

FLUOR HANFORD

F Y 1 9 9 9 A N N U A L R E P O R T



*Meeting the
environmental
challenge safely,
through energy,
innovation and
leadership*

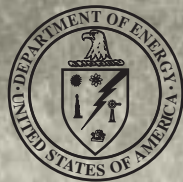


TABLE OF Contents

Letter from the President.....	1
Background & Area Map.....	2
FY 1999 Accomplishments.....	3
Environment, Safety & Health.....	4-5

PROTECT THE RIVER

Spent Nuclear Fuel.....	6
300 Area Deactivation.....	7

TRANSITION 200 AREA

Nuclear Material Stabilization.....	9
Waste Management.....	10-11
Tank Waste Remediation System & River Protection Project.....	12-13

TRANSFORM THE ECONOMY

Economic Development & Transition.....	14
Site Infrastructure.....	15

SUPPORT & SERVICES

Communications & Community Programs.....	16
Safeguards & Security.....	16
Project Controls & Internal Audit.....	17
Volpentest HAMMER Training & Education Center.....	18
Fast Flux Test Facility.....	19
Future Focus.....	20

I am pleased to share this assessment of our accomplishments and challenges during Fiscal Year 1999. In this report, we take stock of our progress toward Hanford's cleanup goals and identify areas that require additional focus as we enter our fourth year on the Hanford site.

During 1999, we have made steady gains in cleaning up and managing the site's legacy wastes. In many areas, we are actually accelerating the scheduled cleanup pace. I'm proud that this work is being done safely and more cost-effectively than ever before. Our team has sustained its emphasis on employee safety, and we have implemented the Integrated Environment, Safety and Health Management System to further enhance our programs.

These gains could not have been made without the teamwork of collective bargaining personnel who have set a goal of zero accidents and have made other significant contributions to our safety program. Together this year, we were able to sustain our overall OSHA recordable case rate at 2.5 injuries reported per 200,000 hours worked, the third best record in the DOE Complex. This is yet another example of the dedication and commitment shown by all our employees at Hanford.

During Fiscal Year 1999, progress against cleanup goals included:

- Pumping radioactive wastes from single- to double-shell tanks in amounts that far exceeded targets
- Resuming full-scale stabilization activities at the Plutonium Finishing Plant after a two-year self-imposed restriction to implement safety improvements



- Retrieving transuranic wastes and completing preparations 14 months ahead of plan for transportation to a permanent storage site
- Reducing nuclear material inventories near the river and populated areas
- Making significant headway toward moving spent nuclear fuels out of the K Basins into long-term storage

Our progress continues to provide important lessons. For instance, we are now putting the world's best technology to work for tasks such as remote handling and preparations for long-term storage of spent nuclear fuel. We continue to look for breakthrough, innovative approaches to expeditiously get real cleanup results. Implementing innovative, cost-effective methods of achieving project milestones will help us continue to deliver outstanding results for both our Department of Energy client and for the taxpayer.

We're proud of the achievements we've made this fiscal year, and we know that through many of these achievements, we are poised to make even greater gains in the year ahead. The Department of Energy's Richland Operations office has articulated a fresh vision for the site, which has our enthusiastic support. In

response, we are sharpening our focus on the distinct pieces of work that support the vision:

- Restoring the Columbia River corridor
- Transitioning the site's central plateau for long-term waste management
- Putting assets to work for the future of the Tri-Cities and neighboring communities

We have developed and implemented a new commercial business model to better accomplish these gains – a model built around a flexible, project-focused organization. This new organization is flatter, layers of management have been eliminated, project focus and efficiency are increased, and significant resources have been redirected to the field where cleanup is taking place. This new business model also joins together the employees of our subcontractor team, allowing us to capitalize on each individual's skill – regardless of contractor affiliation.

Streamlining Fluor Hanford operations allows the Hanford site, more than ever before, to benefit from Fluor's commercial project-management expertise. We fully intend to honor the cleanup commitments we made to Hanford and the community three years ago. We welcome your review of our progress as we continue to raise the bar to achieve even higher levels of performance.

Sincerely,

A handwritten signature in black ink that reads "Ron Hanson". The signature is written in a cursive, flowing style.

President and Chief Executive Officer
Fluor Hanford

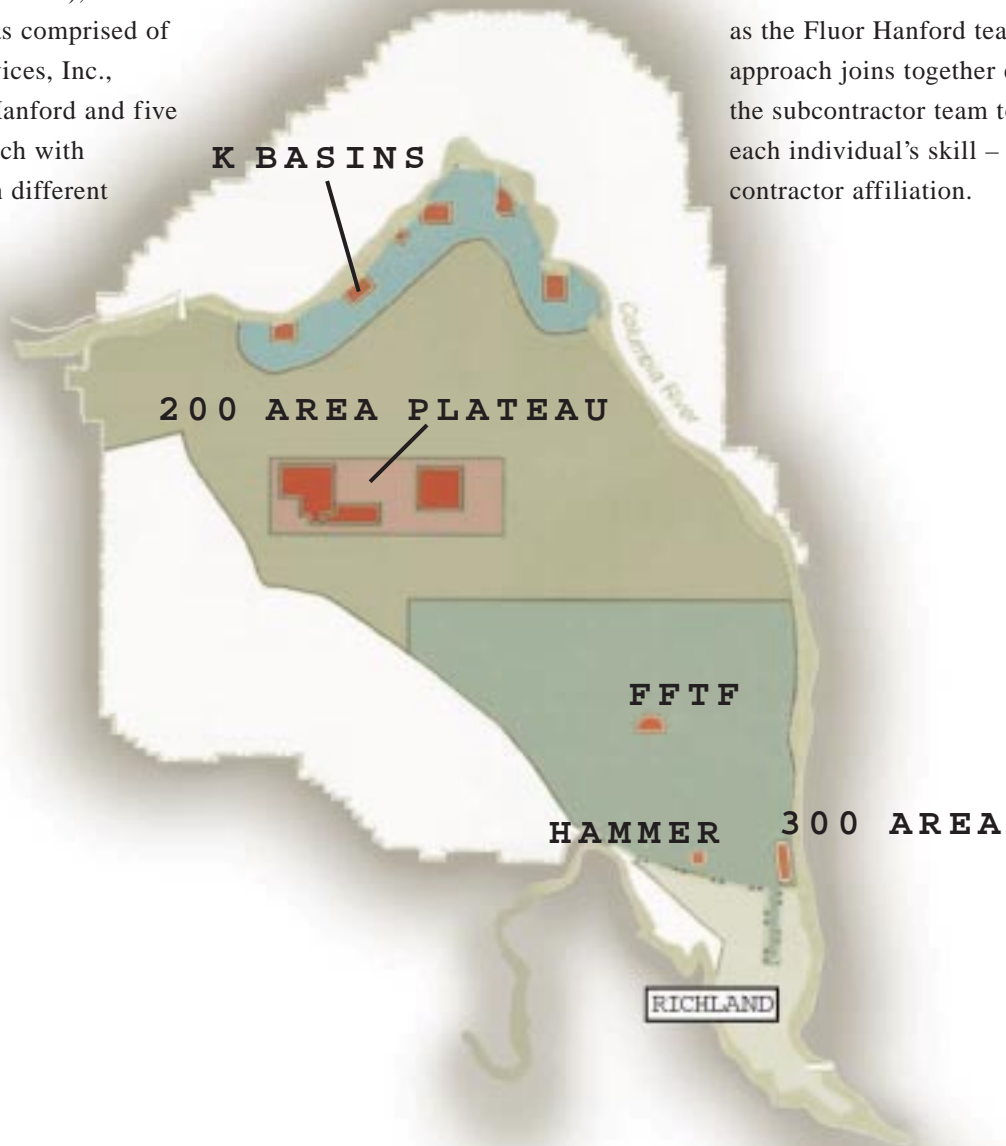
Background AND AREA MAP

Fluor Hanford, a Fluor Global Services company, oversees cleanup and economic transition of the 560-square-mile Hanford site located in southeast Washington State under contract to the U.S. Department of Energy (DOE). Formerly known as the Project Hanford Management Contract (PHMC), the team led by Fluor Hanford was comprised of DynCorp Tri-Cities Services, Inc., Protection Technology Hanford and five major subcontractors, each with expertise in dealing with different aspects of the cleanup.

