



Fact Sheet

Used Fuel Dry Cask Storage

The Tennessee Valley Authority uses dry cask storage to ensure the safety and security of its used nuclear fuel.

Background

Used nuclear fuel can be moved from water-filled storage pools to dry cask storage after an initial cooling period of about five years. Dry casks have an inner, sealed steel cyclinder that holds the used fuel and an outer, steel-reinforced concrete overpack canister. Though considered a temporary solution until a permanent used fuel repository or reprocessing solution is found, dry casks can securely store used nuclear fuel for many decades. The first dry cask storage installation was approved by the Nuclear Regulatory Commission in 1986 at the Surry Plant in Virginia and the casks are today used at dozens of nuclear sites nationwide.

Key points

- TVA is committed to safety in every aspect of its nuclear program, including the safe storage of used nuclear fuel. □
- The long-term approach for managing used fuel – including permanent storage and the possibility of reusing the fuel – is a national issue awaiting final resolution.
- TVA can safely contain its used fuel in underwater storage pools and dry cask containers until a long-term national policy is set.
- Dry cask storage is an industry- and regulatory-approved method of safely containing used nuclear fuel, if needed, for 100 years or longer.

Other information

- The U.S. Department of Energy, Congress and other policymakers are considering a long-term management policy for used nuclear fuel storage, but no long-term storage facility exists today. The Energy Department canceled an underground storage facility in Nevada's Yucca Mountain.
- TVA used nuclear fuel is currently stored in two ways (wet and dry) this ensures the safe management of the material.
- After used fuel assemblies are unloaded from a reactor, they are cooled in secured, water-filled pools inside the plant for at least five years. After that period, those assemblies can safely be moved to dry cask storage.
- Dry cask storage includes two separate cylindrical containers. Fuel is first loaded into a stainless inner container on which the lid is welded shut. This container is then placed into a second, outer steel and concrete cannister.
- The dry cask containers are designed to handle extreme weather conditions and are secured on concrete pads specially designed to withstand the force of an earthquake.



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- TVA currently has dry cask storage at the Sequoyah Nuclear Plant in Soddy Daisy, Tenn., and at the Browns Ferry Nuclear Plant in Athens, Ala. TVA expects to need dry cask storage at Watts Bar Nuclear Plant, in Spring City, Tenn., by 2015.