



## Project Hanford Management Contract

# Cleanup Progress Report

## October – December 1998

**The Project Hanford Management Contract team is committed to results. Aggressive quality improvements will drive our positive momentum from 1998 through fiscal year 1999 to meet the challenges of this enormous cleanup project. Focusing on quality improvement will allow us to raise our performance to a new standard of excellence at Hanford that our stakeholders expect – and we will take pride in delivering.**

A handwritten signature in black ink that reads "Ron Hanson". The signature is written in a cursive style with a large, looping initial "R".

**President and Chief Executive Officer  
Fluor Daniel Hanford, Inc.**

# Contents

Highlights.....	2
Hanford Site Map .....	3
Environment, Safety, Health and Quality.....	4
Facility Stabilization Project .....	7
Spent Nuclear Fuel Project .....	10
Tank Waste Remediation System Project .....	12
Waste Management Project .....	14
Site Infrastructure .....	16
Economic Transition.....	18
HAMMER .....	19
For More Information .....	21

Prime Contractor (Integrator):

- **Fluor Daniel Hanford, Inc.**

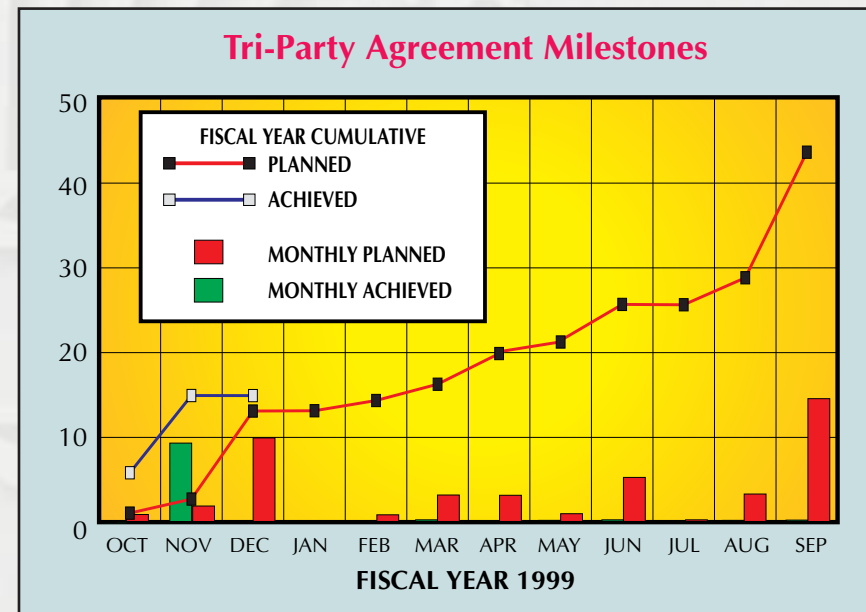
Principal Subcontractors:

- **B&W Hanford Company** (Facility Stabilization Project)
- **DE&S Hanford, Inc.** (Spent Nuclear Fuel Project)
- **DynCorp Tri-Cities Services, Inc.** (Site Infrastructure)
- **Lockheed Martin Hanford Corporation**  
(Tank Waste Remediation System Project)
- **Numatec Hanford Corporation** (Engineering & Technology)
- **Waste Management Federal Services of Hanford, Inc.**  
(Waste Management Project)