Subcontractors included:

- B&W Hanford Company
- DE&S Hanford, Inc.
- Lockheed Martin Hanford Corporation
- Numatec Hanford Corporation
- Waste Management Federal Services of Hanford, Inc.

On October 1, 1999, Lockheed Martin Hanford Corporation (LHMC), who managed cleanup of the Tank Farms as a subcontractor to Fluor Hanford, became the subcontractor to DOE's newly-created Office of River Protection. Under Fluor Hanford's new business model, the PHMC subcontractors have now been integrated as the Fluor Hanford team. The new approach joins together employees of the subcontractor team to capitalize on each individual's skill – regardless of contractor affiliation.



FY 1999 TOP ACCOMPLISHMENTS

1) Continued strong, site-wide safety performance through sustained emphasis on worker safety and implementation of the Integrated Environment, Safety and Health Management System.



The OSHA recordable case rate for 1999 was maintained at 2.5 injuries reported per 200,000 hours worked after a **50% reduction in injuries** during Fluor Hanford's first two years at Hanford.

2) *Nearly 1.9 million liters (half a million gallons) of radioactive waste were pumped* from aging single-shell tanks into safer double-shell tanks – 190,000 liters (50,000 gallons) beyond the target set for the Interim Stabilization Project.

3) The new cross-site transfer line – critical for pumping single-shell tanks in Hanford's 200 West Area – was used to *transfer 6.27 million liters (1.65 million gallons) of radioactive waste into double-shell Tank 241-AP-107.*

4) The long-standing high-heat safety issue in Tank 241-C-106 was effectively resolved with the successful sluicing of 95% of the tank's sludge. This work was completed **2.5 months ahead of schedule and \$1.8 million under budget.**



5) Significant quantities of radioactive materials have been moved out of the 300 Area since deactivation began in 1996, including **150,000 curies of spent fuel samples; 8 million curies of waste vitrified into glass logs; 400,000 curies of cesium; and 137,236 waste containers and seven shipments of spent nuclear fuel** removed this year – greatly reducing nuclear inventory near populated areas.



6) The Spent Nuclear Fuel Project made significant progress toward the November 2000 target to begin moving fuel away from the river and into long-term storage. **The Integrated Water Treatment System was installed, the Cold Vacuum Drying Facility structure was completed, and the Canister Storage Building is essentially finished.**

7) Full-scale plutonium stabilization resumed at the Plutonium Finishing Plant after a two-year, self-imposed hold to implement safety improvements. **150 oxide and sludge items were stabilized – 40 more than targeted.**

8) Retrieval of stored transuranic waste was initiated – **14 months ahead of schedule** – in preparation for shipment to the Waste Isolation Pilot Plant.

9) Onsite disposal of mixed low-level waste from both onsite and offsite generators was initiated in the Hanford

mixed-waste trench, meeting the Tri-Party Agreement milestone commitment **more than 18 months ahead of schedule.**



10) Fluor Hanford furthered its commitment to Tri-Cities community economic development by **committing \$4.3 million** to build a 100,000-square-foot industrial building to attract new business to the area.

11) Fluor Hanford continued its aggressive indirect-cost reduction effort, resulting in a **\$12 million savings**. This reduction includes cost-cutting strategies and process improvement.

12) HAMMER conducted two highly successful performance-based exercises. One was a Tank Farms emergency response simulation. The other was a



Plutonium Finishing Plant mock-up for replacing equipment in a highly radioactive location. The mock-up identified a major safety issue, 24 equipment changes and 12 critical work-sequence changes that were implemented for the actual job. **For every dollar spent to stage the mock-up, the plant saved \$300 in potential corrective actions.**

Environment SAFETY & HEALTH

Fluor Hanford employees have achieved some impressive safety records in a variety of categories during the year. Strong site-wide safety performance has been achieved through successful implementation of the Integrated Environment, Safety and Health Management System (ISMS), and through continuing employee partnership in reducing injuries.

Integrated Environment, Safety and Health Management System

Fluor Hanford is finishing the substantial task of implementing the ISMS at Hanford. ISMS is a method of “doing work safely,” aimed at protecting site workers, the public and the environment.

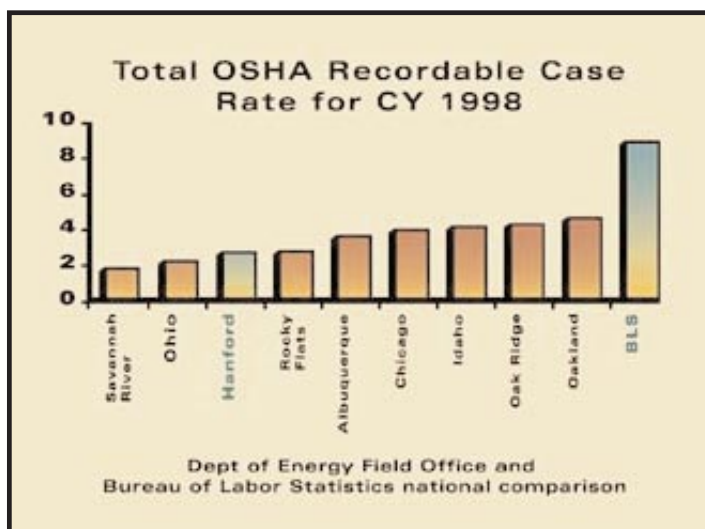
The ISMS plan establishes a single, defined system that integrates environmental, safety and health requirements into Hanford’s work planning and execution processes. It improves efficiency by identifying, ana-

Hanford’s OSHA recordable case rate is lower than the Bureau of Labor Statistics national average, and lower than almost every other site in the DOE Complex.

lyzing and controlling work hazards and environmental impacts. It also increases worker involvement and ownership in the work-planning processes.

Nearly two years of preparation culminated in a two-week-long Department of Energy (DOE) assessment of Phase I, which found that the Fluor Hanford team had successfully met 12 of 13 verification objectives. The last objective will be verified by the end of the year. Phase II verification activities focus on ISMS implementation in the facilities and projects. Phase I and II reviews for K Basins and the River Protection Project (formerly the Tank Waste Remediation System) have already been verified.

Effective use of the ISMS plan integrates the best practices of the DOE’s Voluntary Protection Program with other Fluor Hanford safety and performance improvement initiatives.



Safe Work Accomplishments

- Fluor Hanford employees reached 4 million safe work hours. (Recorded since October 1, 1996)
- Workers at the Plutonium Finishing Plant, the Fast Flux Test Facility, the 300 Area and the Tank Farms each crossed the 1 million safe hours mark.
- Engineering & Technology staff have gone three years without a lost workday and reached one million safe hours.
- Workers at the Waste Sampling and Characterization Facility have gone without a lost time injury since operation began on October 1, 1993. The Waste Receiving and Processing facility has operated without a lost time injury since it began operation in January 1997.
- The Cold Vacuum Drying Facility construction project has gone more than 33 months without an OSHA recordable injury.

