



# WHAT COULD GO WRONG?

**Holtec and Eddy Lea Energy Alliance (ELEA) want to bring HIGH-LEVEL RADIOACTIVE WASTE from nuclear reactors around the country to New Mexico; Waste Control Specialists seeks a site in Texas**



High-level radioactive waste is the most dangerous of all radioactive materials. Contamination resulting from the Fukushima meltdown disaster came from this same source - irradiated fuel from nuclear reactors.

High-level radioactive waste includes irradiated (used) fuel rods from nuclear reactors that contain uranium and plutonium. Radiation exposure can cause genetic damage, leading to birth defects, and cause many kinds of cancers, radiation sickness and even death. A person exposed to unshielded spent fuel rods would be immediately incapacitated and die.

New Mexico already has numerous nuclear facilities and we don't need any more. A single rail car of deadly high-level radioactive waste would carry as much plutonium as the bomb dropped on Nagasaki. WE DO NOT CONSENT!

## What Should Be Done With High-Level Radioactive Waste?

**Centralized (Consolidated) Storage is NOT needed.** The least risky option is to store fuel removed from nuclear reactor fuel pools in dry casks, securing the waste at the generation site or nearby. Most reactor sites are now licensed to store waste for 60 years past decommissioning, and these sites will remain guarded for decades. Moving the waste would create unnecessary risks.

Shipping radioactive waste by rail or trucks increases risks of terrorism and accidents, and the process would continue for over 20 years. Yucca Mountain efforts have failed and no permanent repository is available yet, so why ship this dangerous waste just to store it in a different location? The NRC should prevent terrorism and accident risks by halting consideration of consolidated radioactive waste storage.

For more information visit [www.NoNuclearWasteAqui.org](http://www.NoNuclearWasteAqui.org)  
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## KEY FACTS

- Holtec and Eddy Lea Energy Alliance (ELEA) seek to build a high-level radioactive waste storage facility just between Hobbs and Carlsbad, NM, where they want to store 100,000 metric tons of this dangerous waste for up to 120 years - 40 years through initial licensing and 80 years for license extensions. Holtec hopes to begin construction in 2020 and complete Phase 1 in 1.5 years, with operation beginning in 2022.
- Holtec plans for a nationwide dump. 78,000 metric tons irradiated fuel have already been produced by U.S. nuclear reactors, so Holtec's application would cover every bit of what has already been produced, plus all that is likely to be generated by today's reactors by the time they close.
- Waste Control Specialists (WCS) has applied to store 40,000 tons of cancer-causing high-level radioactive waste on the Texas/ New Mexico border, near Eunice, NM.
- If the NRC approves these licenses thousands of shipments of deadly radioactive waste would move across the nation for over 20 years, posing risks from accidents, leaks and terrorist actions.
- Some radiation would leak from transport containers. The NRC says that this the amount is minimal, but there could be impacts for those along transport routes or stuck next to a train.
- If New Mexico or Texas accepts deadly high-level radioactive waste for storage, the sites would likely become de facto permanent disposal sites for the whole country. Utilities would no longer be lobbying for a final repository and thus Congress wouldn't fund one. The Texas Commission on Environmental Quality (TCEQ) raised this issue in their 2014 report on high-level radioactive waste.
- Transporting high-level radioactive waste increases terrorism risks, according to TCEQ. Cities like Santa Fe, Albuquerque, Dallas, Houston, San Antonio and El Paso could become targets for terrorists holding a trainload of waste hostage.
- We can predict transportation routes, but they wouldn't be approved by USDOT and NRC until 2022, when licensing could be complete. Citizens and policymakers need to know the routes before any decision on whether to give or deny consent to radioactive waste storage is made.
- Licensing the site is premature and illegal. Under the federal Nuclear Waste Policy Act a permanent repository must be approved before any consolidated storage site can be licensed.
- The Shimkus bill, HR 3053, the Nuclear Waste Policy Act Amendments of 2017, would move consolidated storage plans forward. Rep. Ray Lujan deserves thanks for wisely opposing the bill, which was approved by the House Energy & Commerce Committee in June, 2017. There is still time to block this bill. It still has to go to the Natural Resources and Armed Services Committees.

