



# U.S. DEPARTMENT OF ENERGY

**MEDIA CONTACTS:**

**DaBrisha M. Smith**

**DOE-Office of River Protection**

**(509) 376-4306, Dabrisha\_M\_Smith@RL.gov**

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**Suzanne Heaston**

**Bechtel National, Inc.**

**(509) 371-2329, (509) 539-7765-cell, smheasto@bechtel.com**

## **Hanford Waste Treatment and Immobilization Plant Installs Key Vitrification Process Equipment**

**Richland, Wash.** -- Last week, crews at the Hanford Waste Treatment and Immobilization Plant (WTP) installed two large mixing vessels, which are key to the vitrification process, in the Low-Activity Waste Vitrification (LAW) Facility.

Fabricated by Dynamic Air in St. Paul, Minn., each vessel is approximately 15 feet long, 11 feet wide and 8 feet tall and weighs approximately 45,000 pounds (more than 22 tons). They will be used to mix dry glass-forming materials, such as borosilicate and sugar, before the materials are added to the low-activity liquid waste. Once added, the liquid mixture will be poured into two melters, which will heat it to 2,100 degrees Fahrenheit, then transferred into stainless steel containers for permanent storage.

"This installation is significant because mixing, which ensures a quality glass product, is such an integral part of the vitrification process," Bill Clements, area project manager for the LAW Facility, said. "These vessels are the last major pieces of equipment that will support the dry material process in the LAW Facility."

Installed in the north end of the facility at the 68-foot elevation, each vessel was lowered through a hatch, not much larger than the vessels themselves, using a crane. A crew of approximately 20 craft employees, engineers and safety personnel worked together, making sure the vessels were precisely placed on the waiting support frames before they were bolted down.

"The LAW Facility is more than 60 percent complete at this time," Department of Energy-Office of River Protection LAW Federal Project Director Gary Olsen said. "By placing these key components, which are so essential to the vitrification process, we are demonstrating the continued, steady progress on not only the LAW Facility, but the Vit Plant as a whole."

When operational, the LAW Facility, one of four main nuclear facilities at WTP, will process low-activity waste that is transferred via underground pipes from the Pretreatment Facility. It will produce 30 tons of glass daily and is approximately the size of one and a half football fields, and 90 feet, or seven stories, high.

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*Hanford Vit Plant's Low-Activity Waste Vitrification Facility mixer is hoisted into position prior to installation through a hatch in the facility.*

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