# 1<sup>st</sup> Quarter Fiscal Year 1999 Highlights

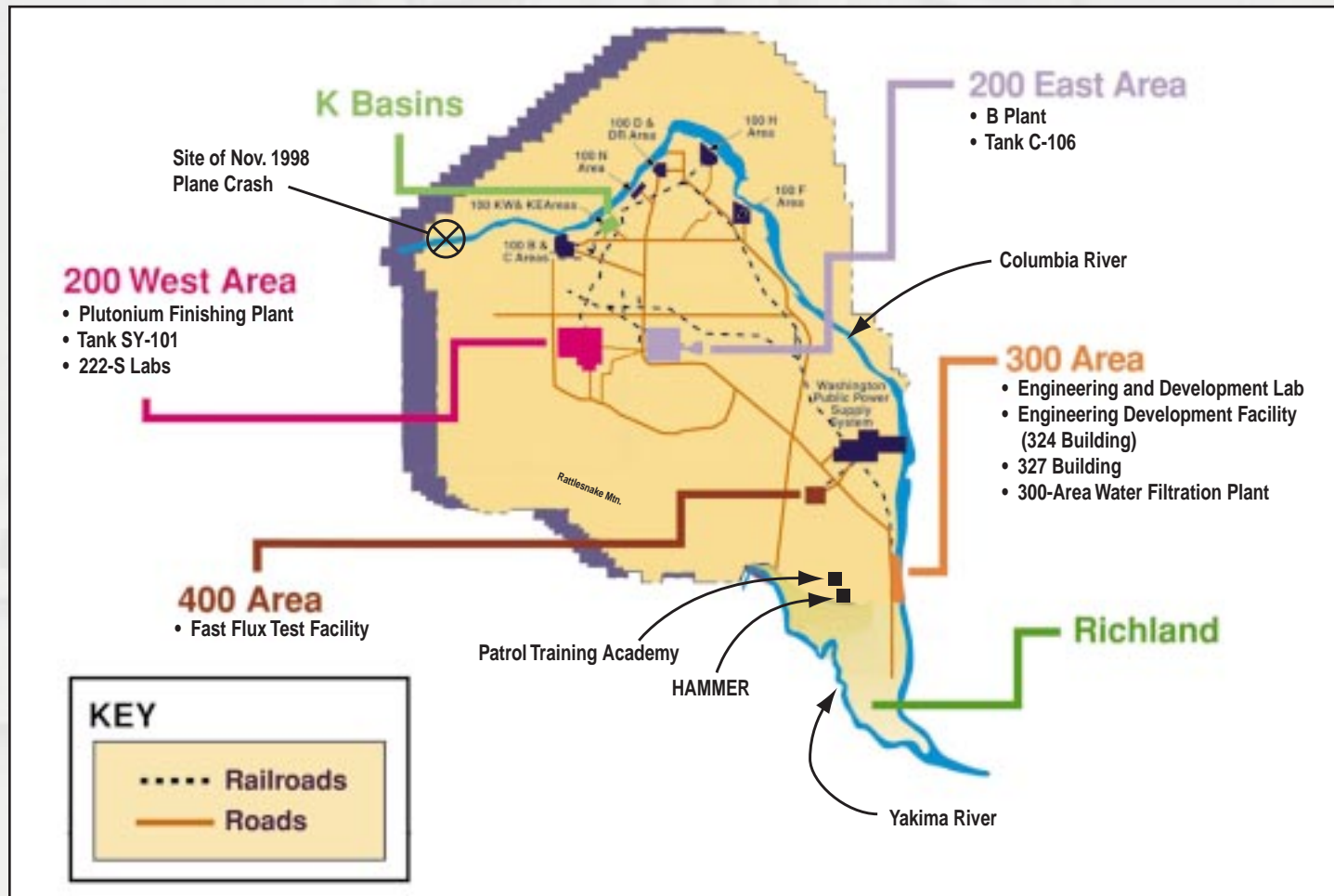
- Began removing wastes from high-heat Tank C-106
- Plutonium Finishing Plant readied to resume plutonium stabilization
- Met first Tri-Party Agreement milestone for Spent Nuclear Fuel Project
- Transferred surplus equipment for reuse, creating new local jobs



*The Tri-Party Agreement between DOE, Washington State and the U.S. Environmental Protection Agency guides Hanford cleanup. At the end of December, we were slightly ahead of our year-to-date target because we completed six milestones before the start of the fiscal year.*



## These Hanford areas and facilities are cited in this report....



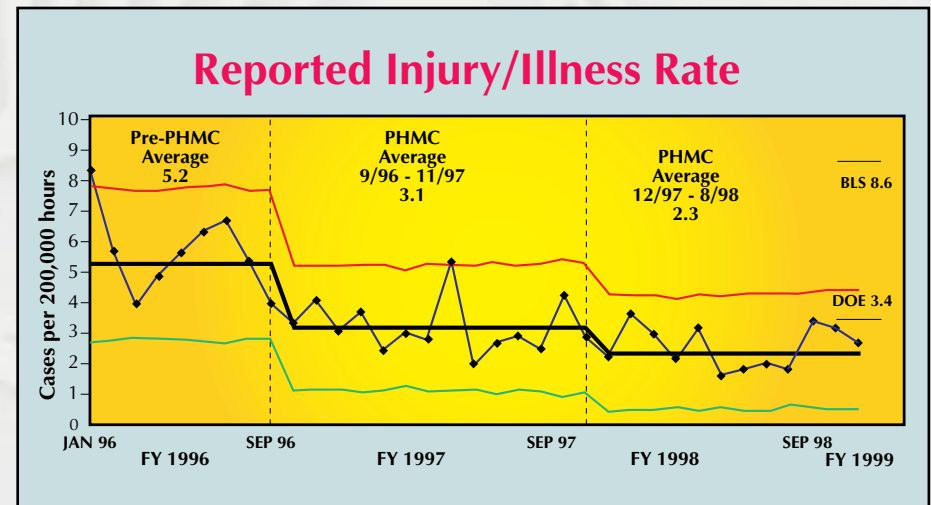
# Environment, Safety, Health and Quality

