

Fact Sheet

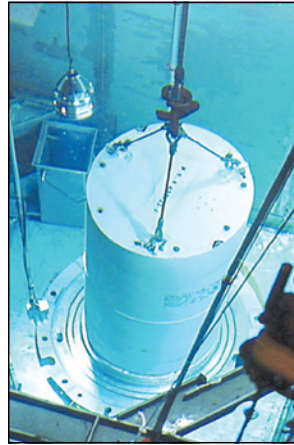
Zion Station Decommissioning and Site Restoration



Dry Cask Storage of Spent Nuclear Fuel



Independent Spent Fuel Storage Installation (ISFSI)
Zion Station's ISFSI will be similar to the one pictured here in Connecticut.



Spent Fuel Removal from Fuel Pool
(L) Removal from fuel pool; (R) Inserting canister into concrete cask

Until the U.S. Department of Energy's (DOE) final disposition plan for spent nuclear fuel is determined, the fuel from the Zion Station must continue to be stored on site. Currently, the fuel is stored in the spent fuel pool adjacent to the reactor buildings. Removing the fuel to dry storage allows decommissioning and site restoration to be completed sooner because the spent fuel pool building can be dismantled along with the other site structures.

Fuel will be stored in concrete casks on an engineered concrete pad. ZionSolutions will perform geotechnical investigations to ensure the suitability and stability of the land prior to facility construction. ZionSolutions will load the fuel underwater into steel storage canisters, which will then be dewatered and sealed. These canisters will be inserted into the concrete casks. Berms, walls, or plantings will obscure views of the storage casks from the lake and surrounding areas. Dry fuel storage is a passive system with no moving parts. The fuel is kept cool by air entering vents on the side of the casks and circulating around the outside of the steel canister.

Quick Facts

- The site licensee is required by the NRC to safely store spent nuclear fuel until the federal government meets its legal obligation to remove it.
- Dry storage has been safely used for more than 20 years. It is highly secure, less costly to maintain, and renders the fuel ready to transport for off-site disposal, storage, or recycling.
- Spent nuclear fuel is stored in dry casks at more than 60 domestic commercial nuclear power plants and decommissioned plant sites.
- The NRC tests, analyzes, and licenses cask designs to ensure they are safe and secure.
- Spent nuclear fuel storage casks are designed to withstand extreme conditions, such as earthquakes, floods, tornadoes, projectiles, and severe temperatures.
- Each loaded concrete cask weighs in excess of 100 tons.
- At the site boundary, radiation emitted is the same as background measurements.

Physical barriers and state-of-the-art electronic security and surveillance technology will be employed to fully comply with Nuclear Regulatory Commission (NRC) criteria. Security officers will be stationed at the installation 24 hours per day, 7 days a week, consistent with nuclear security practices.

For more information:

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