



Treating Groundwater along the Columbia River

A Department of Energy Recovery Act Project

March 2010



The Department of Energy (DOE) and contractor CH2M HILL Plateau Remediation Company are using American Recovery and Reinvestment Act funding to expand groundwater treatment systems at the Hanford Site in southeast Washington State.

CH2M HILL is installing the next generation of groundwater treatment systems at Hanford to remove contaminants and protect the Columbia River. Construction of a pump-and-treat system near the D Reactors on the Hanford Site began in July 2009. The \$20 million project is funded by the Recovery Act and is scheduled to begin operations in 2010. Called 100-DX, the system will replace an older groundwater treatment system that has been operating since 1997 to remove hexavalent chromium.

The 100 Area of the Hanford Site runs along the Columbia River and contains Hanford's nine production reactors. Sodium dichromate, a chemical used as a corrosion inhibitor, was added to the river water to cool Hanford's 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 and because cooling water treated with dichromate was periodically discharged to the soil near the reactors.

The 100-DX pump-and-treat system will not only remove the primary contaminant of concern – hexavalent chromium, it will also help DOE meet its commitment to contain all chromium contamination to prevent it from reaching the Columbia River by 2012.

100-DX Pump-and-Treat System:

- \$20 million Recovery Act project
- \$20 million lifecycle savings in treatment material (resin)
- 600 gal/min (20M gal/month) treatment capacity
- 3.6 billion gallons treated during life of system
- 45 miles of piping
- 11,500 sq. ft. main process building
- 53 wells along the Columbia River

For more information:

Geoff Tyree, Department of Energy,
(509) 376-4171, Geoff_Tyree@rl.gov

Dee Millikin, CH2M HILL,
(509) 376-1297, Dee_Millikin@rl.gov