Emergency Preparedness – Hanford Incident Command System Improvements

Improvements in the Hanford Incident Command System earned one Hanford team an impressive “Superior Performance” rating in a FY 1999 DOE

exercise evaluation report. The site-wide task team is comprised of members from the Hanford Fire Department, Hanford Patrol, Pacific Northwest National Laboratory, Bechtel Hanford, Inc. and Fluor Hanford. The goal was to improve the emergency response effort through implementation of a single Incident Command System. The rating illustrates the concerted efforts that have been made on the site to improve emergency preparedness programs.

Health & Safety Symposia

Fluor Hanford developed and conducted major health and safety symposia during the year including:

- The fifth annual Hanford Health and Safety Exposition, attended by 14,000 employees and community members. Expo '99 was an exhibition of information, equipment, supplies and success stories to promote health and safety of workers both at home and at work.
- A two-day forum entitled "Safety Summit '99," sponsored jointly by

Fluor Hanford, the labor unions and DOE's Richland Operations office, to explore means of taking Hanford safety to the next level of performance.

- An applied ALARA (As Low As Reasonably Achievable) radiation workshop attended by 150 people, comprised



of contractors from across the DOE Complex and other representatives of the nuclear industry.

Safety Culture

Fluor Hanford continued improving the safety culture by increasing worker involvement. For example, Fluor Hanford continued to build on a strong partnership with the Hanford Atomic Metal Trades Council on the Union Safety Representative program, which has enhanced employee involvement, improved lines of communication and strengthened employee commitment to a safety-conscious work environment.

In January, full-scale plutonium stabilization resumed at PFP after a two-year, self-imposed hold to implement safety improvements.

After successful completion of operations readiness reviews, DOE cited five outstanding areas at PFP including emergency preparedness, criticality safety, quality assurance, maintenance and radiological controls.



SPENT Nuclear Fuel PROJECT

The Spent Nuclear Fuel project is one of the nation's highest environmental cleanup priorities. Nearly 80 percent of the Department of Energy's (DOE) inventory of spent nuclear fuel is stored underwater at Hanford in two 4.94-million-liter (1.3-million-gallon) pools. The pools – known as the K Basins – are less than a quarter-mile from the Columbia River and close to now-defunct production reactors. The K Basins are aging and the fuel is corroding, so the fuel must be moved to safe interim storage to minimize risk to the Columbia River until a permanent national repository is established.

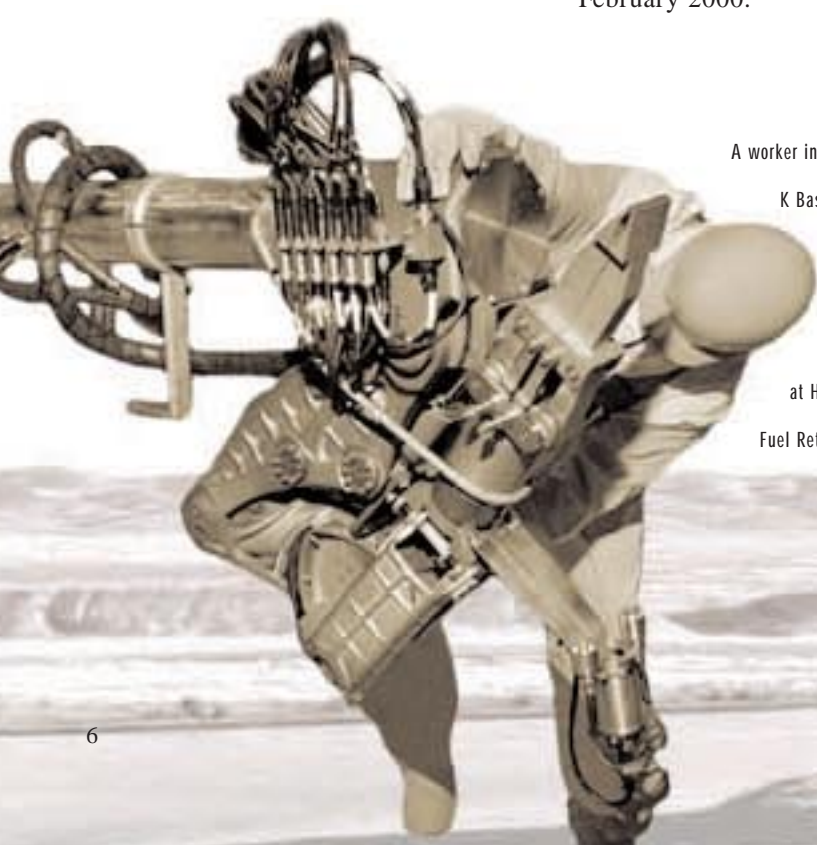
The project's goal is to move the more than 2,070 metric tons (2,300 tons) of corroding spent fuel from the K Basins, dry it in the new Cold Vacuum Drying Facility, and place it in interim storage at Hanford's 200 Area plateau near the center of the site.

This year, the Tri-Party Agreement agencies adopted the first set of reality-based, legally enforceable milestones and target dates for the project.

A number of one-of-a-kind processes and facilities must be designed, tested, built and retested in order to complete the project. Significant progress was made on that front in FY 1999:

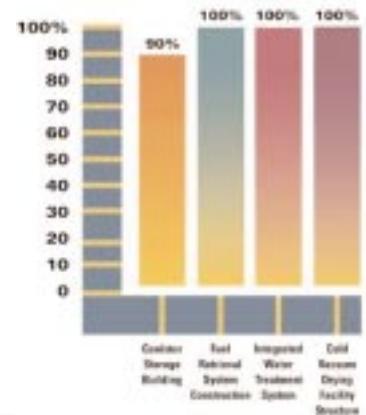
- The Canister Storage Building – a storage facility in Hanford's central plateau that will house the spent fuel once it has been dried and sealed inside robust canisters for storage – is more than 90% complete, and is on time and within budget. Construction will be complete and operations can begin in the spring of 2000.
- The cask loading system, which will move the spent fuel from the K West Basin to the Cold Vacuum Drying Facility, is receiving an additional safety modification and will be complete by February 2000.

- The Cold Vacuum Drying Facility structure was completed. Its first two bays were assembled and have passed initial acceptance tests.
- Construction of the Fuel Retrieval System (FRS) in the K West Basin was completed, and will allow testing to go forward earlier than planned. The FRS will pick up, sort, wash and place into containers the nearly 55,000 fuel elements in K West for transport to the drying facility – a crucial step in the project's path forward.
- The Integrated Water Treatment System (IWTS) in the K West Basin was completed in June, two weeks ahead of schedule. IWTS will filter and collect sludge particles during the underwater sorting, cleaning and loading operation in order to maintain clarity and optimal working conditions.
- Several key technical issues associated with the fuel were resolved, ensuring that the cleanup processes will be safe.



A worker in the K Basins prepares to install the "Konan Arm," a robotic device built and tested at Hanford for the Fuel Retrieval System.

Levels of Completion



300 Area DEACTIVATION

For nearly 50 years, the 300 Area just north of Richland, Wash., was the center of Hanford's radiological research and fuel fabrication. That activity resulted in highly contaminated facilities and a large inventory of radioactive materials. One of the highest Hanford cleanup priorities is to safely deactivate contaminated buildings, and ship radioactive and hazardous waste out of the 300 Area to approved storage – away from Richland and the Columbia River.

