

Hanford's FY 2001 Draft Budget
Help Influence the Priorities

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The mission of the Facility Stabilization Project includes:

- ◆ **Stabilize high-risk nuclear materials**
- ◆ **Manage safe storage of Special Nuclear Materials (Pu, Cs, Sr, U)**
- ◆ **Deactivate nuclear facilities to reduce risks and reduce Surveillance & Maintenance costs**

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Numerous issues and legacies exist with these old facilities which present hazards and risks to the employees and public

- ◆ **Residual inventories of radioactive and hazardous materials**
- ◆ **Contaminated areas**
- ◆ **Discharge of liquid effluents and solid waste**
- ◆ **Surveillance & Maintenance costs may be excessive with time**
- ◆ **Facilities deteriorating with age**
- ◆ **Need to be acceptable for final decommissioning**
- ◆ **Final decommissioning may be decades away**

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Facility Stabilization Project Scope

- ◆ **Manage 182 facilities & 216 waste sites in a safe & compliant condition until deactivation**
- ◆ **Safely store - 150 million curies of Cesium & Strontium capsules at Waste, Encapsulation & Storage Facility**
- ◆ **Provide safeguards & security for 4 metric tons of Plutonium & other Special Nuclear Material at PFP**
- ◆ **Stabilize 736 kg of Plutonium Metal, 34 kg Pu Alloys, 5,363 kg bulk Plutonium Oxide, 1,600 Polycubes, 4,300 L of Plutonium Solution, & complete cementation of 3,765 kg bulk Plutonium residues at PFP (17 mt bulk)**

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Facility Stabilization Project Scope

(Continued)

- ◆ Relocate radioactive material including Spent Fuel assemblies, fuel pieces and remote handled transuranic waste, located in the 324/327 complex, away from the Columbia River to the 200 Area Plateau
- ◆ Remove contaminated equipment and 100% (>1.5M curies) of highly radioactive dispersible material from 324 B-Cell
- ◆ Decontaminate and stabilize the hot cells and 14 buildings within the 324/327 complex, stabilizing 8 kg of Other Nuclear Material
- ◆ Stabilize 16 buildings that are a part of the 300 Area Fuel Supply Facilities

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Facility Stabilization Project Priorities

- ◆ **Maintain facilities in safe & compliant condition and safeguard nuclear materials**
 - ◆ **Plutonium Finishing Plant**
 - ◆ **324/327 Facilities**
 - ◆ **Waste Encapsulation and Storage Facility**
 - ◆ **300 Area Fuel Supply**
 - ◆ **200/300 Area contaminated facilities**
- ◆ **Mitigate urgent risks:**
 - ◆ **Plutonium vulnerabilities at PFP**
 - ◆ **324 Closure Plan (B-Cell Cleanout)**

