New Tank Leak Troubling for Hanford

NICHOLAS K. GERANIOS,Associated Press

SPOKANE, Wash. (AP) — A large, double-walled tank of waste at the nation's most contaminated nuclear site is leaking into its outer shell, raising new concerns about the long-term storage of the radioactive brew and for the effects on the environment if the waste escapes.

The nation's largest collection of deadly wastes left behind from the production of nuclear weapons sits at south-central Washington's Hanford nuclear reservation. Late last month, the U.S. Department of Energy, which oversees the site, revealed a slow leak in the oldest of 28 double-shell waste tanks, AY-102, saying a small amount of waste was leaking into the space between the inner and outer walls.

No waste is believed to have leaked into the environment on the reservation near Richland, the agency said.

That was little comfort to state officials already bemoaning the federal government's long-stalled efforts to build a massive plant to treat the waste.

"The results of the Department of Energy's investigation are concerning," said Washington Gov. Chris Gregoire [1], who has long pushed for Hanford cleanup. "Already, waste has been sitting in these double-shelled tanks past the tanks' life expectancy."

The sprawling Hanford site was built as part of the top-secret Manhattan Project in World War II to make plutonium for nuclear weapons. The leftovers — some 53 million gallons of a radioactive, toxic stew — were first stored in 177 underground single-walled tanks. Many of those tanks have leaked, threatening the nearby Columbia River.

Starting in the 1970s, the government built 28 double-walled tanks to store the most dangerous of the waste until it could be treated for permanent disposal.

That day is still a long way off.

The plant under construction to convert the waste into a stable glass form has suffered skyrocketing costs, technical problems and construction delays for years. Long considered the cornerstone of Hanford cleanup, design of the plant is 85 percent complete and construction is half done,

Most recently, the plant had been scheduled to begin operating in 2019, but the Energy Department pushed off for at least a year a new estimate on the plant's start date and cost while it embarks on additional tests to resolve technical problems with its design and construction.

The last cost estimate: $12.3 billion.

In addition, plans for permanently storing that waste once it's treated are still unresolved, since the federal government halted development of the Yucca Mountain nuclear storage site in Nevada.

The state Department of Ecology [2] is working with federal officials to decide how to deal with the leak. The leaking tank is just past its design life of 40 years, but state officials still expected it to last much longer than that, according to Ecology spokesman Dieter Bohrmann [3].

A plan on what to do next is expected soon, he said.

The Energy Department said Tank AY-102 went into service in 1971 and is the oldest of the double-walled tanks. It has a capacity of 1 million gallons and currently holds 707,000 gallons of liquid wastes and 151,000 gallons of sludge.

By comparison, an Olympic-sized swimming pool holds 660,000 gallons of water.

The state also is worried about the integrity of the remaining 27 double-walled tanks, Bohrmann said, especially the leaker's companion tank known as AY-101.

"The thought was always that these double-shell tanks were stable," he said, adding that the new leak "complicates the tank waste retrieval and cleanup mission."

The Energy Department says workers first spotted material at several locations in the 30-inch area between the walls during routine monitoring in August. It took until October to confirm it was radioactive waste. The agency says there is no evidence the leak is growing or that it has escaped where it was detected.

For now, plans call for twice-weekly visual inspections using remote cameras, and regular checks of liquid levels inside the primary tank, said Tom Fletcher [4], assistant manager for Hanford's tank farms.

Routine monitoring has not detected leaks in any of the other double-shell tanks. Expanded inspections are planned on six of those with similar construction and storage history.

A Hanford watchdog said the leak was entirely predictable, and that the government should never have reached this crisis stage.

State Rep. Gerald Pollet [5], D-Seattle, a long-time advocate for Hanford cleanup, plans to seek a legislative hearing on why the state of Washington has not long demanded a contingency plan.

The state should have insisted that the Energy Department construct newer storage tanks as delays have mounted with plant construction, Pollet said.

"It's a huge setback for cleanup efforts and requires a Plan B that should have been

in place years ago," Pollet said. "It's not like anyone thought the double-shell tanks wouldn't leak."

Source URL (retrieved on *04/25/2015 - 2:48am*):
http://www.chem.info/news/2012/11/new-tank-leak-troubling-hanford?qt-most_popular=0

Links:
[1] http://www.sfgate.com/?controllerName=search&action=search&channel=business%2Fenergy&search=1&inlineLink=1&query=%22Chris+Gregoire%22
[2] http://www.sfgate.com/?controllerName=search&action=search&channel=business%2Fenergy&search=1&inlineLink=1&query=%22Department+of+Ecology%22
[3] http://www.sfgate.com/?controllerName=search&action=search&channel=business%2Fenergy&search=1&inlineLink=1&query=%22Dieter+Bohrmann%22
[4] http://www.sfgate.com/?controllerName=search&action=search&channel=business%2Fenergy&search=1&inlineLink=1&query=%22Tom+Fletcher%22
[5] http://www.sfgate.com/?controllerName=search&action=search&channel=business%2Fenergy&search=1&inlineLink=1&query=%22Gerald+Pollet%22