## High-Level Radioactive Waste Data

- High-level radioactive waste is so dangerous that it must remain isolated from living things for thousands of years. It is mainly irradiated (spent) fuel rods from nuclear reactors, which still contain most of their original uranium, as well as with radioactive strontium, cesium and plutonium, which are created during the reactor fission process. Some of these materials have long half-lives, and remain dangerous far into the future. For example, plutonium remains dangerous for over a quarter of a million years. Inhaling it will cause cancer.
- About 100,000 metric tons of irradiated fuel will have been generated by existing U.S. reactors by the time they cease operating, with roughly 1000 metric tons of plutonium. If separated, that's enough plutonium for 120,000 nuclear bombs.
- If diluted uniformly, the strontium-90 in the U.S. waste would be enough to contaminate the entire fresh water supply of the world to about 60 times the U.S. drinking water standard.
- A report by the Texas Commission on Environmental Quality (TCEQ), acknowledges the vulnerability of radioactive waste to sabotage during transport, and that "consequences due to sabotage or accidents are also higher during transport since the waste may be near population centers." Centralized (consolidated) Interim Storage of the nation's high-level waste at a single location would increase risks by creating an additional site that must be secured.
- DOE calculated that the 53,000 truck shipments originally anticipated to go to Yucca Mountain if transport was mainly by truck would likely have resulted in 53 accidents. Train accidents were anticipated at a rate of 1 in 10,000 shipments. At least one train accident was expected to occur if transport was mainly by train.
- A DOE report found that a severe accident involving one radioactive waste cask that released only a small amount of waste would contaminate a 42-square mile area, with cleanup costs exceeding \$620 million in a rural area. Clean up in an urban area would be time consuming. It could cost up to \$9.5 billion to raze and rebuild the most heavily contaminated square mile.
- Importing high-level radioactive waste might benefit a few counties or corporations, but millions of people along transport routes throughout the country would bear the financial and health risks of accidents or sabotage.

# The following information about Holtec Storage Systems comes from SanOnofreSafety.org:

## Holtec Storage System Designed to Leak

The Holtec HI-STORM CIS (Consolidated Interim Storage) System has major design flaws.

Holtec proposes transporting aging thin-wall stainless steel canisters across the country and double stacking them in concrete steel lined holes. This is an experimental unproven below ground system that has not been approved by the Nuclear Regulatory Commission (NRC).

Each thin-wall canister contains about as much highly radioactive Cesium-137 as was released from the Chernobyl nuclear disaster. There is no adequate plan to safely transport or store these "Chernobyl" cans.

Holtec President Dr. Kris Singh admits canisters cannot be inspected or repaired and states even a microscopic through-wall crack will release millions of curies of radionuclides into the environment.

The NRC has unsubstantiated hope the nuclear industry can solve these problems. However, no one has provided evidence they can solve these problems and there is evidence to the contrary.

The solution is to use transportable storage casks that do not have these problems, such as the thick-walled metal casks (10" to 19 ¾" thick) used in most of the rest of the world. U.S. utilities migrated to thin-wall canisters for short-term cost savings. However, due to the problems with these canisters, they may likely need replacement in the short-term. No funds are allocated for replacing these canisters. Current utility and CIS dry storage plans assume nothing will go wrong with the canisters.

### Canisters cannot be inspected, maintained or monitored to prevent leaks.

- Cannot be inspected or repaired (inside or out).
- Cannot be maintained or monitored to **prevent** radioactive leaks.
- Canister walls are only 1/2" to 5/8" thick.
- No plan to deal with leaking canisters.
- No plan to replace canisters.
- Subject to short-term cracking from numerous environmental causes.
- May already have started to crack.
- Cracks can grow through wall of canister in 16 years after a crack starts.
- The Koeberg nuclear plant had a tank the NRC considers comparable to the thin-wall canisters. The tank leaked in 17 years with cracks deeper than most thin-wall canisters (0.61" vs 0.50").
- The above canister flaws apply to all thin-wall stainless steel canister systems.

