

DOE WILL NOT FLUSH H-CANYON IN LIGHT OF POTENTIAL NEW MISSIONS

As the Department of Energy looks at processing spent nuclear fuel at the Savannah River Site's H-Canyon later this year, the Department has abandoned previous plans to flush the facility intended as part of an effort to place it in a minimum-inventory condition. DOE had originally expected to flush the facility of bulk fissile materials by March in an effort to suspend plans for processing spent fuel (*WC Monitor* Vol. 22 No. 45). However, DOE said this week it had changed those plans in light of plans to potentially process sodium reactor fuels and other materials at the facility this year. "We are not going to flush the canyon, based on the potential missions we have to operate the canyon using those systems, so there was no need to flush it," Jim Giusti, spokesman for DOE's Savannah River Operations Office, said this week.

In early 2011, DOE announced that it expected to largely reduce operations at H-Canyon last year. Consequently, in June the Department asked contractor Savannah River Nuclear Solutions to prepare an H-Canyon resumption plan by the end of 2011 so that processing could eventually be restarted. Since the plan largely curtail operation of H-Canyon was first announced, though, DOE has announced several planned or potential new missions for the facility. In November, DOE directed contractor Savannah River Nuclear Solutions to begin preparations to start processing sodium reactor experimental fuel by the end of

May (*WC Monitor* Vol. 22 No. 57). As a result, the resumption will not be necessary, and a new plan is now due in March. "Based on the new missions we have for H-Canyon, we don't need the resumption plan we originally asked for. We've told them to come up with a tailored approach resumption plan and we've given them until March to do," Guisti said.

He added, "The decision will be what new projects or what new missions are we going to incorporate in the canyon in FY12 and FY13 time frames and those are under review now." He said that DOE planned to make a decision on H-Canyon "as quickly as we can," adding that "there are a lot of things that are in the air right now we are trying to figure out. As soon as we know what those decisions are ... and we've made them, we'll know what we need to do better."

Plan to Focus on Spent Fuel, Plutonium Processing

The focus of SRNS' original resumption plan was outlined in a Dec. 2 site report by the Defense Nuclear Facilities Safety Board, which noted that DOE directed SRNS to look at "unit operations like first cycle, second uranium, and second plutonium solvent extraction which are not needed to support the SRE and plutonium processing missions," processes that recover plutonium and uranium from dissolved material. That will still be the focus of the expected resumption plan, Giusti said, as they comprise the main method for running fuel through the facility. "These are all part of the process for recovering either plutonium or HEU as you run it through the Canyon," he said.

DOE has not yet made a decision on whether to process the sodium reactor fuel being stored at the site's L Basin. However, it has requested a plan from SRNS and expects a response with a cost estimate by the middle of this month, and operations could begin by the end of May. Because the thicker thorium-based fuel would plug the system's pipes if processed alone, DOE expects that it would be diluted with a certain amount of other nuclear fuel. In addition to plans for processing the sodium fuel, the National Nuclear Security Administration announced that it will use H-Canyon to help prepare plutonium oxide feedstock for the Mixed Oxide Fuel Fabrication Facility under construction at SRS, producing about 3.7 metric tons of material using non-pit plutonium consolidated at the site. At that time, DOE said that it would be operating H-Canyon at a higher readiness state in 2012 than had originally been planned in its announcement to ramp down operations.

The Cold War-era H-Canyon facility is the only active reprocessing facility in the United States and is currently DOE's only disposition path for processing some types of

its inventory of excess nuclear materials. DOE said last year that its plan to ramp down spent fuel processing was based on budgetary issues. The planned suspension was met with a large backlash, as it faced questions and criticism from lawmakers, local stakeholders and the Defense Nuclear Facilities Safety Board because of concerns over possible impacts to nuclear material disposition efforts and the long-term future of the facility.

—Kenneth Fletcher