

Preparing sludge collection system

The Floor and Pit Sludge Retrieval System that will collect sludge from the K West Basin is being tested. The system will begin gathering the estimated five cubic meters (6.5 cubic yards) of sludge in the KW Basin in October, after testing, approvals and operator training have finished.

Before collecting sludge, K West Basin personnel had removed over 14,000 cubic meters of highly radioactive debris from that basin. They've extracted 125 large fuel racks previously stored underwater, along with fuel canisters, lids, old pumps, tools, hoses and miscellaneous items.

"We've learned a lot of lessons from the sludge- and debris-removal work that's been done in the K East Basin," says Jim Mathews, Fluor Hanford's KW Basin closure director. "First, we observed K East's sensible decision to remove enough debris so that sludge

pumping wasn't encumbered. More technically, we've learned from K East's experience with sludge pumping velocities, flocculent-injection techniques and locations, among other things." Flocculent is added to the basin water as the sludge is pumped, to settle the flighty sludge and keep the water clear.

KW personnel have been examining tools that will prove important to their work: the many "end effectors" used in the K East Basin. End-effectors are suction heads on the ends of long poles or wands used to vacuum the sludge. "The KE operators invented an amazing variety of very effective end-effectors as they went through their work," says Rhonda Nissen, K West Basin sludge-retrieval project manager. "They devised different heads for corners, flat surfaces, thick sludge, flighty sludge, and many different conditions. We intend to learn and benefit from

their experience. The job they're doing at K East really makes them the sludge-retrieval experts of the world."

Six sludge tanks now sit in the K West Basin, with one designated to hold K West sludge. The other five tanks will receive the much greater volumes of sludge collected in the K East Basin. Fluor Hanford will pump the KE Basin sludge to tanks in the KW Basin later this year.

Fluor personnel have collected about 95 percent of the 42.6 cubic meters (55.7 cubic yards) of "bulk" sludge in the K East Basin. They expect to finish removing the sludge in KE this summer. In K West Basin, the much smaller volume of sludge will be collected by next spring. Then, Fluor will conduct a "final pass" to collect residual sludge. ■

Michele Gerber, Communications