## Expectation:

Improve performance by integrating safety, radiological protection, chemical management, environmental protection, emergency preparedness and quality into work planning and implementation.

## Status Update:

- Since October 1, 1996, we've cut injury rates in half and reduced radiation exposure 46 percent.
- Based on success of a similar approach in fiscal year 1998, the current safety campaign focuses on reducing back strains from awkward body motions in three occupations that account for 50 percent of all injuries.



*A strong safety performance has been sustained.*



# Environment, Safety, Health and Quality

## Status Update:

- Survey shows greater employee confidence in acting on Stop Work responsibility and expressing safety concerns to management.
- Spent Nuclear Fuel Project began using new job-hazard analysis process to increase teaming between workers and environment, safety and health staff, and improve communication. We are introducing the new approach to all Projects.
- We are implementing a single, defined, safety management system that integrates environment, safety and health requirements into the work planning and execution process to create a safe, productive workplace.



# Environment, Safety, Health and Quality

## Status Update:

- **New Quality Improvement Plan defines actions to correct fundamental quality weaknesses.**
- **All 310 of our radiological control technicians passed comprehensive requalifying exams.**
- **Our HAMMER Training Center designed improved, hands-on emergency-response training for Hanford building managers.**



*In 1998, the U.S. Environmental Protection Agency performed its first “multi-media” inspection of the Hanford Site, covering all aspects of potential soil, water or air pollution. Concerns with waste designation and emergency preparedness mentioned by the EPA during the inspection are being addressed.*



# Facility Stabilization Project

## Expectation:

Safely deactivate contaminated buildings to reduce risk to workers and the environment while decreasing cost to taxpayers.

## Status Update:

- **Completed Operational Readiness Reviews at Plutonium Finishing Plant. Plutonium stabilization will resume in early 1999.**
- **Washington State approved our Closure Plan for the 324 Building Radio-chemical Engineering Cells and associated areas.**



*Surplus 8,250-gallon stainless-steel tank from deactivated B Plant was one of 11 transferred to a cattle-feed production plant being built in nearby Burbank, Washington.*

# Facility Stabilization Project

## Status Update:

- Began moving waste and equipment from 327 Building to compliant storage elsewhere at Hanford.
- Upgraded underground fuel-oil tank monitoring system to bring Fast Flux Test Facility (FFTF) into compliance with current State regulations.
- Completed safety analysis of legacy sodium facility in the 300 Area. This provides basis for storage and eventual disposition of sodium used in FFTF development.



*An October ceremony marked B Plant deactivation four years ahead of schedule and \$100 million under budget. On hand, from left: Senator Patty Murray, Energy Secretary Bill Richardson, DOE Richland Manager John Wagoner, Fluor Daniel Hanford President Ron Hanson, DOE Richland Assistant Manager for Facility Transition Pete Knollmeyer, and B Plant Director Bill Bailey.*

# Facility Stabilization Project

## Status Update:

- Energy Secretary Bill Richardson delayed decision on FFTF's future until April, when studies on future U.S. research and isotope production needs will be complete.

## Future Focus Areas:

- Finalize Plutonium Finishing Plant (PFP) integrated project management plan.
- Initiate restart and sustain operations at PFP.
- Accelerate additional PFP stabilization processes to recover schedule.



*Dedicated teams helped update plans for Plutonium Finishing Plant stabilizing operations. Draft identifies opportunities to regain time lost while technical and safety issues were resolved during past two years.*



# Spent Nuclear Fuel Project

## Expectation:

Protect the Columbia River by safely moving more than 2,100 metric tons of deteriorating spent nuclear fuel from the aging K Basins to safe, dry, interim storage in the center of the Hanford Site.

