Yankee Rowe



The Yankee Rowe Independent Spent Fuel Storage Installation (ISFSI).

Yankee Rowe (YR) operated a 185 megawatt nuclear power plant located in Rowe, MA that produced 44 billion kilowatt-hours of electricity from 1961-1992 when it was permanently shut-down for economic reasons. The plant was successfully decommissioned between 1992-2007 with structures removed and the site restored to stringent federal and state remediation standards.



Yankee Rowe during operation.



In August 2007 the U.S. Nuclear Regulatory Commission (NRC) provided notification that the former plant site had been fully decommissioned in accordance with NRC procedures and regulations.

> Above, left: reactor pressure vessel and large component shipments ready for burial in Barnwell, SC. Left: reactor pressure vessel removal by rail.

Remaining at the YR site is the Independent Spent Fuel Storage Installation (ISFSI) consisting of 15 dry storage casks containing 533 spent nuclear fuel (SNF) assemblies used during the years of plant operation and 1 cask con-



Yankee Rowe

The transfer of the SNF assemblies and GTCC waste from the plant's spent fuel pool to the stainless steel canisters and then placement of the canisters into the concrete and steel casks began in June 2002 and was completed in June 2003.

The 16 dry storage casks stand on a three-foot-thick concrete pad approximately the size of a hockey rink. Each concrete cask is comprised of a three and a half-

inch steel liner surrounded by 21 inches of reinforced concrete. Each cask weighs about 126 tons and contains a sealed stainless steel canister. The cask/canister system is completely passive with vents at the base and top of each cask circulating the air that removes heat from the canisters.



Stainless steel transport cask body Stainless steel/lead/stainless steel cask interior body High-efficiency neutron Shielding Canister lids Cask lid Canister lids Cask lid Cask cask ide Cask ide Canister lids Cask ide Casser Cask ide Casser Cask ide Casser Cask ide Casser Casser Cask ide Casser C

Above: diagram of vertical concrete storage cask with canister.

Left: diagram of transport cask with canister.

As currently planned, when the time comes to remove the SNF and GTCC waste, the dual-purpose canister will be removed from each cask, placed in an NRC licensed shipping cask, and likely transported from the site by heavy haul truck. A

heavy haul truck was used during decommissioning for the transport of large components from the site.

The annual cost to operate the Yankee Rowe ISFSI is on the order of \$10 million per year. For more information about the storage of spent nuclear fuel and decommissioning at Yankee Rowe, as well as litigation with the DOE seeking to recover the cost of storing this material resulting from the Federal Government's failure to fulfill its obligations to remove it, go to 3yankees.com.





Under the Nuclear Waste Policy Act and contracts with the U.S. Department of Energy (DOE), the Federal Government was required to have begun removing the SNF and GTCC waste from YR by January 1998. The DOE has yet to meet this obligation and it is uncertain when it will. In the meantime, it is YR's responsibility as

> an NRC licensee to safely store the SNF and GTCC waste in accordance with all applicable federal regulations including programs for security, emergency planning, and cask monitoring. Once the Federal Government fulfills its commitment to remove the SNF and GTCC waste from the site, the ISFSI site will be decommissioned and YR will go out of business.

