equipment hatch or the possibility of a fall.

Delmar said the accident occurred at least 100 feet from the equipment hatch, which he said had a guardrail around it. “Incidents like this are not normal, and unsafe work practices are unacceptable for any Holtec employee or contractor at our facilities,” he said.

The NRC evaluated the incident, but because it did not find any violations of nuclear safety, referred the matter to the Occupational Safety and Health Administration, Dorman said. Holtec said the company has heard nothing from OSHA, and no record of the incident could be found on OSHA’s online database. OSHA declined to comment and a request by The Post for such records is pending.

In February 2021, a faulty valve for a nuclear waste container unexpectedly flew into the air, leaking contaminated water on one worker, who took an internal dose of radiation, according to a federal inspection report. This probably means the worker ingested radioactive water through the eyes, nose, mouth or skin, nuclear safety experts said. The worker did not require medical attention because the dose was below the limits for people who work with radiation, Holtec said.

The incident could have been avoided if managers had fixed a problem with the snap rings that held the valve in place, regulators said in the inspection report. Holtec had “replaced the snap rings on prior occasions due to evidence of bending of the ring” but never recorded the action in its system so it would be fixed permanently, the NRC said. The regulators called this a very low-severity violation, because it was not willful or repeated.

Holtec has since modified the valve design and conducted new training, Delmar said.

A ‘gamble’

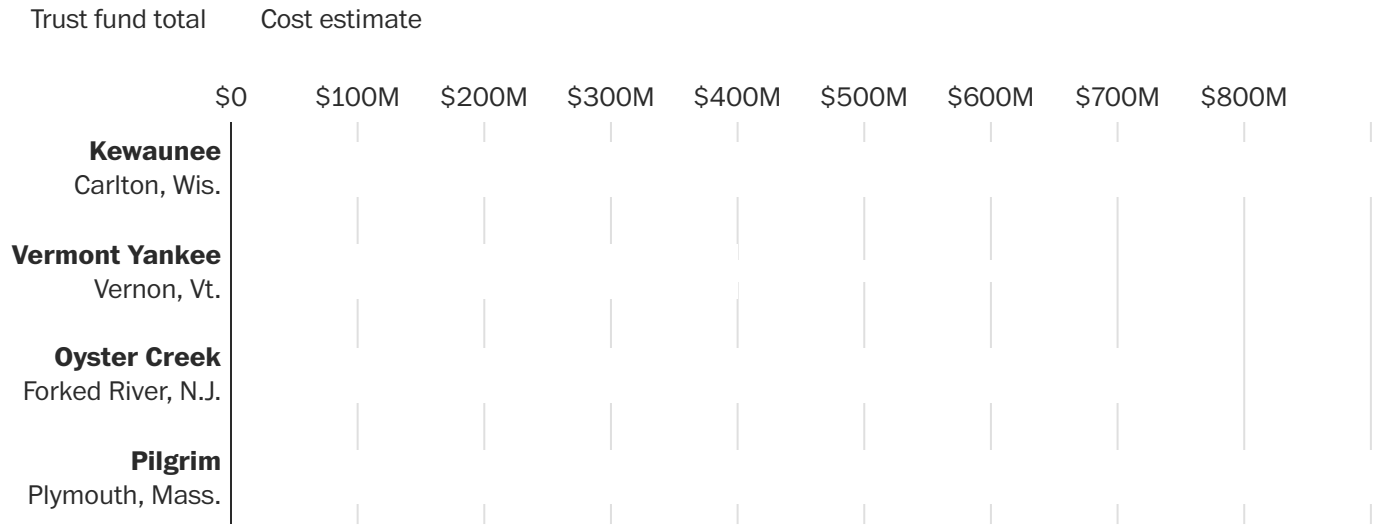
Decommissioning is an unproven business with uncertain profits. The total saved in the nation’s decommissioning trust funds is currently smaller than the estimated cost of shutting them all down, according to Callan’s Moriarty.

“The gamble under all of this is you can do the cleanup for less than the amount of money that’s in the fund. Nobody has proved that yet,” said Gregory Jaczko, an appointee of President Barack Obama who headed the NRC from 2009 to 2012.

Some of the firms buying defunct nuclear power plants in the United States are backed by private equity, an industry with expertise in purchasing unwanted assets and improving their value, often by reducing costs. TriArtisan Capital Advisors, the investment firm that partly owns P.F. Chang’s and TGI Fridays, now owns the company decommissioning Pennsylvania’s Three Mile Island, site of the biggest nuclear meltdown in U.S. history.

The cost of shutting down nuclear reactors

By paying mall fee on monthly energy bill , American have aved billion of dollar to decommission nuclear reactors. Some reactors still have less money in their trust funds than the projected shutdown costs.



