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## Hanford Waste Treatment Plant receives and sets key air-filtration equipment for Low-Activity Waste Facility

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**Richland, Wash.** -- Last week, the Hanford Waste Treatment Plant, also known as the “Vit Plant,” received and placed a key piece of air-filtration equipment in the Low-Activity Waste Facility. The nearly 100-ton carbon bed adsorber is part of a complex air-filtration system that will ensure the facility’s air emissions meet strict environmental regulations and requirements.

The extensive air-filtration system includes compliance monitoring equipment, HEPA filters, the adsorber, a thermal catalytic oxidizer, caustic scrubbers, exhaust fans and a more than 130-foot tall emissions stack. When operational, the adsorber will remove mercury and acid gases before air is channeled through the thermal catalytic oxidizer, which will remove organics and NOx.

“The air-filtration system is designed to the highest nuclear-quality standards to ensure the air emissions from the Low-Activity Waste Facility are completely safe and will not pose any danger to the environment or people,” John Platt, area project manager for the facility, said.

Similar air-filtration systems will be used in the High-Level Waste and Pretreatment facilities. The Low-Activity Waste Facility adsorber is the first to arrive at the Vit Plant.

Completely assembled, the adsorber measures 45 feet long, 12 feet wide and 14 feet tall. It is composed mostly of stainless steel, including nearly 110 feet of 18-inch-diameter piping, and required more than 7,000 nuclear-quality welds to assemble.

The adsorber arrived at the Vit Plant construction site on seven trucks that included two base frames, two major units and two upper platforms and several crates of additional parts. Each major unit measures 21 feet long, 8 feet wide and 11 feet tall.

Using a crane, the adsorber parts were lowered through a hatch in the facility’s roof to the 48-foot elevation. The hatch, which measures 16 feet by 26 feet, is not much larger than the units themselves and required careful planning by Vit Plant engineers and craft.

“Receiving and setting this major piece of equipment is a significant milestone for the Low-Activity Waste Facility and the Vit Plant as a whole,” Jeff Bruggeman, federal area project manager for the facility, said. “The Low-Activity Waste Facility is 67 percent complete and steadily receiving and setting its permanent plant equipment. This is essential to completing Vit Plant construction in 2016, reaching commissioning in 2019 and achieving full operations in 2022.”

A video of the receipt and placement of the carbon bed adsorber is available at

<http://www.hanfordvitplant.com/newsroom/videos/>.

(continued)



## U.S. DEPARTMENT OF **ENERGY**



*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, 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 Vit Plant 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 Vit Plant began in 2001 and is more than 60 percent complete. The project is scheduled to complete construction in 2016; will reach commissioning in 2019 and achieve full operations in 2022.*



The nearly 100-ton carbon bed adsorber is part of a complex air-filtration system that will ensure the facility's air emissions meet strict environmental regulations and requirements. (Photo 1 of 3)



The adsorber includes two major units, which measure 21 feet long, 8 feet wide and 11 feet tall. (Photo 2 of 3)



Using a crane, the adsorber parts were lowered through a hatch in the facility's roof to the 48-foot elevation. (Photo 3 of 3)