



Waste Management

THE SAFLIFT™ CANISTER/CASK handling system at Unit 2 of the Palo Verde nuclear power station, in Wintersburg, Ariz., moved its first fully loaded cask of spent nuclear fuel on March 14, 2003, following extensive testing at the site (the photo above was taken during final testing). American Crane & Equipment Corporation, a manufacturer of custom overhead cranes and specialty equipment located in Douglassville, Pa., delivered the SafLift system to Palo Verde in October 2002, and installation was completed in mid-November. "Unlike previously used methods of handling casks that require operational personnel to manually attach slings prior to lifting a cask," said David Schaefer, vice president of American Crane, "our lifting system is designed to operate remotely, thereby virtually eliminating radiation exposure."

American Crane received the contract to supply three 150-ton single failure-proof cranes for spent fuel handling, one for each of Palo Verde's three operating units. All three of the cranes use the ULTRASAF™ (Ultimate Lifting To Resolve Accidental drop) single failure-proof hoist design. Installation of the cranes in Units 1 and 3 at the site should be completed later this year.

SafLift is the dedicated lifting attachment designed by American Crane, which, according to the manufacturer, provides a safer and more efficient method for cask handling. The main frame of the SafLift includes a 125-ton strongback—designed in compliance with NUREG 0554—that includes two specially designed C hooks (one of which is shown in the photo at right) used to pick up and transport a canister transfer cask (the white cask in photo). The hooks provide seismic stability to the transfer cask during the cask transfer process when a transfer cask is positioned on top of a concrete storage cask (the gray cylinder at the bottom center of the photo). The system also includes a 50-ton canister hoist, with a 50-ton remotely operated canister grab attached to it.

Operation of the SafLift is from a remote radio control system, which allows the operator to maintain a safe working distance. The system is also adaptable to most existing crane systems, and can lift most existing nuclear casks and canisters, according to American Crane.

