Analyses of Potential Terrorist Acts On DCS

The Sept. 11 terrorist attacks on the United States have drawn public attention to the potential for an anti-tank missile assault or a crash of a large aircraft into structures that are part of our nations's critical infrastructure, including power plants and their Dry Cask Storage facilities.

Numerous analyses have been conducted by government, academic and private entities to evaluate the threat. The Electric Power Research Institute, evaluated the effects of a large aircraft traveling low to the ground at 350 mph, precisely hitting nuclear plant containment structures, used fuel storage pools and dry cask storage containers of the type chosen for IPEC. Similar analyses conducted by Sandia National Laboratory subjected a cask to a device 30 times more powerful than a typical anti-tank weapon. And the NRC has evaluated the effects of a postulated F-16 strike. ***None of these scenarios presented a credible hazard to public health and safety.***

Studies show that a Boeing 767-400 crashing into one or several of the dry storage casks at IPEC, would not release any radioactivity to the environment. Similar results were found for an F-16 strike.

Questions

What are the environmental impacts resulting from dry cask storage at IPEC?

Environmental impacts are minimal, both for construction and use of the facility. It is important to note that there is no radiologically contaminated storm water runoff, since the canisters holding the fuel are seal-welded shut.

Has an environmental impact assessment been done for dry cask storage at IPEC?

A generic Environmental Impact Statement was performed for ISFSIs by the NRC, stating that spent fuel can be stored safely and without significant environmental impacts for at least 30 years beyond the licensed reactor life.

How long will dry cask storage be used at IPEC?

The U.S. Department of Energy is expected to begin storing spent fuel from civilian reactors by 2019. IPEC will begin shipping to the repository as soon as DOE begins the process.

What kind of monitoring will be required for the ISFSI?

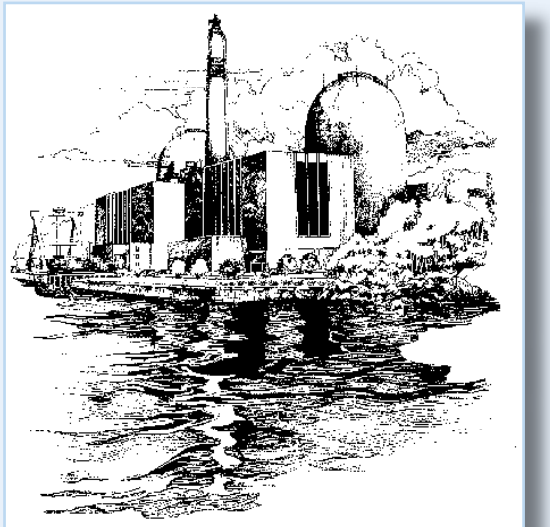
Continuous temperature and radiation monitoring will be installed, along with closed circuit TV and microwave intrusion detection systems. Daily inspections will be made.

Why would Entergy not bury these casks or put them in silos, as opposed to leaving them above ground?

Silos and bunkers are not necessary for the Hi Storm casks. The casks need to be free to radiate heat and have the advantage of a passive cooling system that does not need to rely on power sources, as an active cooling system would. Another advantage of the Hi Storm design is that the casks remain in full view at all times.

Indian Point Energy Center

Dry Cask Storage Update



Entergy

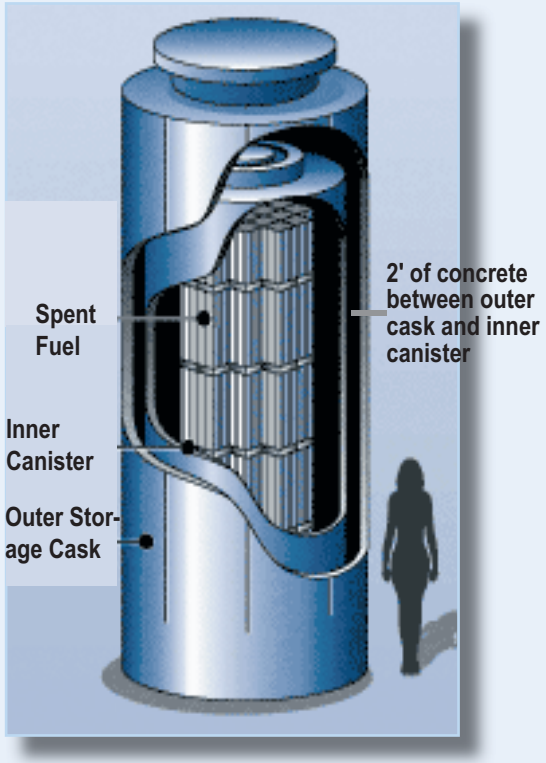
Indian Point Energy Center

Dry Cask Storage

In late 2007, IPEC will begin moving used-fuel assemblies from the Unit 2 spent fuel building into dry storage casks. A new Independent Spent Fuel Storage Installation (ISFSI) has been constructed onsite to house these casks until the federal government begins accepting the fuel at Yucca Mountain, the designated national spent fuel repository.

The Holtec Hi-Storm casks selected for IPEC provide a high degree of shielding and protection for the fuel. They will be placed outdoors on a two and a half foot thick concrete ISFSI pad. With this design, the casks are cooled by natural circulation of outside air. No electrical or mechanical support systems are needed, thus providing an additional margin of safety. The casks continue to be cooled even during a power outage.

Cask Structure



The diagram above illustrates a dry cask storage system of concentric, cylindrical containers made of steel and concrete. Spent fuel is placed in the center, as shown. The outer storage cask is approximately 20' tall and 11' in diameter, with over two feet of concrete sandwiched between inner and outer steel shells. The inner canister is constructed of all stainless steel with honeycomb geometry designed to maximize strength. Loaded with spent fuel, each cask weighs over 360,000 pounds or about the weight of 72 typical sport utility vehicles.

x 72 = Weight of 1 Cask

The ISFSI Pad

The concrete ISFSI pad is approximately 100' wide x 200' long, with a crushed rock apron. It is located north of Unit 2 and within the site's security fence.

√ Approximately 480 truckloads of concrete and some 21 miles worth of rebar were used to form the 2 ½ foot thick pad.

√ A six foot thick bed of compressed engineered fill (about 11,000 tons), provides a foundation for the pad, and acts as a shock absorber in the event of seismic activity.

√ The concrete was mixed on site to minimize truck traffic through the community

ISFSI Pad with new casks at IPEC. The smaller casks will be used for spent fuel from Unit 1 and the larger casks will hold fuel from Units 2 and 3.