## Status Update:

- DOE approved the Project's cost and schedule baseline, reflecting recently negotiated Tri-Party Agreement milestones.
- Delivered our first commitment under proposed Tri-Party Agreement schedule 10 days early. It was a feasibility study defining the project's new regulatory framework.
- Exceeded one year without a skin or clothing radiation contamination, despite 30% increase in worker entries to the basins.



*K West Basin floor grating is removed to make way for fuel retrieval system installation, now under way.*

# Spent Nuclear Fuel Project

## Status Update:

- Completed qualification tests and confirmed final design of first fuel-drying process system in engineering laboratories.
- Resolved engineering design and safety issues related to the fuel-drying process and began purchasing the needed equipment.

## Future Focus Areas:

- Continue to meet or beat the new baseline.
- Complete designs for all sub-projects.
- Develop systems and operations culture necessary for safe, effective fuel removal.



*During peer-led training in the engineering laboratory, K Basin operators quickly become proficient with new spent fuel retrieval system.*



# Tank Waste Remediation System Project

## Expectation:

Protect the Columbia River, our workers and the public by safely storing and disposing of high-level radioactive tank waste.

## Status Update:

- Continued pumping from four single-shell underground tanks. More than 110,000 gallons of liquid wastes pumped out since mid-1998.
- Developed detailed schedule for pumping 26 remaining single-shell tanks.
- Began sluicing single-shell Tank C-106, a major step in reducing safety risk from this high-heat tank. Analysis under way to evaluate vapors exhausted during sluicing.
- Developed operating and maintenance system concepts and plans for delivery of tank waste to the private contractor for waste treatment.



*Top: Screen is installed in an underground single-shell tank so that radioactive liquid wastes can be pumped out. Bottom: Workers practice Tank C-106 sluicing process.*

# Tank Waste Remediation System Project

## Status Update:

- Closed safety issue on organic complexants in underground tanks. As a result, 18 tanks were taken off the Congressional Watch List.
- Concluded Tri-Party Agreement negotiations on characterization of groundwater and vadose zone under single-shell tank farms.

## Future Focus Areas:

- Finalize consent decree covering single-shell tank pumping milestones.
- Conduct lab tests and evaluate options to mitigate rise in measured level of Tank SY-101 wastes.
- Resolve Washington State's leak-detection concerns.



*Workers obtain a sample of gases retained inside Tank SY-101.*

# Waste Management Project

## Expectation:

Safely treat, store and dispose of radioactive and hazardous solid and liquid wastes, provide analytical services, generator services, and pollution prevention and waste minimization program coordination.

## Status Update:

- DOE's Carlsbad Office approved final major baseline document needed before certifying shipment of transuranic waste to Waste Isolation Pilot Plant in New Mexico. Our certification plan was praised for its quality.
- Washington State granted our exemption request to treat certain wastes onsite by surrounding them with metal or plastic coverings, a method previously demonstrated at Hanford.



*Mixed low-level waste debris is "macroencapsulated" in high-density polyethylene tubes.*

# Waste Management Project

## Status Update:

- Several new instruments in 222-S Labs greatly enhanced tank waste sample analysis and development of tank waste retrieval methods.

## Future Focus Areas:

- Achieve full certification to ship transuranic waste to Waste Isolation Pilot Plant, to reduce Hanford's stored waste volume.
- Continue cooperative efforts with other DOE sites to accelerate cleanup and waste treatment and save tax dollars. Example: 17 cubic meters of mixed low-level Hanford waste will be treated in early 1999 at the Idaho National Engineering and Environmental Laboratory.



*Workers sampled and analyzed air in headspaces of the first 17 transuranic waste drums destined for shipment to New Mexico, and demonstrated our ability to safely control gases that could be generated during transport.*



## Site Infrastructure

### Expectation:

Optimize the Hanford Site infrastructure, reduce site inventories and be more cost effective.

### Status Update:

- Shut down the 300-Area water filtration plant, enabling removal of associated chlorine tanks.
- Completed a multi-year \$11-million capital project: a backup water-supply system for fire protection.
- Conducted all flammable and reactive waste storage site inspections required for this fiscal year.



*Two non-compliant, underground, fuel-oil tanks were removed, one of them from atop Hanford's Rattlesnake Mountain.*

Site Infrastructure





## Site Infrastructure

### Future Focus Areas:

- Smoothly transition calibration services to private company
- Integrate the weed and pest control program for the entire Project Hanford Management Contract team.



