

# ERC team removes 125,000 tons of soil at 100N

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At the end of this month, the Environmental Restoration Contractor team will have removed and disposed of an estimated 125,000 tons of contaminated soil and debris from the 100N Area and transported the soil and debris to the Environmental Restoration Disposal Facility on Hanford's central plateau.

Bechtel Hanford and its subcontractor Foster Wheeler Environmental Corp. led the N Area cleanup effort along the Columbia River corridor. The project began in July 2000 and has focused on the removal of the N-3 crib and N-3 trench. The crib and trench work is scheduled for completion later this month.

"The removal of the crib and trench will become vital as N Area cleanup work continues," said Ernie Mokuiki, Bechtel's site subcontractor representative. "Since the project began, we have worked to dramatically reduce radiation levels in the area around the crib and trench."

The N-3 crib and trench were built after the N-1 crib and trench reached a holding limit. The N-1 crib and trench were the original waste-disposal facilities for the adjacent N Reactor. The concrete-covered cribs and trenches were used to dispose of liquid from the reactor's fuel-storage basin and water-based cooling systems. The cribs and trenches were designed to absorb liquid waste through layers of gravel, sand and soil before it could reach groundwater levels.

During the crib excavation, innovative on-site techniques by the ERC team improved safety conditions by reducing worker exposure to potential contaminants. Craft workers also teamed with supervisors to come up with ways to work more efficiently while keeping safety first.

In the removal of the concrete crib cover, craft worker input resulted in the use of a remote-operated diamond saw. The saw traveled along a track, cutting the concrete crib cover into removable rectangular panels. Workers stood next to the crib using controls to operate the saw.

"The saw method used by workers was a timely way to get things done," said Bechtel project engineer Dale Obenauer. "Normally the saw would have been manually guided, but this technique significantly trimmed workers' exposure to concrete dust and particles while placing workers as far as possible from potential radiation sources."

The concrete cover panels were then remotely clamped down using C-shaped fixtures and lifted with a large crawler crane. Instead of using worker-guided "tag lines" attached to the end of a panel, the workforce devised a system that used electric winches, or "tuggers," to maneuver the panels. Two tuggers were installed at the



Environmental Restoration Contractor team workers demolish a 100 N Area valve house that once was used to release liquid from Hanford's N Reactor into the adjacent N-3 crib and trench in the 100N Area.

*Continued on page 7.*

## ERC team removes 125,000 tons of soil at 100N, cont.

base of the crane boom and controlled from the cab by the crane operator using toggle switches. Workers improved safety and reduced radiological doses and potential contamination by not having contact with the panels during removal operations.

“With that bit of on-site ingenuity, people felt confident in their working environment,” said Rick Donahoe, Bechtel's site task lead. “The installation of electric tuggers on the crane, coupled with the proficiency of the crane operator, allowed the task to be completed safely and efficiently.”

The ERC team also removed large-diameter metal effluent piping that led from N Reactor valve houses to the crib. The contaminated piping was flattened and sheared into transportable lengths. With the majority of effluent structures associated with the crib deemed contaminated, the ERC team also demolished and removed the two valve houses that regulated liquid entry into the N-3 crib.

“It is extremely rewarding to see workers taking the time to care for the welfare of each other and develop creative on-site techniques to get the job done in a safe and efficient manner,” said DOE facility representative Cliff Ashley. “What they have done personifies the intent of the Integrated Environment, Safety and Health Management System. The work being done by the ERC team at N Area is helping to clean up contaminants along the Columbia River corridor while doing so in a safe working environment.” ♦