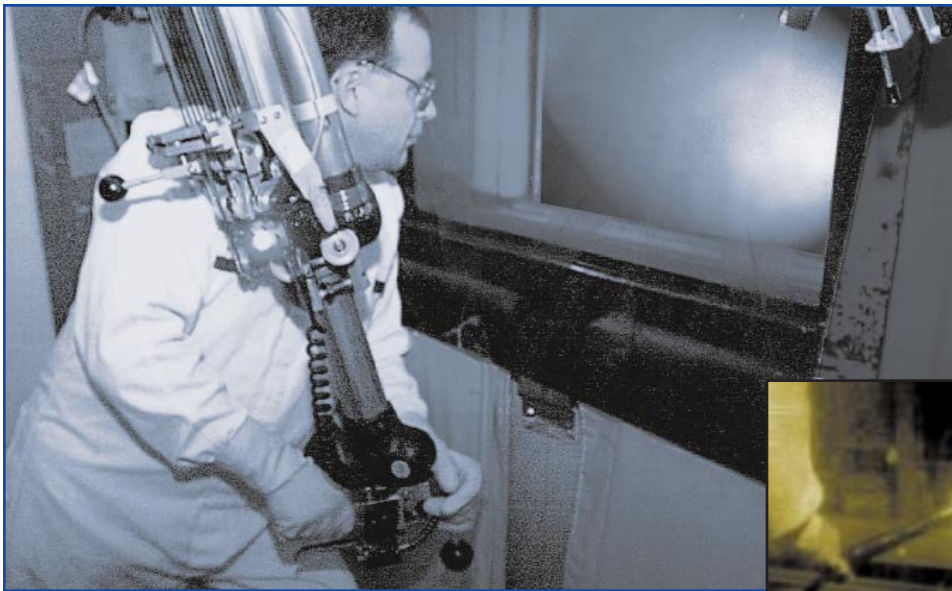
Current focus is on deactivation of the 324 and 327 Buildings – highly radioactive facilities that contain heavily shielded enclosures (hot cells) once used

to examine and test reactor fuel elements and other irradiated materials. Since deactivation began in 1996, major progress has been made and significant quantities of radioactive material have been moved out of the 324 and 327 Buildings, including:

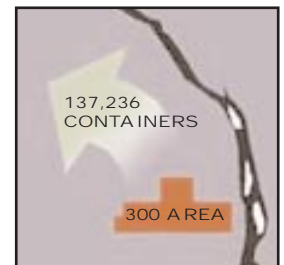
- 150,000 curies of spent fuel samples
- 8 million curies of waste vitrified into glass logs
- 400,000 curies of cesium
- 137,236 waste containers and seven shipments of N Reactor and K Reactor spent nuclear fuel removed this year
- Major progress was achieved in the B Cell cleanout. The Fluor Hanford team dismantled the largest and most highly

contaminated equipment rack inside the 324 Building's B Cell. The final rack has been disconnected and will be dismantled in FY 2000.

- With support from the Department of Energy Research and Development Program, a procurement action was initiated for a robotic platform to enable hot cell cleanup in the 324 Building. The system will be installed in FY 2000.
- Equipment removal and final cleanup of the 327 Building's F and G Cells was completed two months ahead of schedule.



A hot-cell technician operates a robotic arm to manipulate a remote cutting torch to dismantle a highly radioactive rack inside the 324 Building's B Cell.



REDUCING THE NUCLEAR **Footprint**

One of the overall goals of Hanford cleanup is to reduce the nuclear footprint left by decades of nuclear production. In order to do that, as much of the waste materials as possible must be transferred to offsite storage facilities. What's left must be condensed into a small, manageable area away from the Columbia River.

The 200 Area Plateau is a 130-square-kilometer (50-square-mile) piece of land in the center of Hanford that is being converted to just such a place. Some waste from other parts of the 1,456-square-kilometer (560 square-mile) site is being brought to the 200 Area for long-term storage, thereby allowing those other areas to be decontaminated and converted to non-Hanford land. All of the waste that is not shipped offsite will be stored here.

NUCLEAR MATERIAL Stabilization

The Nuclear Material Stabilization Project is an important piece of the 200 Area conversion effort. The project's goal is to safely stabilize the plutonium inventory at the Plutonium Finishing Plant (PFP), and deactivate and dismantle the contaminated buildings.

- 150 items of oxides and sludge – 40 more than the FY 1999 target – were thermally treated. Three more furnaces were installed on schedule, greatly increasing the capacity for thermal stabilization.
- The first major milestone in the revised project plan to stabilize plutonium solutions at PFP was met with the August restart of the prototype Vertical Denitration Calciner. The calciner heats plutonium nitrate solutions, converting them to a more stable oxide powder. Of more than 400 containers of solutions, 16 have been stabilized.
- The design for a new, long-term technology for stabilizing solutions – Magnesium Hydroxide Precipitation – was

completed 10 days ahead of schedule. Testing confirmed that this process, which chemically separates the plutonium from solutions, will eliminate a step in stabilization. The prototype calciner will be used to stabilize solutions until the Magnesium system becomes operational in July 2000.

- All of the highly enriched uranium that was not contaminated with plutonium was shipped to Oak Ridge National Laboratory in Tennessee.
- Tank 241-Z-361, an old concrete settling tank once used for liquid containment at PFP, was successfully tested for structural integrity. Sampling confirmed there is low volatility and low potential for a criticality event. Two core samples were taken from the tank on schedule and delivered to the laboratory for analysis.



Small ovens, called muffle furnaces, dry small batches of plutonium-bearing materials, converting them to a more stable form. Hanford will use this thermal process to stabilize three-quarters of PFP's 4.3 metric tons of plutonium.



Items of Oxide & Sludge Processed at PFP

Waste MANAGEMENT PROJECT

Hanford's legacy from decades of defense production includes large volumes of waste that must be managed. The Waste Management Project safely treats, stores and disposes of solid wastes and provides analytical, generator, environmental, waste-minimization, transportation and packaging services.

- The first mixed-waste disposal trench in the Department of Energy (DOE) Complex opened and began receiving mixed low-level waste more than one-and-a-half years ahead of schedule. 182 cubic meters (6,440 cubic feet) of mixed low-level waste from the Central Waste Complex was disposed of in the trench.
- The Waste Management team began retrieving, testing and sorting transuranic waste from the Low-Level Burial Grounds 14 months ahead of schedule.

At the Waste Receiving and Processing facility, all waste drums are x-rayed to verify content. A percentage of the drums must also be inspected by opening and examining the contents remotely in shielded rooms at the WRAP facility.

The low-level wastes will remain in the burial grounds, while the transuranic waste will be transferred to storage, processed through the Waste Receiving and Processing facility (WRAP), and then prepared for shipping to the Waste Isolation Pilot Plant (WIPP) in New Mexico for disposal.

