



Project Hanford Management Contract

WASTE MANAGEMENT PROJECT FY-1997 ACCOMPLISHMENTS

*Doing More -
Spending Less -
Building for
the Future*



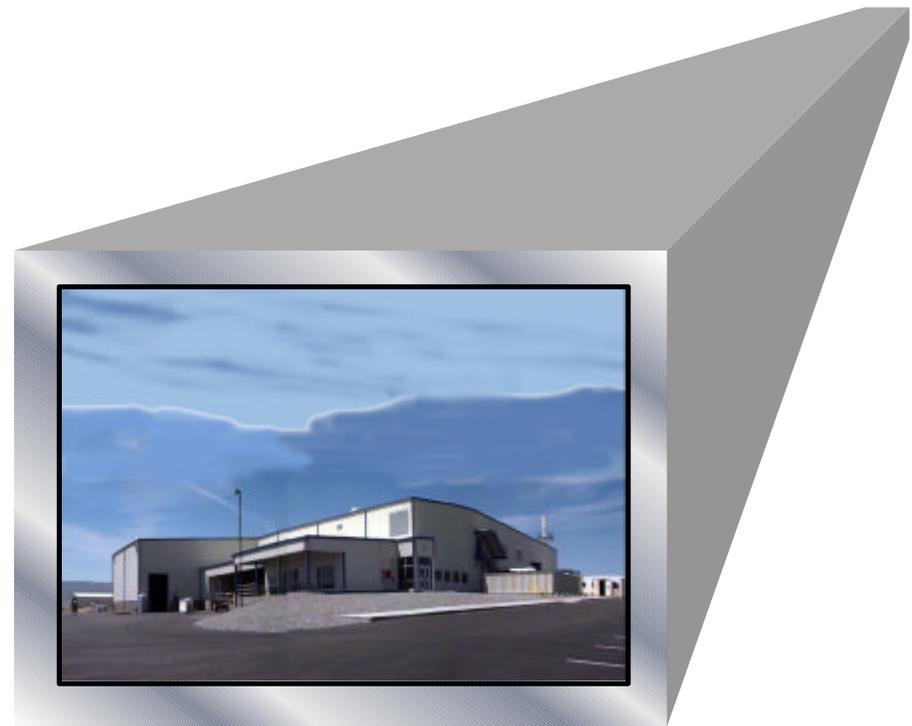
Richland Operations
Waste Programs Division



Waste Management
Federal Services of Hanford



Fluor Daniel Hanford





Using Best Commercial Practices to Provide Total Waste Management Services for Hanford Site and DOE Generators

- ◆ **Solid waste storage, treatment, and disposal — onsite and offsite**
- ◆ **Liquid effluent treatment and disposal**
- ◆ **“User friendly” Generator Services**
- ◆ **Waste minimization and pollution prevention**
- ◆ **Analytical laboratory operations**





Partnering with DOE and Waste Generators to Provide Responsive Service





In FY-97, the Waste Management Project Achieved Results, Saved Costs, and Established a Foundation for the Future

- 4 **Improved previous contractor's safety record by 83%**
- 4 **Completed all work ahead of schedule and under budget**
- 4 **Achieved all key milestones**
- 4 **Achieved all performance-based incentives**
- 4 **Improved/expanded services to waste generators**
- 4 **Implemented new waste treatment capabilities for DOE**
- 4 **Developed a long-range plan for continuing progress**

The Waste Management Project achieved these results despite a 30% reduction in budget over the last two years



We answered these waste management challenges . . .

- 4 Accelerate treatment and disposal of past and present low-level, low-level mixed, TRU, and hazardous wastes**
- 4 Integrate activities with other DOE sites to increase Complex-wide efficiency**
- 4 Reduce life-cycle waste management costs in every activity area**
- 4 Expand services to waste generators to improve waste characterization and acceptance**
- 4 Establish a foundation and path forward for future progress**

. . . as the following pages show



Waste Management
Challenge:

- 4 Accelerate treatment and disposal of past and present low-level, low-level mixed, TRU, and hazardous wastes**





