

# THE HANFORD SITE

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## **New Ventilation System Increases Safety Margin for Hanford Waste Tank Workers**

RICHLAND, Wash. – EM Hanford and its tank operations contractor, Washington River Protection Solutions (WRPS), have enhanced safety for workers by installing a new exhauster ventilation system above waste tanks.

The system, located in a group of tanks called the A Farm, continuously draws air from the tanks, separates moisture and radioactive particles, and sends filtered air through 50-foot exhauster stacks, well above workers.

After nearly four years of design, fabrication, installation, and testing, EM and WRPS are operating the new system that ventilates the farm's six waste storage tanks. Each of the tanks, constructed between 1954 and 1955, has a capacity of 1 million gallons.

"This ventilation project is key to protecting workers against hazards associated with managing Hanford's tank waste," said Jim Lynch, with EM's tank farms operations. "It reduces the risk posed by chemical vapors from the tanks during operations that disturb the waste, such as retrieving waste from the tanks."

The new ventilation system has other benefits, too.

"Active ventilation also increases the margin of safety for workers when we are removing old, highly contaminated pieces of equipment from the tanks," said Garth Stowe, WRPS project manager. "This clears the way for crews to install new equipment that will be used to retrieve waste. In addition, the ventilation system clears fog that forms in the tanks due to the heat generated by the waste, so operators get a better view when retrieving waste."

Hanford's tank ventilation systems also function to prevent the buildup of flammable gas in the tanks. The system features two exhausters with 50-foot-tall stacks; a 50-foot-by-20-foot valve manifold; and approximately 700 feet of ducting, piping, electrical lines, and insulation.

"The whole construction team did an amazing job," Stowe said. "Assembling a system like this with air bottles on your back, inside a small tank farm with different elevations and other work going on around you, is a tremendous accomplishment. And, most important, the team completed all work safely."

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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](http://www.hanford.gov) for more information about the Hanford Site.

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