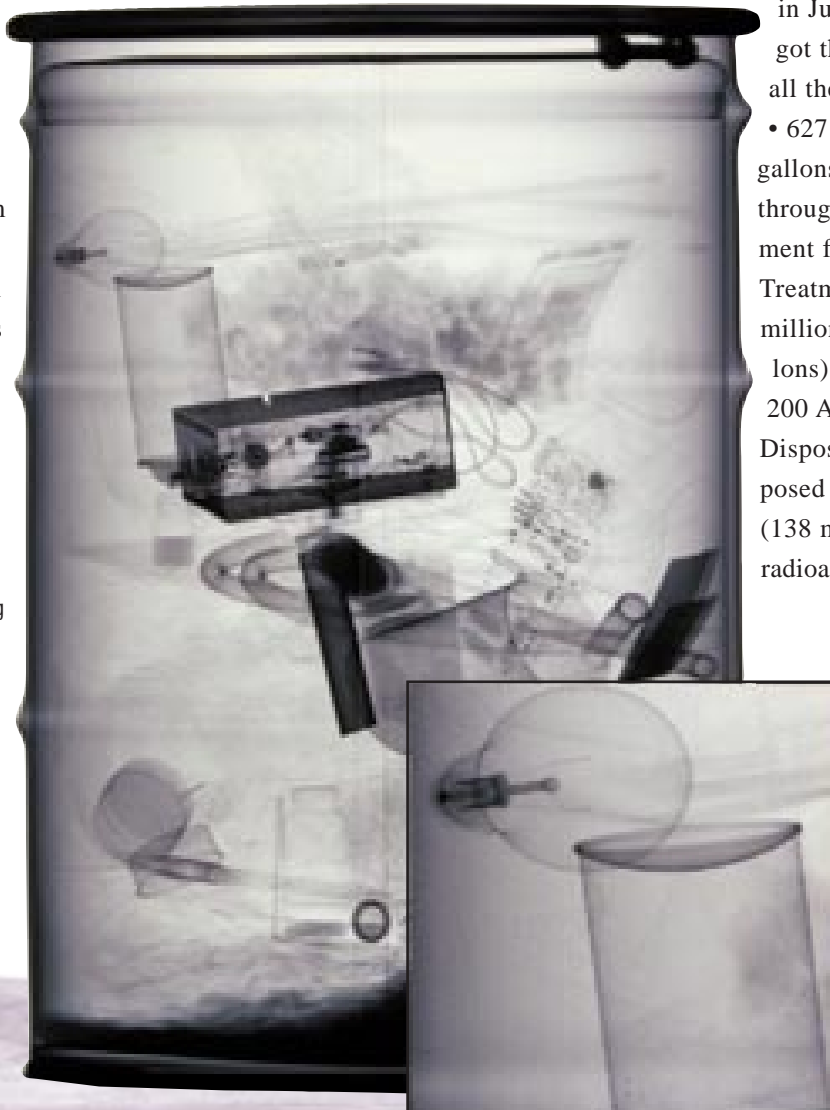
- Pollution prevention efforts were recognized in April with the *National Pollution Prevention Award* presented by Energy Secretary Bill Richardson. The team also received the White House

Closing the Circle Award for Waste Minimization and Pollution Prevention.

- The Waste Management Project's efficiencies saved \$10.5 million, which was then used to fund previously unfunded work and to accomplish work scheduled for FY 2000.
- DOE's Carlsbad Area Office assessed the Waste Management Project's Transuranic Waste Program to certify the program for shipping Hanford's transuranic waste to WIPP for disposal.

The first phase of the audit was completed in July, and Hanford's program got the highest initial marks of all the DOE sites.

- 627 million liters (165 million gallons) of wastewater passed through the 200 Area water treatment facilities. The Effluent Treatment Facility treated 95 million liters (25 million gallons) of wastewater, and the 200 Area Treated Effluent Disposal Facility treated and disposed of 524.4 million liters (138 million gallons) of radioactive wastewater.



- 228 million liters (60 million gallons) of industrial wastewater were treated in the 300 Area Treated Effluent Disposal Facility.
- The Waste Management team helped the Spent Nuclear Fuel team accelerate movement of K Basin sludge away from the river by proposing use of an existing facility (T Plant) for near-term treatment.
- Workers at the Waste Encapsulation Storage Facility successfully removed 1.8 metric tons (two tons) of low-level waste and .9 metric tons (one ton) of mixed waste from the facility without incident through careful strategy and daily pre-job safety planning sessions. Eliminating this contamination dramatically reduced the numbers of radiation areas, which significantly reduces the cost of daily work.



Uncovered drums of transuranic waste in this large trench are among the first to be retrieved more than a year early. The current schedule calls for retrieving 10,000 drums by 2004.

Tank WASTE REMEDIATION SYSTEM & RIVER PROTECTION PROJECT

By volume, 60% of the nation's high-level radioactive waste is stored at Hanford in aging and deteriorating tanks. Cleaning up that waste is the nation's number one environmental cleanup priority. If left alone, the tank waste is a threat to the Columbia River and the region.

The 200 Area's complex of 177 underground tanks is known as the Tank Farms. 149 of those tanks are single-shell tanks. The waste from those single-shell tanks must be pumped into more environmentally sound double-shell tanks for safe storage.

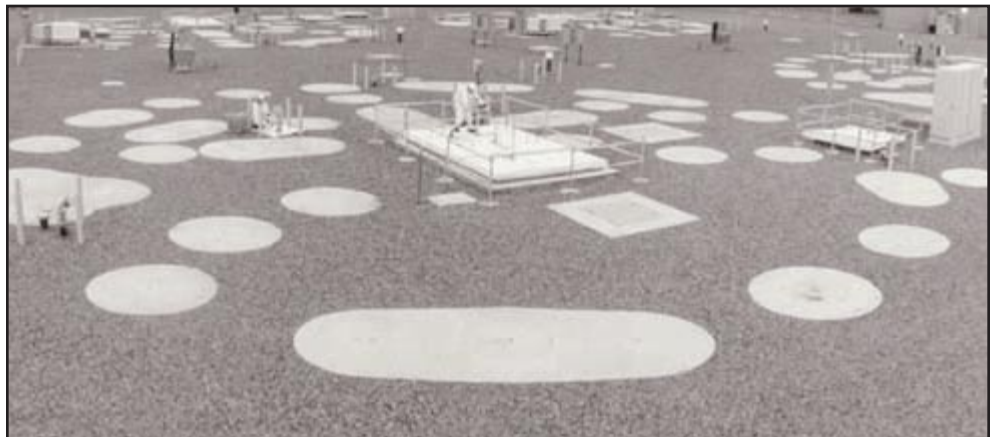
The Tri-Party Agreement agencies (Department of Energy (DOE), Environmental Protection Agency and Washington State Department of Ecology) reached agreement on a plan to remove 22.8 million liters (6 million gallons) of remaining pumpable liquid waste from the single-shell tanks by the end of FY 2004.

Hanford's Interim Stabilization Project is responsible for:

- *Identifying the contents of the underground waste tanks*
- *Determining necessary actions for continued safe management of the tank waste*
- *Stabilizing the waste for transfer from the single-shell tanks to double-shell tanks*
- *Storing the stabilized waste until permanent facilities are available*
- *Reducing life-cycle cost by applying enhanced characterization, monitoring and leak-detection technologies*
- The first transfer of waste to a double-shell tank using the new cross-site transfer line occurred in March 1999. The cross-site transfer line is a 9.92 kilometer- (6.2-mile) long, double-walled pipeline

that carries liquid waste from the single-shell tanks in the 200 West Area to double-shell tanks in the 200 East Area.