**In two
successful
Evaporator
campaigns,
we reduced
high-level
waste tank
volumes
by 990,000
gallons**



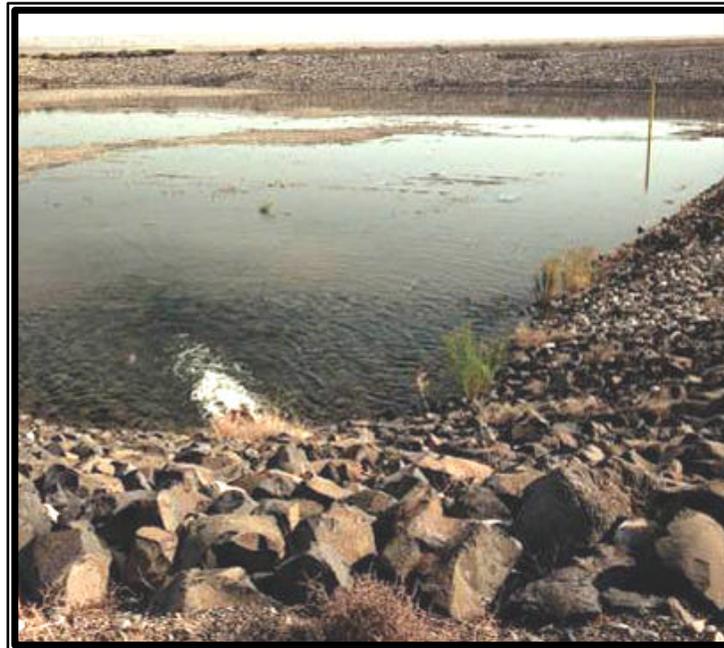


We brought Hanford's two new liquid effluent treatment facilities up to maximum capacity, maintained an efficiency rate above 95%, and processed a record volume of waste — *96.6 million gallons* — for disposal





We ended direct disposal of wastewater to the environment by diverting the last remaining waste stream to the 200A Treated Effluent Disposal Facility





We disposed of 222,300 ft³ of low-level waste





We completed macroencapsulation of 880 drums of low-level mixed waste and are storing it in Hanford's RCRA-permitted mixed waste disposal facility.





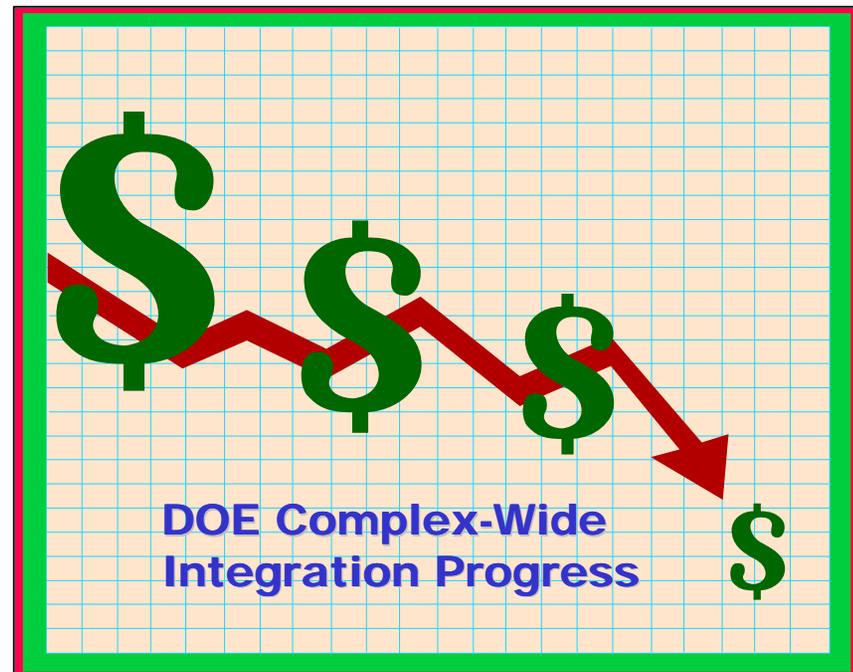
We subcontracted with AST Environmental Services for compaction and macroencapsulation of low-level mixed waste for disposal