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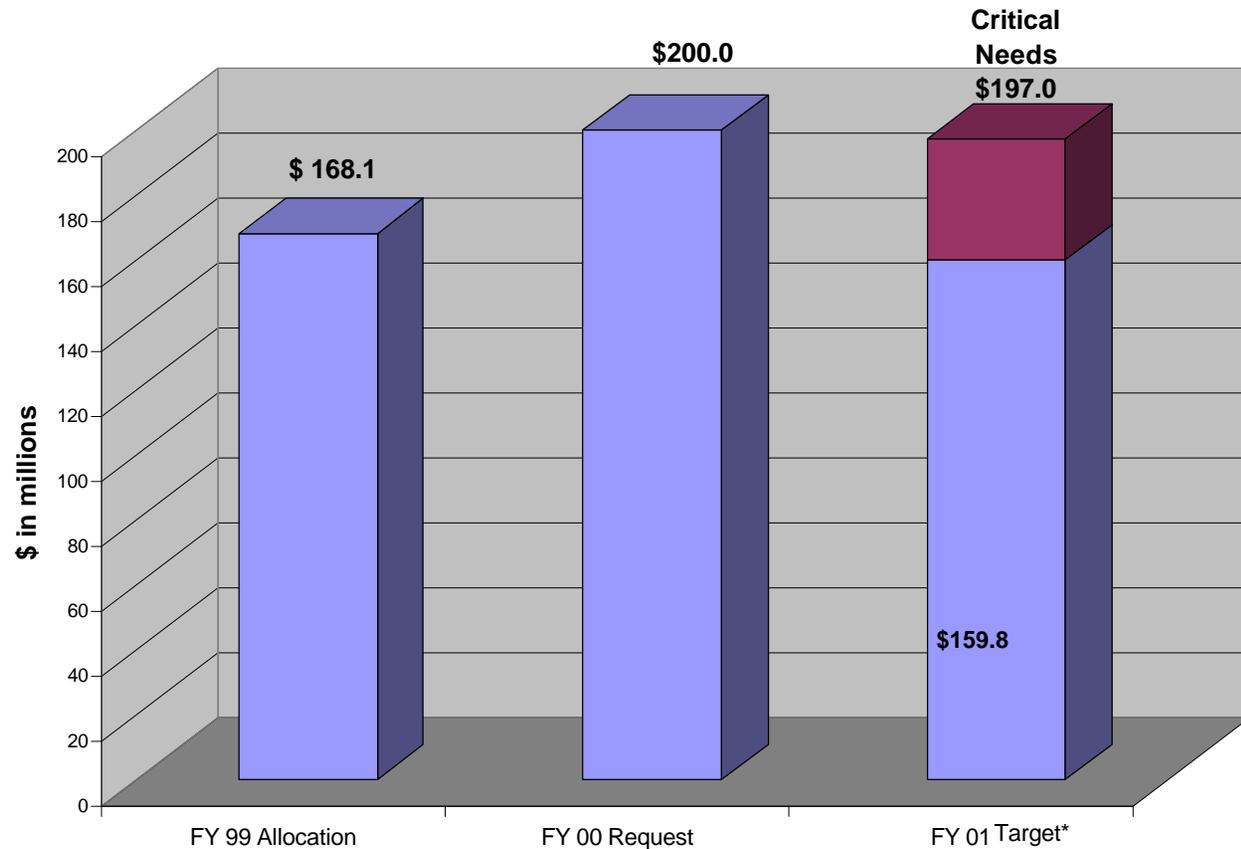
Facility Stabilization Project Priorities (Continued)

- ◆ **Decontaminate and stabilize facilities to further reduce risk/operating cost:**
 - ◆ **300 Area Fuel Supply Shutdown**
 - ◆ **324/327 Legacy Waste Program**
 - ◆ **324/327 Deactivation**
 - ◆ **PFP Deactivation**
 - ◆ **WESF Facility Modifications**
 - ◆ **300 Area Contaminated Facilities**
 - ◆ **200 Area Contaminated Facilities**

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Facility Stabilization Funding Profile