- Nearly 1.9 million liters (500,000 gallons) of radioactive waste was pumped from aging single-shell tanks into safer double-shell tanks – 190,000 liters (50,000 gallons) beyond the FY 1999 Consent Decree total set for the Interim Stabilization Project. This action minimizes the potential for discharge to the environment.
- There were seven single-shell tanks being pumped simultaneously by the end of FY 1999. By early 2000, more tanks will be pumping than have ever been pumped at one time in the site's history.
- The long-standing high-heat safety issue in Tank 241-C-106 was effectively



All that is visible of the underground storage tanks in a typical Hanford

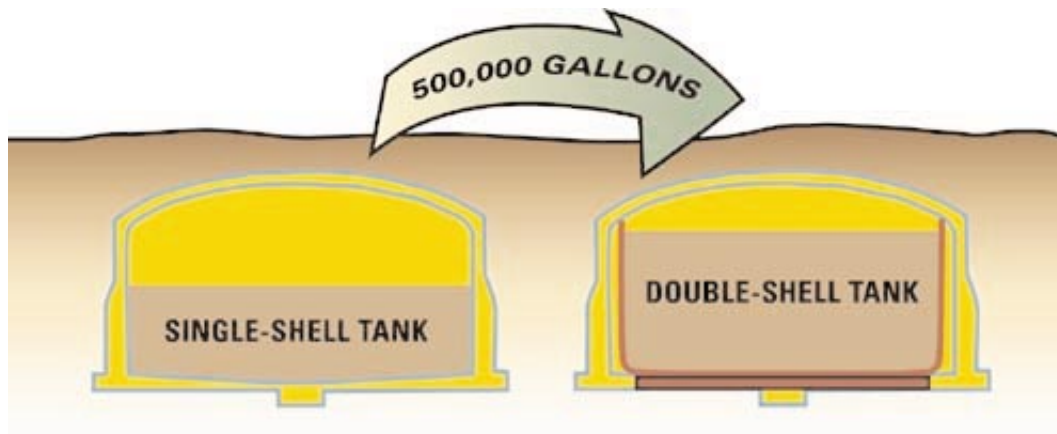
Tank Farm are the monitoring and access areas on top of the tanks.

resolved this year with the successful sluicing of 173.74 centimeters (68.4 inches) – 95 percent – of the tank’s sludge. That’s 50.8 centimeters (20 inches) more than originally targeted. The work was completed two-and-a-half months ahead of schedule and \$1.8 million under budget.

- During FY 1999, Lockheed Martin Hanford Corp. (LHMC) managed cleanup of the Tank Farms as a subcontractor to Fluor Hanford. At the beginning of FY 2000, work at the Tank Farms was transferred to DOE’s newly created Office of River Protection (ORP) as the next step in the evolution of tank-waste cleanup. LHMC will continue to manage the River Protection Project cleanup as a contractor to DOE-ORP.



Workers install the pump for S-103, one of the most recent single-shell tanks to enter the pumping phase.



ECONOMIC Development

& TRANSITION

The Fluor Hanford Office of Economic Transition is charged with supporting economic diversification, stabilization and growth of the Tri-Cities and the region. The Office met its economic transition targets in FY 1999 by helping to create hundreds of new, non-Hanford jobs; focusing new initiatives for Tri-Cities economic growth; and garnering contractor support for economic growth and diversification in the region.

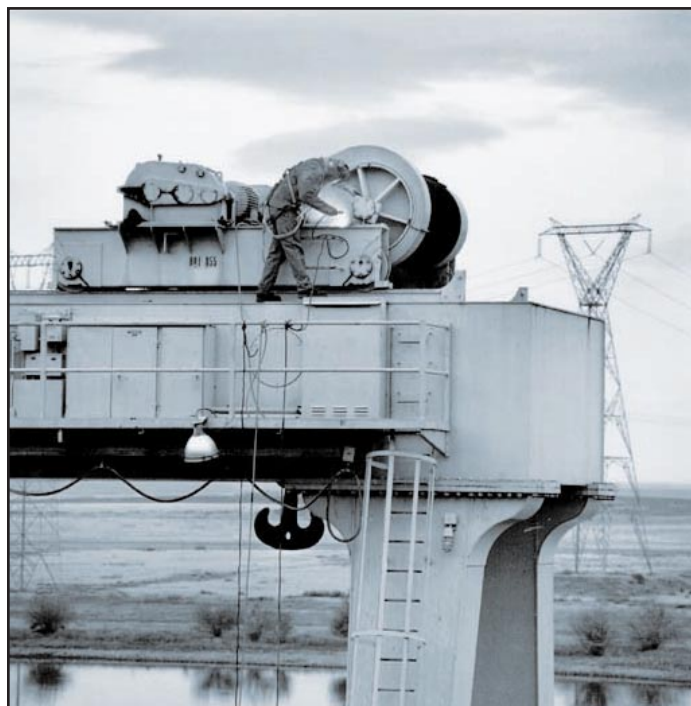
- Fluor Hanford is half way to achieving its goal of creating 3,000 non-Hanford jobs in five years. More than 1,500 new jobs have been created to date, exceeding

the FY 1999 cumulative goal by 40%.

- As part of the “Target Tri-City” initiatives, Fluor Hanford strengthened its relationship with the Tri-City Industrial Development Council (TRIDEC). Fluor Hanford is building a \$4.3 million industrial building to attract new business to the Tri-Cities.

- Fluor Hanford is also investing \$400,000 for development of a marketing plan for the Tri-Cities by Fluor Global Siting Services under the direction of TRIDEC.

- Fluor Hanford’s for-profit investment company, Columbia Basin Ventures (CBV), shifted its focus from venture capital investments to Tri-City job creation. CBV invested \$1.4 million in local businesses in FY 1999.



Gunderson Northwest was able to expand its local railcar repair business thanks to Fluor Hanford’s transfer of a surplus 60-ton crane and a donation to help install it at the firm’s plant. Up to 40 new area jobs are projected.

Fluor Hanford is building this \$4.3 million industrial facility to attract new business to the Tri-Cities.



S I T E

Infrastructure

- The Office of Economic Transition provided TRIDEC with a full-time recruiter; committed \$35,000 toward a feasibility study for a new Tri-City transportation facility; and transferred \$29 million in underused assets to the community.

The Infrastructure team is responsible for increasing Hanford’s cost efficiency by optimizing the site’s infrastructure. The team is working to transfer Hanford assets to the community as a part of Fluor Hanford’s commitment to economic transition. FY 1999 objectives were completed on or ahead of schedule.

- The Infrastructure team won two of Vice President Al Gore’s *Hammer Awards* for project management. Gore annually recognizes government projects that demonstrate innovation and significant cost-savings to taxpayers. The team was recognized for initiating and managing the transfer of Hanford land and buildings at little or no cost to the Port of Benton, and for cost-effectively converting Hanford’s aging steam heating system to an electrical system.
- The Infrastructure team collaborated with other Fluor Hanford contractors to fabricate a Multi-Canister Overpack to transport spent nuclear fuel elements inland to protect the Columbia River.

- The team increased efficiency and savings by outsourcing Hanford Standards Laboratory to Energy Northwest, operator of a commercial nuclear power plant. The outsourcing saved \$300,000 overall by reducing turnaround time and eliminating the need to upgrade the site’s aging calibration laboratory. Fluor Hanford worked closely with the Hanford Atomic Metal Trades Council to meet the needs of the project as well as to provide employment opportunities to affected workers.



hold spent nuclear fuel elements from the K Basins. Each MCO will be placed in a water-filled cask, sealed and dried for interim storage in the Canister Storage Building.



Communications

& COMMUNITY PROGRAMS

Communications

The Fluor Hanford communications team provides consistent news of cleanup progress and performance to employees, stakeholders and the news media.

