New Era In Hanford Tank Waste Treatment

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Washington River Protection Solutions operations engineer Steven Porter, left, and nuclear chemical operator Brent Walker monitor the Tank-Side Cesium Removal System in the control room as the system is put in operations mode.

New Era In Hanford Tank Waste Treatment

RICHLAND, Wash. –Today, the Department of Energy (DOE) announced workers have begun the first large-scale treatment of radioactive and chemical waste from large underground tanks at the Hanford Site. This marks completion of the first of an <u>ambitious slate of 2022 priorities</u> set by the DOE Office of Environmental Management (<u>EM</u>).

In a message of congratulations to the Hanford workforce, Senior Advisor for EM William "Ike" White called the Tank Side Cesium Removal (TSCR) System a "cornerstone of the Direct Feed Low Activity Waste program".

"It's a capability that will transform the Hanford Site and benefit the entirety of the EM program," White said. "I'm optimistic about what Hanford will achieve this year as we work toward around-the-clock operations to treat tank waste."

The newly operational TSCR System removes radioactive cesium and solids from tank waste. The treated waste will be fed directly to the nearby Waste Treatment and Immobilization Plant for vitrification, or immobilization in glass, when the plant comes online next year.

The cesium removal system is a key part of the Site's Direct Feed Low Activity Waste (DFLAW) program, an assembly of several highly interdependent projects and infrastructure that will operate together to vitrify and safely dispose of millions of gallons of low-activity tank waste once operational.

"This is an exciting new era in our Hanford cleanup mission," said Brian Vance, manager of EM's (DOE's) Office of River Protection and Richland Operations Office. "For the first time in Hanford Site history, we are treating a significant amount of tank waste on an industrial scale."

Hanford tank operations contractor Washington River Protection Solutions (WRPS), working with EM staff, other site contractors and regulatory agencies, built, installed and tested the cesium removal system next to large underground storage tanks. Those tanks, called the AP tank farm, are located near the center of the Hanford Site, which is less than a quarter mile from the vitrification plant. The cesium removal technology is nearly identical to a system operating at DOE's Savannah River Site in South Carolina.

John Eschenberg, WRPS president and CEO, said the launch of the TSCR system operations was nearly three years in the making.

"I'm extremely proud of our team, the dedicated workforce who delivered this project on time and on budget during some challenging times over the last 18 months," Eschenberg said.

The Hanford Site is home to approximately 56 million gallons of radioactive tank waste stored in 177 underground tanks, representing one of DOE's largest environmental risks and most complex challenges. The tank waste is a result of nearly five decades of plutonium production that supported national security missions and helped end World War II.

An animated video showing how the cesium removal system fits into the highly integrated Direct-Feed Low-Activity Waste Program at Hanford can be viewed here.

Video and photos relevant to this announcement can be found https://wrpstoc.com/tank-side-cesiumremoval-system/

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The Department of Energy (DOE) is engaged in one of the great public works of this century at the Hanford Site near Richland, Washington. Responsible for the federal government's cleanup of the legacy of more than 40 years of producing plutonium through the 1980s, DOE is transforming the site back into a 24/7 operations mode to treat tank waste from the production era. The DOE Office of River Protection (ORP) is responsible for the safe and efficient retrieval, treatment and disposal of the 56 million gallons of chemical and radioactive waste stored in Hanford's 177 underground tanks. The mission includes building and commissioning the world's largest radioactive waste treatment plant, which will immobilize the legacy tank waste through vitrification. The DOE Richland Operations Office is responsible for all remaining Hanford cleanup and is currently focused on stabilizing and demolishing former plutonium production structures, excavating and disposing of contaminated soil and waste, treating contaminated groundwater, and configuring Hanford Site infrastructure for the future, with an emphasis on supporting the tank waste mission. Hanford Site work is conducted by a federal and contractor workforce of approximately 11,000 personnel. Visit www.hanford.gov for more information about the Hanford Site.







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