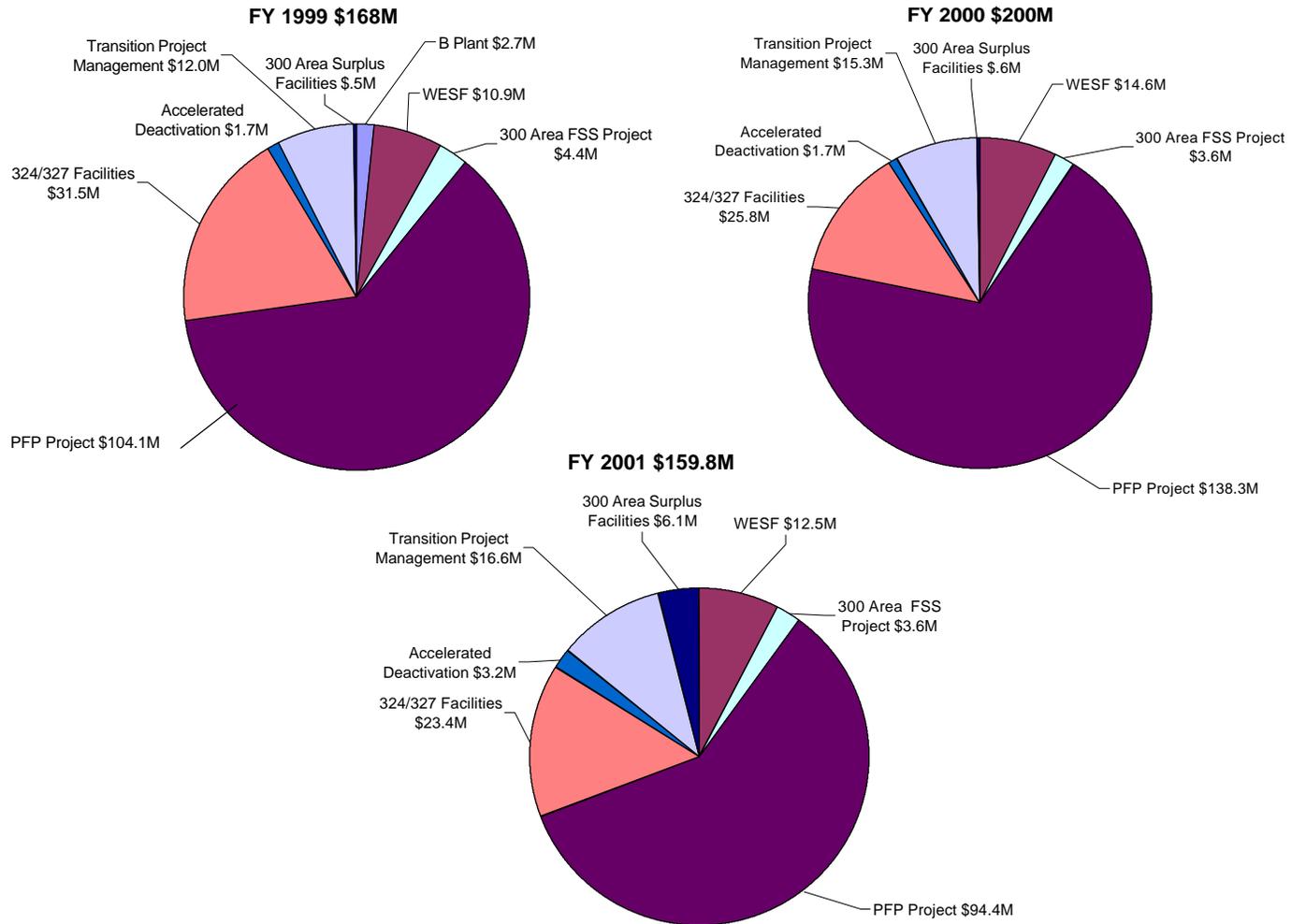


* FY 2001 Target reflects \$1,065M Case.

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Facility Stabilization Funding by Sub-Project



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Facility Stabilization Project Priorities

Maintain Facilities Safe & Compliant



Safeguard Nuclear Material

- PFP
- 324
- 327
- WESF
- 300 Area Fuels
- 200/300 Area Transferred Contaminated Facilities

- Plutonium
- Cs/Sr Capsules
- Unirradiated Uranium
- SNM Planning, Reporting & Disposition
- Legacy Fuel

High

Mitigate Urgent Risks

Essential Services

- Pu Vulnerabilities at PFP
- 324 B Cell Cleanout

- Laundry
- Steam
- Fee
- IAEA Support

Priority

Further Reduce Site Risks/Operating Costs (Facility Deactivation/Performance Enhancements)

- 324/327 Legacy Waste Program
- 324/327 Deactivation
- PFP Deactivation
- WESF Facility Modifications
- 300 Area FSS Shutdown
- 300 Area Deactivation
- 200 Area Deactivation

