Idaho crews overcome challenges
to safely remove and dispose of hot cell

Cleanup crews at the Department of Energy's Idaho Site have been doing some heavy lifting - literally! As many as 200 CH2M-WG Idaho, LLC, employees and subcontractors recently supported an effort to remove and dispose of a hot cell that weighed the equivalent of nine fully loaded Boeing 737s.

The team responsible for the successful lift.

Unlike the aircraft, the 1 million-pound hot cell moved at a snail's pace - about two miles per hour - as it was transported from its former location at the Advanced Test Reactor Complex (ATR-C) to an onsite landfill two miles away. A 600-horsepower semi-truck, towing a trailer equipped with 224 tires, was needed to transport the concrete hot cell structure to the landfill and a D9 Cat was used to tow the truck and trailer up a slight incline at the final end of the journey.

A massive gantry crane system was erected to hoist the one-piece structure on the tractor trailer. Premier Technology, a small business located in nearby Blackfoot, Idaho, manufactured lifting fixtures for the task, which also involved drilling more than 150 holes into the hot cell and inserting bolts that weighed 40 pounds each. An onsite maintenance team fabricated a large pan filled with sand to stabilize the uneven hot cell structure as it was transported on the trailer.

The hot cell was placed in the onsite landfill as a safe way to permanently dispose of radioactively contaminated structure. Once placed into the landfill, the hot cell was filled with grout, where it will be a visible structure until the 510,000-cubic-yard repository is filled to capacity and ultimately capped.

The hot cell leaves the Reactor Technology Complex.

About $6.5 million in American Recovery and Reinvestment Act funding was used for the project, which also included the demolition of two other hot cells at the ATR-C as well as the building that housed the structures. The hot cells were designed and built in the 1950s and 1960s to assemble/disassemble nuclear test reactor components and for the examination of materials exposed to neutron bombardment. They were also used to produce radioisotopes, including cobalt-60 and iridium-192, for radiography and other medical procedures, such as cancer treatment.

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