

Questions Mounting At Hanford, Savannah River Over Yucca Termination

BY GEORGE LOBSENZ

Washington state regulators overseeing the Energy Department's cleanup of its heavily contaminated Hanford site have raised pointed questions about the Obama administration's decision to terminate the Yucca Mountain nuclear waste repository, warning that any effort by DOE to leave high-level radioactive waste stored indefinitely at Hanford is "not a legal option, nor an acceptable option to the state of Washington."

In comments on a draft environmental impact statement (EIS) by DOE on cleanup of underground storage tanks at Hanford holding some 53 million gallons of high-level waste, officials with the Washington Department of Ecology raised particular concern about "melters" to be used to process tank waste for disposal, suggesting DOE was considering "long-term interim storage" of highly contaminated used melters at Hanford due to the lack of a deep geologic repository such as Yucca Mountain.

Meanwhile, a community group near DOE's Savannah River Site—a nuclear weapons facility near Aiken, S.C., that also has large amounts of high-level waste that was supposed to go to Yucca Mountain—this week charged the administration had "broken faith" with South Carolina and other states hosting contaminated DOE facilities by dumping Yucca without providing any disposal alternatives.

In a November 9 statement, the Savannah River Community Re-Use Organization said the administration's decision clearly raised the prospect that Savannah River would become a de facto permanent waste repository, negatively affecting the region's image and its ability to recruit other businesses to replace the dwindling DOE payroll at Savannah River.

The community group also demanded that it and other states hosting DOE sites be granted one or two seats on the blue-ribbon panel that the administration plans to convene soon to develop recommendations on new options for disposal of high-level waste from DOE weapons sites and spent reactor fuel from U.S. nuclear power plants.

DOE is expected to announce the members of the blue-ribbon panel soon, but has not indicated whether states or communities hosting DOE nuclear sites will have representatives on the commission—representatives that could raise inconvenient issues for the administration.

The commission already faces difficult political, legal and technological problems in terms of drawing up new disposal options because no state or community wants to host a nuclear repository and the only other apparent alternative—nuclear waste reprocessing—is technically immature, hugely expensive and would still leave waste streams needing permanent disposal.

DOE to date has gotten around the apparent lack of realistic alternatives by suggesting that spent commercial reactor fuel can be safely put in dry storage facilities at nuclear power plants for several decades, giving the nation time to find new permanent disposal strategies. And in fact, some commercial nuclear plants already have spent fuel in on-site dry storage facilities that pose little risk and draw relatively little public attention.

However, extended interim storage is likely to be a much more controversial solution for the huge amounts of high-level wastes at DOE weapons sites because of strong opposition from affected states and local communities, with states in particular holding some legal weapons to force removal of high-level waste.

Sources told *The Energy Daily* that DOE's draft EIS on cleanup of high-level tank wastes at Hanford was delayed for months as department officials wrestled with what to put in the document regarding ultimate disposal of the waste now that the administration has declared its intent to terminate Yucca Mountain.

The department wound up contending in the draft EIS that the termination of Yucca does not

raise any questions about the adequacy of its EIS—or the ultimate efficacy of its Hanford cleanup strategy—because analyses show that extended waste storage at the site will not pose any safety risks.

“The analyses in this EIS are not affected by recent DOE plans to study alternatives for the disposition of the nation’s spent nuclear fuel and high-level waste because the EIS analysis shows that vitrified high-level waste can be stored safely at Hanford for many years,” DOE said in the draft EIS issued last month.

However, the Washington Department of Ecology suggested that the termination of Yucca raises many legal questions about the adequacy of the EIS and DOE’s plans for retrieving tank wastes and melting them into a glassified waste form to be poured into canisters for final disposal.

Ecology noted that the federal Nuclear Waste Policy Act “requires permanent isolation of these most difficult waste streams. Leaving these wastes stored at Hanford indefinitely is not a legal option, nor an acceptable option to the State of Washington.”

Ecology also said it was concerned about the standards that would be set by DOE for glassified wastes and their canisters to ensure no harmful leakage of radionuclides.

“These standards were developed based on what was acceptable to Yucca Mountain,” the state agency said. “Now that Yucca Mountain is no longer the assumed disposal location, Ecology is concerned about what standards for glass and canisters will be utilized..... Ecology insists that DOE implement the most conservative approach in these two areas to guarantee that the glass and canister configurations...will be acceptable at the future deep geologic repository.”

Ecology appeared to raise its sharpest objections to long-term interim storage of melters after they are used in Hanford’s waste treatment plant to convert the highly radioactive tank wastes into glass.

“This draft...EIS assumes that the used (both spent and failed) high-level waste melters are high-level waste and, therefore, should be disposed of in a deep geologic repository,” the state agency said. “This EIS also assumes that the used high-level waste melters will stay on site before shipment to such a repository. DOE has not requested, and Ecology has not accepted, long-term interim storage of failed or spent high-level waste melters at Hanford.

“Ecology does not agree that the high-level waste melters will or should stay on site. We do agree with the final disposal in a deep geologic repository. The disposal pathway for both the failed and the spent melters will require further evaluation than is presented in this draft... EIS. Ecology and DOE will need to reach a mutual understanding and agreement on the regulatory framework for disposal.”

As a cooperating agency on the EIS and a permitting authority for most Hanford cleanup activities, Ecology has substantial leverage in negotiations with DOE. In addition, DOE is trying to get state permission to bring low-level wastes from other sites to Hanford for final disposal.

Other states hosting DOE sites have even stronger tools for forcing DOE to remove high-level wastes. Idaho, which hosts unusual high-level sodium-bearing nuclear waste at DOE’s Idaho National Laboratory, has a legally binding agreement with DOE to remove all high-level waste from the site by 2035.

And at Savannah River, South Carolina regulators have received numerous commitments from DOE to remove high-level wastes, and in recent years and months have accepted plutonium and other high-level wastes from other DOE sites on the understanding that those wastes would be sent to Yucca Mountain.

The administration’s decision to terminate Yucca drew strong criticism from the typically pro-DOE Savannah River Community Re-Use Organization, which said it would launch a public education campaign to alert local citizens and communities about the possibility and

ramifications of waste remaining indefinitely at Savannah River, which has some 30 million gallons of high-level waste in underground storage tanks.

“The government’s about face on this critical issue leaves state and local leaders with more questions than answers,” said David Jameson, vice chairman of the community re-use group and chairman of the Greater Aiken Chamber of Commerce.

“The federal government has broken faith with communities across the nation. It has violated its promise to provide permanent storage of nuclear waste. As a result, we must come to terms with our own lingering—perhaps permanent—role as caretaker for a large part of the nation’s highly radioactive defense waste.”

South Carolina is one of more than a dozen states that could seek to put pressure on DOE over what to do with nuclear weapons waste without Yucca Mountain. High-level nuclear waste from U. S. nuclear weapons production operations currently is stored at 16 sites in 13 states and totals 7,000 metric tons.