- The Fluor Hanford communications team was called on to provide information to a broad range of media and other stakeholders as the Hanford story continues to command the public's attention. Providing clear and understandable messages on Hanford's technical achievements to the public, and local, regional and national media is an ongoing challenge.
- Communications staff provided leadership to the Department of Energy for public involvement and integration of site contractors' external affairs; coordi-

nated site tours; fulfilled speaking engagements; and responded to information requests from stakeholders, news media and a myriad of interest groups.

Community Programs

The Hanford Community Involvement Team, which included Fluor Hanford and its contractors, was created in 1996 to support the community. During its first three years, the Fluor Hanford team has contributed more than \$3 million to non-profit organizations in the community. In addition, employees have provided thousands of hours of targeted support to education, the arts and basic human services for area youth and families.

- The Fluor Hanford companies are collectively the largest contributor to United Way in the Tri-Cities.

- Fluor Hanford organized a community landscaping project that donated more than 2,500 volunteer hours and saved \$150,000 at the Children's Center in Richland, Wash., enabling the center to meet occupancy permit requirements.
- Fluor Hanford received U.S. Senator Slade Gorton's *Award for Innovation in Education* for leading and organizing the first *Tri-Cities' Crystal Apple Awards for Excellence in Education*, awarding 10 teachers or teams of teachers \$1,000 each, a Crystal Apple and other prizes.

Safeguards & Security

Protection Technology Hanford became a contractor with Fluor Hanford in March 1999. The five-year contract calls for Protection Technology to carry out a mission with three parts:

- 1) Protection of spent nuclear materials
- 2) Protection of classified matter
- 3) Protection of government assets and personnel

- In response to a Secretary of Energy mandate to update security training,

the Safeguards & Security staff worked with its counterparts at DOE's Richland Operations office to brief 8,600 Hanford employees on protecting national security information and security interests.

- The Hanford Patrol team earned the top three individual honors in DOE's 1999 National Security Police Officer Training Competition.
- Safeguards & Security expects

to receive DOE's Voluntary Protection Program "Star Status" for its strong, workforce-safety culture.

The Hanford Patrol includes some of the top performers in national law enforcement and security competitions.



Project Controls

& INTERNAL AUDIT

Fluor Hanford's project control efforts are focused on providing effective leadership that enables the major projects to be successful and to meet contractual commitments.

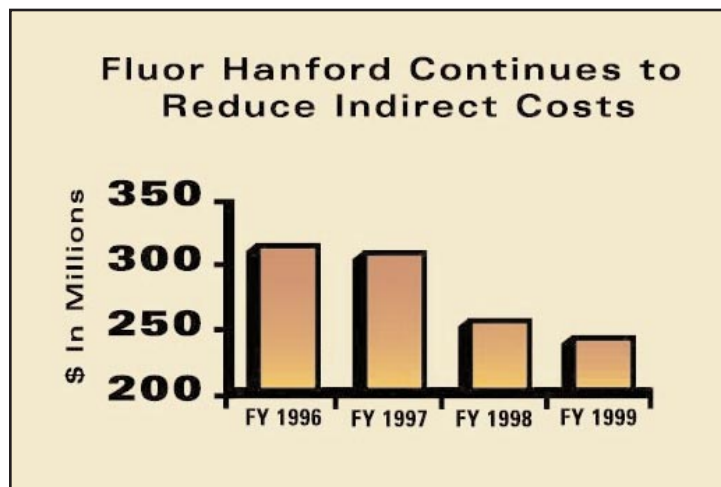
- **HANDI 2000** – an integrated business management system – was successfully deployed in less than half the time normally required. For the first time, procurement, inventory, project performance, contracts, human resources and finance data are integrated into a single data repository, resulting in savings of more than \$1.5 million per year.
- The **Desktop98 Project** smoothly migrated 8,100 users from multiple computers and programs to a single, integrated suite of desktop products. The Fluor Hanford workforce now has modern software and computers that improve collaboration, scheduling, task management, electronic forms and mail, and sharing of information.
- Fluor Hanford is **Year 2000 (Y2K)** ready, achieving this milestone almost two months ahead of schedule. Several Y2K-compliant projects modernized the Hanford network and server infrastructure, creating an "Information Superhighway" that links all areas of the

site for the first time. The data-handling capability was increased by more than 500%, and Internet access was increased by more than 1,200%.

- Fluor Hanford continued its aggressive indirect-cost reduction effort in FY 1999, resulting in a \$12 million savings compared to the prior year. This reduction includes cost-cutting strategies and process improvements. For example, Fluor Hanford accelerated the implementation of the HANDI 2000 System, which resulted in significant savings and accomplished the Y2K readiness milestone ahead of schedule.
- A new purchasing card, with improved flexibility and streamlined processes, provided another way to save dollars and increased the rebate for Fluor Hanford's purchases 3.5 times over the previous agreement. The rebate is expected to

generate \$531,000 over the next three years, money that will be used for site cleanup activities.

- Two new automated audit tools enabled the Internal Audit Department to make radical improvements that are expected to double staff productivity with no increase in cost. The first – Audit Command Language software – is a data extraction and analysis tool that identifies trends, projections and anomalies resulting in fraud detection and improved business processes. The second – Price Waterhouse Coopers TeamMate – eliminates the need for hard-copy working papers, streamlines supervisory review processes and integrates the phases of the audit process, increasing audit productivity.



VOLPENTEST HAMMER TRAINING & EDUCATION CENTER

With large amounts of hazardous materials at Hanford that must be dealt with safely, it is vital that workers are trained to successfully mitigate potentially threatening situations. The Department of Energy's (DOE) Volpentest HAMMER Training & Education Center, managed by Fluor Hanford, specializes in courses for hazardous materials workers, emergency response coordinators, managers, scientists, firefighters, law enforcement personnel and others.

HAMMER opened the doors to its new facility in September 1997 and quickly became one of the country's premier hands-on training centers. HAMMER uses realistic props and settings to provide training for the Hanford workforce and others. The training is designed to save lives, reduce injuries and increase worker productivity.

- 24,627 students trained at HAMMER in FY 1999, the majority of whom took Hazardous Waste Operations, Respiratory Protection, Rad Worker, Emergency Preparedness and other site-based courses. HAMMER's student day totals increased by nearly half, from 23,227 in FY 1998 to 33,605 in FY 1999.

- HAMMER conducted two highly successful performance-based exercises. First, an equipment-replacement mock-up was held at the Plutonium Finishing Plant (PFP) in April. That exercise identified one major safety issue, 24 necessary equipment changes and 12 critical work-sequence changes – all

changes were implemented for the actual job. For every dollar spent in staging the mock-up, PFP saved \$300 in potential corrective action. Another exercise held in June was a simulation that allowed Tank Farms employees to hone their emergency-response skills.

- HAMMER held 68 National Transportation Program Regulatory Compliance Training classes during FY 1999, as compared to 24 in FY 1998 – a 260% attendee increase accomplished at a significantly reduced cost to the program and other DOE sites. These courses make our nation's highways safer by ensuring that those who ship nuclear and hazardous materials are well-trained.

- HAMMER secured and maintained local, state, national and international

training programs, including the Northwest Public Power Association, Washington State's Transportation and Military departments, and the National Counternarcotics Center. The U.S. State Department broke ground in June for a new Port-of-Entry Building for HAMMER's international foreign border enforcement training programs.

HAMMER provides realistic, hands-on training opportunities for Hanford employees and offsite organizations. Gator Safety of Sweet Home, Ore., trains employees of Willamette Industries to safely extinguish propane fires. A HAMMER worker watches carefully, ready to shut off the flames if the need arises.



