

River Corridor Project successfully enters 224-T

The excitement was visible as representatives of the Department of Energy Richland Operations Office, the Washington State Department of Health and the Defense Nuclear Facilities Safety Board watched River Corridor Project team members pry open the door of E Cell in the old 224-T Building on June 26. The purpose of the entry was to ensure that 224-T poses no potential risk to the public or the environment.



The 224-T canyon facility's process cells have been shut down since 1956 and had not been entered since the 1980s — until this past June 26 when a River Corridor Project team made successful entries into E Cell.

The 224-T Building is a small canyon facility with six process cells separated from three levels of operating galleries by a foot-thick concrete wall. The original mission of the 224-T Building was to concentrate dilute solutions of plutonium received from the 221-T Plutonium Separation Facility. The 244-T Building was placed into operation in 1945.

Plutonium concentration activities were suspended in the mid-1950s and operations were finally shut down in 1956. Although the building was used for a couple other missions, the cells have not been used since 1956 and not been entered since the 1980s.

The containment tent designed for this entry was the “brainchild” of Dale Sumsion, lead nuclear chemical operator. He used ideas borrowed from tents used at PUREX and B Plant, with substantial help from the ALARA Center. “The team from those days still works together and we use elements of the reengineering we learned then,” said Bob Moe, field work supervisor. Sumsion was named ALARA Person of the Quarter for his design ideas.

Heat was a problem

The teamwork and safety awareness were obvious as the group quickly worked to accomplish the entry. By that afternoon, two entries had been made to support the initial characterization work for E Cell. Because of the heat, however, the “stay” times were just a little over an hour.

During the morning entry, personnel were successful in removing the outer cover and framework assembly and performing surveys to give them access to the inner door. Items such as sharp edges, splinters and nails were packaged and padded to prevent injuries. They were packaged in two specially designed plastic sleeves and removed from the work area as low-level waste.

In the afternoon, the workers successfully installed the temporary door, removed the inner cell door and secured the temporary one in preparation for upcoming cell work. The work will include more detailed radiological surveys, videotape of the inner cell and robotic deployment of a probe to measure radionuclide hold-up in the process tanks. The new temporary door was locked to maintain control of the area.

Continued on page 13.

River Corridor Project successfully enters 224-T, cont.

Techniques refined

While all of the work did go according to plan, the time it took to accomplish it, combined with the heat, prompted the team to reevaluate some techniques in order to find methods to reduce the stay time. Two key initiatives were devised for the frame removal and the inner door removal that should shorten two hours of work time on fresh air to one hour. These techniques will be used in the upcoming work for F Cell.

“It’s obviously been several years that we’ve been trying to get in there,” said Dave Evans, director of the Facility Transition Division for DOE-RL. “It is particularly gratifying to get in and find that the radioactivity levels are much less than we anticipated... There has been great cooperation on solving issues related to the entry. I would like to express my appreciation to all those who helped make this a success — the support organizations, the regulators and the DNFSB who all made it possible.” ♦



Carpenter Gary Harting of Fluor Hanford cuts the lock from a cell door at the 224-T Building as nuclear chemical operator Dale Sumsion of FH looks on. The team that performed the entry consisted of a carpenter, radiation control technicians and nuclear chemical operators, some on loan from the Plutonium Finishing Plant.