Hanford Waste Treatment Plant completes important mechanical installation in Pretreatment Facility

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Richland, Wash. -- Crews at the Hanford Waste Treatment Plant, also known as the “Vit Plant,” recently assembled and placed a more than eight-ton decontamination booth in the Pretreatment Facility. The booth will be used to decontaminate large pieces of equipment that must be removed from radioactive areas when they require maintenance.

“The decontamination booth is the first significant piece of permanent plant equipment to be placed inside the Pretreatment Facility that is not required to support the civil construction progress,” Ray Patterson, area project manager for the facility, said. Previously, certain large vessels and cranes had to be set before the upper floors and surrounding walls could be installed.

The stainless steel booth stands 14.5 feet tall, 15 feet long and 7 feet wide. It was delivered to the Vit Plant construction site in 13 pieces, which were transported inside the Pretreatment Facility and assembled.

The ceiling of the booth will be equipped with a single-track trolley and a hoist that can be used to move and hang equipment during cleaning. It will also be equipped with leaded glass viewing windows, which provide shielding, and two sets of gloveboxes that allow workers to manipulate cleaning equipment inside the booth.

“Installation of the decontamination booth is another example of the transition from civil construction to mechanical installations in the Pretreatment Facility,” Wahed Abdul, federal area project manager for the facility, said. “The transition is crucial as we move toward construction completion in 2016, commissioning in 2019 and full operations in 2022.”

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.

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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 60 percent complete. Construction is scheduled to be complete in 2016; will reach commissioning in 2019 and achieve full operations in 2022.

The decontamination booth is the first significant piece of permanent plant equipment to be placed inside the Pretreatment Facility that is not required to support the civil construction progress. The stainless steel booth measures 14.5 feet tall, 15 feet long and 7 feet wide.