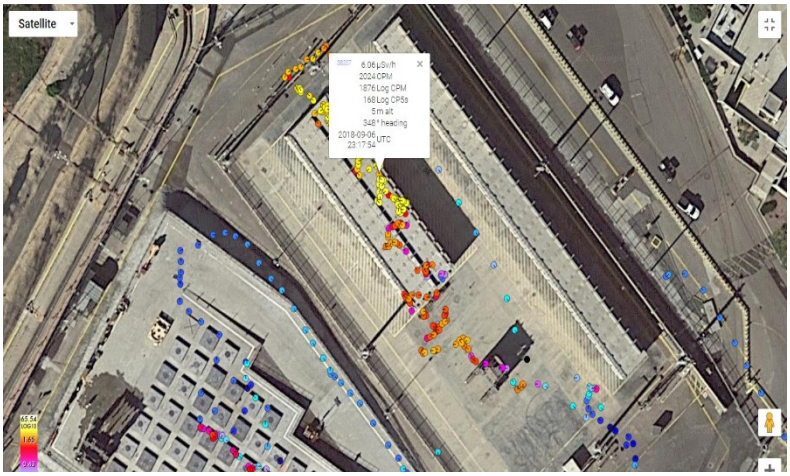
Urgent Nuclear Waste Storage Problems and Solutions

Demand thick-wall transportable storage casks that don't crack.
Demand public access to real-time radiation monitoring.

San Onofre thin-wall (5/8" thick) steel nuclear waste storage canisters are vulnerable to cracks and radioactive leaks. The Nuclear Regulatory Commission (NRC) says once a crack starts, it can grow through the wall in 16 years. Cracks can grow faster in hotter canisters.

Some of the 51 aging Areva thin-wall canisters are already 15 years old and have high radiation readings at inlet air vents of canister concrete overpacks. The public does not know whether these canisters are leaking. Each canister holds roughly a Chernobyl nuclear disaster.



15-year-old canisters measure over 2000 counts per minute (6 microsieverts per hour). The NRC refuses to tell us why. https://api.safecast.org/en-US/bgeigie_imports/38207

The NRC and Southern California Edison are not protecting our safety. They:

- Refuse to tell us why radiation levels are high at the oldest Areva canisters.
- Refuse to tell us the radiation levels at the **outlet** air vents of the canister overpacks – where radiation levels will be highest from cracking, leaking canisters.
- Refuse to keep the spent fuel pools – the only current option available to replace cracking canisters.
- Refuse to require thick-wall casks (10" to 19.75" thick) that don't crack, that can be inspected, maintained and monitored to prevent leaks and explosions.

Instead, the NRC allowed Southern California Edison to load 73 new Holtec thin-wall canisters and 12 new Areva thin-wall canisters. After loading 29 of these Holtec canisters, Edison temporarily stopped loading after a canister almost dropped 18 feet due to mismanagement and a flawed engineering design. A drop over 11 inches requires a canister be opened to inspect for fuel damage. Edison has no way to do this. Canisters are now being loaded too hot to unload fuel back into the pool. The only other option for unloading canisters is a large hot cell – a dry fuel handling facility. Edison refuses to build one and the NRC refuses to require one, erroneously claiming nothing can go wrong.

Demand elected officials force the NRC to:

- Require thick-wall nuclear waste casks that don't crack and that can be inspected, maintained and monitored to prevent radioactive leaks and explosions.
- Require public access to real-time radiation monitoring.
- Require no more loading of thin-wall canisters.
- Require replacement of existing thin-wall canisters **before** they leak.
- Require storage of casks away from flooding and coastal risks, and in reinforced buildings for additional environmental and security protection.
- Require an on-site system to prevent and stop radioactive leaks.

The NRC is currently doing none of these things. Instead, they are misleading both the public and elected officials regarding the safety and vulnerability of these thin-wall canister systems.

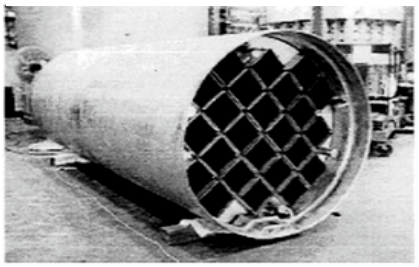
Our elected officials need to hear from you.

Reasons to require THICK casks

Safety Features	Thin canisters	Thick casks
1. Thick walls	1/2" - 5/8"	10" - 19.75"
2. Won't crack		√
3. Ability to inspect, repair, maintain (inside & out)		√
4. Pressure monitoring, pressure relief valve		√
5. Monitor system prevents leaks		√
6. ASME container certification (N3 stamp)		√
7. Defense in depth (redundancy)		√
8. Stored in concrete building		√
9. Gamma & neutron protection	Need overpack	√
10. Transportable w/o add'l cask & inspectable		√
Market leader	U.S.	World

NRC licenses thin & thick-wall containers. Process requires 18 to 30 months and costs millions of dollars. Vendors will only apply for a license if they have a customer. Most U.S. customers choose thin-wall canisters for short-term cost savings. Unlike other countries, NRC refuses to enforce safety regulations & allows exemptions to ASME pressure vessel manufacturing standards. This is a partial list of safety features. NRC only requires quarterly monitoring of radiation levels. Instead of requiring continuous monitoring, NRC allows elimination of reporting overpack outlet air vent radiation levels – where levels will be highest from through-wall cracks in canisters. SanOnofreSafety.org

Thin Canister



Thick Cask

Germany

Thick-wall casks stored in buildings for additional environmental and security protection.

Continuous remote radiation monitoring and pressure monitoring.

Japan

Thick-wall casks stored in buildings survived 2011 Fukushima tsunami and 9.0 earthquake.