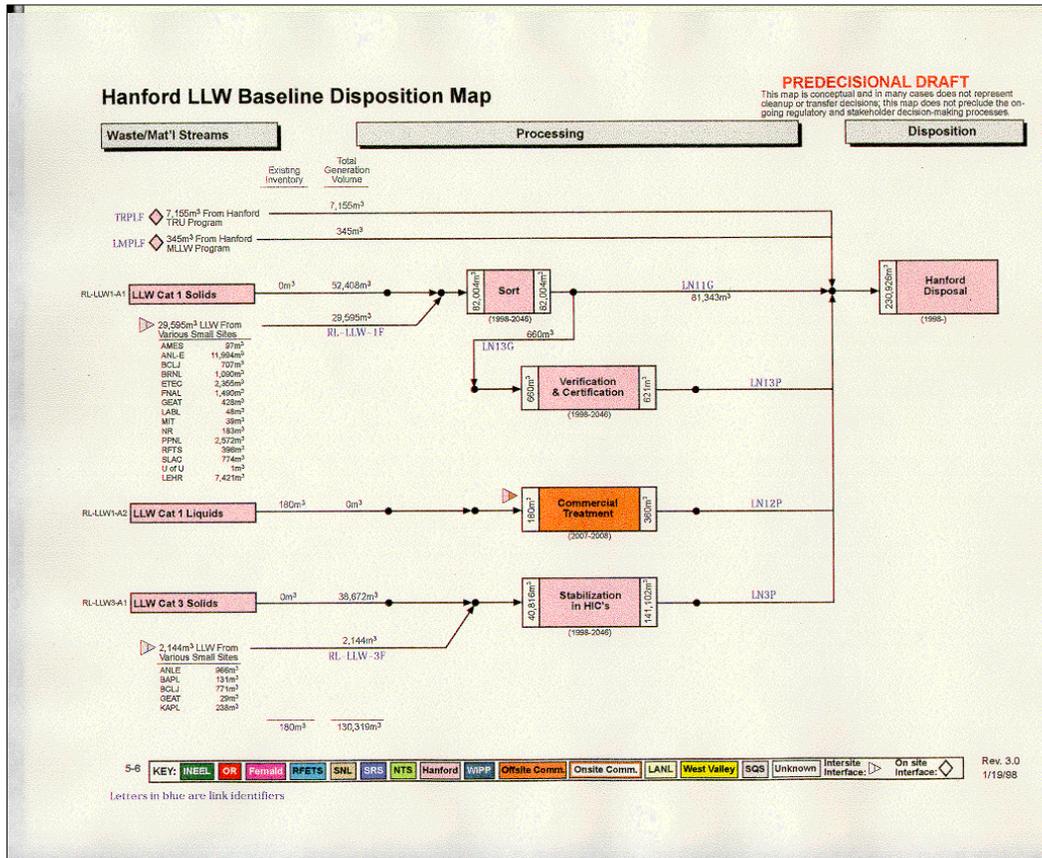
Waste Management
Challenge:

- 4 **Integrate activities with other DOE sites to increase Complex-wide efficiency**





Project Hanford Management Contract



We played a key role in development of the Complex-Wide EM Integration Team's award-winning plan for handling DOE wastes nation-wide



We pioneered regional waste management integration efforts, sending mixed waste from Hanford to the INEEL for WERF incineration — *at no incremental cost*





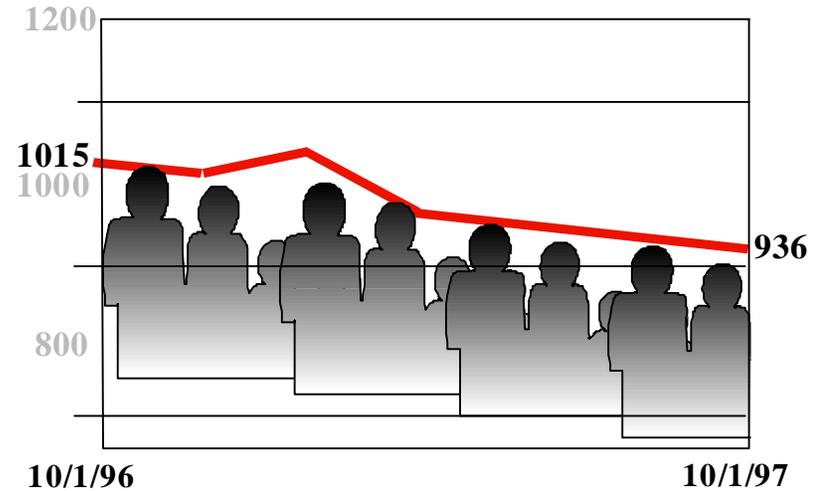
Extending our regional integration activities, we accepted “Bettis ash” incinerated at INEEL’s WERF for stabilization at T-Plant. The stabilized residue will be returned to Bettis Atomic Power Lab for disposal.





Waste Management Challenge:

- 4 **Reduce life-cycle waste management costs in every activity area**
 - 3 **Implemented a commercial business model**
 - ✓ **Changed procedures and organizations to achieve more efficient operations**
 - ✓ **Decreased staff**





**We reduced solid waste storage costs by 27%
and disposal costs by 24%**



**FY-97 Savings
to DOE:
\$1.5 million**



We completed 56 waste minimization initiatives, eliminating storage, treatment, and disposal costs for 1,500 m³ of low-level and mixed waste and 28 tons of hazardous waste

FY-97 Savings
to DOE:

\$14 million



**We cut liquid effluent treatment costs at
300 Area TEDF while raising the plant's
operational efficiency to 97.8%**



**FY-97 Savings
to DOE:
\$900,000**



We avoided the need for costly mixed waste treatment by directly disposing of 10,000 ft³ of soils and HEPA filters previously designated as MLLW



**FY-97 Savings
to DOE:**

\$914,000



**We surveyed, cleaned,
and down-posted the 242-A
Evaporator fenced area,
eliminating the need for
personal protective equipment**

**FY-97 Savings
to DOE:
\$98,616**



Waste Management
Challenge:

- 4 Expand services to waste generators to solve waste characterization and acceptance problems**





