Holtec’s HI-STORM FW Dry Cask Storage System Exceeds Expectations at TVA’s Sequoyah

This issue is adapted from a TVA news bulletin and a subsequent piece published by Nuclear News, on April 21, 2016.

Holtec and Sequoyah’s dry cask team safely and successfully loaded five HI-STORM FW dry cask storage systems on schedule, while remaining below dose goals, with no human performance events, no injuries, and no personnel contaminations. This is the first time that Sequoyah has used Holtec’s HI-STORM FW dry-storage cask system. The dry cask team prepared for several weeks leading up to the fuel loading campaign by performing dry rehearsals, to ensure the equipment worked properly and the procedures were correct.

The previous cask system that Sequoyah used was Holtec’s HI-STORM 100 system. The equipment and processes were very similar. The primary advantages of the FW system are higher capacity (37 spent fuel assemblies versus 32 for the 100 system) and higher decay heat handling capability (up to 46 kW versus 37 kW for the 100 system).

The Holtec and Sequoyah teams were able to keep dose low by strategic placement of fuel assemblies in the casks, improved HI-TRAC processing, cask shielding, and, most importantly, engaged safety-conscious workers. This brings the total number of dry storage casks on the independent spent fuel storage installation (ISFSI) to 49. The ISFSI has the capacity to store 90 containers.

Senior Manager of Radiation Protection, Mike Halter said, “We saw continuous improvement in both schedule and dose performance, thanks to the focus of the team.”

The cask dose performance including the original and revised estimates is shown in the table below.

<table>
<thead>
<tr>
<th>Cask Dose Performance</th>
<th>Estimate R0</th>
<th>Estimate R1</th>
<th>Actual</th>
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</table>

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Holtec’s HI-TRAC VW Transfer Cask and Luke Shipley, Radiation Protection Technician for TVA

Photo Left: Boilermakers, Casey Pope and Anthony Lambert of TVA, Removing Lifting Cleats from the Loaded HI-STORM FW Dry Storage Cask

Photo Right: Installation of threaded plugs into Bolt Holes
Photo Left: Loaded HI-STORM FW Dry Storage Cask, Containing 37 Spent Fuel Assemblies Staged for Transport to the ISFSI

Photo Right: Vertical Cask Transport (VCT) used to Transport the Cask

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