Hanford Site Treats More than 2 Billion Gallons of Groundwater Six Years in a Row

RICHLAND, Wash. – Workers at the Hanford Site are celebrating another year of significant progress in protecting the Columbia River.

Fiscal year (FY) 2020 marks the sixth consecutive year that Hanford has treated more than 2 billion gallons of groundwater to remove contamination from decades of past operations to produce plutonium for the U.S. nuclear weapons program.

The U.S. Department of Energy (DOE) and contractor CH2M HILL Plateau Remediation Company, (CHPRC), a Jacobs Company, have treated an average of 2.4 billion gallons of groundwater a year for the past five years. The Department and CHPRC expect to reach that goal again when this fiscal year ends on Sept. 30.

“Protecting the Columbia River continues to drive our groundwater treatment efforts,” said Mike Cline, DOE’s project director for cleanup of soil and groundwater at Hanford. “Over the past decade, we have significantly reduced the areas of contamination near the river.”

In this video, longtime Hanford employees discuss the collaboration, ingenuity, and pride involved in the design, construction and continuous improvement of Hanford’s groundwater treatment systems over the past decade.

Hanford workers operate six treatment systems to remove radioactive and chemical contaminants from groundwater along the Columbia River and an area near the center of the Hanford Site called the Central Plateau. This is where massive chemical processing facilities separated plutonium from fission products from the 1940s through the 1980s and discharged billions of gallons of contaminated liquids to soil disposal sites.

The volume of contaminated groundwater from Hanford’s plutonium production mission hasn’t been the only challenge. This year presented a new challenge with the COVID-19 pandemic, which has limited the number of personnel who can work at the site since March.

Fortunately, the advanced technologies in the treatment facilities made it possible for groundwater treatment to continue largely uninterrupted. Operations managers safely monitor the systems remotely — meeting social distancing requirements while ensuring the plants continue to operate efficiently during the site’s phased remobilization of operations.

“The reliability of Hanford’s treatment systems and the experience of our team has been instrumental in our ability to consistently meet — and typically exceed — our annual treatment goals,” said Bill Barrett, vice president of CHPRC’s soil and groundwater remediation project.

Hanford has treated more than 23 billion gallons of groundwater and removed nearly 600 tons of contaminants since the first groundwater facilities began operating in the mid-1990s. The treatment systems have removed most of the chromium contamination along the Columbia River and hundreds of tons of nitrates on the Central Plateau, as well as other contaminants of concern such as carbon tetrachloride, uranium, and technetium-99.

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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 9,400 personnel. Visit www.hanford.gov for more information about the Hanford Site.

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