*In conjunction with 2<sup>nd</sup> annual snow awareness day, contractor staff participated in tabletop exercises to review winter preparations and responses to cold-weather scenarios.*



*Hanford Fire Department coordinated rescue and recovery efforts of 19 agencies when a plane crashed in the Columbia River at Hanford's border.*

# Economic Transition

## Expectation:

Support economic diversification of the eight-county region surrounding the Hanford Site.

## Status Update:

- Westway Trading Corp. of New Orleans sited its new \$1.5-million livestock feed plant and distribution hub nearby. With our assistance and surplus Hanford equipment, up to 20 jobs may be created.
- Our venture-capital firm, Columbia Basin Ventures, made \$1 million equity investment in prepaid calling-card maker Mundo Communications Network. Firm projects up to five new jobs this year.

## Future Focus Area:

- Explore options for funding asset conversions.



*Gunderson Northwest expanded its local railcar repair business, thanks to transfer of a Hanford surplus 60-ton crane and our donation to help install it at the firm's plant. Up to 40 new non-Hanford jobs are projected.*

Economic Transition



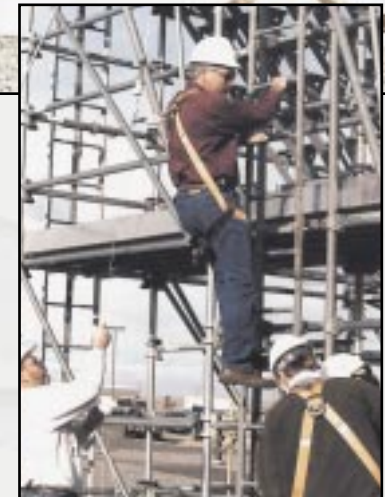
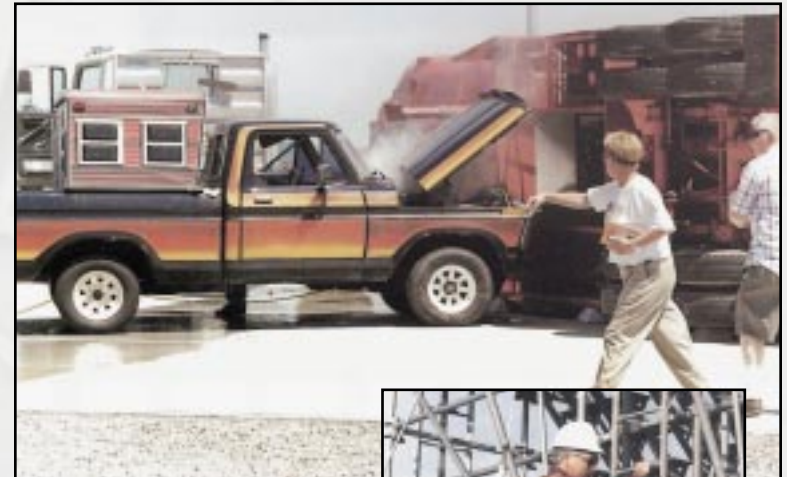
# Volpentest HAMMER Training Center

## Expectation:

Host, broker and provide training, with hands-on use of realistic props and settings, to save lives, reduce injuries, increase worker productivity and serve as a catalyst for regional training.

## Status Update:

- Delivered 340 classes this quarter for a total of 7,186 student days, including 329 classes for the Hanford workforce, HAMMER's first priority.
- Conducted 16 classes as DOE National Center of Excellence for transportation training. We plan to deliver 70 such classes this fiscal year for the same dollars it took to conduct 24 in fiscal year 1998.
- Took responsibility for Hanford Patrol Training Academy to market excess capacity.



*Student satisfaction with HAMMER courses is high, whether a Hanford worker fall-protection course (right) or hazardous waste refresher training for the Teamsters (above).*



# Volpentest HAMMER Training Center

## Future Focus Areas:

- Add more hands-on activities and use of props to Hanford worker training programs.
- Design and implement the pilot for a National Counternarcotics Center.
- Expand State-sponsored training, such as WorkFirst.



*HAMMER provides realistic drills to test Hanford Fire Department readiness for emergency events.*

## For More Information...



- **U.S. Department of Energy**  
Office of External Affairs  
P.O. Box 550, MS A7-75  
Richland, WA 99352  
(509) 376-5742



- **Fluor Daniel Hanford, Inc.**  
Office of Communications  
& Media Relations  
P.O. Box 1000, MS B3-30  
Richland, WA 99352  
(509) 376-5101

OR

- Visit the Hanford Homepage at: <http://www.hanford.gov>

RL-F98-009 1/99

