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## **HANFORD SIGNS-UP TO CLEANUP OF GROUNDWATER TO PROTECT THE COLUMBIA RIVER FROM CHROMIUM**

*Groundwater contaminated with chromium at concentrations that are toxic to aquatic life will soon receive treatment prior to reaching the Columbia River. This action, to be conducted by the U.S. Department of Energy (DOE) with oversight by the U.S. Environmental Protection Agency (EPA) and the Washington State Department of Ecology (Ecology), is part of Hanford's Superfund cleanup effort. This action will result from a Record of Decision signed on April 1 by these three agencies of the Tri-Party Agreement. Groundwater containing chromium that would otherwise flow into the Columbia River will be pumped out of the ground and treated to reduce the amount of chromium. The treated water will be injected back into the ground. This decision addresses groundwater around the now-closed nuclear reactor sites known as the 100-D, 100-H, and 100-K Areas.*

*"This decision is an example of the commitment by the Tri-Party agencies to protect the natural resources of the Columbia River that are treasured by the people of the Pacific Northwest", said Chuck Clarke, EPA Regional Administrator. Aquatic life that lives in or uses the river bottom is the major beneficiary of this action. "Protection of the few native salmon spawning grounds left on the Columbia River is a top priority to the State of Washington", said Ecology director Mary Riveland. John Wagoner, Manager, DOE's Richland Operations Office, concluded that "this effort is part of the Environmental Restoration program that includes pump-and-treat projects around the site to cleanup contaminated groundwater as well as remove contaminated soil and other material that pose future risks to groundwater." The Tri-Party members emphasized that the decision to tackle this chromium problem is responsive to public, tribal, and stakeholder values to protect the Columbia River. Of particular value is the Hanford Reach, the last portion of the Columbia River that supports salmon spawning.*

*The nuclear reactors at Hanford used chromium in their cooling water to inhibit corrosion. Part of the chromium-containing effluent was discharged to the soil and subsequently migrated to the groundwater. Contaminated groundwater upwells into the Columbia River through the river bottom in the affected reactor areas. Organisms that live within the river bottom in these areas are exposed to toxic levels of chromium. Young salmon are particularly sensitive to chromium. Salmon adults excavate depressions in the river bottom, deposit their eggs, and then bury the eggs with gravel. The first few months of salmon development as eggs and alevin, are spent within the rocky river bottom.*

*Groundwater in the three remaining reactor areas: 100-N, 100-B, and 100-F, which are not covered by this cleanup decision, contain substantially lower concentrations of chromium, and an interim cleanup action for chromium is not currently planned. However, 100-N reactor area has a pump-and-treat system to reduce the amount of radioactive strontium-90 entering the river via the N- Springs.*

*Plans call for construction to begin on treatment systems in the 100-D and 100-H Areas in August 1996, and be on-line in March 1997. The 100-K Area completion is anticipated to lag by about three months. Construction and operation/maintenance for 5 years was estimated by DOE to be \$29.8 million for a combined pumping rate of 545 gallons per minute.*

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9602-002.TWR