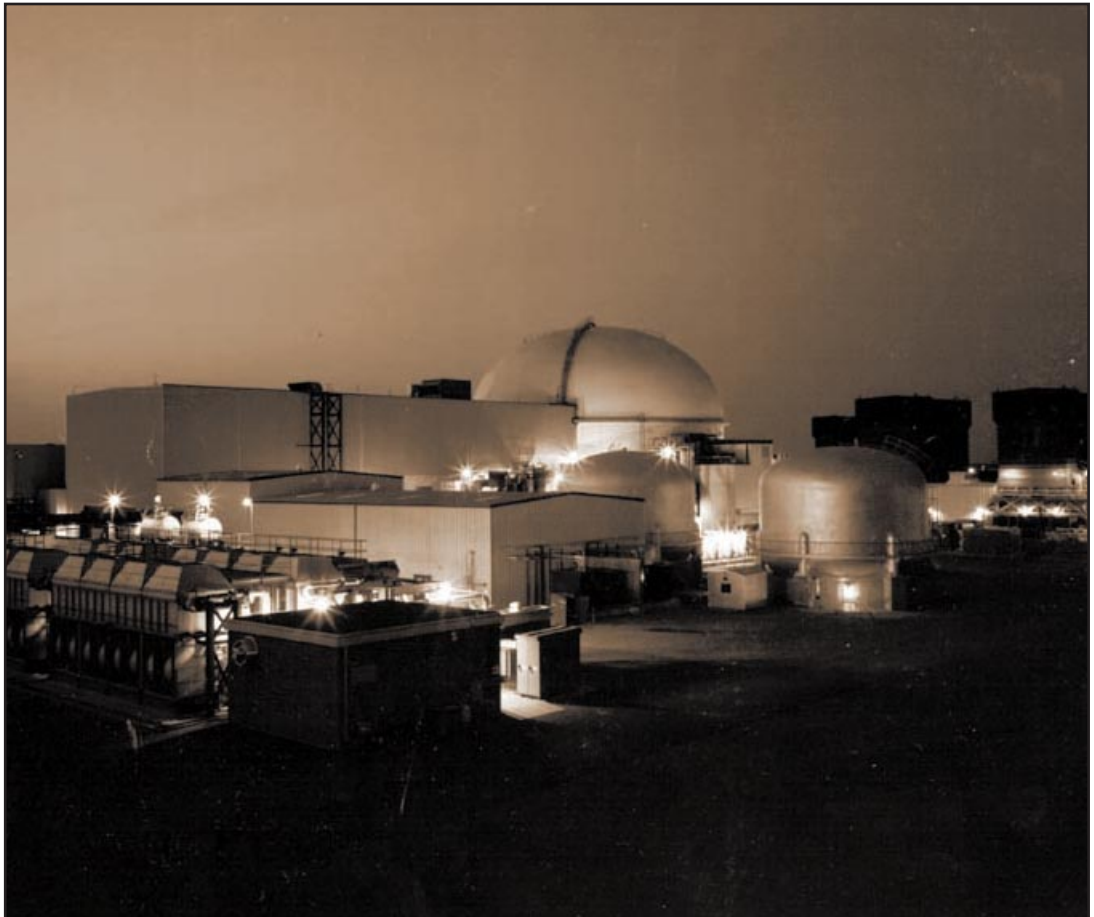
FAST FLUX Test FACILITY

The Fast Flux Test Facility (FFTF) is a 400-megawatt, sodium-cooled reactor designed to test fuels and materials for advanced nuclear power plants. This state-of-the-art reactor operated for 12 years, setting world records for safe and reliable operation.

As directed by the Department of Energy (DOE), FFTF staff performed monitoring, maintenance, safety and all other work to maintain the reactor in a safe, standby condition during the year.

This ensures the reactor's viability for potential new missions currently under consideration by DOE, including the production of medical isotopes for diagnosis and treatment. It also provides for the reactor's readiness for a National Environmental Policy Act review – the next step in determining future use of the reactor – ordered by DOE Secretary Bill Richardson.

During the year, FFTF workers continued to maintain this state-of-the-art reactor in safe standby condition to ensure the reactor's availability for potential new missions under consideration by DOE.



Future FOCUS

Following a corporate-wide business assessment, Fluor Corporation renewed its commitment to the federal government and specifically to the Department of Energy (DOE). At Hanford, we initiated a project-focused restructuring of the Fluor Hanford contractor team in late 1999, which will further improve performance in actual cleanup work.

Based on lessons learned during our first three years at Hanford and in conjunction with DOE's decision to form a separate Office of River Protection, Fluor Hanford streamlined its organization, reducing layers of management and redirecting support resources to the projects.

We have implemented a new business model – a Project Management System – adapted from our successful commercial business, and we're developing accelerated project completion plans modeled after successes achieved by Fluor at the DOE Fernald site.

Full benefit of this project-focused structure will be achieved in the 2000 calendar year, positioning the Fluor Hanford team to bring significant value to DOE's Richland Operations office over the next several years. Fluor Hanford is poised to meet major project challenges in FY 2000. We are committed to:

Spent Nuclear Fuel Project

- Begin moving spent fuel out of the K West Basin no later than November 2000.
- End the risks to the river and environment by getting the fuel into secure canisters, dried and placed in monitored storage in the Canister Storage Building vault.
- Complete all cleanup faster than the current baseline, which will free money for other urgent cleanup needs.

Nuclear Materials Stabilization

- Accelerate plutonium thermal stabilization by installing three more muffle furnaces.
- Install the Magnesium Hydroxide Precipitation system to stabilize solutions.
- Begin stabilization of polycubes in 2000.

- Accelerate work to support complete deactivation and dismantlement of Plutonium Finishing Plant facilities 18 years early, at a life cycle savings of over \$1 billion.

300 Area Accelerated Deactivation

- Complete rack removal from 324 Building's B Cell.
- Install a robotics work platform for the deactivation of B Cell.
- Continue the cleanup acceleration effort at facilities near the river.

Waste Management Project

- Complete Waste Isolation Pilot Plant (WIPP) certification audit and begin shipping transuranic waste.
- Ramp up mixed low-level waste treatment and continue waste retrieval.
- Prepare T Plant for treatment and storage of K Basin sludge and other waste as transuranic waste to be shipped to WIPP.

Economic Development and Transition

- TRIDEC will market the \$4.3 million industrial facility built by Fluor Hanford as part of its new “target market” program.
- Continue acceleration of our commitment to create 3,000 non-Hanford jobs by the end of our first five years (Sept. 30, 2001).

In the year ahead, Hanford will benefit from Fluor Hanford’s project management strengths, with the experience and proven expertise of the corporation behind it. Our restructuring – based on the past three years of experience on the site – will leverage our total corporate experience to elevate focus on project results. Fluor Hanford is poised to move into high gear in the coming months to deliver quality performance to our DOE client and the taxpayer.

Lessons Learned

Fluor Hanford initiated management actions and improvements in a number of specific areas during the year as the result of a Compliance Order issued in May 1999 by DOE’s Office of Enforcement and Investigation (EH-10). The Order cited Fluor Hanford for matters associated with subcontractor supervision, documentation, design quality and responsiveness. The violations resulted in the assessment of a \$330,000 fine.

As a result, senior management immediately began taking significant remedial actions. Those actions – involving work processes, control of subcontractors, and the relevant quality assurance and compliance organizations – have been completed, consistent with the Compliance Order.



