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## Hanford Waste Treatment Plant receives last pieces of equipment for quality control system

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**Richland, Wash.** -- The Hanford Waste Treatment Plant, also known as the “Vit Plant,” recently received the last and most significant pieces of its autosampling system for the Low-Activity Waste (LAW) Facility. The system will ensure the glass produced by the Vit Plant meets all regulatory standards and requirements.

It was designed by EnergySolutions and fabricated by Mid-Columbia Engineering, both of Richland, Wash.

“We were able to draw on local expertise and capabilities to design and fabricate this equipment, which will be essential to quality control during Vit Plant operations,” Mark Watts, manager of Procurement & Subcontracts at the Vit Plant, said.

When operational, the autosampling system will be used to take samples throughout the vitrification process and transport them to the Analytical Laboratory (Lab) for testing and evaluation. Approximately 10,000 samples will be analyzed annually from all three waste-processing facilities -- the Pretreatment (PT), High-Level Waste (HLW) and LAW facilities.

Waste will be sampled using remotely operated robotic arms inside shielded boxes within the facilities. The samples will be deposited into 15-milliliter bottles, which will be encased in tightly sealed carriers. The specially designed carriers will then be transported to the Lab via a pneumatic transfer system, similar to those used at a bank drive-thru. Stainless steel pipes will run between each facility and the Lab and transport the samples at 25 feet per second.

This week, the Vit Plant received the two autosamplers, each which contains a robotic arm and shielded box, that will be housed in the LAW Facility. The plant also received nearly 150 carriers and more than 6,500 bottles.

“The ongoing receipt and installation of equipment like the autosampling system are key to keeping the project on track to complete the Vit Plant’s LAW Facility, Lab, and Balance of Facilities by 2016,” Dale Knutson, Department of Energy federal project director for the Vit Plant, said.

The LAW Facility is the furthest along of the four major nuclear facilities that compose the Vit Plant. It is currently 65 percent constructed. Autosampling equipment for the PT and HLW facilities are expected to arrive in 2012.

(continued)

*Bechtel National, Inc. is designing and building the world's largest radioactive waste treatment plant for the U.S. Department of Energy at the Hanford Site in southeastern Washington state. The \$12.2 billion Waste Treatment and Immobilization Plant (WTP), also known as the "Vit Plant," will immobilize the radioactive liquid waste currently stored in 177 underground tanks using a process called "vitrification."*

*Vitrification involves blending the waste with molten glass and heating it to high temperatures. The mixture is then poured into stainless steel canisters. In this glass form, the waste is stable and impervious to the environment, and its radioactivity will dissipate over hundreds to thousands of years.*

*The WTP will cover 65 acres with four nuclear facilities -- Pretreatment, Low-Activity Waste Vitrification, High-Level Waste Vitrification and Analytical Laboratory-- as well as operations and maintenance buildings, utilities and office space.*

*Construction of the WTP began in 2001 and is now 58 percent complete. Construction is scheduled to be complete in 2016 and operational in 2019.*

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