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HANFORD'S NEWEST GROUNDWATER TREATMENT SYSTEM UP AND RUNNING

Largest System on Columbia River Completed Three Months Early

Note: Photos are available for downloading at this link: <http://ow.ly/7461x>

RICHLAND, WASH. – October 21, 2011 – The startup of Hanford's newest groundwater treatment facility marks significant progress for the [U. S. Department of Energy's](#) (DOE) ability to address an estimated 65 square miles of contaminated groundwater that lie beneath the Hanford Site. With a water treatment capacity of 800 gallons per minute, the new system boosts the capacity for treating contaminated groundwater and removing chromium near the Columbia River by 40 percent.

Contractor [CH2M HILL Plateau Remediation Company](#) (CH2M HILL) recently finished building the largest groundwater treatment system along the Columbia River. Called 100-HX, the facility is located near the H Reactor on the Hanford Site in Washington State.

The 100-HX system significantly upgrades capacity to treat groundwater along the river and is a key component of the DOE's strategy for stopping chromium from entering the Columbia River in 2012.

"The Department of Energy's goal is to restore groundwater to its intended beneficial use, either drinking water standards or stricter aquatic standards," said John Morse, Senior Technical Advisor for the DOE Groundwater Project. "This new facility is a key part of our strategy of meeting our goals of treating groundwater and preventing contamination from entering the river."

The 17,500-square-foot 100-HX process plant uses 31 extraction wells and over 61 miles of piping to bring groundwater to the facility that will be able to treat up to 35 million gallons per month. The treated water is then returned to the aquifer through a series of injection wells.

"The 100-HX system is a key component of the Tri-Party agencies' strategy for stopping chromium from entering the Columbia River by the end of 2012," said Dib Goswami, lead hydrogeologist for the Washington Department of Ecology's Nuclear Waste Program. "Together with other systems already in operation along the River Corridor, Ecology believes the new facility will bring the total treatment capacity to about where it needs to be to prevent toxic chemicals from entering the Columbia River."

Dyan Foss, CH2M HILL's Vice President of Soil and Groundwater Project, said "This is a larger system that uses a newer resin than the previous systems and will not require as much maintenance and monitoring. It brings value to the taxpayer dollar through efficiencies, schedule savings, and tangible progress in meeting DOE's groundwater cleanup commitment."

Resin is a granular material used to treat chromium as it flows through tanks in the treatment facility. The new resin, called Resin-Tech ®SIR-700, does not need to be replaced as often, saving time and money. It is also more effective. At another recently built treatment facility, the resin has already proven its ability to retain 15 times more chromium than previous resins.

"We were able to complete construction and testing three months ahead of schedule, enabling groundwater treatment to be expedited," said Kent Dorr, CH2M HILL Vice President of Engineering, Projects and Construction. "We were able to apply lessons learned from CH2M HILL's recently built system, known as 100-DX, near the D Reactors. The time saved, along with efficiencies in design, saved millions of dollars that can be driven back into Hanford cleanup."

The two systems, 100-DX and 100-HX, were designed to work together to treat chromium contamination in the groundwater around and between the D and H Reactors.

Groundwater on the Hanford Site became contaminated above drinking water standards following decades of plutonium production during the Cold War. Sodium dichromate, a chemical used as a corrosion inhibitor, was added to river water used to cool Hanford's older nuclear reactors while they were operating. Over time, the soil and groundwater became contaminated with chromium because of leaks in the dichromate transfer systems and piping.

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