Work begins on $5.5 million project at WVDP

By Rick Miller, Olean Times Herald | Posted: Thursday, August 29, 2013 6:00 pm

ASHFORD — An outdoor concrete storage pad designed to hold 56 multi-purpose containers with 275 high-level stainless steel canisters with high-level radioactive glass logs is in the initial construction stages at the West Valley Demonstration Project.

The stainless steel containers, now housed behind thick concrete walls in the Main Process Building, must be moved before the building can be demolished to get at the source of a radioactive Strontium that has been making its way toward Buttermilk Creek for decades.

CH2M Hill, B&W West Valley LLC (CHBWV), the contractor at the site of the clean-up of the nation's first commercial nuclear fuel reprocessing plant in the town of Ashford, recently contracted with Butler Construction, Springville, for construction of a 144-foot by 110-foot concrete pad three feet thick. It will hold 57 loaded storage casks carrying five each of the 10-foot high stainless steel canisters with the radioactive glass logs. The storage casks — each weighing 87.5 tons — will be enclosed in reinforced concrete

Heatherly Dukes of CHBWV told people attending the quarterly public meeting of the West Valley Demonstration Project Wednesday night, Aug. 28, that Butler Construction started preliminary work earlier that day. The project should be completed by the end of November. It has a 50-year design life and will cost about $3.5 million to build. Design costs push the cost is closer to $5.5 million.

Dukes said CHBWV had ordered eight of the storage casks. The delivery time is about a year. The amount of money the Department of Energy budgets for the project will affect how many of the overpack containers can be purchased in a given year. They cost about $500,000 each.

"We're not going to be loading for a couple of years," Dukes said at the meeting. The outside of the canisters first need to be decontaminated and those logistics haven't been worked out yet. The storage casks will hold waste, waiting for the day there is a high level nuclear waste repository to ship it to. Without the prospect of using Yucca Mountain in Nevada, a new repository site is decades away.

The overpack containers will be lifted into reinforced concrete storage casks placed on the concrete pad. The cask is 161 inches tall and 120 inches in diameter. The 20-inch thick concrete has a 4-inch stainless steel liner and weighs 133,500 pounds unloaded.

The last of the stainless steel canisters probably won't be moved from the Main Process Building and loaded into one of the overpack containers until some time in 2018, Dukes said.

Bryan Bower, director of the West Valley Demonstration Project for the Department of Energy, said it will be in the 2019-20 time period before the Main Process Building is demolished to ground level. Additional work will need to be done to remove below ground foundations in order to get to the source of the strontium 90 plume.

Charles Biedermann of CHBWV reported the 860-foot permeable treatment wall installed in 2010 to intercept and treat the strontium 90 in the groundwater is performing as designed according to monitoring wells before, inside and after the wall. The passive system is 30-feet deep, and consists of zeolite, a granular, volcanic material from Utah that grabs the strontium 90 from the groundwater as it passes through.

Tests have shown that by the time any of the groundwater reaches the confluence of Buttermilk and Cattaraugus creeks that Strontium 90 is either non-detectable, or at background levels.

CHBWV President Daniel Coyne told the meeting that the deactivation of the facility continues. The melter, used to heat the glass/liquid radioactive waste mixture to make the glass logs, and two other large components of the vitrification cell are ready for shipment off-site. It's unclear whether they will be able to ship the items via rail from the facility or whether they will have to be trucked elsewhere for rail shipment.

Crews are repacking waste remotely, while nearly 60,000 cubic feet of low-level waste has been shipped to disposal areas in Nevada and Utah. Much of the industrial waste from the demolition of clean buildings containing no radioactivity has gone to the McKean County landfill, he said.

Officials declined to discuss security for the casks that will sit on the concrete pad. "The Department of Energy will be here as long as the high level waste is here," Bower said. "I don't see security becoming any more lax."

Bower's report updating Phase I studies was brief, as he said DOE and the New York State Energy Research and Development Authority (NYSERDA) are continuing talks on the extent of the studies which are reviewed by an independent scientific panel.

Diane D'Arrigo of the Nuclear Information and Resources Service in Washington, D.C., said many people are "not satisfied" with the way climate change is being addressed in the studies – particularly as it relates to long-term erosion of the site where two 600,000-gallon steel tanks that held radioactive liquid waste that dated from the operation of the plant in 1960s and early 1970s where spent nuclear fuel assemblies were chopped up and run through an acid bath to recover plutonium. The tanks still contain radioactive residue and sludge.

The decision of whether to remove the tanks or fill them with grout (cement) has not been made, and is probably years away. Some people are concerned that the high level radioactive material

left in the tanks could find its way to Cattaraugus Creek and the Great Lakes if erosion is unchecked over decades.

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