Low

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Facility Stabilization Workscope Comparison

Description	FY1999	FY2000	FY2001
PUREX/B Plant Transfer	Complete		
Safe and Secure Plutonium Vault Operations	✓	✓	✓
Safe Storage of Cesium and Strontium Capsules at Waste Encapsulation and Storage Facility (WESF)	✓	✓	✓
Manage excess facilities in the 200 / 300 Areas	✓	✓	✓

✓ = Fully Funded

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Facility Stabilization Workscope Comparison (Continued)

Description	FY1999	FY2000	FY2001
PRF Recovery Actions	Complete		
Support IAEA Activities	✓	✓	✓
Tank 361 Characterization	✓	Complete	
Plutonium Stabilization DNFSB 94-1	✓	✓	Partial
Pu Packaging at PFP			Unfunded
324 Closure Plan-Phase 1 B Cell (TPA M-89-02)	✓	Partial	Unfunded
Begin Deactivation of 324 and 327 hot cells (balance of plant)			Unfunded

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Facility Stabilization Workscope Comparison (Continued)

Description	FY1999	FY2000	FY2001
Packaging and removal of spent fuel assemblies and fuel pieces from 307 facility	✓	Complete	
Removal of remaining legacy fuel waste containers from 327 facility *	✓		Unfunded
300 Area Fuel Supply/RCRA Closure Activities (303K Building)	✓	✓	Unfunded
Complete 300 Area Fuel Supply Deactivation	Unfunded	Unfunded	Unfunded
Plutonium Finishing Plant Deactivation		Unfunded	Unfunded

* no workscope scheduled for FY 2000

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Facility Stabilization Technology Needs

- ◆ **Gamma camera - characterization projects**
- ◆ **Glovebox decontamination and size reduction**
- ◆ **Cesium and strontium capsule leak detection system**
- ◆ **Plutonium processing and packaging equipment**
- ◆ **Robotic decontamination (CP-5 Demo)**
 - ◆ **Demonstrate 300 Area FY 00, FY 01**

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Facility Stabilization Stretch and Breakthrough Opportunities

- ◆ **Four Opportunities identified**
 - ◆ **Implementation of the PFP Integrated Project Management Plan**
 - ◆ **will incorporate evaluation/decisions related to technical requirement reviews and trade studies intended to provide alternatives and accelerate stabilization, storage and shipment**
 - ◆ **will provide alternatives to accelerate the deactivation of PFP**

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Facility Stabilization Stretch and Breakthrough Opportunities (Continued)

- ◆ Accelerate the deactivation of the 324/327 buildings
- ◆ Accelerate the deactivation of the 231-Z building
- ◆ Accelerate the deactivation of 200 and 300 Area buildings
- ◆ Two of these opportunities are applicable in FY 00 and FY 01

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Facility Stabilization Stretch and Breakthrough Opportunities (Continued)

- ◆ **Accelerate the deactivation of the 231-Z building**
 - ◆ **By providing \$2.78M in FY 00 deactivation can be completed in the same year, resulting in a savings of \$10.6M to the current baseline completion of FY 09**
- ◆ **Accelerated deactivation of 200 and 300 Area buildings**
 - ◆ **With deactivation funds, savings of up to \$6M per year can be achieved in minimum safe costs beginning in FY 01**

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Facility Stabilization Buy Back List

◆ Plutonium Solution Stabilization	2.8M
◆ PFP Polycubes	.3M
◆ PuSH Operations	7.7M
◆ Project W-460 PuSH	5.4M
◆ PFP Oxides/Metals Stabilization	1.3M
◆ 324 Closure Plan-B Cell Cleanout	10.1M
◆ PFP Cementation	6.6M
◆ 324 Closure Plan	2.6M
◆ 300 Area Shutdown, RCRA	<u>.3M</u>
	37.1M

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