DOE News Release

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Treatment Resin Reduces Costs, Materials in Hanford Groundwater Cleanup

Efficiency delivered more than $6 million in cost savings, $3 million in annual savings

Note: Photos are available for downloading on our website at this link: http://ow.ly/lHFf5

RICHLAND, Wash. – U.S. Department of Energy (DOE) contractor CH2M HILL Plateau Remediation Company is using a treatment material that has delivered more than $6 million in cost savings to date and is delivering more than $3 million in annual cost savings and efficiencies in treatment of contaminated groundwater near the Columbia River at the Hanford Site in southeast Washington state.

The material, an ion exchange resin, is used in groundwater treatment systems to strip contaminants from the water—in this case, hexavalent chromium—before it is pumped back into the ground. The systems are treating contamination that resulted from the operation of Hanford's plutonium production reactors during the Cold War.

"The Department of Energy's goal is to restore Hanford groundwater to beneficial use," said Briant Charboneau, Federal Project Director for DOE's Richland Operations Office. "Along the Columbia River, this means removing contaminants so the groundwater meets standards for protecting human health and the environment. Using the new resin is a significant improvement in reducing cleanup costs and protecting the environment."

"We have used the material to enhance operations and save costs that can be driven back into Hanford cleanup," said Bob Popielarczyk, CH2M HILL vice president for soil and groundwater remediation at the Hanford Site. "This is another example of our workforce finding solutions that are smart for the environment and taxpayer dollars."

In comparison to the previous resin used in treatment systems, the new resin can hold more contamination, lasts longer, and does not have to be replaced as often. Each replacement costs approximately $10,000, and CH2M HILL estimates more than 600 resin changes have been avoided in the last 2.5 years in groundwater treatment facilities along the Columbia River. An additional benefit is the resin can be disposed of onsite at Hanford's engineered landfill, which eliminates costs and worker hazards associated with preparation and shipment of the resin to an offsite facility.

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"We have not had to replace the resin once since loading it into the systems," said Dean Neshem, CH2M HILL pump-and-treat operations and maintenance engineer. "This means our systems can continue to operate, and we can treat more groundwater. When we do have to change it out, we can dispose of it on the Hanford Site, which is more efficient than shipping it offsite."

After the resin was installed in two recently constructed treatment facilities, three additional treatment facilities were retrofitted with the newer, more efficient material. In addition to delivering cost savings, the change in resin also allows for higher treatment capacity through the existing equipment; treatment capacity was increased at one of the treatment facilities by 40 percent.

Since groundwater treatment began in the 1990s, Hanford contractors have treated a total of 7.6 billion gallons of groundwater and removed 45 tons of contaminants, including 5,600 pounds of hexavalent chromium.

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The Department of Energy's Richland Operations Office is responsible for several major cleanup projects on the Hanford Site, including cleanout and demolition of the high-hazard Plutonium Finishing Plant, demolition of excess facilities, excavation of contaminated soil and solid waste, and treatment of contaminated groundwater, as well as Hanford Site infrastructure. The office oversees approximately $1 billion in annual funding for Hanford Site work that is conducted by a Federal and contractor workforce of approximately 4,500 personnel. Visit www.hanford.gov.

Headquartered near Denver, Colo., employee-owned CH2M HILL is a global leader in engineering, procurement, construction, management and operations for government, civil, industrial and energy clients. With $6.4 billion in revenue and more than 25,000 employees, CH2M HILL is an industry-leading program management, construction management and design firm, as ranked by Engineering News-Record (2008). The firm's work is concentrated in the areas of energy, water, transportation, environmental, nuclear and industrial facilities. The firm has long been recognized as a most-admired company and leading employer, including being named by FORTUNE as one of the 100 Best Companies to Work For and one of America's Most Admired Companies (2008). Visit www.ch2mhill.com.