We implemented a commercial-style Generator Services approach, assisting waste generators at their facilities to improve waste characterization, packaging, and acceptance rates





We developed a streamlined waste documentation approach to enable accelerated off-site shipment of 120 containers of D&D waste, achieving a significant facility transition milestone





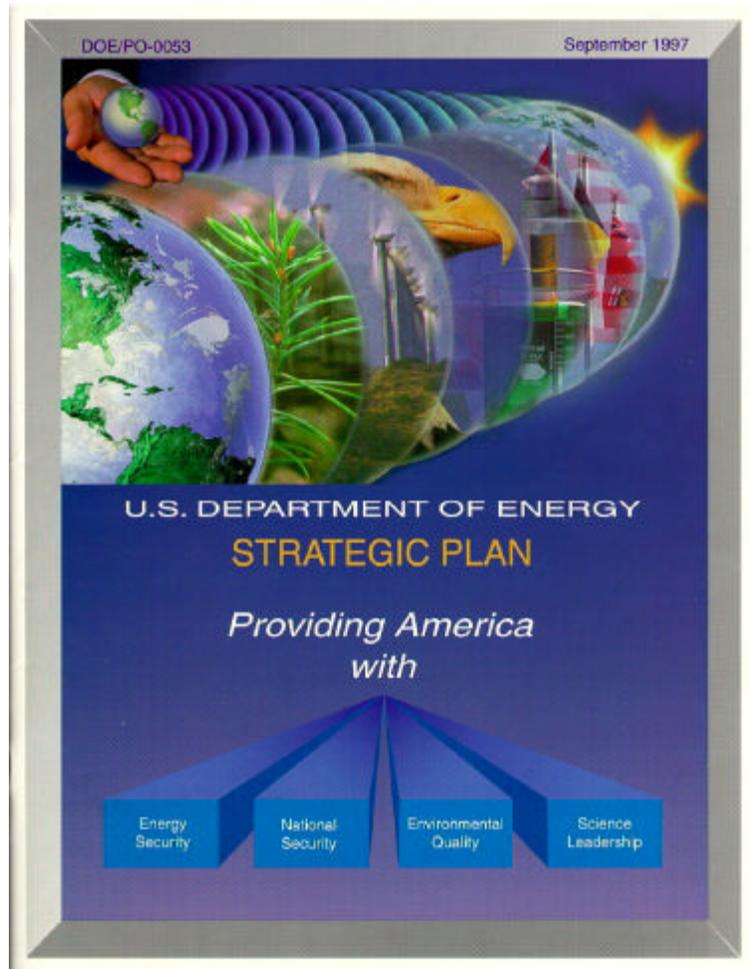
By implementing effective waste packaging, transportation, characterization and acceptance systems, we were able to receive and dispose of waste from 23 off-site generators

Ames Laboratory Argonne National Laboratory
East Bates Accelerator, Massachusetts Battelle
Columbus Laboratories Bettis Atomic Power
Laboratory Bettis Atomic Power Shipyards
Brookhaven National Laboratory Fermi National
Accelerator Laboratory General Atomics Knolls
Atomic Power Laboratory Knolls Atomic Power
Shipyards Lawrence Berkeley Laboratory
Paducah Energy Systems Pearl Harbor Naval
Shipyards Portsmouth Energy Systems
Portsmouth Naval Shipyards Princeton Plasma
Physics Laboratory Puget Sound Naval
Shipyards Energy Technology Engineering
Center Rocky Flats Plant Stanford Linear
Accelerator Center University of California,
Davis University of Utah



We completed construction and startup of DOE's newest TRU/LLW processing facility, WRAP, and began characterizing waste drums





- 4 We developed the Waste Management Long-Range Strategic Plan for Hanford, which will lead to increased efficiency and more cost reductions
 - 3 Established a project vision and goals
 - 3 Developed a strategy for achieving goals
 - 3 Measure progress to those goals



FY-1997 PERFORMANCE HIGHLIGHTS

Waste Management Project

Improved safety performance

- ä Reduced Lost Workday and OSHA Recordable injury rates 57% from previous contractor's FY-96 level

More work for less money

- ä Completed scope for \$10M less budget
- ä Implemented cost savings valued at \$25.8 million

New capabilities for DOE

- ä Completed construction and startup of WRAP for TRU/LLW processing
- ä Brought 2 new liquid waste treatment facilities up to full capacity
- ä Pioneered successful inter-site treatment and disposal approaches

Waste treatment and disposal "firsts"

- ä Macroencapsulated 880 drums of mixed debris
- ä Treated 96.6 million gallons of liquid waste, the most ever in one year



For all of these reasons. . .

**Fluor Daniel Hanford's FY-97
Critical Self-Assessment rated
Waste Management Project
performance
"Excellent"**