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## Essential overhead maintenance crane installed in Hanford Waste Treatment Plant

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**Richland, Wash** -- Today, crews at the Hanford Waste Treatment Plant, also known as the "Vit Plant," installed major components of an overhead crane that will be essential to plant operations. The components were lowered through the roof into the canyon-like center that runs the length of the Vit Plant's largest facility -- the Pretreatment Facility.

When the plant is operational, the canyon-like center, known as the "hot cell," will not be accessed by humans, and the equipment stored in it will be maintained using only remote-handling equipment and the crane.

"The crane will be absolutely essential to maintaining the process equipment housed in the Pretreatment Facility," Ty Troutman, area project manager for the facility, said.

The 30-ton-capacity crane is composed of four major components: a bridge, trolley, slewer (a rotating overhead base) and a telescoping mast with manipulator arm. These components will maximize the versatility of the crane, allowing it to move and rotate in virtually all directions. The manipulator arm and seven hooks, which extend and retract, provide additional functionality.

Using a rail system installed this fall, the crane will be able to move the length of the 400-foot-long hot cell, as well as in and out of maintenance areas. It was manufactured by PaR Systems in St. Paul, Minn., and is the largest crane that will be installed in any of the four major nuclear facilities that compose the Vit Plant.

Engineers and skilled craft have prepared for the installation by creating a comprehensive rigging and lift plan and reconfiguring the crane used to lift the components through the facility roof. The reconfiguration enabled workers to safely maneuver around already installed rebar and concrete.

"This accomplishment is part of our continued transition from civil construction to mechanical installations and further demonstrates our commitment to reaching construction complete in 2016 and operations in 2019," Wahed Abdul, Department of Energy area project manager for the facility, said.

The Pretreatment Facility is the first step in the vitrification process and will be used to separate the waste into high-level waste solids and low-activity waste liquids. Construction of the Pretreatment Facility is currently 34 percent complete.

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*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. The plant will be operational in 2019.*



Photo 1 of 2: Crane components were lifted into the air and lowered into the Pretreatment Facility through its roof.



Photo 2 of 2: When operational, the crane will be essential to maintaining the process equipment housed in the Pretreatment Facility.

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