Note: Trust fund balances and cost estimates as of December 2020. Cost projections are based on estimates publicly shared by plant owners. Kewaunee's costs exclude certain spent fuel expenses expected to be reimbursed by the Energy Department

Source: Ca an Inst tute

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Singh founded Holtec in the 1980s, when he saw that nuclear plants were running out of space to safely store radioactive fuel, according to Joy Russell, a senior vice president at Holtec and one of the company's longest tenured employees. A mechanical engineer who specialized in heat transfer, Singh became a pioneer of the nuclear industry by devising new systems for safely storing spent fuel rods, including metal racks that go inside cooling pools and steel-and-concrete cylinders that can store fuel for decades, Russell said in a 2020 interview.

In 2017, Holtec opened the doors of a stately new manufacturing center in Camden, N.J., that showcases Singh's accomplishments. Employees arriving at the main office building on the Krishna P. Singh Technology Campus walk by a parking space reserved for the CEO's chauffeured Rolls-Royce and into an atrium where more than 100 patents bearing Singh's name are on display.

But the Camden campus also brought controversy. After opening the facility, Singh complained to an area paper that Camden residents "don't show up to work" and "some of them get into drugs," angering community leaders in the mostly Black and Hispanic city. Singh later apologized and said his comments were taken out of context.

The NRC has given Holtec permission to pare back safety and security requirements at its plants, including security personnel, cybersecurity, emergency planning, terrorist attack drills and accident insurance, according to documents on the agency's website. In approving these requests, the NRC has accepted Holtec's rationale that such measures are less crucial for retired plants, which experts agree do not carry the same radiological risk.

Some nuclear safety advocates say the NRC is being too deferential to Holtec and other companies. Years of research by the NRC itself shows plants are still vulnerable to a disaster after they shut down. In staff reports, the NRC has said severe accidents can result from mishandling spent fuel rods and that sites storing nuclear waste remain vulnerable to sabotage.

A test case

When Holtec announced its deal to acquire Oyster Creek, some local residents were uneasy about the plant becoming a test case for Holtec's corporate expansion, said Janet Tauro, an environmental activist who lives 20 minutes north of the plant.

"When you are dealing with highly radioactive nuclear fuel and taking apart a nuclear power plant, you have to be infallible — there is no room for mistakes," said Tauro, the New Jersey board chair of the nonprofit group Clean Water Action.

For 50 years, the plant's towering gray chimney had been one of the area's most distinctive physical landmarks. Its single reactor generated enough electricity to power 600,000 homes — roughly two New Jersey counties.

With the NRC's blessing, Holtec shrank the plant's emergency response staff, documents show. The plant lowered its on-site insurance from $50 million to $10 million and stopped providing funds to the surrounding community for emergency equipment, staff and training, because, the company said, hazards at the site had been reduced.

While rare, major accidents have occurred at nuclear waste sites with no operational reactor. In 2014, an explosion inside New Mexico's underground repository for "low level" radioactive waste items, such as contaminated clothing and tools, led to 21 workers testing positive for internal contamination and some reporting respiratory problems, according to an investigation by the Energy Department. The entire site had to close for a three-year, $2 billion cleanup.

The NRC's Dorman said the agency still requires emergency planning measures on the premises of a shut-down nuclear plant, which he said provides ample resources to respond to accidents. However, the Federal Emergency Management Agency warned the NRC last year that having no dedicated personnel or equipment in neighboring communities "could have unfortunate consequences."

Holtec's Delmar said its exemptions at Oyster Creek "are consistent with other decommissioning sites" and "reflect the reduction in risk at each of the key points in the decommissioning process."

Last summer, Holtec finished moving all of Oyster Creek's spent fuel rods from cooling pools into dry storage containers in just 32 months — a "world record," the company said in a news release. The process normally takes five years or more, but Holtec sped it up by building a fuel canister the company says can accommodate nuclear waste at higher temperatures. After reviewing the company's calculations, the NRC concluded it was safe to reduce the mandatory minimum cooling time to one year, filings show.

The future of waste

In an empty cow pasture in the New Mexico desert, Holtec is attempting to write the next chapter of the American nuclear story. The company is in the final stages of getting NRC approval for an "interim" waste storage site designed to secure spent fuel from around the country in a shopping-mall-size bunker for up to 40 years.

In meetings with New Mexicans, Holtec representatives have said the facility would create jobs and fulfill an important national need. New Mexico Attorney General Hector Balderas (D) has sued the NRC, claiming the regulator "colluded with Holtec" by rubber stamping its plans and ignoring potential environmental harms.

The NRC's Dorman says the agency's review of the Holtec site has been rigorous. The agency recently approved a separate, privately owned storage facility in Texas, a project that now faces legal challenges by that state. Holtec declined to comment.

"The NRC has not figured out a permanent solution" to nuclear waste, Balderas said in an interview. "They are using Holtec as a Band-Aid."

Alice Crites contributed to this report.

CORRECTION

A previous version of this article incorrectly stated that a worker in one photo was welding a dry storage canister. In fact, the worker was using a tool called a grinder. The article has been corrected.