



News from

Fluor Hanford

Contact: Michael Turner, (509) 376-2472
Michael_J_Turner@rl.gov

Cleanup Highlights

Since winning the contract in 1996, Fluor Hanford has made steady progress in cleaning up Hanford — the world's largest environmental restoration project. The year 2002, however, could be heralded as the year of unprecedented achievement thus far. Every project recorded tremendous progress in bringing the site a giant step closer to having cleanup complete...cleaning up legacy hazardous and radioactive waste that resulted from producing plutonium for our nation's defense.

Toward the end of 2002, Fluor Hanford signed a revised contract with the Department of Energy that marked a distinct change in the way the DOE holds its contractors accountable — paying only for accomplishments achieved, not just work done — and significantly shortened the schedules for cleanup. Simply put, the Hanford Site is on an accelerated pace for closure...35 years earlier than originally planned — by 2035 and possibly even 2025 — and at a savings of about \$35 billion.

PROGRESS THROUGH 2002

The Spent Nuclear Fuel Project has taken more than half (2.3 million pounds) of the degrading used nuclear fuel out of underwater storage in two leak-prone concrete pools (the K Basins) near the Columbia River and moved it into dry storage 12 miles inland. The 4.6 million pounds of corroding fuel and the more than 2.6 million gallons of radioactive water in the two basins — enough to fill 104 average, backyard in-ground swimming pools — collectively pose the single largest risk to potentially contaminating the Columbia River. Fluor Hanford has dramatically improved the rate of removing, processing, and storing the fuel in preparation for eventually cleaning (deactivating) and closing the basins that are just 400 yards from the river. In 2001, the Spent Nuclear Fuel Project shipped three loads of processed fuel a month to interim dry storage in underground vaults 12 miles away from the river. By the last quarter of 2002, that number had jumped to about 20 shipments a month. By the end of the year, Fluor Hanford had removed nearly half of the spent nuclear fuel, representing 25 million curies of radioactivity.

The Plutonium Finishing Plant has processed more than 60% of the total inventory of 37,000 pounds of plutonium-bearing material including solutions, the most unstable form. Until it is processed, this material is extremely unstable and represents an immediate risk to workers and the public because of its reactivity and pyrophoric properties. Using technologies developed at both Pacific Northwest National Laboratory (also at Hanford) and other DOE sites, Fluor Hanford twice quadrupled the rate at which the plutonium materials were stabilized, meeting and even beating milestones set by the legally binding Tri-Party Agreement and the Defense Nuclear Facilities Safety Board.

Other projects managed by Fluor Hanford have contributed to accelerating cleanup and eventually “shrinking” the 560 square miles of today’s Hanford site to a consolidated waste-management area of 75 square miles...the amount of radioactivity closest to the City of Richland was reduced by 90% ...12 shipments of transuranic waste were sent off site for permanent disposal. At the Waste Management Project — where activities include retrieving, storing, treating, and disposing of radioactive solid and liquid waste — personnel continued to package and ship transuranic (TRU) waste to the Waste Isolation Pilot Plant in New Mexico. Between July 12, 2000 — the date of the first shipment of TRU waste off the site — and the end of 2002, 12 shipments of TRU waste had been sent to the WIPP. At the Central Plateau Remediation Project, three large cells, used for processing nuclear material, were cleaned out. This project has reduced the amount of radioactivity closest to the City of Richland from 13 million curies to just 1 million — a reduction of 90%.

Safety is Fluor Hanford’s priority...the average time between injuries resulting in missed days away from work is 16 times better now than when Fluor assumed the Hanford contract (260,000 hours in 1996 vs 4 million hours today)...and the OSHA-recordable injury rate is 75% better than industry average. The DOE also recognized Fluor Hanford for its commitment to safety by awarding six Fluor Hanford projects the Voluntary Protection Program “STAR,” shared with only 20 other projects in the entire DOE complex. Because of this distinction, Fluor Hanford provided safety-program mentoring to the Puget Sound Naval Shipyard at DOE’s request.

JANUARY-APRIL 2003

In February, personnel at the Plutonium Finishing Plant completed stabilizing “polycubes” — two-inch cubes of polystyrene impregnated with plutonium — beating the schedule by a month. All the plutonium-bearing material is scheduled to be stabilized by February 2004.

By the end of April, the newly named Groundwater Protection Program had met all of the six Tri-Party Agreement milestones assigned to date — five of them early. The groundwater at Hanford has long been a focus of the Northwest because of its potential to contaminate the Columbia River. Since assuming responsibility for groundwater protection last summer, Fluor Hanford has taken the project head-on, and is performing remedial or preventative activities across the site.

Fluor Hanford’s Waste Management Project sent nine shipments of TRU waste from the Hanford Site to WIPP for permanent storage. The project is gearing up to make as many as seven shipments in May and continue at that pace, or better, through the end of the year.

An additional 380,000 pounds of spent nuclear fuel were removed from the K Basins and sent to dry storage. The project is on schedule to meet the Tri-Party Agreement milestone of having more than 2.6 million pounds of fuel out of the basins by May 31, 2003.

A court ruling in April allowed the decommissioning of the Fast Flux Test Facility to begin...liquid sodium, a molten metal, was drained from the cooling loops of the reactor that was once used as a national research facility for testing advanced nuclear fuels, materials, and components. During full-scale operation from 1982-1992, three cooling loops kept liquid sodium in the reactor core at about 1,000 degrees Fahrenheit. Each cooling loop has a primary and a secondary side. Fluor Hanford drained the sodium, two months ahead of the legal deadline. Currently, the project is removing spent nuclear fuel from the reactor’s core.

Three Fluor Hanford-managed projects each attained the notable “million hours” without a lost-time injury. To put this in perspective, it took 2.5 million “man hours” to build the new Seahawks Stadium, *total*.

#